Introduction

Appendix E sets out the collated contextual and baseline information, on a topic-by-topic basis, for each of the 10 assessment topics:

1. **Biodiversity and Nature Conservation** (including Fauna and Flora)
2. **Population** including demographics, socio-economics
3. **Human health**
4. **Soil** including geology and land use
5. **Water** quality (including surface and ground water quality and availability)
6. **Air quality**
7. **Climatic Factors** including climate change and adaptation and flood risk
8. **Material Assets** including waste management and minerals
9. **Cultural Heritage** including architectural and archaeological heritage
10. **Landscape and Townscape**

The information for each topic is structured as follows in compliance of the SEA Directive Annex I (b) – (g) requirements:

Annex I SEA Directive Requirements	Sub section in the Topic chapter
	Introduction - provides an overview and definition of the topic.
The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation.	**Summary of national and regional plans and programmes** - provides an overview of the policy context in which the revocation plan sits and identifies the environmental protection, objectives, established at international, Community or national level that are relevant to the Regional Strategy.
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	**Overview of the baseline -** provides an overview of the relevant aspects of the current state of the environment at a national and regional level and the key topic specific baseline factors which will need to be considered as part of the assessment. **The likely evolution of these baseline conditions without the implementation of the revocation plan** - provides an overview of how the baseline is likely to change in the absence of the revocation plan, an understanding of this is key to understanding the effects of the revocation plan on the topic area.
The environmental characteristics of areas likely to be significantly affected.	**The environmental characteristics of areas likely to be significantly affected** – provides a summary of those key aspects of the region most likely to be affected by the plan.

Annex I SEA Directive Requirements	Sub section in the Topic chapter
Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	**Current problems in areas of particular environmental importance** (such as those designated under the Wild Birds and Habitats Directives and further expanded upon in **Appendix G**). Given the focus on European designated conservation sites this sub-section appears in biodiversity.
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects).	**Assessing significance** –provides an outline of the illustrative guidance used to assess the potential effects for each topic. **Assessment of likely significant effects of retention, revocation and partial revocation** - including information on the likely significant effects.
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	**Proposed mitigation measures** – including proposed measures identified.

1. Biodiversity and Nature Conservation

1.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the Revocation plan on biodiversity and nature conservation. Information is presented for both national and regional levels.

Biodiversity in this context is defined by the ***Convention on Biological Diversity***[1] as 'the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.' Biodiversity is integral to the functioning of ecosystems and these, in turn, provide 'ecosystem services' which include food, flood management, pollination and the provision of clean air and water.

There are links between the biodiversity and nature conservation topic and other topics in the SEA, including water, soil and geology, land use, and climate change.

1.2 Summary of Plans and Programmes

1.2.1 International

The UK is a signatory (along with another 189 parties) to the **Convention on Biological Diversity** , Nagoya, Japan, 2010 which sets out a conservation plan to protect global biodiversity, and an international treaty to establish a fair and equitable system to enable nations to co-operate in accessing and sharing the benefits of genetic resources. The new global vision is: 'By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.' The parties also agreed a shorter-term ambition to 'Take effective and urgent action to halt the loss of biodiversity, [so] that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication'.

In March 2010, the European Union (EU) agreed to **an EU vision and 2020 mission for biodiversity**:

- By 2050, EU biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity's intrinsic value and for their

[1] The convention uses this definition to describe 'biological diversity' commonly taken to mean the same as biodiversity.

essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided;

- Halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restore them insofar as is feasible, while stepping up the EU contribution to averting global biodiversity loss.

The European Commission adopted a new **EU Biodiversity strategy** to help meet this goal. The strategy provides a framework for action over the next decade and covers the following key areas:

- Conserving and restoring nature
- Maintaining and enhancing ecosystems and their services
- Ensuring the sustainability of agriculture, forestry and fisheries
- Combating invasive alien species
- Addressing the global biodiversity crisis

There are a number of EU Directives focusing on various types of wildlife and habitat that provide a framework for national action and international co-operation for conservation on land and in the sea. In particular the ***Habitats Directive*** and ***Birds Directive*** include measures to maintain or restore important natural habitats and species including through the designation of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These Directives are transposed into British law through a number of regulations and planning policy documents. The ***Freshwater Fish Directive*** includes a measure of the quality of fresh waters needing protection or improvement in order to support fish life.

The ***Marine Strategy Framework Directive (2008/56/EC)*** requires Member States to develop a marine strategy, including determining Good Environmental Status (GES) for their marine waters, and designing and implementing programmes of measures aimed at achieving it by 2020, using an ecosystem approach to marine management. It takes account both of socioeconomic factors and the cost of taking action in relation to the scale of the risk to the marine environment. Draft regulations establish a legal framework which assigns duties to the Secretary of State, Welsh and Scottish Ministers and the Department of the Environment in Northern Ireland have been published for consultation.

Under the ***Ramsar Convention***, wetlands of international importance are designated as Ramsar Sites. As a matter of policy, Ramsar sites in England are protected as European sites. The vast majority are also classified as SPAs and all terrestrial Ramsar sites in England are notified as Sites of Special Scientific Interest (SSSIs).

1.2.2 National

UK

The Wildlife and Countryside Act (1981) is the main UK legislation relating to the protection of named animal and plant species includes legislation relating to the UK network of nationally protected wildlife areas: Site of Special Scientific Interest (SSSIs[2]). Under this Act, Natural England now has responsibility for identifying and protecting the SSSIs in England. The ***Countryside and Rights of Way Act (2000)*** (CROW) strengthens the powers of Natural England to protect and manage Sites of Special Scientific Interest. The CROW Act improves the legislation for protecting and managing SSSIs so that:

- Natural England can change existing SSSIs to take account of natural changes or new information;
- all public bodies have a duty to further the conservation and enhancement of SSSIs;
- neglected or mismanaged sites can be brought into favourable management;
- new offences and heavier penalties now apply to people who illegally damage SSSIs.

The ***UK Biodiversity Action Plan (1994)*** was the UK Government's response to signing the Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. The CBD called for the development and enforcement of national strategies and associated action plans to identify, conserve and protect existing biological diversity, and to enhance it wherever possible. The UK Biodiversity Action Plan was then established to conserve and enhance biodiversity in the UK through the use of Habitats and Species Action Plans to help the most threatened species and habitats to recover and to contribute to the conservation of global biodiversity. The plan set out a programme for conserving the UK's biodiversity. It also led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that meet the BAP criteria at UK level. As well as having national priorities and targets, action was taken at a local level to create Local Biodiversity Action Plans (LBAPS). These identify local priorities for biodiversity conservation and work to deliver agreed actions and targets for priority habitats and species and locally important wildlife and sites.

Conserving Biodiversity – The UK Approach (2007) sets out an approach to halt UK biodiversity loss by 2010 using an integrated framework of an Ecosystem Approach[3]. Key targets include:

[2] As amended by the *Countryside and Rights of Way (CROW) Act 2000* and the *Natural Environment and Rural Communities (NERC) Act 2006*

[3] The Convention on Biological Diversity (http://www.cbd.int/ecosystem/) defines the Ecosystem Approach as *'a strategy for the integrated*

- for 95% of SSSIs to be in favourable or recovering condition by 2010;
- to halt the loss of biodiversity by 2010; and
- to reverse the long-term decline in the number of farmland birds by 2020

More recently the ***Conservation of Habitats and Species Regulations (2010)*** requires that sites of importance to habitats or species are to be designated and any impact on such sites or species must be considered in regards to planning permission applications.

The ***Environmental Protection Act (1990)*** sets out key statutory requirements for the UK regarding environmental protection (including waste and nature conservation).

The ***Marine and Coastal Access Act (2009)*** sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. The ***Offshore Marine Conservation (Natural Habitats, &c.) Regulations (2007)*** apply in the 'offshore area' beyond 12 nautical miles from the UK coast. They provide protection for a variety of marine species and wild birds through a number of offences that aim to prevent damaging activities affecting protected species and habitats.

The ***National Parks and Access to the Countryside Act (1949)*** aims to conserve and protect countryside and National Parks through legislation.

The ***Offshore Marine Conservation (Natural Habitats, &c.) Regulations (2007)*** apply in the 'offshore area' beyond 12 nautical miles from the UK coast. They provide protection for a variety of marine species and wild birds through a number of offences that aim to prevent damaging activities affecting protected species and habitats.

England

The Natural Environment and Rural Communities (NERC) Act (2006) establishes Natural England as the main body responsible for conserving, enhancing and managing England's natural environment. It also covers biodiversity, pesticides harmful to wildlife and the protection of birds.

The ***Natural Environment White Paper (2011)*** recognises that nationally, the fragmentation of natural environments is driving continuing threats to biodiversity. It sets out the Government's policy intent to:

- improve the quality of the natural environment across England;

management of land, water and living resources that promotes conservation and sustainable use in an equitable way.'

- move to a net gain in the value of nature;
- arrest the decline in habitats and species and the degradation of landscapes;
- protect priority habitats;
- safeguard vulnerable non-renewable resources for future generations;
- support natural systems to function more effectively in town, in the country and at sea; and
- create an ecological network which is resilient to changing pressures.

By 2020, the Government wants to achieve an overall improvement in the status of the UK's wildlife including no net loss of priority habitat and an increase of at least 200,000 hectares in the overall extent of priority habitats. Under the White Paper, the Government has also put in place a clear institutional framework to support nature restoration which includes Local Nature Partnerships creating new Nature Improvement Areas (NIAs).

Biodiversity 2020: A strategy for England's wildlife and ecosystem (2011) is a new biodiversity strategy for England that builds on the Natural Environment White Paper and provides a comprehensive picture of the Government is implementing the international and EU commitments. It sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea.

The ***National Planning Policy Framework (NPPF) (2012)*** replaces the majority of previously used planning policy including Planning Policy Statement 9 on Biodiversity and Geological Conservation. The NPPF includes key policies to ensure the planning system contributes to and enhances the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and

- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The Framework states that, when preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Local planning authorities are expected to set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity or landscape areas will be judged. In doing so they must take into account the policies in the Framework including those which set out the circumstances where in order to conserve and enhance biodiversity planning permission should be refused.

1.2.3 West Midlands Regional Plans

There are 157 Local Biodiversity Action Plans (LBAPs) in England, of which six relate to the West Midlands[4] (as at March 2011):

- Birmingham & Black Country LBAP
- Herefordshire LBAP
- Shropshire LBAP
- Staffordshire LBAP
- Warwickshire LBAP
- Worcestershire LBAP

LBAPs are normally prepared and coordinated at the county level. The plans usually include actions to address the needs of the UK priority habitats and species in the local area, together with a range of other plans for habitats and species that are of local importance or interest.

1.3 Overview of the Baseline

1.3.1 England

There are over 4,100 SSSIs in England, covering 1,076,986ha (including open water and coastal

[4] http://www.wmbp.org/about_the_partnership

habitats). In terms of land area, approximately 8% of England is designated as SSSI.[5]

In England there are 250 SACs, 85 SPAs and 74 RAMSAR sites.[6]

As at 01 May 2012 the overall condition of SSSIs in England was assessed by Natural England to be 37.25% as area favourable; 59.4% area unfavourable recovering; 2.21% area unfavourable no change; 1.11% area unfavourable declining and 0.03% area destroyed/part destroyed.[7] The reasons for adverse conditions at sites are set out in **Table 1.1**. This indicates that planning permission (general) was linked to 0.93% of the area not meeting the Natural England Public Service Agreement (PSA) targets and planning permission (mineral and waste) 0.25%.[8] Whilst these targets have been superseded, the were linked to delivering the commitments in the 2007 Conserving Biodiversity Strategy such as the requirement to have 95% of SSSIs to be in favourable or recovering condition by 2010.

Table 1.1 Reasons for Adverse Condition Summary

Reason for adverse condition	Percentage of unit area not meeting the PSA target	Reason for adverse condition	Percentage of unit area not meeting the PSA target
Inappropriate scrub control	14.46%	Fire - other	1.73%
Under-grazing	13.95%	Inappropriate coastal management	1.71%
Overgrazing	11.66%	Vehicles - other	1.68%
Water pollution - agriculture/run off	11.31%	Moor burning	1.62%
Inappropriate water levels	10.48%	Earth science feature obstructed	1.51%
Invasive freshwater species	8.75%	Vehicles - illicit	1.33%
Forestry and woodland management	5.90%	**Planning permission - general**	0.93%
Drainage	5.27%	Inappropriate css/esa prescription	0.79%
Coastal squeeze	5.16%	Sea fisheries	0.71%
Inappropriate weirs dams and other structures	4.46%	Air pollution	0.60%
Inappropriate weed control	4.28%	Peat extraction	0.50%
Water pollution – discharge	4.25%	Inland flood defence works	0.40%

[5] Natural England http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/sssi/default.aspx

[6] JNCC Protected sites http://jncc.defra.gov.uk/page-1456

[7] http://www.sssi.naturalengland.org.uk/special/sssi/reportAction.cfm?Report=sdrt15&Category=N&Reference=0

[8] http://www.sssi.naturalengland.org.uk/special/sssi/reportAction.cfm?Report=sdrt17&Category=N&Reference=0

Reason for adverse condition	Percentage of unit area not meeting the PSA target	Reason for adverse condition	Percentage of unit area not meeting the PSA target
Inappropriate cutting/mowing	3.95%	Game management - pheasant rearing	0.35%
Deer grazing/browsing	3.60%	Game management - other	0.32%
Public access/disturbance	3.30%	Inappropriate dredging	0.25%
Inappropriate ditch management	3.19%	**Planning permission - other mineral and waste**	0.25%
Siltation	3.06%	Inappropriate pest control	0.22%
Fish stocking	2.75%	Earth science feature removed	0.14%
Fertiliser use	2.67%	Inappropriate stock-feeding	0.09%
Water abstraction	2.06%	Pesticide/herbicide use	0.04%
Agriculture – other	1.77%	Other	14.07%

1.3.2 West Midlands

Despite its industrial past, 80% of the West Midlands is rural, with 75% as agricultural land. The cover of semi-natural habitat is very low (6%). Only London region has less. Despite this, the region has nationally significant proportions of several important habitats, including 20% of England's lowland meadows, 10% of England's broadleaved woodland and 9% of the wood pasture and parkland, lowland heathland and acid grassland[9].

Most of the best wildlife sites are small and isolated, but there are better connected networks of habitats in the upland regions, along the river valleys, in wooded landscapes such as the Wyre Forest, and in the heathlands of Cannock Chase. Fourteen such areas, including the Malvern Hills, Woolhope Dome and Staffordshire Moorlands, are identified as Biodiversity Enhancement Areas.

Internationally designated sites

The West Midlands hosts 17 Special Areas of Conservation, and 2 Ramsar sites as listed in **Appendix G**. These sites are subject to the highest level of protection.

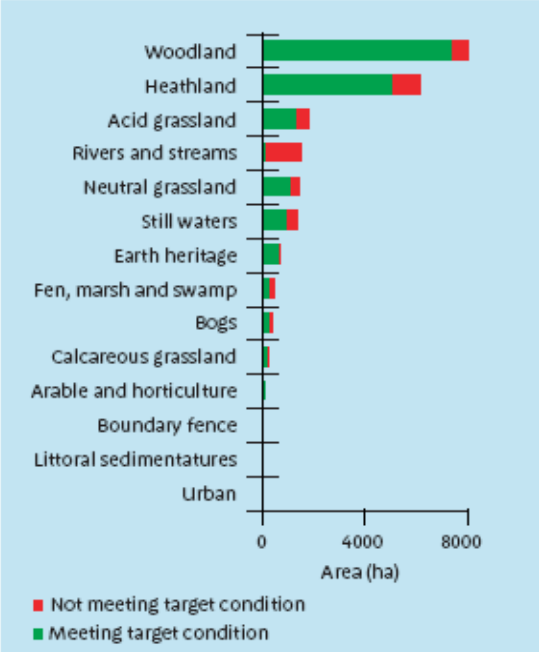
[9] Natural England (2009) State of the natural environment in the West Midlands

SSSIs

Sites of Special Scientific Interest (SSSIs) cover around 28,000 hectares of the region (around 2%), the lowest cover of any region. Although they cover a smaller area than in any other region, by number (442) they account for 10% of all England's SSSIs. Many of the SSSIs are small and isolated, reflecting the fragmentation of the wider biodiversity resource and making them particularly vulnerable to external pressures.

SSSI condition has improved significantly over recent years. In May 2012, 94% of this area was 'favourable' or 'recovering' condition[10]. This compares with 84% in 2009 and only 65% in 2004[11].

Figure 1.1 Condition of SSSI habitats



The condition of the rivers and freshwater habitats remains one of the most significant challenges for the future.

Whilst overall wild bird populations have remained broadly stable in England from 1970 to 2007,

[10] http://www.sssi.naturalengland.org.uk/special/sssi/reportAction.cfm?Report=sdrt18&Category=R&Reference=West+Midlands

[11] West Midlands Regional Assembly (2010) West Midlands Regional Spatial Strategy - Annual Monitoring Report 2009

farmland birds have not fared so well. Farmland bird numbers are now 52% lower than in 1966. Farmland birds have been adversely affected by changes in farming practices, particularly during the 1970s and 1980s. The West Midlands is one of only two regions with a continued significant decline in populations of farmland bird species, with the Farmland Bird Index falling 28% between 1994 and 2006.[12]

Biodiversity Enhancement Areas

Biodiversity Enhancement Areas are a designation originating from the regional strategy. Fourteen areas important for the concentrations of biodiversity have been identified and include areas such as the Shropshire Hills, Cannock Chase, and the Malvern Hills. They include both urban and remote rural areas, and range in size from a few parishes, such as the Woolhope Dome in Herefordshire, to the extensive upland habitats of the Staffordshire Moorlands on the edge of the Peak District National Park. They cover 25% of the Region but hold 70% of the Sites of Special Scientific Interest, 86% of the upland and lowland heathland, and 72% of the unimproved grassland. Their purpose is to complement the range of policy and delivery measures that protect and enhance biodiversity across protected sites and the wider environment. They are given priority within the Regional Spatial Strategy along with those for specific species and habitats identified in Biodiversity Action Plans, Strategic River Corridors and measures to ensure that the Region reaches or exceeds its share of the UKBAP targets[13].

1.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

The 2009 sustainability appraisal identified difficult challenges in relation to biodiversity in the region. The Region's plants and animals have suffered major declines in recent decades, and there are continuing pressures from changing land uses and more indirect factors such as climate change. The Region is endowed with a large number of sites sufficiently important to justify being designated for their value, including a range of sites which are of international importance. Growth and development in the Region had the potential to affect these sites in a variety of ways, and in addition can also affect internationally important sites some distance from the Region. It is a legal requirement that the RSS ensures that there are no significant adverse effects on these international sites.

Appendix G summarises the existing problems at sites designated for their international biodiversity importance. Many of the problems relate to the need for appropriate management. However, the integrity of the following sites is more closely linked to factors within the scope of the regional strategy.

[12] Natural England (2008)
[13] http://www.wmbp.org/landscapes_for_living/biodiversity_enhancement_areas

- **Cannock Chase SAC** – suitable air and soil quality
- **Cannock Extension Canal SAC** - maintaining good water quality and limiting physical disturbance or damage.
- **Downton Gorge SAC** – air quality
- **Fens Pools SAC** - water quality and quantity; development that reduces or fragments the available terrestrial habitats for newts; recreational disturbance.
- **Pasturefields Salt Marsh SAC** - quality of water supply
- **Peak District Dales SAC** – air quality
- **River Clun SAC** – water quality
- **River Mease SAC** - water supply and quality
- **South Pennine Moors SAC** - recreational pressure and disturbance, water quantity, air pollution
- **The Stiperstones and the Holley SAC** - air pollution
- **West Midlands Mosses SAC** - recreational disturbance
- **Wye Valley and Forest of Dean bat sites SAC** – disturbance
- **Humber Estuary pSAC** - water quantity and water quality
- **Severn Estuary pSAC** – recreational pressure and disturbance, water quality, water quantity
- **Peak District Moors (South Pennine Moors Phase I) SPA** - recreational pressure and disturbance, water quality, water quantity, air pollution
- **Humber Flats, Marshes and Coast (Phase I) SPA** - land take, recreational pressure and disturbance, water quality, water quantity
- **Severn Estuary SPA -** maintaining coastal processes and controls on large-scale human activities within the site, such as land reclamation, aggregate extraction and flood-defence construction
- **Midlands Meres and Mosses Phase I Ramsar Site** - water quality, recreational pressure and disturbance, water quality

- **Midlands Meres and Mosses Phase II Ramsar Site** – water quality, land take, recreational pressure and disturbance

- **Humber Flats, Marshes and Coast (Phase I) Ramsar Site** - water quality

More generally, although many of the region's habitats are fragmented or much reduced in extent the region still supports significant proportions of the following:[14]

Lowland meadows. Probably the most important habitat, the region supports approximately 20% of the total England resource, found particularly in Worcestershire but also across the whole region. Meadows are probably the most highly fragmented and most threatened of habitats in the region. Key sites include Mottley Meadows NNR in Staffordshire which still supports populations of snakes-head Fritillary one of the few locations for this plant outside the Thames Basin.

Lowland heathlands. The region supports approximately 9% of the total resource for England. Key species associated with this habitat include birds such as nightjar and woodlark; and insects such as the silver studded blue butterfly which occurs at Prees Heath, its most northerly location within the British Isles. Key sites can be found within Cannock Chase AONB within Staffordshire.

Lowland dry acid grassland occurs across the region particularly in the uplands, in Worcestershire and associated with heathland amounting to approximately 9 % of the England resource. On the Malvern Hills the nationally rare high-brown fritillary butterfly can be found in association with bracken, this species has suffered a dramatic decline recently and this is a national key location for this species.

Broad-leaved woodland. Approximately 10% of England's total resource survives within the region. This habitat can be found across the region. Although much has been replanted with conifers the slow process of reverting these woodlands back to native broadleaves has begun. Key sites include Wyre Forest, one of England's largest ancient lowland oak coppice woodlands this site supports England's largest population of pearl-bordered fritillary butterflies.

Lowland wood pasture and Parkland. Although no precise national inventory exists it is believed that the region supports 9% of the total resource for England. The ancient trees associated with this habitat along with the grazed habitat beneath are extremely important for invertebrates and lower plants such as fungi and lichen. Key sites include Moccas Park in Herefordshire, one of the largest and most diverse wood pastures in Britain, supporting a rich diversity of plants and animals including over 700 beetles, nineteen of which are national rarities.

[14] http://www.wmbp.org/condition_biodiversity_in_region

Open mosaic habitats on previously developed land. Areas in and around Stoke, Birmingham and the quarry workings within Warwickshire support valuable areas of this habitat which is an important resource for many scarce invertebrates, including a range of butterflies and moths (e.g. Dingy Skipper, Grizzled Skipper, Small Blue, Grayling, Chalk Carpet moth).

Rivers and canals are of particular importance for the wetland habitats associated with their floodplains particularly the wet grasslands that still support breeding waders but also reed beds and more diverse habitats such as the only inland saltmarsh within the country on the River Trent in Staffordshire. The river system is also important for a range of species not including allis shad and twaite shad which are known to spawn in the River Teme and Severn, and the Depressed river mussels which are under serious threat across Europe, but still survive in the River Teme and freshwater pearl mussels with a few scattered individuals across the Midlands. Birmingham supports over 100 miles of canals which are of importance for local wildlife and just outside Birmingham on the Cannock Extension canal the rare floating water plantain an internationally scarce plant can be found, potentially the most important population surviving within England.

Lowland raised bogs and fens found within the north of Staffordshire and Shropshire within the area know as the Meres & Mosses. Aqualate Mere is a key site important for its wintering waterfowl and breeding waders.

Traditional Orchards found predominantly within Herefordshire and Worcestershire are particularly important for their genetic variety and also for the range of invertebrates and lichens they support. Of particular note is the recent discovery of the golden eye lichen, a lichen believed to be extinct until its recent discovery in Herefordshire.

1.5 Summary of Existing Problems Relevant to Revocation of the Regional Strategy

The following existing problems for biodiversity have been identified in the West Midlands[15]:

- many of region's plants and animals have suffered major declines in recent decades, particularly those outside of designated sites;
- there is continuing pressure on biodiversity from land use change;

[15] Based on the 2010 final sustainability appraisal of the Phase 3 regional strategy revision and the Natural England State of the Environment report 2008.

- habitats are fragmented and there is a need for improved connectivity across the landscape;
- climate change.

As identified in section 1.4 above, there are a number of European sites within the region which are potentially susceptible to a range of pressures including air and water quality, recreational pressure and disturbance.

1.6 Likely Evolution of the Baseline

1.6.1 Likely Evolution of the Baseline - England

Results of the 2008 reporting round of the UK Biodiversity Action Plan indicate that in England:[7]

Habitats:

- 17% of priority habitats were increasing (compared to 24% in 2005);
- 12% of priority habitats were stable (compared to 12% in 2005);
- 12% of habitats were declining (continuing/accelerating) (compared to 2% in 2005);
- 24% of habitats were declining (slowing) (compared to 34% in 2005);
- 24% of habitats were fluctuating (compared to 7% in 2005); and
- the status of 10% of habitats was unknown (compared to 20% in 2005).

Species:

- 8% of species were increasing (no change since 2005);
- 22% of species were stable (no change since 2005);
- 24% of species were fluctuating (compared to 19% in 2005);
- 6% of species were declining (slowing) (compared to 8% in 2005);
- 8% of species were declining (continuing/accelerating) (compared to 10% in 2005);
- 3% of species were lost (pre BAP publication) (no change since 2005);
- 5% of species showed no clear trend (compared to 7% in 2005); and

- the status of 21% of species was unknown (no change since 2005).

In England, in 2009 over 80% of SACs and SPAs were in favourable or recovering condition. For the decade up to 2008, SSSI condition in England has experienced a dramatic improvement in the overall site condition over the last 10 years as a result of protection and management[16]. However, some species in particular continue to be impacted upon. The trend in populations of breeding wading birds on unprotected lowland wetland grasslands is towards a major decline.[17]

Despite the increase in area protected for its biodiversity there is concern that the protected site network as it exists is insufficient to protect biodiversity in England as a whole and that some species and habitats will be confined to these protected areas and more vulnerable to pressures and threats, including climate change.[18]

1.6.2 Likely Evolution of the Baseline – West Midlands

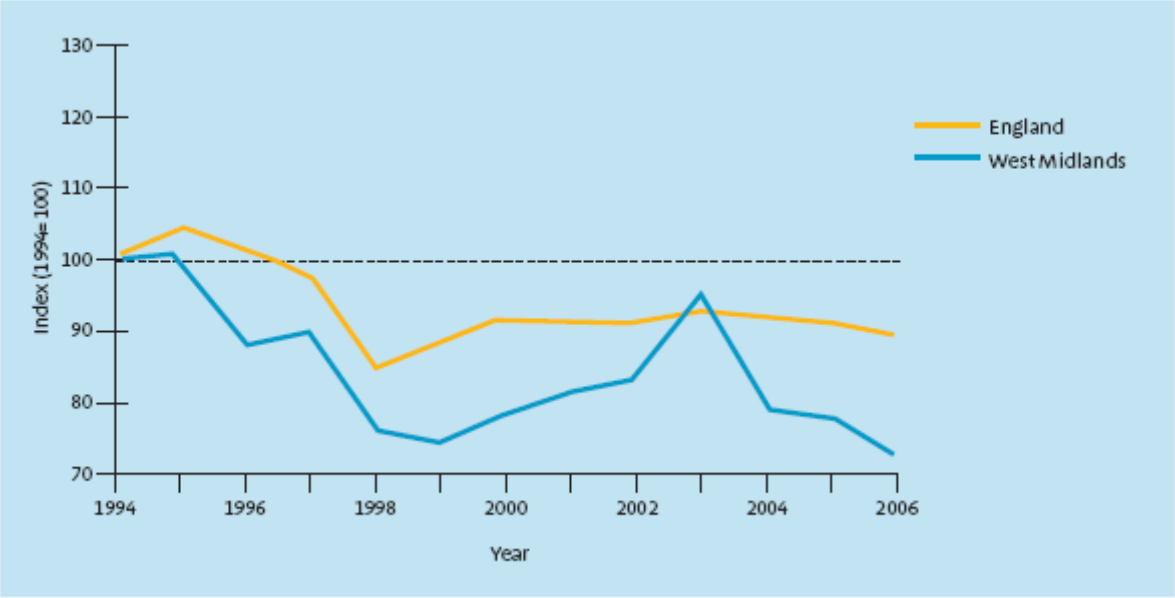
The SEA Directive requires a consideration of the evolution of the baseline without the proposed plan or programme being in place. Slightly confusingly in this assessment, 'without the proposed plan or programme' actually refers to the plan to revoke the regional strategy. So the evolution of the baseline without the plan will mean in this instance, the evolution of the baseline with the existing regional strategy in place.

Natural England's state of the natural environment report for the West Midlands identifies that declines in condition of biodiversity can be attributed to a range of factors, including inappropriate grazing regimes, agricultural intensification, inappropriate development, and high levels of phosphates and nitrates from both point and diffuse sources.

The West Midlands is one of only two regions with a continued significant decline in populations of farmland bird species, with the Farmland Bird Index falling 28% between 1994 and 2006 (**Figure 1.2**). The declines are of particular concern as the region still supports nationally important populations of specialist farmland birds such as corn bunting with hotspots for these species within south Warwickshire and central Shropshire[19].

[16] Natural England (2008) State of the Environment Report
[17] Joint Nature Conservation Committee, Protected Areas, http://www.jncc.gov.uk/page-4241)
[18] Lawton *et al* (2010) Making Space for Nature: A review of England's Wildlife Sites and Ecological Network
[19] http://www.wmbp.org/condition_biodiversity_in_region

Figure 1.2 Breeding Birds Index 1994-2006



Therefore, the assessment has used the findings of the 2010 sustainability appraisal and appropriate assessment to the West Midlands plan to provide an informed understanding of likely future evolution of the biodiversity/wildlife baseline.

Policy CC1 (climate change) seeks to enhance and extend natural habitats so that the opportunities for species migration are not precluded and biodiversity can adapt to climate change. This should have significant benefits to biodiversity, particularly in the longer term and for those species that require specific habitat features to facilitate migration.

Policy RR2 (The Rural Regeneration Zone) relates to a parts of the rural areas of Herefordshire, Shropshire and Worcestershire which are characterised by agriculture, market towns and villages and is rich in landscape, historic buildings and traditional crafts. As part of a package of measures to encourage renaissance of the area the policy places emphasis on promoting rural diversification, particularly in association with environmental improvement, the enhancement of biodiversity and the development and marketing of local food and other products. It also seeks to maintain and enhance the landscape (especially the three AONBs) and the natural (as well as the built and historic) environment. Policy RR3 (Market Towns) has a similar requirement to Policy RR2 in stating that development plans should normally prioritise, for each town, policies to improve the natural environment.

Policy PA6 (Portfolio of Employment Land) includes the requirement to take account of the need to protect and enhance the Region's natural environment when identifying suitable employment land.

Policy PA10 (Tourism and Culture) states that local authorities should identify those areas where the development of sustainable tourism can be encouraged to the benefit of the local economy and employment without damaging local environment or character. In doing so, they should assess the cumulative impact of tourism on the environmental assets (including biodiversity). This should reduce the pressures tourism can cause to biodiversity (e.g. from recreational pressure)

Policy QE1 (Conserving and Enhancing the Environment) identifies environmental improvement as a key component to the strategy to underpin the overall quality of life of all areas. It states that local planning authorities and other agencies should conserve and enhance those areas of the region including the Peak National Park, the five AONBs, and European wildlife sites. It also states that irreplaceable assets and those of a limited or declining quantity, which are of fundamental importance to the Region's overall environmental quality, such as specific wildlife habitats should be protected and where possible enhanced. This policy is key to the approach to conserving and enhancing the biodiversity resource of the region, as least in so far as the planning system has any influence.

Policy QE2 (Restoring degraded areas and managing and creating high quality new environments) seeks to ensure that the restoration and remediation of derelict and contaminated sites and reuse of buildings, has regard to the Region's biodiversity (and historic) assets.

Policy QE4 (Greenery, Urban Greenspace and Public Spaces) includes the requirement for development plan policies to create and enhance urban greenspace networks by linking new urban greenspace to the wider countryside to encourage the spread of species. This has the potential to significantly increase the biodiversity value of the region and contribute to species adaptation to climate change.

Policy QE6 (The conservation, enhancement and restoration of the Region's landscape), while focussing on the protection and enhancement of the landscape will also deliver gains to biodiversity.

The main policy in the regional strategy dealing with biodiversity is Policy QE7 (Protecting, managing and enhancing the Region's Biodiversity and Nature Conservation Resources). The policy states that all plans and programmes of local authorities and other relevant agencies should encourage the maintenance and enhancement of the region's wider biodiversity resources, giving priority to the protection and enhancement of specific species and habitats of international, national and sub-regional importance as identified in the West Midlands Regional Biodiversity Audit, Local Biodiversity Action Plans (LBAPs) and other BAPs; those that receive statutory protection; and the biodiversity enhancement areas shown on the Areas of Enhancement Diagram.

It also requires policies and proposals which enable the region to achieve its minimum share of the UK Biodiversity Action Plan (UKBAP) targets and the targets of local partnerships and other BAPs; and to take a common approach to biodiversity and nature conservation issues which cross local planning authority and Regional boundaries.

The supporting text explains that the areas for biodiversity enhancement identified in the strategy offer some of the best prospects for retaining environments with a rich and resilient biodiversity resource. The aim is to reinforce the ecological integrity by supporting existing biodiversity and landscape enhancement projects; buffering habitat units from adverse impacts; restoring and re-creating locally characteristic habitats; and expanding and linking isolated habitat units;

Policy QE8 (Forestry and Woodlands) seeks an increase in tree cover and the conservation and protection of woodlands, particularly ancient and semi-natural woodlands. The protection of ancient woodland, in particular, will conserve the important biodiversity resource they provide, while increasing can increase the biodiversity interest.

Policy QE9 (The Water Environment) includes provisions to protect and enhance wetland species and habitats, particularly those subject to local biodiversity partnerships.

Policy QE10 (Transforming the Environment of the Black Country) includes the requirement for local authorities and others to prepare and implement a joint Black Country Landscape Action Plan (incorporating a Canal Management Plan) based on the West Midlands' Green Infrastructure approach to define and deliver an integrated network of open spaces, waterways and canals; to protect and enhance topographical, biodiversity and historic assets.

Policy M1 (Mineral Working for Non-Energy Minerals) states that development plans should protect and seek improvements to biodiversity during the operational life of workings and include policies requiring that the restoration of mineral workings should contribute to local/regional biodiversity targets. As the supporting text recognises, in restoring sites, there may be opportunities to increase and enhance woodland cover, biodiversity and habitats, and has the potential to make significant contributions to meeting local and Regional biodiversity targets.

Taken together, the policies in the Regional Strategy, if properly implemented, underpinned by strong legal requirements and the National Planning Policy Framework would be most likely to contribute to a continuing improvement in the overall biodiversity resource in the West Midlands. It would not solve all of the problems for biodiversity, as this is mainly outside the control of the planning system.

1.7 Assessing Significance

Table 1.5 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the biodiversity objective. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 1.5 Approach to Determining the Significance of Effects on Biodiversity

Effect	Description	Illustrative Guidance
++	Significant positive	• Alternative would have a significant and sustained positive impact on European or national designated sites and/or protected species. (e.g. – fully supports all conservation objectives on site, long term increase in population of designated species) • Alternative would have a strong positive effect on local biodiversity (e.g. – through removal of all existing disturbance/pollutant emissions, or creation of new habitats leading to long term improvement to ecosystem structure and function). • Alternative will create new areas of wildlife interest with improved public access in areas where there is a high demand for access to such sites.
+	Positive	• Alternative would have a minor positive effect on European or national designated sites and/or protected species (e.g. – supports one of the conservation objectives on site, short term increase in population of designated species). • Alternative may have a positive net effect on local biodiversity (e.g. – through reduction in disturbance/pollutant emissions, or some habitat creation leading to temporary improvement to ecosystem structure and function). • Alternative will enhance existing public access to areas of wildlife interest in areas where there is some demand for such sites.
0	No (neutral effects)	• Alternative would not have any effects on European or national designated sites and/or any species (including both designated and non-designated species). • Alternative would not affect public right of way or access to areas of wildlife interest.
-	Negative	• Alternative would have minor short-term negative effects on non-designated conservation sites and species (e.g. – through a minor increase in disturbance/pollutant emissions, or some loss of habitat leading to temporary loss of ecosystem structure and function). • Alternative will decrease public access to areas of wildlife interest in areas where there is some demand for such sites.
--	Significant negative	• Alternative would have a negative and sustained effect on European or national designated sites and/or protected species (e.g. – prevents reaching all conservation objectives on site, long term decrease in populations of designated species). These impacts could not reasonably be compensated for. • Alternative would have strong negative effects on local biodiversity (e.g. – through an minor increase in disturbance/pollutant emissions, or considerable loss of habitat leading to long term loss of ecosystem structure and function).
?	Uncertain	• From the level of information available the impact that the Alternative would have on this objective is uncertain.

1.8 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 1.6 summarises the significant effects identified in the detailed assessment of the West Midlands Regional Spatial Strategy policies against the biodiversity topic.

Table 1.6 Significant Effects against the Biodiversity Topic

Regional Spatial Strategy Policy	Score			Commentary
	Short Term	Medium Term	Long Term	
QE1 Retention	++	++	++	Policy QE1 is the West Midlands Regional Strategy's overarching environmental quality policy, and states that environmental improvement is a key component of the Regional Strategy which underpins its overall approach improving the quality of life and supporting wider economic and social objectives. Policy QE1 also provides the policy context for environmental policies in the Regional Strategy such as QE3, QE9, EN1, EN2 and M3. One of its objectives is to enhance the environmental quality of the region's urban areas. Improving and conserving the region's environment will result in the expansion of wildlife habitats and will positively affect biodiversity, helping to restore range of species and populations within the West Midlands region.
QE1 Revocation	++	++	++	The legal requirement for local planning authorities to ensure that internationally and nationally designated sites are given the strongest level of protection and that development does not have adverse effects on the integrity of sites of European or international importance for nature conservation would be unchanged by revocation of policy QE1. The National Planning Policy Framework contains policies relating to green infrastructure and planning for climate change so as to mitigate the negative effects of development on biodiversity, which is set out in paragraph 99 of the National Planning Policy Framework are also relevant. The magnitude of any enhancement will depend on local circumstances and decisions, meaning that there could be uncertainty over the extent to which significant biodiversity enhancement could be delivered at a meaningful (i.e. landscape) scale over the longer term.
QE2 Retention	0	++	++	Policy QE2 is a generic and aspirational policy which encourages local authorities, agencies and local communities to work together to develop strategies to restore degraded land and promote a good quality built and natural environment. Associated with this approach is likely to be habitat and species enhancement.
QE2 Revocation	0	++	++	The National Planning Policy Framework provides full support for the remediation of contaminated and degraded land such that it is suitable for new uses, and as a minimum, not be capable of being determined as contaminated under Part 11A of the Environmental Protection Act 1990 (paragraph 109 and 121). However, the National Planning Policy Framework is silent on which remediation technologies should be preferred. The effects of revoking Policy QE2 are therefore uncertain, and will depend on whether local planning authorities support sustainable remediation above traditional methods. The likely effects on biodiversity remain positive but are uncertain.
QE7 Retention	++	++	++	The policy states that all plans and programmes of local authorities and other relevant agencies should encourage the maintenance and enhancement of the region's wider biodiversity resources, giving priority to the protection and enhancement of specific

Regional Spatial Strategy Policy	Score			Commentary
	Short Term	Medium Term	Long Term	
				species and habitats of international, national and sub-regional importance as identified in the West Midlands Regional Biodiversity Audit, Local Biodiversity Action Plans (LBAPs) and other BAPs; those that receive statutory protection; and the biodiversity enhancement areas shown on the Areas of Enhancement Diagram. It also requires policies and proposals which enable the region to achieve its minimum share of the UK Biodiversity Action Plan (UKBAP) targets and the targets of local partnerships and other BAPs; and to take a common approach to biodiversity and nature conservation issues which cross local planning authority and Regional boundaries.
QE7 Revocation	++	++	++	As indicated above, paragraph 109 of the NPPF states that the planning system should contribute to and enhance the natural environment including providing net gains to biodiversity where possible. It is expected that the duty to cooperate will assist local biodiversity action plan groups to continue to pursue the conservation and enhancement of the habitats and species they are interested in.

1.8.1 Effects of Revocation

The Government's aim, as announced in the Natural Environment White Paper is that by 2020, there will be an overall improvement in the status of wildlife. The planning system can make an important contribution to achieving these goals, although it has to be recognised that the most influence will come from land uses outside the control of the planning system, and in particular, agriculture, and will depend on the uptake and success of agri-environment schemes.

Key indicators for biodiversity are the number and extent of protected areas and their condition. In particular, the Natural Environment White Paper states that 90% of priority wildlife habitats are should be in recovering or favourable condition by 2020. There will be more, bigger, better and less-fragmented areas for wildlife, including no net loss of priority habitat and an increase of at least 200,000 hectares in the overall extent of priority habitats. At least 50% of Sites of Special Scientific Interest will be in favourable condition, while maintaining at least 95% in favourable or recovering condition.

According to the baseline figures, the 2020 target is very close to being achieved in the West Midlands (94% in favourable or recovering condition).

Revocation of the West Midlands Regional Strategy could, in theory, remove or reduce any such remaining potential for biodiversity improvements set out in policies contained in the Strategy. However, the NPPF together with legislation and wider national policies on biodiversity provides a strong framework for protecting the existing biodiversity resource. For example, given the continued application of the legal and policy protection given to European and Ramsar sites and to SSSIs and further

application of agri-environment schemes it is expected that revocation of the Regional Strategy would not change the positive direction of travel. Achievement of legally binding targets for water and air quality will also be significant contributory factors in improving the quality of areas important for wildlife, while enhanced provisions on aspects such as the delivery and protection of green infrastructure will play an important role in increasing the overall area with significant biodiversity value. Statutory and policy protection for AONBs and National Parks will continue to protect the biodiversity value with these areas, at least in so far as the planning system is concerned.

Despite these safeguards, it is far from certain that this would be the outcome and will depend on decisions taken by local authorities in consultation with their communities, and by businesses and other partners, on the future scale, nature and location of housing and other development in order to meet identified need. This is particularly the case with respect to non-designated sites and their associated biodiversity.

1.8.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The likely significant effects on biodiversity associated with the revocation of the quantitative policies are summarised in **Table 1.6** for Policies QE1, 2, & 7. The combination of legislative requirements for protecting biodiversity, the policy and guidance in the NPPF and the actions of other organisations (such as Natural England) as well the LPAs themselves creates a framework where the effects of revocation are considered to deliver similar positive benefits to biodiversity and nature conservation as retention.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

1.8.3 Effects of Retention

Assessment of the effects of retention of the Regional Strategy are predicated to the assumption that in the absence of the legislation and regional architecture enabling the updating of the Regional Strategy, the policies they contain will remain and become increasing outdated and in some cases in conflict with the national policies in the NPPF. They will therefore play an increasingly smaller role in plan making and development control over time.

However, as all the policies in the Regional Spatial Strategy identified to have significant effects on biodiversity are non-locationally specific, beneficial and seek to mitigate the adverse effects of development, and in most cases consistent with legal requirements, it can be assumed that the effects of retention will mirror the anticipated evolution of the baseline as set out in section 1.6.2 and are unlikely to be materially different from revocation.

1.9 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

1.10 Proposals for Monitoring

No specific monitoring is required other than that provided through the annual review of the NPPF and local plan AMRs.

2. Population

2.1 Introduction

In the absence of detailed SEA guidance on the content of the population topic, 'population' includes information on demographics and generic socio-economic issues. The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals on the plan to revoke on population and socio-economics. Information is presented for both national and regional levels.

There are links between the population topic and a number of other SEA topics, in particular the effects of population on human health, material assets, air quality and climate change.

2.2 Summary of Plans and Programmes

2.2.1 International

The United Nation's ***Aarhus Convention (2001)*** grants the public rights and imposes on Parties and public authority's obligations regarding access to information, public participation and access to justice. It contains three broad themes or 'pillars':

- access to information;
- public participation; and
- access to justice.

The ***SEA Directive*** creates the following requirements for public consultation;

- Authorities which, because of their environmental responsibilities, are likely to be concerned by the effects of implementing the plan or programme, must be consulted on the scope and level of detail of the information to be included in the Environmental Report. These authorities are designated in the SEA Regulations as the Consultation Bodies (Consultation Authorities in Scotland).
- The public and the Consultation Bodies must be consulted on the draft plan or programme and the Environmental Report, and must be given an early and effective opportunity within appropriate time frames to express their opinions.

- Other EU Member States must be consulted if the plan or programme is likely to have significant effects on the environment in their territories.

- The Consultation Bodies must also be consulted on screening determinations on whether SEA is needed for plans or programmes under Article 3(5), i.e. those which may be excluded if they are not likely to have significant environmental effects.

The ***European Employment Strategy*** seeks to engender full employment, quality of work and increased productivity as well as the promotion of inclusion by addressing disparities in access to labour markets. These overarching aims are further espoused in the ***Integrated Guideline for Growth and Jobs 2008-11*** and later documents relating policy objectives into broad actions for the member states (***A Shared Commitment for Employment***, 2009; and, ***Implementation of the Lisbon Strategy Structural Reforms in the context of the European Economic Recovery Plan***, 2009).

2.2.2 National

England

The ***Government's Housing White Paper "Laying the Foundations"*** sets out the Government's policies to support the housing market, especially house building. The Government believes that a well functioning housing market is vital to competitiveness and attractiveness to business. Housing is also seen as crucial to social mobility, health and well being – with quality and choice having an impact on social mobility and wellbeing from an early age. The Government is putting in place new incentives for housing growth through the New Homes Bonus, Community Infrastructure Levy and proposals for local retention of business rates.

The ***Local Growth White Paper (October 2010)*** sets out the Government overarching goal is to promote strong, sustainable and balanced growth. It restates the Government's role in providing the framework for conditions for sustainable growth by:

- creating macroeconomic stability, so that interest rates stay low and businesses have the certainty they need to plan ahead;

- helping markets work more effectively, to encourage innovation and the efficient allocation of resources;

- ensuring that it is efficient and focused in its own activities, prioritising high-value spending and reducing tax and regulatory burdens; and

- ensuring that everyone in the UK has access to opportunities that enable them to fulfil their potential.

The White Paper focuses on the approach to local growth proposing measures to shift power away from central government to local communities, citizens and independent providers. It introduced Local Enterprise Partnerships (LEPs) to provide a vision and leadership for sustainable local economic growth. The number of LEPs has increased to 39 from the 24 originally announced. Across England the LEP's are at different stages of establishment and are subject to further development and consultation. LEPs will be expected to fund there own day to day running costs but may wish to submit bids to the Regional Growth Fund (RGF). The RGF is a discretionary £1.4bn Fund operating for 3 years between 2011 and 2014 to stimulate enterprise by providing support for projects and programmes with significant potential for creating long term private sector led economic growth and employment and, in particular, help those areas and communities that are currently dependent on the public sector make the transition to sustainable private sector-led growth and prosperity.

There are a number of policies set out with the ***National Planning Policy Framework (NPPF) (2012)*** that set out how local planning authorities should plan for the supply of housing. The new policies explain that to boost significantly the supply of housing, local planning authorities should:

- use their evidence base to ensure that their Local Plan meets the full, objectively assessed housing needs;
- identify and update annually a supply of specific deliverable sites sufficient to provide five years worth of housing;
- identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15;
- provide a housing trajectory and set out a housing implementation strategy for the full range of housing; and
- set out their own approach to housing density to reflect local circumstances.

The policy outlines measures that local planning authorities should take order to deliver a wide choice of high quality homes, widen opportunities for home ownership and create sustainable, inclusive and mixed communities. The policy states that Local planning authorities should identify and bring back into residential use empty housing and buildings in line with local housing and empty homes strategies.

The Government's **planning policy for traveller sites (2012)** should be read in conjunction with the National Planning Policy Framework. The policy replaces Circular 01/2006: Planning for Gypsy and Traveller Caravan Sites and Circular 04/2007: Planning for Travelling Showpeople. The overarching aim of the new policy is to ensure fair and equal treatment for travellers, in a way that facilitates the traditional and nomadic way of life of travellers while respecting the interests of the settled community.

2.2.3 West Midlands Regional Plans

There are six Local Enterprise Partnerships in the West Midlands:

- Black Country LEP
- Coventry and Warwickshire LEP
- Greater Birmingham & Solihull LEP
- Marches LEP
- Stoke-on-Trent & Staffordshire LEP
- Worcestershire LEP

Their objectives are summarised in **Table 2.1**.

Table 2.1 West Midlands LEP Intention by Indicator[20]

Indicator	Black Country	Coventry & Warwickshire	Birmingham & Solihull	Marches	Stoke-on-Trent & Staffs	Worcestershire
Support for small scale enterprise	✓	✓	✓	✓	✓	✓
Support for enterprise start-ups	✓	✓	✓	✓	✓	✓
Support for social enterprise, community ownership		✓	✓	✓	✓	✓
Use/up-skill of local skills and labour	✓	✓	✓	✓	✓	✓
Decentralised energy schemes and energy efficiency	✓	✓	✓	✓	✓	✓
Support for food growing and for local supply chains for foodstuffs	✓			✓	✓	✓
Measures to reduce mileage for raw materials, products, people or services					✓	
Measures to maximise local resource use			✓		✓	✓

[20] Localise West Midlands (2001) Evaluation of West Midlands LEP proposals at: http://localisewestmidlands.org.uk/wp-content/uploads/LWM-evaluation-LEPS-Localisation.pdf

Indicator	Black Country	Coventry & Warwickshire	Birmingham & Solihull	Marches	Stoke-on-Trent & Staffs	Worcestershire
Support for industrial symbiosis/local reuse & recycling industries						
Support for general supply chain developing and linking activities			✓	✓	✓	
Measures to harness public and other large scale procurement to support local supply chains/SME's	✓		✓		✓	✓
Targeting geog. areas of need as well as of opportunity		✓	✓		✓	✓
International trade	✓					
Working with other LEPs	✓			✓		

2.3 Overview of the Baseline

2.3.1 UK

National Demographics

In mid 2010 the resident population of the UK was 62,262,000 in mid-2010[21] and 64.8% of the population was working age (aged 16 to 64) (65.8% males and 63.8% females).The working age population in 2010 was broken down as follows: [22]

- 77.0% economically active;
- 70.5% in employment;
- 8.2% unemployed.

The breakdown of qualifications of the working age population in 2010 was as follows;

[21] Office for National Statistics 2010 mid-year population estimates
[22] NOMIS, Official Labour Market Statistics, Annual Population Survey, 2010, https://www.nomisweb.co.uk

- 31.2% had NVQ4 and above;
- 50.9% had NVQ3 and above;
- 67.2% had NVQ2 and above;
- 80.1% had NVQ1 and above;
- 8.4% had other qualifications; and
- 11.6% have no qualifications.

In England and Wales, between 2008/09 and 2009/10 estimates from the British Crime Survey (BCS) indicate vehicle-related thefts fell by 17 per cent, burglary fell by 9% and violent crime fell by one per cent (**Table 2.2**). All BCS crime fell by 9%.

Table 2.2 Number of crimes recorded by the police in England and Wales:[23]

	2008/09	2009/10	Change
	Number of offences (thousands)		%
Vandalism	2,700	2,408	-11
Burglary	725	659	-9
Vehicle-related theft	1,476	1,229	-17
Bicycle theft	527	480	-9
Other household theft	1,155	1,163	1
Household acquisitive crime	3,883	3,531	-9
All household crime	6,583	5,939	-10
Theft from the person	725	525	-28
Other theft of personal property	1,096	1,036	-5
All violence	2,114	2,087	-1
Personal acquisitive crime	2,094	1,895	-9
All personal crime	3,936	3,648	-7
All BCS Crime	10,518	9,587	-9

In 2010/11, the UK had a total of 32,750 schools which were broken down as follows:

[23] Home Office, British Crime Survey in England and Wales 2009/10, http://rds.homeoffice.gov.uk/rds/pdfs10/hosb1210.pdf

- 3,130 nursery (138,300 students);
- 21.244 primary (4,922,000 students);
- 4,121 secondary (3,888,700 students);
- 1,293 special (102,800 students); and
- 427 pupil referral units (12,500 students).[24]

Total of 9,064,300 pupils at maintained schools and a further 589,800 at non-maintained schools).[24]

National Socio-Economic

In 2010 UK per capita Gross Value Added (GVA) was £20,476.[25] The 2010 headline estimates show that both total GVA and GVA per head at current basic prices have increased in all UK regions. In 2010, London's gross value added (GVA) per head of population was 71.1 per cent above the average for the United Kingdom (UK), while that of Wales was 26.0 per cent below the average.

In 2009 the median full-time gross hourly pay in UK was £12.43 (males' median being £13.09 and the female median being £11.42). This compares to £11.98 in 2008.[26] In the three months to July 2010 pay growth (including bonuses) rose by 1.2% in the private sector over the previous year compared with 2.7% for the public sector. Excluding bonus payments, growth in the private sector over the year was 1.3% compared with 2.8% for the public sector.[27]

In the period February - April 2012 the UK had a total of 29,280,000[28] people in employment aged 16 and over, up 166,000 on the quarter. The number of people employed in the private sector increased by 205,000 to reach 23.38 million but the number of people employed in the public sector fell by 39,000 to reach 5.90 million.

In February 2012 – April 2012, the UK had an unemployment rate of 8.2% (all people of working age). This is a reduction of 0.2% on the previous quarter and compares to the previous year when the UK had

[24] DCSF, Education and Training Statistics for the United Kingdom: 2011, http://www.education.gov.uk/rsgateway/DB/VOL/v001045/v02-2011c1v2.xls
[25] Regional, sub-regional and local gross value added 2010, http://www.statistics.gov.uk/pdfdir/gva1210.pdf
[26] NOMIS, Official Labour Market Statistics, Annual survey of hours and earnings - resident analysis https://www.nomisweb.co.uk/output/dn87000/{AFB7B1A5-142C-4D4F-BDE2-467C1389CB90}/nomis_2009_08_20_160703.xls
[27] ONS Labour Market Statistics, June 2012, http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/june-2012/index.html
[28] ONS Labour Market Statistics, June 2012, http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/june-2012/index.html

an unemployment rate of 5%.[29]

The recent UK recession has caused a downturn in many sectors and markets of the UK economy. UK gross domestic product (GDP) in volume terms decreased by 0.3 per cent in the first quarter of 2012, revised from a previously estimated decline of 0.2 per cent. Production industries fell by 0.4 per cent, within which manufacturing output was flat whilst the output the service industries rose slightly by 0.1 per cent.[30]

2.3.2 England

Demographic

In mid-2010 England had a resident population of 52,234,000 and 64.8% of the population is of working age (aged 16 to 64) split by gender, 65.8% males and 63.8% females.

In 2010 the working age population breakdown was as follows:

- 77.2% were economically active;
- 70.5% of working age population were in employment.
- 8.3% of working age population were unemployed.[31]

The working age population in 2010 had the following qualification breakdown:

- 31.1% have NVQ4 and above;
- 50.7% have NVQ3 and above;
- 67.0% have NVQ2 and above;
- 80.3% have NVQ1 and above;
- 8.6% have other qualifications; and
- 11.1% have no qualifications.[32]

[29] NOMIS, Official Labour Market Statistics, National Indicators, June-August 2009, https://www.nomisweb.co.uk/articles/news/files/LFS%20headline%20indicators.xls
[30] ONS, UK Snapshot, http://www.ons.gov.uk/ons/dcp171778_264972.pdf
[31] ONS Economic activity time series https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/subreports/nrhi_time_series/report.aspx?

In 2008/09, England had 24,737 schools:

- 438 nursery (37,200 students);
- 17,064 primary (4,074,900 students);
- 3,361 secondary (3,271,100 students);
- 1,058 special (85,500 students); and
- 458 pupil referral units (15,200 students).[33]

Socio-Economic

In 2010 England's per capita Gross Value Added (GVA) was 20,974.[34]

In 2011 the median full-time gross hourly pay in England was £12.85 (males' median being £13.44 and the female median being £12.00). This compares to £12.75 in 2010 and represents growth of 0.78% in nominal hourly total full time pay over the previous year. [35] In 2010, England had a total of 26,295,000 jobs.[36] In Feb 2008 - Jan 2010, England had an unemployment rate of 7.8% (all people of working age). This compares to the previous year when it had an unemployment rate of 6%.[37]

2.3.3 West Midlands

Demographics

In 2010, 5.5 million people were living in the West Midland region, which represents 10% of the English total[38]. The local area with by far the largest population in 2010 was Birmingham. The next most populous local authorities are Coventry and Dudley. **Figure 2.1** and **Table 2.3** illustrate how the population is distributed across local authority areas within the region.

[32] ONS https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/report.aspx
[33] DCSF, Education and Training Statistics for the United Kingdom: 2009, http://www.dcsf.gov.uk/rsgateway/DB/VOL/v000891/Chapter1.xls
[34] Regional, sub-regional and local gross value added 2010, http://www.ons.gov.uk/ons/rel/regional-accounts/regional-gross-value-added--income-approach-/december-2011/stb-regional-gva-dec-2011.html
[35] ONS: Earning by workplace https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/subreports/gor_ashew_time_series/report.aspx
[36] ONS https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/report.aspx
[37] ONS https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/subreports/nrhi_time_series/report.aspx
[38] Office for National Statistics, *Population estimates, mid 2010*, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-231847

Figure 2.1 West Midlands Population Distribution

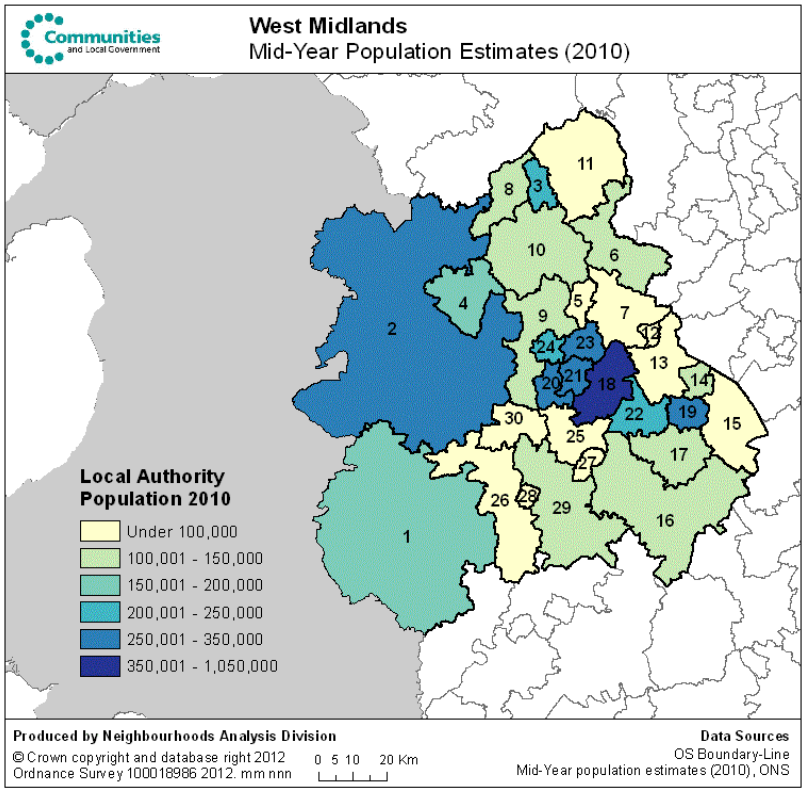


Table 2.3 Population by Authority 2010

1.	Herefordshire UA	179,297	16.	Stratford-on-Avon	118,985
2.	Shropshire UA	293,378	17.	Warwick	138,756
3.	Stoke-on-Trent UA	240,072	18.	Birmingham	1,036,878
4.	Telford and Wrekin UA	162,613	19.	Coventry	315,739
5.	Cannock Chase	94,674	20.	Dudley	307,362
6.	East Staffordshire	109,447	21.	Sandwell	292,799
7.	Lichfield	98,686	22.	Solihull	206,091
8.	Newcastle-under-Lyme	124,493	23.	Walsall	256,898
9.	South Staffordshire	106,592	24.	Wolverhampton	239,354

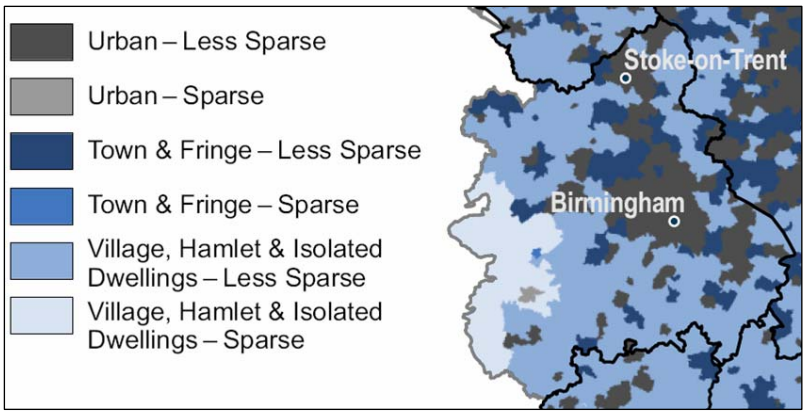
10.	Stafford	125,968	25.	Bromsgrove	93,441
11.	Staffordshire Moorlands	95,427	26.	Malvern Hills	75,381
12.	Tamworth	76,003	27.	Redditch	78,666
13.	North Warwickshire	61,872	28.	Worcester	94,763
14.	Nuneaton and Bedworth	122,181	29.	Wychavon	117,028
15.	Rugby	94,188	30.	Wyre Forest	98,147

Between 2000 and 2010 the population of the West Midlands grew by 4%, the fastest growth rate of all the English regions. The population increase was the result both of natural change and net inward migration.

The share of the population of the West Midlands aged 65 and over is slightly greater than in England as a whole (17.2% compared to 16.5%). There were proportionately fewer people aged between 16 and 64 than the England average of (63.5% compared to 64.8%).

The West Midlands is third most urbanised region, after London and the North West, in terms of the proportion of its population that lives in urban areas. On the basis of rural-urban classifications developed by the Office for National Statistics, just 15% of the population of the West Midlands lives in areas classified as rural[39], compared to around 19% for England as a whole. **Figure 2.2** illustrates this classification.

Figure 2.2 West Midlands Settlement Classification



Source: Office for National Statistics, Regional Trends 43

[39] Office for National Statistics (June 2011), *Regional Trends No. 43*, http://www.ons.gov.uk/ons/rel/regional-trends/regional-trends/no--43--2011-edition/index.html

Over the 10 years to 2020 the West Midlands is projected to be the fourth fastest growing region in England. Over this period the population of the West Midlands is expected to grow by almost 8%, or 436,000 people, reaching a total of 5.9 million[40]. This is likely to put continued pressure on the natural environment (including water resources), the character of the landscape and local environment to meet the regions housing need.

Population growth will be accompanied by changing age-structure of inhabitants. The age group expected to grow most in size is expected to be persons aged 65 or over. By 2020 this group will comprise 19% of the population of the West Midlands. This has implications for people of working age with responsibility for caring for older relatives.

All local authority areas in the region are projected to experience population growth between 2010 and 2020 but there will be significant local variation in the rate of increase. The fastest growing local authorities are projected to be Coventry, Rugby – where the population will expand by between 16% and 13% respectively. The city of Birmingham will become even more populous, with the number of inhabitants projected to grow by 110,000 (11%). On the other hand the population of Malvern Hills, South Staffordshire and Wyre Forest are expected to grow only by 3% over the period. Uneven population growth could mean environmental pressures are felt differently across different parts of the region.

Social Exclusion

Deprivation describes a broad range of economic and social issues including unmet needs caused by a lack of resources of all kinds. A measure of overall deprivation experienced by people living in an area is provided by the Index of Multiple Deprivation 2010, which is calculated for every Lower layer Super Output Area (LSOA) in England[41]. This index assesses seven aspects of deprivation:

- Income deprivation
- Employment deprivation
- Health deprivation and disability
- Education, skills and training deprivation
- Barriers to housing services
- Crime
- Living environment deprivation

[40] Office for National Statistics, *2010 based sub-national population projections for England*, http://www.ons.gov.uk/ons/dcp171778_259219.pdf

[41] These geographical areas have an average population of around 1,500

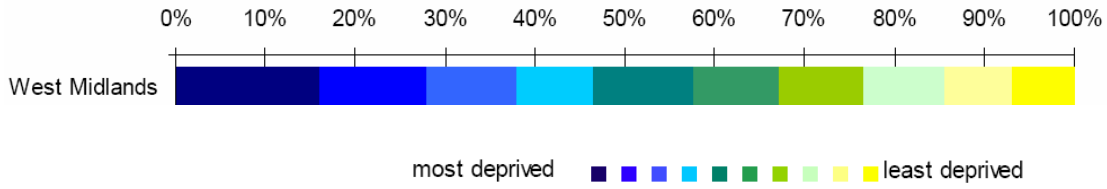
The West Midlands region is comprised of a total of 3,482 of LSOAs. Of these, 557, or 16%, are in the 10% most deprived of areas across England as a whole. This is an increase of 36 'most deprived' LSOAs between 2007 and 2010.

Many of the largest urban centres within the region contain areas with high levels of multiple deprivation. The metropolitan area of Birmingham has very high levels of severe multiple deprivation: 39.2% of LSOAs in the district fall in the most deprived 10% in England and 22.5% of LSOAs in the district fall in the most deprived 5% of LSOAs in England. The districts of Wolverhampton, Walsall and Sandwell all have severely deprived LSOAs. Further concentrations of severely deprived LSOAs are to be found in Coventry and Stoke-on-Trent.

The West Midlands is the region with the third highest number of children living in income deprived households (255,000) after London and the North West. The number of older people affected by income deprivation is 255,000, the third highest region after the North West and London.

Only 42.2% of LSOAs in the West Midlands region are in the 50% least deprived LSOAs, and just 14.3% of the region's LSOAs fall in the least deprived 20% of LSOAs in England (**Figure 2.3**).

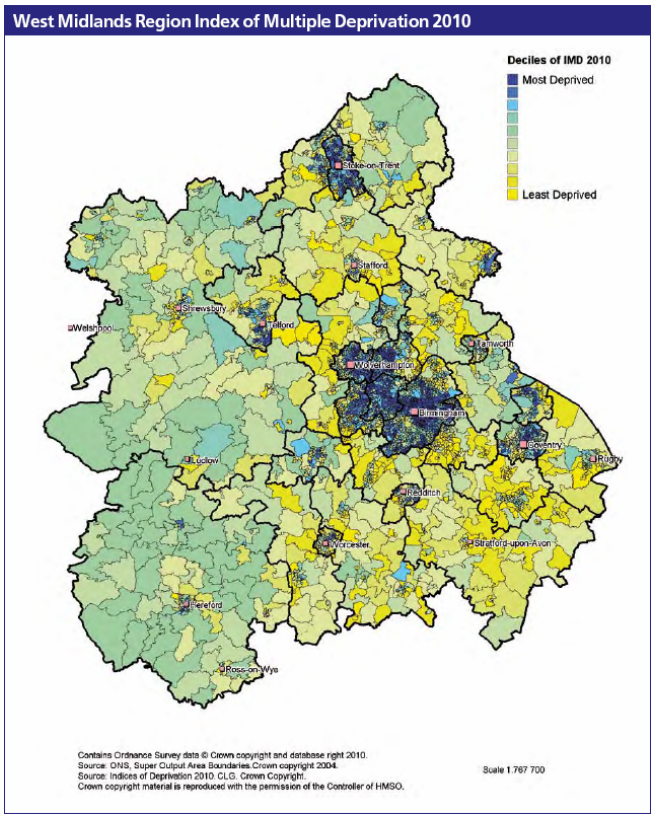
Figure 2.3 Proportion of LSOAs in West Midlands by IMD decile



These areas of relatively low deprivation are clustered in the southern parts around Stratford-upon-Avon and Hereford, and in the west of the region around Ludlow and Shrewsbury (**Figure 2.4**).[42]

[42] Department for Communities and Local Government (March 2011), *The English Indices of Deprivation 2010: technical report*, http://www.communities.gov.uk/publications/corporate/statistics/indices2010technicalreport

Figure 2.4 West Midlands IMD 2010



Source: Department for Communities and Local Government[43]

Access to services and employment

There is significant variation in access to basic services across the West Midlands. The average distance to these services ranges from 300 metres in part of Newcastle-under-Lyme to 7.5 kilometres in one part of Herefordshire[44]. The median for all LSOAs in the region is 1 kilometre. **Table 2.4** summarises the accessibility to key services of urban and rural areas by region, illustrating the relatively good performance of the East Midlands.

[43] Ibid

[44] Department for Communities and Local Government, *English Indices of Deprivation 2010: underlying indicators*, http://www.communities.gov.uk/publications/corporate/statistics/indices2010

Table 2.4 Accessibility in Rural and Urban Areas (May 2010) – residential delivery points within a specified distance of service (%)[45]

Region	Banks & Building Societies (4km)		GP surgeries (4km)		Post Offices (2km)		Primary Schools (2km)		Secondary Schools (4km)	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
East Midlands	14.1	69.7	23.4	71.0	22.3	68.8	25.0	70.6	14.8	69.8
East of England	13.5	67.8	23.4	69.3	22.8	66.2	24.8	68.9	13.8	68.2
London	0.0	99.8	0.1	99.9	0.1	99.4	0.1	99.8	0.0	99.8
North East	12.5	78.9	17.3	80.6	16.6	77.9	16.9	80.2	12.1	79.4
North West	7.2	87.6	9.3	88.4	9.0	86.7	10.0	88.2	6.8	87.9
South East	10.9	77.2	17.5	78.5	15.7	75.3	17.1	77.3	8.6	75.4
South West	16.9	65.2	25.4	66.2	25.5	63.5	28.8	65.4	14.5	65.1
West Midlands	6.3	83.1	10.8	84.6	10.7	82.9	11.7	84.2	7.1	83.9
Yorkshire & the Humber	10.7	79.3	16.3	80.4	15.9	79.0	17.1	80.1	10.5	79.1

The Annual Monitoring Report for the West Midlands RSS identifies the following key conclusions in respect of accessibility across the region, illustrating a high degree of reliance on the private car and significant intra-regional disparities in use of public transport:

- Data (2007/08) from the DfT shows that car travel comprises nearly four-fifths (77.9%) of the mileage undertaken in the Former Metropolitan Area and 87.3% of mileage in the Non-Metropolitan Area.
- The average commuting trip length has been declining since reaching a high in 1999/01. In the Metropolitan Area residents commuted 33% less distance (6.7 miles) than in the Rest of the Region (8.9 miles). The average distance commuted in the West Midlands in 2007/08 was 7.9 miles. This is an increase of 3.9% when compared to 2005/06.
- Mode of travel to work data, quoted in the Labour Force Survey in Regional Transport Statistics (2009), provides 2008 walking and cycling data. This shows that 2% of those in employment and living in the West Midlands cycled to work, compared to 3% for England as a whole. It also shows that 10% of those in employment and living in the West Midlands walked to work which was slightly below the level for England as a whole (11%).
- There is a considerable difference in public transport usage between the Former Metropolitan Area and the Rest of the Region with the number of trips made PPPA by public transport in the Former Metropolitan Area increasing from 126 to 137 trips PPPA or 8.7%, compared to a decline in the Rest

[45] Rural Services Data Series: Availability of Services by Region, 2010

of the Region from 60 to 46 trips PPPA or 23.3%. Whilst public transport trips PPPA declined in the Rest of the Region, mileage travelled by public transport PPPA increased by 7.2% (46 miles). Mileage travelled by public transport PPPA in the Former Metropolitan Area also increased over the same time period by 38.9% (272 miles).

Living Environment

An analysis of data on publicly accessible green spaces, including parks, nature reserves, millennium greens, sports pitches and allotments, carried out by the Commission for Architecture and the Build Environment analysis, finds that the West Midlands performs relatively poorly on quantity of green space [46]. There were an estimated 1.36 hectares of green space per 1,000 population, less than all other English regions apart from London. People in the West Midlands were found to frequent parks and green spaces less frequently than the average across the country.

According to estimates by the Campaign for the Protection of Rural England, the proportion of land in the West Midlands that is disturbed by noise and/or visual intrusion was 49% in 2007[47]. This had risen from 43% in the early 1990s and was approximately equal to the national average. Herefordshire and Shropshire had the greatest proportion of tranquil places of any counties in the region: 79% and 74% of their land area respectively. As might be expected given their urban nature Birmingham, Dudley, Coventry, Sandwell, Stoke-on-Trent, Wallsall and Wolverhampton were classified as zero percent undisturbed.

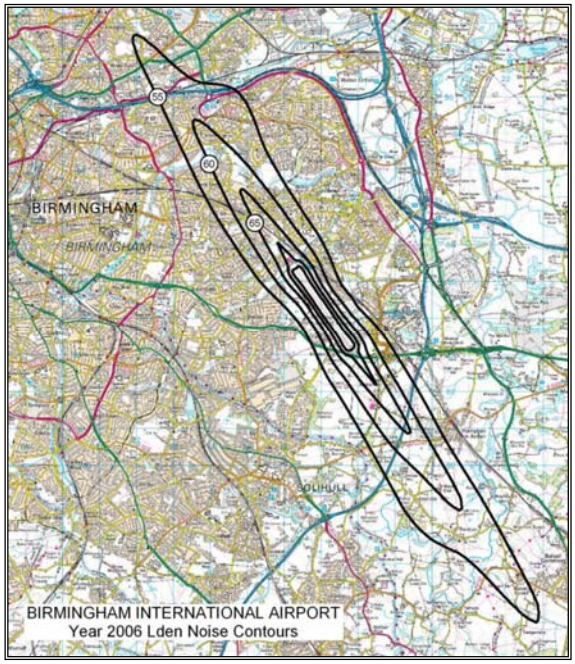
The West Midlands is home to the seventh busiest airport in the UK (Birmingham International Airport), located at Bickenhill in the Metropolitan Borough of Solihull, 10.2 km east southeast of Birmingham city centre . In 2011, according to the Civil Aviation Authority (CAA), 8.6 million passengers pass through the airport. This represented a 1 per cent increase on the previous year and resulted in around 93,145 aircraft movements in 2011[48]. With prospects for continued growth at Birmingham International Airport such levels of activity can affect the living environment through impacts on air quality, noise, waste and transport. Any future expansion of the airport would likely increase pressures on the surrounding environment.

Figure 2.5 shows how the area surrounding Birmingham International Airport is affected by aircraft noise. It plots 55 to 65 decibel equivalent continuous noise contours around the airport. In total the outer contour covers an area of 31 square kilometres along a North West to South East vector. Around

[46] Commission for Architecture and the Built Environment (2010), *Urban green nation: building the evidence base*, http://webarchive.nationalarchives.gov.uk/20110118095356/http:/www.cabe.org.uk/files/urban-green-nation.pdf
[47] Campaign for the Protection of Rural England, *Tranquil Places*, http://www.cpre.org.uk/resources/countryside/tranquil-places
[48] UK Airport Statistics 2011 - *annual Aviation Intelligence About the CAA*
http://www.caa.co.uk/default.aspx?catid=80&pagetype=88&sglid=3&fld=2011Annual

21,250 dwellings, home to 48,400 people are located within the contours. These dwellings experience average noise levels of at least 55 decibels. The population subject to higher noise levels is considerably lower: 15,300 people experience noise of 60 or more decibels and 2,200 people experience noise at level of 65 or more decibels. No dwellings are affected by levels of noise greater than 70 decibels.[49]

Figure 2.5 Birmingham International Airport noise exposure contours



Source: Birmingham Airport, *Noise Action Plan, 2010 - 2015*[50]

Sense of community

Across the West Midlands, peoples' satisfaction with local area is broadly the same as the average in England and Wales: around 82% of people in the region reported they were either 'very satisfied' or 'fairly satisfied' with their local area[51].

The number of crimes recorded per 100,000 population in the West Midlands was below the national

[49] Birmingham Airport, *Noise Action Plan, 2010 - 2015,* http://www.birminghamairport.co.uk/meta/about-us/environment/noise-management/noise-action-plan.aspx
[50] Ibid

[51] Department for Communities and Local Government, *2009-10 Citizenship Survey*, http://www.communities.gov.uk/publications/corporate/statistics/citizenshipsurvey200910spirit

average[52]. The rate of crime committed against households was close to the national average but certain categories of crime are more prevalent than in other places. For instance the West Midlands had the second highest rate of vandalism of any English region[53].

As in other areas of the country, public perception of crime is an ongoing issue. In the most recent Citizenship Survey, in 2009-10, 12% of respondents reported that they were 'very worried' about becoming a victim of crime. This suggests that people in the West Midlands are more fearful than any other region in England apart from London. A further 30% of people reported they were 'fairly worried' about being a victim of crime[54].

Housing and economy

Demographic pressures will give rise to considerable need for additional housing. In 2008, there were 2.2 million households in the region[55]. Between 2008 and 2023 the West Midlands is projected to experience a low rate of household growth compared to most other regions. Still, it is estimated that by 2023, when the population will have reached 6 million, the number of households living in the region will have grown by 12.6% to 2.5 million.

Figure 2.6 shows the percentage of households if different types in the Midlands in 2008, compared to the England average. It shows that the region has a lower proportion of one-person households (33%) than the national average (34%). The 'other' category, which includes lone parents without dependent children and households with two or more adults, also is also less common (making up 5% of households compared to 8% nationwide). A higher proportion of households in West Midlands are couples, either with or without dependent children and lone parents, than is the case nationwide.

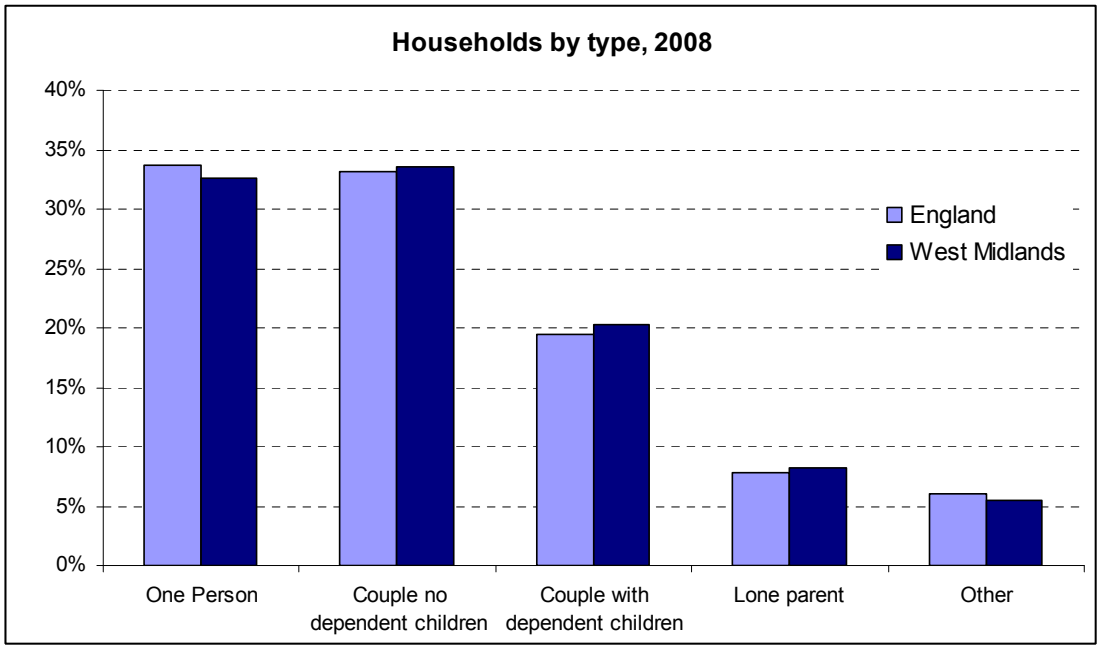
[52] Office for National Statistics (February 2012), *Region and Country Profiles: key statistics*, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-227575

[53] Home Office, *Crime Survey for England and Wales*, http://www.homeoffice.gov.uk/science-research/research-statistics/crime/crime-statistics/british-crime-survey/

[54] Department for Communities and Local Government, *2009-10 Citizenship Survey*, http://www.communities.gov.uk/publications/corporate/statistics/citizenshipsurvey200910spirit

[55] Department for Communities and Local Government, *Table 403: household projections by region*, http://www.communities.gov.uk/documents/housing/xls/140945.xls

Figure 2.6 West Midlands Households by Type



The region experienced a rapid rise in housing delivery from 11,200 in 2001-02 to a peak of 18,700 in 2005-06. After that the number of net additional dwellings per annum began declining and is now 46% below the peak[56]. Housing supply hit a low of only 10,000 in 2010-11.

The average energy efficiency rating new homes in the West Midlands has been gradually increasing over the last three years[57]. In the first quarter of 2012 new homes in the region had, on average, a SAP rating of 78.

Home ownership is still the most common form of housing tenure in the region, although the percentage of owner occupied dwellings has fallen from 70% in 2000 to 66% in 2010, in line with broader national trends. This is less than the England average of 65% dwellings being owner occupied. The proportion of dwellings rented from a council or housing association also declined over the period (from 23% to 19%), whilst the proportion of privately rented dwellings rose by 8 percentage points. In line with the national trend, the number of council houses in the West Midlands that failed to meet the Decent Homes standard has fallen substantially in recent years – to 13,300 or 6% of the stock by March

[56] Department for Communities and Local Government, *Table 118: Annual net additional dwellings*, http://www.communities.gov.uk/documents/housing/xls/118.xls
[57] Department for Communities and Local Government, *Code for sustainable homes and energy performance of buildings*, http://www.communities.gov.uk/publications/corporate/statistics/codesustainablesapq12012

2011[58].

House prices in the West Midlands were around 23% lower than the England average in 2011, at £164,000[59]. Prices in the region fell by 10% during the recent recession, on average and remain below the peak of £178,000 seen in 2007.

Affordability pressures have eased somewhat as a result of the recent house price falls. The ratio of lower quartile house price to lower quartile earnings – a measure of peoples' ability to afford to buy a house –was 6 in 2011, down from stood at 6.9 in 2007. This is lower than the England average affordability ratio of 6.5[60].

Housing affordability varies significantly from place to place within the region. In general housing tends to be least affordable in southern parts of the region. For instance the lower quartile affordability ratio in Stratford-on-Avon is 9.6 and in Malvern Hills it is 9.2. This compares to 3.5 in Stoke-on-Trent.

The number of households accepted as homeless by local authorities in the West Midlands rose 9% year-on-year to 8,730 in 2011[61]. This was a smaller percentage increase than seen across England as a whole (14%) and statutory homelessness remains around half the levels seen in the early 2000s. However, the rate of statutory homelessness per 1,000 households in the West Midlands (3.9) is higher than any other English region; the national average is 2,2 per 1,000 households. Despite this there were only 1,460 households living in temporary accommodation at the end of 2011; its usage was less common than in other regions[62].

Economically, the West Midlands performs below the English average. Its Gross Value Added (GVA) per head in 2010 was almost half of GVA of London, and the third lowest of all regions[63]. However, the economy in the East was hit hard by recession, with total GVA falling 2.8% between 2008 and 2009 (compared to 1.6% across England as a whole).

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[58] Department for Communities and Local Government, *2011 Business Plan Statistical Appendix*, http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/localauthorityhousing/dataforms/hssabpsa1011/bpsadatareturns1011/

[59] Department for Communities and Local Government, *Table 507: Housing Market: mix adjusted house prices*, http://www.communities.gov.uk/documents/housing/xls/2105102.xls

[60] Department for Communities and Local Government, *Table 576: ratio of lower quartile house prices to lower quartile earnings*, http://www.communities.gov.uk/documents/housing/xls/152924.xls

[61] Department for Communities and Local Government, *Table 772: Statutory homelessness,* http://www.communities.gov.uk/documents/statistics/xls/2102069.xls

[62] Department for Communities and Local Government, *Table 776: Statutory homelessness: households in temporary accommodation*, http://www.communities.gov.uk/documents/statistics/xls/2102081.xls

[63] Office for National Statistics (December 2011), *Regional Gross Value Added (Income Approach)*, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-250308

In April-June 2011, the proportion of workless households in the West Midlands was higher than England average (20.6% compared to 18.6%)[64] In the West Midlands 2.2% of households had never worked, compared to an England average of 1.8%. A higher proportion of children in the East (18.4 per cent) lived in workless households in the second quarter of 2011 than the England average of 15.7 per cent. The proportion of the working age population in the West Midlands claiming a key social security benefit was 16.5% in November 2011 – almost two percentage points higher than the average across Great Britain (14.7 per cent)[65].

The proportion of working households in the West Midlands was 50.3% in the second quarter of 2011, down from 53.6% in 2008 and lower than the England average of 53.5%[66]. In April 2011, median gross weekly earnings for full-time employees in the West Midlands were £470. This is below the UK average of £500 and 23% lower than in London (£610).

2.4 Environmental characteristics of those areas most likely to be significantly affected

2.4.1 National

Output in the UK economy has been largely flat for a year and half and was estimated to have contracted slightly in the past two quarters. There are weaknesses within domestic demand. Consumption fell, as the squeeze on real incomes continued and households saved more and business investment remained significantly below its pre-crisis level, held back by weak demand, heightened uncertainty and tight credit conditions. Growth in the rest of the economy was also estimated to be weak, with manufacturing and services output both broadly flat. However, business surveys, labour market developments and Bank of England reports all point to somewhat stronger activity in the first quarter, suggesting that the underlying picture is less weak.

Unemployment rates have been on a rising trend although in May 2012, this trend was abated slightly. Disadvantage continues to exist in communities, both in remote areas and inner cities.

2.4.2 West Midlands

The key issues for the region are identified as:

[64] Office for National Statistics (September 2011), *Working and workless households*, http://www.ons.gov.uk/ons/rel/lmac/working-and-workless-households/2011/index.html

[65] Nomis, *Official Labour Market Statistics*, https://www.nomisweb.co.uk/reports/lmp/gor/2013265926/report.aspx

[66] Office for National Statistics (September 2011), *Working and workless households*, http://www.ons.gov.uk/ons/rel/lmac/working-and-workless-households/2011/index.html

- In common with other regions, housing completions are significantly below that required to meet latent demand and address affordability issues.
- Continuing population growth is likely to exacerbate housing supply and affordability pressures, particularly in urban areas.
- The West Midlands is the third most urbanised region (after London and the North West), with significant pockets of deprivation and poor quality environment.
- Access to services is highly variable, reflecting the urban/rural contrasts of the region.

2.5 Likely evolution of the baseline

2.5.1 National

Demographic

The current UK population is generally increasing, and projected to reach 73.2 million by 2035. [67]

The age structure of the UK population is moving towards an ageing population: those of pensionable age are projected to increase by 28% from 2010 to 2035 (note that the pensionable age is to change over this period). Those aged between 15-64 years are projected to decrease from 62.1% to 60.5% of the population, whilst those under 16 are projected to decrease from 18.7% to 17.9% of the population by 2033. [67]

There are no formal targets for population growth in the UK (other than the recent intention to introduce non-EU immigration caps).

Socio-Economic

There are current uncertainties over market conditions and the range of economic forecasts available indicate a number of future scenarios. The Bank of England recently concluded that "*underlying growth is likely to remain subdued in the near term before a gentle increase in households' real incomes and consumption helps the recovery to gain traction. … The possibility that the substantial challenges within the euro area will lead to significant economic and financial disruption continues to pose the greatest*

[67] ONS, National Population Projections 2008-based, http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2010-based-projections/sum-2010-based-national-population-projections.html

threat to the UK recovery".[68]

2.5.2 England

Demographic

Between 2008 and 2033, the population of England is projected to increase from 51.46 million to 60.715 million, an increase of 17.9%. The number of children aged under 16 is projected to increase by 12.8% from 9.669 million in 2008 to 10.916 million by 2033; the number of people of working age is projected to increase by 7.7% from 33.503 million in 2008 to 36.101 million; the number of people of pensionable age is projected to rise by 65.2% from 8.289 million in 2008 to 13.697 million.[69]

Socio-Economic

No GDP values for England were available but trends will closely match that of the UK as a whole.

2.5.3 West Midlands

Over the 10 years to 2020 the West Midlands is projected to be the fourth fastest growing region in England. Over this period the population of the West Midlands is expected to grow by almost 8%, or 436,000 people, reaching a total of 5.9 million[70]. This is likely to put continued pressure on the natural environment (including water resources), the character of the landscape and local environment to meet the regions housing need.

Population growth will be accompanied by changing age-structure of inhabitants. The age group expected to grow most in size is expected to be persons aged 65 or over. By 2020 this group will comprise 19% of the population of the West Midlands. This has implications for people of working age with responsibility for caring for older relatives.

All local authority areas in the region are projected to experience population growth between 2010 and 2020 but there will be significant local variation in the rate of increase. The fastest growing local authorities are projected to be Coventry, Rugby – where the population will expand by between 16% and 13% respectively. The city of Birmingham will become even more populous, with the number of inhabitants projected to grow by 110,000 (11%). On the other hand the population of Malvern Hills,

[68] Bank of England, Overview of the Inflation Report May 2012 http://www.bankofengland.co.uk/publications/Pages/inflationreport/infrep.aspx

[69] General Register Office for Scotland population projections, http://www.scotpho.org.uk/home/Populationdynamics/Population/DataPagesofPopulation/Population_scotprojections.asp

[70] Office for National Statistics, *2010 based sub-national population projections for England*, http://www.ons.gov.uk/ons/dcp171778_259219.pdf

South Staffordshire and Wyre Forest are expected to grow only by 3% over the period. Uneven population growth could mean environmental pressures are felt differently across different parts of the region.

2.6 Assessing significance

Table 2.5 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the population objective. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 2.5 Approach to determining the significance of effects on population

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Alternative will provide a significant increase to housing supply above the current completion rate in the region, providing a wide choice of high quality homes for communities. • Alternative will provide a significant opportunity to create sustainable, inclusive and mixed communities. • Alternative will generate significant employment opportunities per annum, a large proportion of which will benefit local communities. • Alternative will facilitate significant long term investment in key regional sectors, specific localities or Nationally Significant Infrastructure Projects (NSIPs)
+	Positive	• Alternative will lead to an increase to housing supply above the current completion rate in the region, providing a wide choice of high quality homes for communities. • Alternative will provide opportunities to create sustainable, inclusive and mixed communities. • Alternative will generate employment opportunities, some of which will benefit communities within the region. • Alternative will facilitate long term investment in key regional sectors and specific localities.
0	No (neutral effects)	• Alternative will not affect the current rate of housing supply within the region. • Alternative will not affect the provision of opportunities to create sustainable, inclusive and mixed communities. • Alternative will not affect the creation of employment opportunities within the region. • Alternative will not affect long term investment in key regional sectors and specific localities.
-	Negative	• Alternative will lead to a decrease in housing supply below the current completion rate in the region, affecting the choice of homes for communities. • Alternative will reduce opportunities to create sustainable, inclusive and mixed communities. • Alternative will lead to a minor increase in unemployment. • Alternative will reduce the resilience and diversity of the regional and local economy. • Alternative will reduce the long term investment in key regional sectors and specific localities.

Effect	Description	Illustrative Guidance
--	Significant negative	• Alternative will lead to a significant decrease in housing supply below the current completion rate in the region, affecting the choice of homes for communities. • Alternative will significantly reduce opportunities to create sustainable, inclusive and mixed communities. • Alternative will lead to a significant sustained increase in regional unemployment and worklessness. • Alternative will significantly reduce the resilience and diversity of the regional and local economy • Alternative will significantly reduce the long term investment in key regional sectors and specific localities.
?	Uncertain	• From the level of information available the impact that the alternative would have on this objective is uncertain.

2.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 2.6 summarises the significant effects identified in the detailed assessment of the West Midlands Regional Spatial Strategy policies against the population topic.

Table 2.6 Significant Effects against the Population Topic

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
UR1: Implementing an Urban Renaissance: the MUAs	Revocation	+	+	+	Policy UR1 sets out the core overall strategic objective of the West Midlands Regional Strategy which is to implement an urban renaissance in the region's Major Urban Areas. Overall there are benefits across the SEA themes, but particularly for biodiversity, population and human health and climatic factors, through developing brownfield land and easing pressure on environmental capacity by concentrating development in existing Major Urban Areas, historic centres and settlements. The focus of the National Planning Policy Framework is on the delivery of sustainable development as set out in paragraph 6 and further in paragraphs 18 to 219 of the document. It is possible that removing the requirement to direct most strategically significant growth to the West Midlands Major Urban Areas and removing the target for the use of previously developed land could lead to less development within the Major Urban Areas, and result in less development of brownfield land. This could lead to more development on greenfield sites in the countryside around the region's Major Urban Centres.

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					There are potential benefits for biodiversity if it resulted in less development on those areas of brownfield land with high biodiversity value and benefits to human health where there were lower housing densities and more opportunities for green space within urban areas.
	Retention	+	+	++	The Regional Strategy recognised that the extent to which brownfield targets could be achieved by local authorities will vary across the region. For local authorities with limited previously developed land, there would be less potential for effects arising from revocation.
UR1A: Black Country Regeneration Policies	Revocation	++	++	++	Policy UR1A identifies the Black Country sub region in the West Midlands as a primary focus for regeneration activity, hence development and investment will be centred on four strategic centres and growth corridors in the Black Country. The specific locations of the centres and corridors will be defined in the Black Country Joint Core Strategy and Local Development Documents. Policy UR1A also states development and environmental enhancement should be planned for and encouraged in other locations across the Black Country which support local centres and communities, use suitable sites and be accessible by public transport. The revocation of policy UR1A will have no negative impacts. This is because the Black Country Joint Core Strategy prepared by the four Black Country local planning authorities (Dudley, Sandwell, Walsall, Wolverhampton) was adopted in February 2011. The Black Country Joint Core Strategy was prepared within the regional planning policy framework set out by policy UR1A in the West Midlands Regional Strategy. This has ensured that the sub regional high level strategic planning approach to promote the regeneration of the Black Country have effectively been coordinated by the four Black Country local planning authorities through their joint core strategy.
	Retention	++	++	++	Given the existence of the up to date Black Country Core Strategy, it is expected that the policy or variations of this policy through the implementation of the policies in the joint core strategy by the four Black Country local planning authorities will be delivered at the local level and the environmental effects of revocation would be the same as retention.
UR1B: Housing and Employment Land	Revocation	+	+	++	Policy UR1B states that within the growth corridors the Black Country Joint Core Strategy and Local Development Documents will define Employment Land Investment Corridors and lists four objectives the identification of the corridors should deliver, protect designated land for employment development, sites for mixed use development, development which is balanced and development should be supported by water cycle strategies so as too secure sustainable patterns of development. The revocation of policy UR1B will have no negative impacts. This is because the Black Country Joint Core Strategy prepared by the four Black Country Core local planning authorities (Dudley, Sandwell, Walsall, Wolverhampton) was adopted in February 2011. The Black Country Joint Core Strategy was prepared within

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					the regional planning policy framework set out buy policy UR1B in the West Midlands Regional Strategy. This has ensured that the sub regional high level strategic planning approach to promote the regeneration of the Black Country have effectively been coordinated by the four Black Country local planning authorities through their joint core strategy.
	Retention	+	+	++	Given the existence of the up to date Black Country Core Strategy, it is expected that the policy or variations of this policy through the implementation of the policies in the joint core strategy by the four Black Country local planning authorities will be delivered at the local level and the environmental effects of revocation would be the same as retention.
UR1C:Strategic Office Development in the Black Country	Revocation	+	+	++	Policy UR1C identifies the scale of B1(a) office floorspace required from 2004 to 2021 to support the regeneration of the Black Country which should be centred in the four strategic centres of Walsall, West Bromwich, Wolverhampton and Brierley Hill. Again to deliver this policy the four local planning authorities covering the Black Country will do so through their Black Country Joint Core Strategy and Local Development Documents The revocation of policy UR1C will have no negative impacts. This is because the Black Country Joint Core Strategy prepared by the four Black Country Core local planning authorities (Dudley, Sandwell, Walsall, Wolverhampton) was adopted in February 2011. The Black Country Joint Core Strategy was prepared within the regional planning policy framework set out in the West Midlands Regional Strategy. This has ensured that the sub regional high level strategic planning approach to promote the regeneration of the Black Country have effectively been coordinated by the four Black Country local planning authorities through their joint core strategy.
	Retention	+	+	++	Given the existence of the up to date Black Country Core Strategy, it is expected that the policy or variations of this policy through the implementation of the policies in the joint core strategy by the four Black Country local planning authorities will be delivered at the local level and the environmental effects of revocation would be the same as retention.
UR3: Enhancing the Role of City, Town and District Centres	Revocation	+	+	++/?	Revocation of the West Midlands Regional Strategy will mean that it will be for local planning authorities to determine the priorities and location for growth and regeneration, working with other local authorities, business partners and their communities in their town and city centres. The Localism Act places a Duty to Cooperate on local authorities and the National Planning Policy Framework sets out clear policy on the Duty to Cooperate at paragraphs 178-181. In addition the National Planning Policy Framework sets out that local plans will be examined by an independent inspector whose role is to (amongst other things) assess whether the plan has been prepared in accordance with the Duty to Cooperate. Any significant environmental effects of the proposed distribution of new development in the region's town, city and district centres should be identified and addressed through sustainability appraisal and strategic environmental assessment of local

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					authority's local plans. The National Planning Policy Framework does not contain a target for development on previously developed land. However, paragraph 111 of the National Planning Policy Framework encourages the effective use of land by re-using land that has been previously developed, provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land, which will impact on the future development of town and city centres in the region.
	Retention	+	+	++	Policy UR3 states that city, town and district centres and in particular those centres identified in the network of town and city centres in policy PA11, should be enhanced to play a leading role in urban renaissance programmes in order to provide services for local communities, a sense of identity and as drivers of economic growth. This policy identifies the key role of towns and cities in the West Midlands, the role they will play to host new development, where this development should be concentrated and delivered focusing on the 25 towns and cities identified in policy PA11 of the West Midlands Regional Strategy. The principles aims and types of development to be located in these 25 towns and cities are set out in policy PA11.
UR4: Social Infrastructure	Revocation	0	0	+/?	The National Planning Policy Framework paragraph 70 sets out policies to deliver the social, recreational and cultural facilities and services community needs. It states that local planning authorities should plan positively for the provision and use of shared space, community facilities (such as sports venues and cultural buildings), to enhance the sustainability of communities and residential environments. The consistency of the approach
	Retention	+	+	++/?	Policy UR4 is a generic policy encouraging local authorities, partners and community organisations etc in the West Midlands through Local Strategic Partnerships for example to work together to deliver the urban renaissance in the region. This will contribute to local regeneration and help deprived areas to achieve their full potential and contributing to maintaining and enhancing the built and historic character. Policy UR4 will help improve the management of the impacts of access and recreation as well as contribute to local regeneration and help deprived areas. It increases access to leisure facilities (including woodlands, parks, watercourses), improves the quality and quantity of publicly accessible green space and provides opportunities for people to come into contact with and appreciate the natural and built environment.
RR4: Rural Services	Revocation	0	+	++/?	The immediate effects of revocation are likely to be neutral. Local authorities will be required to deliver national policy as set out in the National Planning Policy Framework, including policies on promoting a competitive economy paragraphs 18-22, supporting a prosperous rural economy paragraph 28 and promoting sustainable transport paragraphs 29-32 which will all contribute to promoting the rural services required to support the regeneration

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					of rural areas. The transport element of policy RR4 sets out aspirations that fit well with the broad thrust of the National Planning Policy Framework, including its policy for rural areas. However most of the actions are outside the scope of spatial planning. Where planning decisions would be required, for example to improve transport facilities or to make road safety improvements, the policy sets no requirements or targets and identifies no specific schemes. Consequently it is uncertain what environmental effects would arise from revocation, but any difference in effect seems unlikely to be significant.
	Retention	+	+	++	Policy RR4 sets out a number of services which rural communities require to sustain a rural renaissance and sustainable forms of development in rural areas. Again these policy objectives should inform the preparation of local plans and Local Transport Plans by the region's local authorities. This policy recognises the key role Market Towns and other settlements in the region's rural areas play in providing services to rural communities, providing local housing and improvement to local services, whilst supporting economic diversification. Retention of policy RR4 would have positive environmental impacts by providing local housing and employment, reducing the need to travel and improving the quality of the local environment. Further policy RR4 seeks to ensure that transport contributes to addressing social and economic challenges in the region's rural areas. This policy, if implemented, will have positive effects on population and human health, through increased accessibility to local services and employment and reducing inequalities, and a positive impact on air through reduced need to travel.
CF1: Housing within Major Urban Areas	Revocation	++	++	++	Local planning authorities will determine their housing targets having regard to the policy on housing supply in the National Planning Policy Framework. This states that, to boost significantly the supply of housing, local planning authorities should use their evidence base to ensure that their local plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework. They should prepare Strategic Housing Market Assessment to assess their full housing needs, working with neighbouring authorities where housing market areas cross administrative boundaries. The Strategic Housing Market Assessment should identify the scale and mix of housing and the range of tenures that the local population is likely to need over the plan period which meets household and population projections, taking account of migration and demographic change; addresses the need for all types of housing, including affordable housing and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes); and caters for housing demand and the scale of housing supply necessary to meet this demand. Paragraphs 173-177 of the National Planning Policy Framework seek to ensure the viability and deliverability of housing which if successful will lead to a greater proportion of the houses planned for actually being

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					built over the plan period. There will be scope in the West Midlands to change the housing distribution between districts. Joint working in line with the Duty to Cooperate will enable local planning authorities to distribute, and where necessary constrain, housing growth in a way that aims not only to fit with needs in each housing market area but also to accord with specific policies in the Framework that indicate development should be restricted[71] (examples of which are given in the footnote on page 4 of the Framework). Consequently, whilst recognising uncertainties about possible impacts, it is reasonable to assume that higher overall provision closer to the latest projections (2008 figures) could be distributed in a way that would not have significantly different environmental effects, and might even be less harmful in some respects.
	Retention	++	++	++	The increased provision of housing will have a significant positive effect on human health, and seeks to accommodate housing needs in the most sustainable way within the region's Major Urban Areas whilst taking account of local housing conditions.
CF2: Housing Beyond the MUAs	Revocation	0	0	+	Devolving responsibility for housing and employment to local authorities is unlikely to result in significantly different effects to that intended by the policies set out in the West Midlands Regional Strategy. The provisions of the National Planning Policy Framework in respect of high quality design and the protection and enhancement of natural resources, for example, mean that there are safeguards in the manner in which development is realised. What is less predictable, however, is whether the provisions will be effective in areas of major change outside the region's Major Urban Areas where significant development will inevitably result in changes in landscape character and pressures on natural resources. Differences in the interpretation of the National Planning Policy Framework could result in discordant approaches to resource protection and enhancement in adjacent local authorities. Equally there could be a loss of momentum for the regeneration of specific settlements where significant additional development could be difficult to justify in the absence of demand. Provision for affordable housing and wider community infrastructure could be compromised.
	Retention	0	+	++	Focusing growth and regeneration based development outside the region's Major Urban Areas is likely to lead to important changes in the character of those settlements identified such as Worcester, Telford, Shrewsbury, Hereford and Rugby. Releasing housing land has the potential to have both positive and negative effects on the natural, cultural, built and archaeological heritage of these settlements. Housing development is likely to change the character of these settlements. The environmental policies in the West Midlands Regional Strategy should help to provide protection for these settlements. Provision of affordable housing

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					should be facilitated through the growth proposed. The viability and sustainability of urban communities are enhanced through the promotion of tourist, cultural and education developments in these five settlements. The policy contributes towards sustainability by developing in line with environmental and heritage considerations. The policy includes many objectives that help to contribute towards healthy lifestyles including reducing the need to travel which should help to promote walking and cycling. The policy will reduce health and welfare inequalities by coordinating the necessary infrastructure provision to support housing development outside the region's Major Urban Areas. This policy will maintain and enhance community facilities through further development and maintenance of existing infrastructure. The vitality of communities will be enhanced through careful development and enhancement of the local identity and character. Social cohesion will be positively impacted upon through economic regeneration, employment growth and provision of affordable housing. Increase in community empowerment will be dependent upon the response of the community to new development. The policy should help to promote healthy lifestyles through general regeneration of communities, improvement in skill levels and the provision of affordable housing. The public's health will be improved through improved provision in health and social care infrastructure, and improved access to green spaces.
CF3: Levels and Distribution of Housing Development	Revocation	0	+	++	The increased provision of housing, and particularly affordable housing is likely to lead to positive effects on the population and human health. However, this will also depend on related factors such as the quality of the houses, their density, location relative to green spaces and ambient air quality. Revocation of policy CF3 will not remove the need for more houses to be built within the West Midlands. Indeed it is Government policy is to boost significantly the supply of housing, for example through initiatives such as the Community Infrastructure Levy, New Homes Bonus and the local retention of business rates which are intended to encourage a more positive attitude to growth and allow communities to both share the benefits and mitigate the negative effects of growth. Paragraph 159 of the National Planning Policy Framework states that local planning authorities should have a clear understanding of housing needs in their area. They should prepare Strategic Housing Market Assessment to assess their full housing needs, working with neighbouring authorities where housing market areas cross administrative boundaries. The Strategic Housing Market Assessment should identify the scale and mix of housing and the range of tenures that the local population is likely to need over the plan period which meets household and population projections, taking account of migration and demographic change; addresses the need for all types of housing, including affordable housing and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes); and caters for housing demand and the scale of housing
	Retention	0	+	++	

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					supply necessary to meet this demand. Paragraphs 173-177 of the National Planning Policy Framework seek to ensure the viability and deliverability of housing which if successful will lead to a greater proportion of the houses planned for actually being built over the plan period. Paragraph 47 of the National Planning Policy Framework states that to boost significantly the supply of housing, local planning authorities should use their evidence base to ensure that their local plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period.
CF4: The Reuse of Land and Buildings for Housing	Revocation	+	++	++	The revocation of policy CF4 will have no effect because the policy had a specific time period in which to operate which was from 2001 to 2011, which has now expired. Further, the revocation of policy CF4 would not remove the requirement for local authorities to prepare local plans to be consistent with legal and national policy requirements on meeting obligations on carbon emissions, adopting a precautionary approach to climate change, maximising the potential for more sustainable relations and respecting environmental limits. Revocation of the brownfield targets may affect how local planning authorities direct development and preferential use of available brownfield land.
	Retention	+	++	++	Policy CF4 encourages local planning authorities to optimise the opportunities for recycling land and buildings for new housing development, contributing to the achievement of the West Midlands regional target of at least 76% of future housing provision being on previously developed land between 2001-2011. Encouraging regeneration through the use of brownfield land, creating an attractive environment in built up areas and environmental benefit by avoiding development in the countryside. Accessibility, reducing travel need in particular road transport with benefits for air quality and green house gas emissions. Reducing inequalities relating to access and transport all stem from the sustainable reuse of brownfield land and old building stock.
CF5: Delivering Affordable Housing and Mixed Communities	Revocation	++	++	++	Local plans prepared by local planning authorities will need to take account of the National Planning Policy Framework. Revoking this policy will simplify policy for users given the local plan will no longer have regional, sub-regional and local affordable housing targets. There is therefore potential uncertainty on the level of overall affordable housing supply in the region and it is possible that a different spatial distribution of affordable housing provision across the region will occur, which will have different environmental effects in the long term once all local plans are updated. As set out in paragraph 173 of the National Planning Policy Framework the provision of affordable housing in local plans depends on the financial viability and land availability within a local area to do so. This will be tested by other parties via local plan examination process. Therefore, the provision of affordable

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					housing and setting of target is a locally led and based decision making process. Local planning authorities are also expected to work together to meet the development needs of their local area.
	Retention	++	++	++	Policy CF5 seeks to promote the development of affordable housing and the creation of mixed communities, addressing housing needs in the most sustainable way whilst taking account of local housing conditions. Policy CF5 also states that local plans should make adequate provision for sites to accommodate gypsies and travellers so as to meet their accommodation needs. Making adequate provision for sites to accommodate gypsies and travellers will deliver positive effects to population and human health. It could also reduce or remove adverse effects arising from illegal pitch sites.
QE1: Conserving and Enhancing the Environment	Revocation	++	++	++	The legal requirement for local planning authorities to ensure that internationally and nationally designated sites are given the strongest level of protection and that development does not have adverse effects on the integrity of sites of European or international importance for nature conservation would be unchanged by revocation of policy QE1. The National Planning Policy Framework contains policies relating to green infrastructure and planning for climate change so as to mitigate the negative effects of development on biodiversity, which is set out in paragraph 99 of the National Planning Policy Framework are also relevant. The magnitude of any enhancement will depend on local circumstances and decisions, meaning that there could be uncertainty over the extent to which significant biodiversity enhancement could be delivered at a meaningful (i.e. landscape) scale over the longer term.
	Retention	++	++	++	Policy QE1 is the West Midlands Regional Strategy's overarching environmental quality policy, and states that environmental improvement is a key component of the Regional Strategy which underpins its overall approach improving the quality of life and supporting wider economic and social objectives. Policy QE1 also provides the policy context for environmental policies in the Regional Strategy such as QE3, QE9, EN1, EN2 and M3. One of its objectives is to enhance the environmental quality of the region's urban areas. Improving and conserving the region's environment will result in the expansion of wildlife habitats and will positively affect biodiversity, helping to restore range of species and populations within the West Midlands region.

2.7.1 Effects of Revocation

The overall effects of revocation are judged not to be significantly different from the retention of the Regional Strategy, given the provisions of the NPPF which largely reiterate the intention of Plan policies relating to environmental protection and enhancement. It is possible that removing the requirement to

direct most strategically significant growth to the Major Urban Areas and removing the target for the use of previously developed land could lead to less development within the Major Urban Areas, and result in less development of brownfield land. This could lead to more development on greenfield sites in the countryside around the region's Major Urban Centres. However, this is only a potential, long-term cumulative effect which is uncertain in occurrence and spatial impacts. The provisions of the NPPF in respect of environmental protection and sustainable development should help to address this issue. There are no specific targets relating to the provision of employment land or job creation, meaning that revocation is unlikely to have a significant effect on delivery of economic growth though Core Strategies given the guidance of the NPPF for evidence-based provision. The allocation of strategic sites could be less certain (with attendant potential implications for economic prosperity), but the Duty to Co-operate makes provision for attention to such strategic matters.

2.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The likely significant effects on population associated with the revocation and retention of the quantitative and spatially specific policies are summarised in **Table 2.6** for policies UR1, UR1A, UR1B, UR1C, CF1, CF2, CF3, CF4 and CF5. However, in no instances were the population effects associated with either the revocation or retention of these policies considered to be negative. The combination of NPPF guidance, LEP activities, existing joint working and the intention to increase housing supply, create employment and contribute to sustainable, inclusive and mixed communities, creates a framework where the effects of revocation are considered to deliver similar positive benefits to retention. However, the assessment did identify that revocation of some of the policies listed above would lead to less positive effects in the short to medium term compared with their retention (although the scores were still positive). These are policies UR1 and CF2.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

2.7.3 Effects of Retention

The overall effects of retention are judged to be positive or significantly positive for a range of policies which promote the targeted and balanced provision of housing and employment opportunities across the region. Focussing on the regeneration of the MUAs, those living in the most deprived areas stand to benefit from the provision of affordable housing and environmental enhancement. The West Midlands RSS places considerable reliance on Core Strategies for the delivery of its aspirations, and there would inevitably be variance in the local interpretation of policy, apart from compliance with regional housing delivery targets. Delivery of a consistent improvement in environmental quality is a key facet of the RSS and this is likely, though partnership working, to gain momentum as the Regional Strategy matures.

2.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

2.9 Proposals for Monitoring

No specific monitoring is required other than that provided through the annual review of the NPPF and local plan AMRs.

3. Human Health

3.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals to revoke the regional strategies on human health. Information is presented for both national and regional levels.

There are links between the human health and wellbeing topic and other topics in the SEA, specifically human health (noise), air, climate change and energy use, material assets (transport) and material assets (waste management).

3.2 Summary of Plans and Programmes

3.2.1 International

The World Health Organization (WHO)[72] states that *"health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels*; consequently, healthy public policy has been a main goal of health development in many countries. The ***Canadian Lalonde Report (1974)*** identified four health fields independently responsible for individual health: environment, human biology, lifestyle and health care organisation.

The WHO ***Children's Environment and Health Action Plan for Europe (CEHAPE) (2004)*** was launched in June 2004 and signed by all 53 Member States of the WHO European Region, including the UK. The aim of the CEHAPE is to protect the health of children and young people from environmental hazards.

The European Union has a Programme for Community action in the field of Health (2008-2013) and, on the 23/4R[d] October 2007 the Commission adopted a new overarching Health Strategy ***'Together for Health – A Strategic Approach for the EU 2008-2013***'. Community Action focuses on tackling health determinants which are categorized as: personal behaviour and lifestyles; influences within communities which can sustain or damage health; living and working conditions and access to health services; and general socio-economic, cultural and environmental conditions.

The ***SEA Directive*** adopted in 2001 specifically requires the consideration of "*the likely significant*

[72] See the Ottawa Charter adopted at the First International Conference on Health Promotion in 1986.

effects on the environment, including on issues such as …, human health, …" (European Parliament and the Council of the European Union, 2001). The SEA Protocol (United Nations Economic Commission for Europe, 2003) implements the political commitments made at the Third European Conference on Environment and Health and uses the term 'environment and health' throughout. It indicates that health authorities should be consulted at the different stages of the process and so goes further than the SEA Directive. Once ratified, it will require changes to the SEA Directive to require that health authorities are statutory consultees.

The WHO publication ***Health Impact Assessment in Strategic Environmental Assessment (2001)*** provides a review of Health Impact Assessment concepts, methods and practice to support the development of a protocol on Strategic Environmental Assessment to the Espoo Convention, which adequately covers health impacts.

3.2.2 National

UK

Many of the national level policies and strategies regarding health are aimed at understanding the trends and nature of health issues within the country, understanding the links between health issues and other related factors (such as economic status, etc.), and, primarily, at reducing the inequalities in health outlooks that are evident between different parts of the country and different sections of the population. Whilst some applicable policies/strategies are contained within adopted strategies, many of the Government's objectives and intended actions are contained within White Papers and guidance papers.

The Health Protection Agency's ***Children's Environment and Health Action Plan, a summary of current activities which address children's environment and health issues in the UK (2007)*** applies the objectives of CEHAPE (2004) to the UK context and ***A Children's Environment and Health Strategy for the United Kingdom (2009)*** provides recommendations from the Health Protection Agency to the UK Government as to how it best can meet its commitment to the CEHAPE.

England

In England, the Department of Health is the government department responsible for public health issues. Its work includes setting national standards, shaping the direction of health and social care services and promoting healthier living.

The NHS White Paper, ***Equity and excellence: Liberating the NHS (2010)*** sets out the Government's long-term vision for the future of the NHS and consists of three mutually-reinforcing parts:

- putting patients at the heart of the NHS;

- focusing on improving outcomes; and
- empowering local organisations and professionals.

***Liberating the NHS: Legislative framework and next steps (*2010)** is the Government's response to the consultation on the implementation of the White Paper and three further consultations: ***Commissioning for patients (2010)*, *Local democratic legitimacy in health (2010)* and *Regulating healthcare providers (2010)*.** In this document the Government's commitment to the White Paper reforms are reaffirmed and described in detail how developments in light of the consultation will be put into practice across the three parts identified in the white paper above.

The ***Health and Social Care Act (2012)*** enacts the proposals set out in the White paper and the subsequent rounds of consultation. The changes are designed to make the NHS more responsive, efficient and accountable, and capable of responding to future challenges. Key elements of the Act include: clinically led commissioning, service innovation, giving greater voice for patients, providing a new focus for public health, ensuring greater accountability and streamlining arms length bodies.

The Government's White Paper, ***Healthy Lives, Healthy People: Our strategy for public health in England (2010)*** recognises that the quality of the environment, including the availability of green space and the influence of poor air quality and noise, affects people's health and wellbeing. It details plans for a shift of power to local communities, including new duties and powers for local authorities to improve the health of local people. From April 2013, Directors of Public Health will be employed within upper tier and unitary local authorities. They will be able to influence local services, for example joining up activity on rights of way, countryside access and green space management to improve public health by connecting people with nature.

3.2.3 West Midlands

No relevant regional plans or programmes were identified under this topic.

3.3 Overview of the Baseline

3.3.1 National

UK

In the UK, during 2006-2008, life expectancy at birth was 77.4 years for males and 81.6 years for

females.[73]

In 2006-2008, 37% of males and 38% of females in the UK rated their health as good; 44% of males and 41% of females rated their health as very good. Consequently, around 19% to 21% of males and females in the UK felt that their health was less than good.[73]

In 2007 the main causes of death in the UK were diseases of the circulatory system, and neoplasms (cancers).[73] There are high levels of hypertension and overweight/obesity in the UK. Public health trends often correlate with deprivation and these figures for illness are invariably far less favourable in deprived areas. [74]

Deaths from respiratory diseases (including influenza, pneumonia, chronic lower respiratory disease, bronchitis, emphysema and other chronic obstructive pulmonary diseases and asthma) are higher in the UK than in any other EU Member State. In the UK there are 87.7 deaths per 100,000 males and 64.0 deaths per 100,000 females from respiratory diseases, compared to an EU average of 63.4 and 32.5.[75]

England

In England, during 2006-2008, life expectancy at birth was 77.93 years for males and 82.02 years for females.[76] In 2006-2008, 38% of males and 39% of females in England rated their health as good; and 44% of males and 41% of females rated their health as very good.[76]

The Health Survey for England, published in 2010, includes the following key findings for 2009: [77]

- In 2009 men and women reported a similar prevalence of longstanding illness according to the Health Survey for England; 41 per cent of men, 43 per cent of women, and almost a quarter reported an illness limited their activity in some way; 22 per cent of men and 23 per cent of women;
- For adults aged 16 and over, self-reported cigarette smoking prevalence was 24 per cent for men and 20 per cent for women. Cigarette smoking prevalence varied by age, being higher among younger adults (32 per cent for men and 26 per cent for women aged 25-34) and lower among older adults (11 per cent for men and 8 per cent for women aged 75 and over);

[73] ONS, United Kingdom Health Statistics 2010, http://www.statistics.gov.uk/downloads/theme_health/ukhs4/ukhs4-2010.pdf

[74] Health Survey for England 2007 Healthy lifestyles: knowledge, attitudes and behaviour Summary of key findings, Office of National Statistics, http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=6637

[75] ONS, United Kingdom Health Statistics 2010, http://www.statistics.gov.uk/downloads/theme_health/ukhs4/ukhs4-2010.pdf

[76] ONS, United Kingdom Health Statistics 2010, http://www.statistics.gov.uk/downloads/theme_health/ukhs4/ukhs4-2010.pdf

[77] Health Survey for England 2010, http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england/health-survey-for-england--2009-health-and-lifestyles

- High blood pressure was 32% in men and 27% in women. The prevalence significantly increased with age in both sexes; and
- The percentage of adults who were obese has gradually increased over the period examined by the HSE, from 13 per cent of men in 1993 to 22 per cent in 2009 and from 16 per cent of women in 1993 to 24 per cent in 2009.

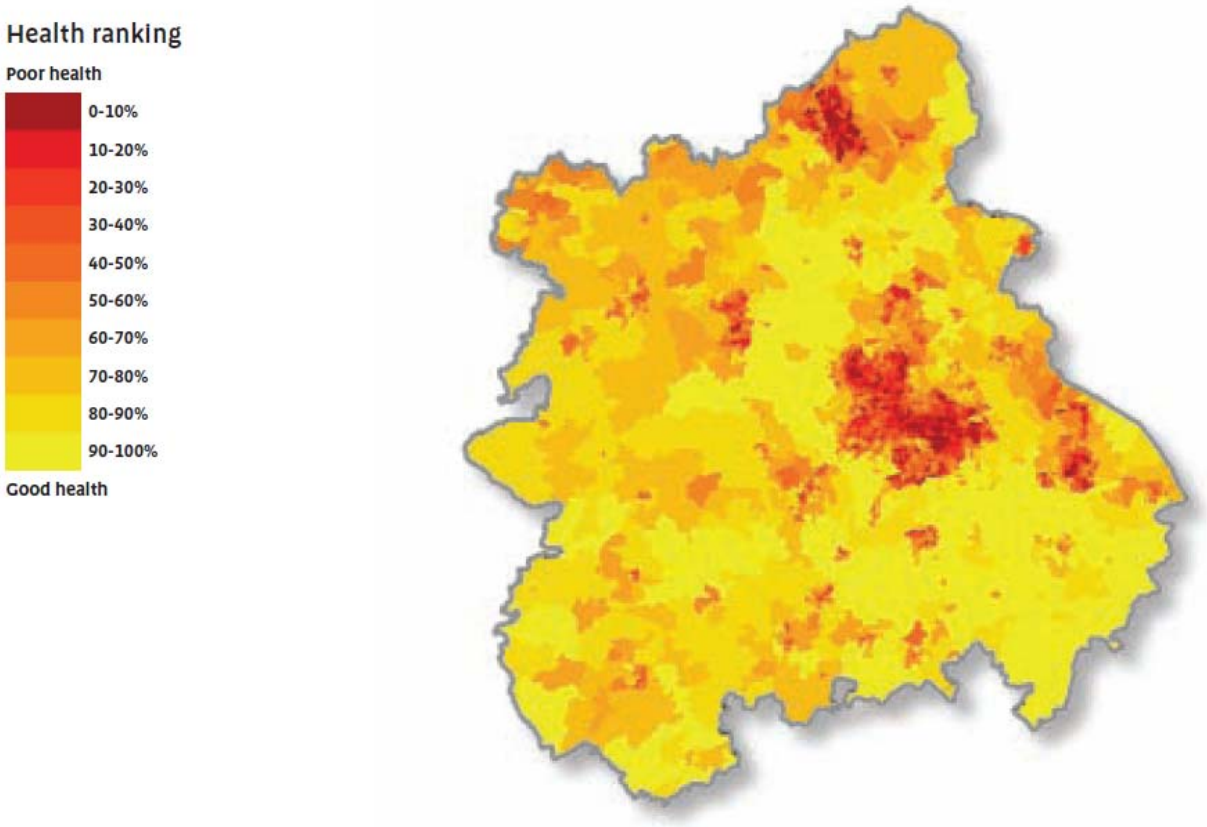
3.3.2 West Midlands

Over the past five years there has been a steady upward trend in life expectancy across English regions[78]. The West Midlands is no exception to this positive trend, however, at 77.9 years male and 82.2 years female, life expectancy at birth in the region is below the England average[79]. The gap in life expectancy between the worst and the best local authorities in the Region is 5.0 years for men and 3.7 years for women. Communities with high Index of Multiple Deprivation scores consistently have low quality environments, including higher density housing and a lack of well planned, accessible green space (**Figure 3.1**). Within the West Midlands life expectancy continues to be highest as a female living in the rural area and lowest as a male in the urban areas[80].

The death rate in the region was 9.2 per 1,000 of population in 2009, somewhat higher than across England as a whole (8.9)[81]. Likewise the age-standardised mortality rate, which takes into account the age structure of the population, was 5.7 per 1,000 people – above the England average of 5.5[82]. The West Midlands has the highest infant mortality rate in the country at 6 per 1,000 live births (30% greater than the national average).

[78] Office for National Statistics (October 2011), *Life expectancy at birth and at age 65 by local areas in the United Kingdom 2004-06 to 2008-10*, http://www.ons.gov.uk/ons/rel/subnational-health4/life-expec-at-birth-age-65/2004-06-to-2008-10/statistical-bulletin.html#tab-Regional-life-expectancy
[79] Office for National Statistics (February 2012), *Region and Country Profiles: key statistics*, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-227575
[80] West Midlands Annual Monitoring Report 2009 (WMRA, 2010)
[81] Office for National Statistics (February 2012), *Region and Country Profiles: key statistics*, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-227575
[82] Office for National Statistics (June 2011), *Regional Trends online tables; 06: health and social care*

Figure 3.1 Health ranking based on disability, morbidity and premature death statistics from the English Indices of Deprivation 2007[83]



The number of fatal casualties on the roads in the West Midlands fell 30% to 156 in 2010 and is half its level in the mid-1990s. The rate of road casualties per billion vehicle miles is now also lower than the national average.[84]

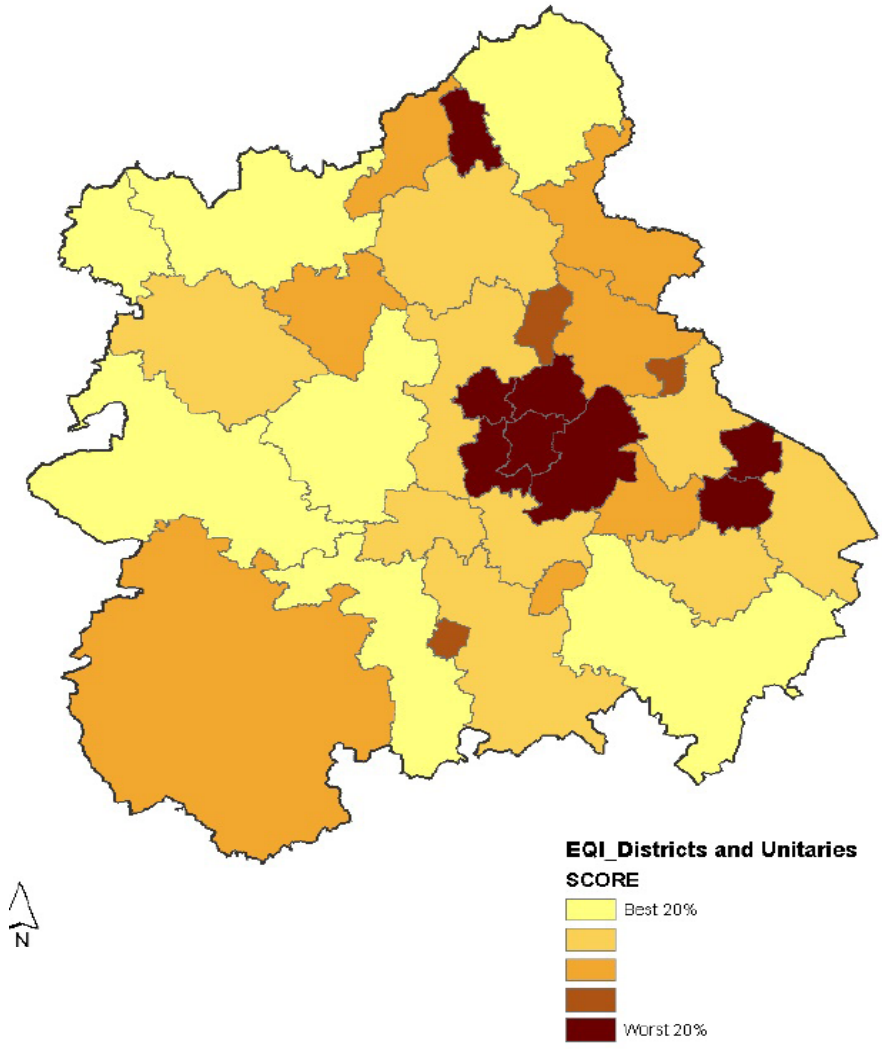
Sedentary lifestyles are a growing concern, creating avoidable health problems such as obesity, diabetes, heart disease and some cancers. Not only does this reduce wellbeing, it is also associated with poor physical health, health inequalities and lower productivity. Recent survey data show that the proportion of people in the West Midlands region participating regularly in moderate intensity sports activities is the lowest of any region in England[85]. The prevalence of obesity amongst the adults in the West Midlands strategic health authority is estimated at 11.8%, which is above the national average of

[83] Natural England (2009) State of the Natural Environment in the West Midlands
[84] Department for Transport, *Reported road casualties in Great Britain: annual report 2010*, http://www.dft.gov.uk/statistics/releases/road-accidents-and-safety-annual-report-2010/
[85] Sport England, *Active People Survey 2010-11*, http://www.sportengland.org/research/active_people_survey/aps5.aspx

10.5%[86].

Figure 3.2 illustrates the Environmental Quality Index[87] which depicts the ranking of districts into five categories combining eight environmental factors. These are air quality, derelict land, flood risk, fly tipping, green space, proximity to regulated sites, river water quality and semi-natural habitats. Urban areas particularly Stoke on Trent, Coventry and the West Midlands conurbation have the worst environments.

Figure 3.2 EQI Environmental Factors for the West Midlands

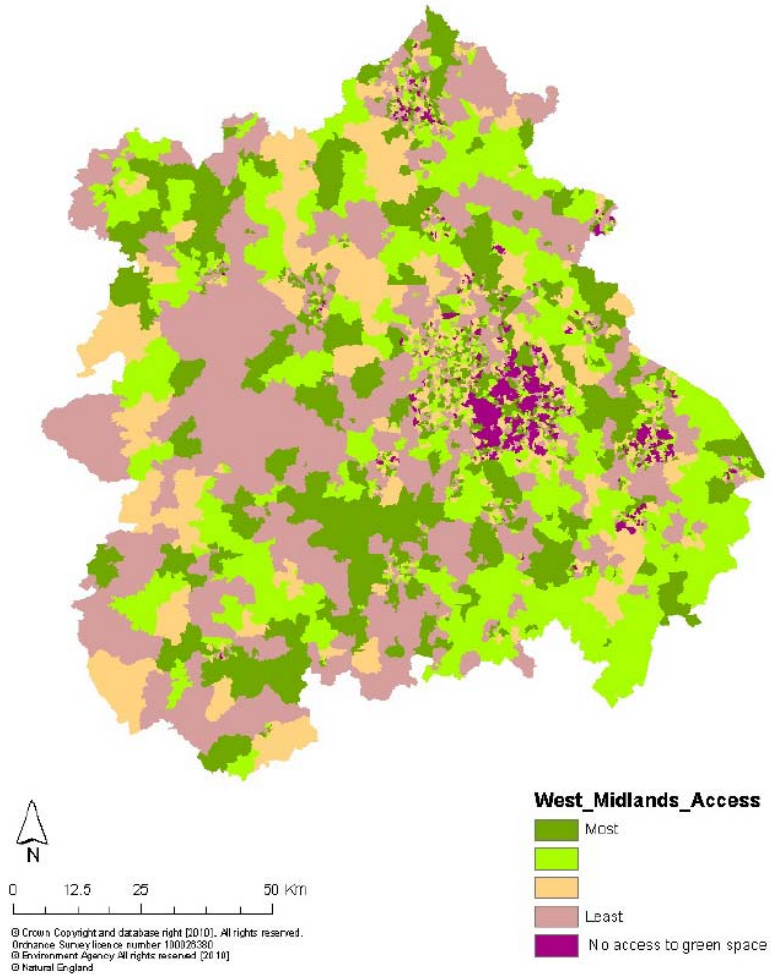


[86] National Health Service, *Statistics on obesity, physical activity and diet; England 2012*, http://www.aso.org.uk/wp-content/uploads/downloads/2012/03/2012-Statistics-on-Obesity-Physical-Activity-and-Diet-England.pdf

[87] Environment Agency (2011) State of the Environment Report West Midlands at: http://www.environment-agency.gov.uk/static/documents/Research/MIDS_SOE_West_Sust_Places.pdf

Figure 3.3[88] shows the ranking of LSOAs according to the percentage of accessible space within them, comprising natural habitats, parks, paths and cycle ways. The map illustrates the clear relative deprivation of urban areas, but also the paucity of access in large parts of the Region's rural areas. However, as **Table 3.1** shows, the Region as a whole has a reasonable proportion of most types of access resources, excepting common land, open access land and open access fields, a factor which could be significant in some rural areas.

Figure 3.3 Access to Greenspace in the West Midlands



[88] Environment Agency (2011) State of the Environment Report West Midlands at: http://www.environment-agency.gov.uk/static/documents/Research/MIDS_SOE_West_Sust_Places.pdf

Table 3.1 Access in the West Midlands[89]

Access type	West Midlands	% England resource	England total
Footpaths	18,005 km	13%	141,576 km
Bridleways	3,325 km	10%	33,788 km
Byways Open to All Traffic (BOATs)	167 km	4%	4,115 km
Navigable rivers	821km	19%	4,308 km
Open access land	18,852 ha	2%	865,250 ha
National Trails	69 km	2%	3,787 km
Common land	9,643 ha	2%	459,477 ha
Permissive Paths	375 km	9%	4,096 km
Open Access Fields	240 ha	2%	9,620 ha
National Nature Reserves	2,909 ha	4%	95,748ha
Local Nature Reserves	3,321 ha	10%	34,941ha
Country Parks	30	9%	319
Millennium Greens	37	15%	245
Doorstep Greens	20	10%	194

3.4 Environmental characteristics of those areas most likely to be significantly affected

3.4.1 UK

Health inequalities exist in many communities, often exacerbated by poor access to or use of health services. Any future funding constraints on health services are likely to affect this situation.

[89] Natural England (2009) State of the Natural Environment in the West Midlands at: http://publications.naturalengland.org.uk/publication/39008?category=118044

At present, respiratory illness places a significant burden on the health service which is partly attributable to existing air pollution. According to Occupational Health and Safety Information Service (2006), death rates from respiratory disease are higher in the UK than both the European and EU average. The report also suggests that respiratory disease costs the NHS and society £6.6 billion.

3.4.2 West Midlands

- Life expectancy is increasing in line with national trends, although certain indicators such as infant mortality are significantly above national levels.
- There is a strong correlation between health and IMD scores.
- Participation in sport is lowest of any region, and obesity higher than the national average.
- Accessible urban greenspace is most limited in urban areas which are generally more deprived socio-economically.
- Open space/public access assets across the region are generally in line with the expected average.

3.5 Likely evolution of the baseline

3.5.1 National

UK

Life expectancy at birth in the UK has reached its highest level on record for both males and females. A newborn baby boy could expect to live 77.7 years and a newborn baby girl 81.9 years if mortality rates remain the same as they were in 2007 - 2009. Females continue to live longer than males, but the gap has been closing.

Although both sexes have shown annual improvements in life expectancy at birth, over the past 27 years the gap has narrowed from 6.0 years to 4.2 years. Based on mortality rates in 1980 - 82, 26% of newborn males would die before age 65, but this had reduced to 15% based on 2007 - 2009 rates. The equivalent figures for newborn females were 16% in 1980 - 82 and 10% in 2007 - 2009. Life expectancy at age 65, the number of further years someone reaching 65 in 2007 - 2009 could expect to live, is also higher for women than for men. Based on 2007 - 2009 mortality rates, a man aged 65 could expect to live another 17.6 years, and a woman aged 65 another 20.2 years.

Within the UK, life expectancy varies by country, with the highest life expectancy at birth and at age 65 is higher for England than for the other countries of the UK. [90]

England

The current general trend in human health is generally towards improved health, greater life expectancy and reduced mortality from treatable conditions.[91]

For example, life expectancy for males in England increased from 76.9 years in 2003–05 to 78.3 years in 2007–09, an increase of 1.4 years. For females, life expectancy increased by 1.2 years from 81.1 to 82.3 years over the same period.[92] Trends in respiratory illness are downwards and are expected to continue like this, although a significant factor to be considered is that measured pollution is also affected by the weather, and hot summers in 2003 and 2006 significantly increased these levels.[93]

3.5.2 West Midlands

There is generally improving health across the region, notwithstanding the challenge of poor health in the more deprived areas, which also suffer from relatively poor access to greenspace.

3.6 Assessing significance

Table 3.2 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on health. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

[90] Office for National Statistics, http://www.statistics.gov.uk/cci/nugget.asp?id=168
[91] Health Survey for England 2007 Healthy lifestyles: knowledge, attitudes and behaviour Summary of key findings, Office of National Statistics, http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=6637
[92] ONS (2009) http://www.statistics.gov.uk/pdfdir/liex0611.pdf
[93] Defra 2008

Table 3.2 Approach to determining the significance of effects on health

Effect	Description	Illustrative Guidance
++	Significant positive	• Alternative has a significant positive effect on the likely determinants of good health in the region (including housing provision, employment opportunity, level of deprivation, physical activity, access to open space and recreational activities, improvements to environmental quality and community safety) • Alternative has a strong and sustained positive effect on health and wellbeing and acknowledges the health needs of specific groups in society (children, mums to be and the elderly). • Alternative supports the provision of healthcare facilities (i.e. as a result of an increase in the local population linked with employment provision).
+	Positive	• Alternative has a positive effect on the likely determinants of good health in the region (including housing provision, employment opportunity, level of deprivation, physical activity, access to open space and recreational activities, improvements to environmental quality and community safety) • Alternative has a positive effect on health and wellbeing and acknowledges the health needs of specific groups in society (children, mums to be and the elderly). • Alternative may support the provision of healthcare facilities (i.e. as a result of an increase in the local population linked with employment provision).
0	No (neutral effects)	• Alternative has no observable effects on health and wellbeing of regional communities.
-	Negative	• Alternative has a negative effect on the likely determinants of good health in the region (including housing provision, employment opportunity, level of deprivation, physical activity, access to open space and recreational activities, improvements to environmental quality and community safety) • Alternative has a negative effect on health and wellbeing and acknowledges the health needs of specific groups in society (children, mums to be and the elderly). • Alternative results in some nuisance and/or disruption to communities, such that some complaints could be expected
--	Significant negative	• Alternative has a significant negative effect on the likely determinants of good health in the region (including housing provision, employment opportunity, level of deprivation, physical activity, access to open space and recreational activities, improvements to environmental quality and community safety) • Alternative has a significantly negative effect on health and wellbeing and acknowledges the health needs of specific groups in society (children, mums to be and the elderly). • Alternative causes statutory nuisance or a sustained and significant nuisance and/or disruption to communities.
?	Uncertain	• From the level of information available the impact that the alternative would have on this objective is uncertain.

3.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 3.3 Significant Effects against the Human Health Topic

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
UR4: Social Infrastructure	Revocation	0	0	+/?	The National Planning Policy Framework paragraph 70 sets out policies to deliver the social, recreational and cultural facilities and services community needs. It states that local planning authorities should plan positively for the provision and use of shared space, community facilities (such as sports venues and cultural buildings), to enhance the sustainability of communities and residential environments. Policies in the National Planning Policy Framework also seek to promote and conserve cultural heritage, designated landscapes and green infrastructure, which will also contribute to the provision of cultural facilities.
	Retention	+	+	++/?	Policy UR4 is a generic policy encouraging local authorities, partners and community organisations etc in the West Midlands through Local Strategic Partnerships for example to work together to deliver the urban renaissance in the region. Contribute to local regeneration and help deprived areas to achieve their full potential and contributing to maintaining and enhancing the built and historic character. Policy UR4 will help improve the management of the impacts of access and recreation as well as contribute to local regeneration and help deprived areas. It increases access to leisure facilities (including woodlands, parks, watercourses), improves the quality and quantity of publicly accessible green space and provides opportunities for people to come into contact with and appreciate the natural and built environment.
RR4: Rural Services	Revocation	0	+	++/?	The effects of revocation are likely to be neutral in the short term. Local authorities will be required to deliver national policy as set out in the National Planning Policy Framework, including policies on promoting a competitive economy paragraphs 18-22, supporting a prosperous rural economy paragraph 28 and promoting sustainable transport paragraphs 29-32 which will all contribute to promoting the rural services required to support the regeneration of rural areas.
	Retention	+	+	++	Policy RR4 sets out a number of services which rural communities require to sustain a rural renaissance and sustainable forms of development in rural areas. Again these policy objectives should inform the preparation of local plans and Local Transport Plans by the region's local authorities. This policy recognises the key role Market Towns and other settlements in the region's rural areas play in providing services to rural communities, providing local housing and improvement to local services, whilst supporting economic diversification. Retention of policy RR4 would have positive environmental

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					impacts by providing local housing and employment, reducing the need to travel and improving the quality of the local environment. Further policy RR4 seeks to ensure that transport contributes to addressing social and economic challenges in the region's rural areas. This policy, if implemented, will have positive effects on population and human health, through increased accessibility to local services and employment and reducing inequalities, and a positive impact on air through reduced need to travel. However, the impact on soil and water will depend on how policy is implemented.
CF3: Levels and Distribution of Housing Development	Revocation	0	+	++	Revocation of policy CF3 will not remove the need for more houses to be built within the West Midlands. Indeed it is Government policy is to boost significantly the supply of housing, for example through initiatives such as the Community Infrastructure Levy, New Homes Bonus and the local retention of business rates which are intended to encourage a more positive attitude to growth and allow communities to both share the benefits and mitigate the negative effects of growth. Paragraph 159 of the National Planning Policy Framework states that local planning authorities should have a clear understanding of housing needs in their area. They should prepare Strategic Housing Market Assessment to assess their full housing needs, working with neighbouring authorities where housing market areas cross administrative boundaries. The Strategic Housing Market Assessment should identify the scale and mix of housing and the range of tenures that the local population is likely to need over the plan period which meets household and population projections, taking account of migration and demographic change; addresses the need for all types of housing, including affordable housing and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes); and caters for housing demand and the scale of housing supply necessary to meet this demand. Paragraphs 173-177 of the National Planning Policy Framework seek to ensure the viability and deliverability of housing which if successful will lead to a greater proportion of the houses planned for actually being built over the plan period. Paragraph 47 of the National Planning Policy Framework states that to boost significantly the supply of housing, local planning authorities should use their evidence base to ensure that their local plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period.
	Retention	0	+	++	The increased provision of housing, and particularly affordable housing is likely to lead to positive effects on the population and human health. However, this will also depend on related factors such as the quality of the houses, their density, location relative to green spaces and ambient air quality.

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
CF5: Delivering Affordable Housing and Mixed Communities	Revocation	++	++	++	Local plans prepared by local planning authorities will need to take account of the National Planning Policy Framework. Revoking this policy will simplify policy for users given the local plan will no longer have regional, sub-regional and local affordable housing targets. There is therefore potential uncertainty on the level of overall affordable housing supply in the region and it is possible that a different spatial distribution of affordable housing provision across the region will occur, which will have different environmental effects in the long term once all local plans are updated. As set out in paragraph 173 of the National Planning Policy Framework the provision of affordable housing in local plans depends on the financial viability and land availability within a local area to do so. This will be tested by other parties via local plan examination process. Therefore, the provision of affordable housing and setting of target is a locally led and based decision making process. Local planning authorities are also expected to work together to meet the development needs of their local area.
	Retention	++	++	++	Policy CF5 seeks to promote the development of affordable housing and the creation of mixed communities, addressing housing needs in the most sustainable way whilst taking account of local housing conditions. It is also anticipated to have neutral or marginally positive effects on material assets, water and air, principally through meeting local housing needs and creating a better quality of local environment. Policy CF5 also states that local plans should make adequate provision for sites to accommodate gypsies and travellers so as to meet their accommodation needs. Making adequate provision for sites to accommodate gypsies and travellers will deliver positive effects to population and human health. It could also reduce or remove adverse effects arising from illegal pitch sites.
QE1: Conserving and Enhancing the Environment	Revocation	++	++	++	The legal requirement for local planning authorities to ensure that internationally and nationally designated sites are given the strongest level of protection and that development does not have adverse effects on the integrity of sites of European or international importance for nature conservation would be unchanged by revocation of policy QE1. The National Planning Policy Framework contains policies relating to green infrastructure and planning for climate change so as to mitigate the negative effects of development on biodiversity, which is set out in paragraph 99 of the National Planning Policy Framework are also relevant. The magnitude of any enhancement will depend on local circumstances and decisions, meaning that there could be uncertainty over the extent to which significant biodiversity enhancement could be delivered at a meaningful (i.e. landscape) scale over the longer term.
	Retention	++	++	++	Policy QE1 is the West Midlands Regional Strategy's overarching environmental quality policy, and states that environmental improvement is a key component of the Regional Strategy which underpins its overall approach improving the quality of life and supporting wider economic and social objectives. Policy QE1 also provides the policy context for environmental policies in the

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
					Regional Strategy such as QE3, QE9, EN1, EN2 and M3. One of its objectives is to enhance the environmental quality of the region's urban areas. Improving and conserving the region's environment will result in the expansion of wildlife habitats and will positively affect biodiversity, helping to restore range of species and populations within the West Midlands region.

3.7.1 Effects of Revocation

The overall effects of revocation are judged to be similar to those of retention, albeit with potential uncertainty in the longer term, particularly with regard to the effectiveness of the delivery of policy. The precise effects on health are difficult to quantify, but the provision of affordable housing, social infrastructure and the enhancement of environmental quality will continue and have a positive impact on health. However, removal of affordable housing targets and variance in approaches to environmental enhancement which, on balance, means that it is likely greater uncertainty over longer term effects could be introduced. Careful monitoring of impacts would be required to determine whether this might be he case.

3.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The quantitative and spatially specific policies with a significant positive impact on human health are CF3 and CF5 relating to the levels of housing development and provision for affordable homes. In the short-medium term, revocation of the West Midlands Regional Strategy could place some limitations on delivering the number of dwellings envisaged by the plan and improved housing provision for specific

needs, including: older and disabled, affordable and for ethnic minorities. The significant benefits to health may be deferred as a result of revocation, primarily as a result of the time taken for local authorities to respond to the new planning policy framework. However, overall the effects will still be positively significant in the longer term.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

3.7.3 Effects of Retention

The overall effects of retention are judged to be positive, promoting health improvement as part of wider policies to improve the environmental quality of the region generally and in urban areas in particular. This is based on the strategic provision of green infrastructure and targets for affordable housing. Over the longer term, the health of the population could be raised, although this is only a contribution (albeit potentially significant) to a complex multi-faceted issue.

3.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

3.9 Proposals for Monitoring

No specific monitoring is required other than that provided through the annual review of the NPPF and local plan AMRs.

4. Soil and Geology

4.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of revoking the regional strategy on soil, geology and land use. Information is presented for both national and sub-regional levels.

Soil and geology within this context is concerned with important geological sites, and the contamination of soils. Land use in this context is concerned with the effective use of land i.e. by encouraging the reuse of land that has been previously developed (brownfield land) as well promoting sustainable patterns of land use e.g. in relation to the protection of open spaces and green infrastructure.

There are links between the soil and geology topic and other topics in the SEA, including material assets.

4.2 Summary of Plans and Programmes

4.2.1 International

The ***European Thematic Strategy on Soil Protection (2006)*** sets out the European Commission's strategy on soils and includes a proposal for an EU wide ***Soils Directive***. The overall objective of the strategy is the protection and sustainable use of soil, based on the following guiding principles:

- preventing further soil degradation and preserving its functions;
- when soil is used and its functions are exploited, action has to be taken on soil use and management patterns;
- when soil acts as a sink/receptor of the effects of human activities or environmental phenomena, action has to be taken at source; and
- restoring degraded soils to a level of functionality consistent at least with current and intended use, thus also considering the cost implications of the restoration of soil.

The ***EU Waste Incineration Directive (2000/76/EC)*** aims to introduce measures to prevent or reduce as far as possible air, water and soil pollution caused by the incineration of waste, as well as the resulting risk to human health. The measures set out under the Directive include a prior authorisation requirement for incineration and co-incineration plants, and emission limits for certain pollutants released

to air or to water. The requirements of the Directive have been developed to reflect the ability of modern incineration plants to achieve high standards of emissions control.

The ***EU Integrated Pollution, Prevention and Control (IPPC) Directive (2008/1/EC)*** defines the obligations to which industrial (including waste management) and agricultural activities with a high pollution potential must comply, through a single permitting process. It sets minimum requirements to be included in all permits, particularly in terms of pollutants released. The aim of the Directive is to prevent or reduce pollution being released to the atmosphere, water and soil, as well as reducing the quantities of waste arising from industry and agriculture. In order to gain an IPPC permit, operators must demonstrate that they have systematically developed proposals to apply the 'Best Available Techniques' (BAT) to pollution prevention and control and that they address other requirements relevant to local factors.

The European Commission reviewed European legislation on industrial emissions in order to ensure clearer environmental benefits, remove ambiguities, promote cost-effectiveness and to encourage technological innovation. The review led to the commission proposing and adopting a recast ***Directive on Industrial Emissions (IED) (2010/75/EU)*** which came into force on 6 January 2011.

A number of other European Directives contribute indirectly to soil protection including on ***Habitats (92/43/EEC)***, ***Air (2008/50/EC)***, ***Water (2000/60/EC)*** and ***Nitrates (91/676/EEC)***.

The ***World Summit on Sustainable Development (2002)*** in Johannesburg proposed broad-scale principles which should underlie sustainable development and growth including an objective on greater resource efficiency. Reusing previously developed land is a good example of resource efficiency of land.

The conservation of resources is one of the underlying objectives of the ***European Spatial Development Perspective (ESDP) (1999)*** the framework for policy guidance to improve cooperation among community sectoral policies. There also exists a range of legislation in relation to resources.

UK

The ***Environmental Protection Act (1990)*** defines within England, Scotland and Wales the legal framework for duty of care for waste, contaminated land and statutory nuisance.

The ***Environment Act 1995*** seeks to protect and preserve the environment and guard against pollution to air, land or water. The Act adopts an integrated approach to environmental protection and outlines where authorisation is required from relevant authorities to carry out certain procedures as well as outlining the responsibilities of the relevant authorities. The Act also amends the Environment Protection Act 1990 with regard compulsory remediation of contaminated land. Environmental Protection Act was also modified in 2006 to cover radioactivity, and then a further modification made in 2007 to cover land contaminated with radioactivity originating from nuclear installations.

The ***Wildlife and Countryside Act 1981*** allows the designation of SSSIs for sites with geological importance.

England

The ***Contaminated Land (England) Regulations 2006*** sets out provisions relating to the identification and remediation of contaminated land. It identifies sites requiring regulation as 'special sites' and adds land contaminated by radioactive substances to this classification.

In June 2011, the Government outlined its vision for England's soils in the ***Natural Environment White Paper (NEWP)***. This set a clear target that by 2030 all of England's soils will be managed sustainably and degradation threats tackled successfully, in order to improve the quality of soil and to safeguard its ability to provide essential ecosystem services and functions for future generations. As part of this vision, the Government committed to undertaking further research to explore how soil degradation can affect the soil's ability to support vital ecosystem services; and how best to manage lowland peatlands in a way that supports efforts to tackle climate change. This will inform our future policies and the direction of future action towards 2030.

The Government has recently reviewed the contaminated land regime in England for the first time since its introduction in 2000. Following the review of the contaminated land regime including public consultation, revised ***Statutory Guidance has now been issued under Part 2A of the Environmental Protection Act 1990***. This revised Statutory Guidance while still taking a precautionary approach, allows regulators to make quicker decisions about whether or not land is contaminated under Part 2A preventing costly remediation operations being undertaken unnecessarily. It also offers better protection against potential health impacts by concentrating on the sites where action is actually needed.

The ***National Planning Policy Framework*** (NPPF) states that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils; preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil pollution or land instability; and remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate (paragraph 109). Local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality (paragraph 112). The NPPF also states that planning policies should encourage the effective use of land by reusing land that has been previously developed, provided that it is not of high environmental value (paragraph 111). The NPPF also reaffirmed the Government's commitment to maintaining Green Belts. It states that local planning authorities with Green Belts in their area should establish Green Belt boundaries in their Local Plans which set out the framework for Green Belt and settlement policy. Once established, Green Belt

boundaries should only be altered in exceptional circumstances.

4.2.2 West Midlands

The regional strategy does not contain a specific policy dealing with the protection of soils. However, one of the guiding principles for the West Midlands is to ensure that development is directed sequentially with priority given to promoting brownfield development in sustainable locations, but not where it is detrimental to the quality of the environment. Policy CF2 (Housing beyond the Major Urban Areas) states that in rural areas, the provision of new housing should generally be restricted to meeting local housing needs and/or to support local services, with priority being given to the reuse of previously developed land and buildings within existing villages enhancing their character wherever possible. Policy CF3 (Levels and distribution of housing development) states that any provision for housing above the figures in the Regional Spatial Strategy within the MUAs should be on previously developed land and Policy CF4 (The reuse of land and buildings for housing) states that at least 76% of new housing should be on previously developed land. Policy QE2 (Restoring degraded areas and managing and creating high quality new environments) promotes the restoration and remediation of derelict and contaminated sites and reuse of buildings.

One of the strategic objectives of the spatial strategy (paragraph 3.14) is to retain the Green Belt but to allow adjustment to boundaries where this is necessary to support urban regeneration.

4.3 Overview of the Baseline

4.3.1 National

UK - Soils and Geology

The geology of the UK is diverse and has resulted in over 800 soil types. As a broad overview the following rock types exist in a progression from North West to South East (predominant rock types): Tertiary Volcanic Rocks; Crystalline Rock of Pre-Cambrian and later age; Lower Carboniferous to Cambrian; Triassic and Permian; Early Precambrian and Devonian; Jurassic; Cretaceous; Tertiary and Marine Pleistocene; and finally a return to Cretaceous.[94]

The quality of the land across the UK varies, with the best and most versatile agricultural land generally situated in the lowland and valley areas of England. Due to the topography and terrain, much of Scotland and Wales is classified as lower grade land. An estimated 21% of all farmland in England is

[94] Agricultural Land Classification, protecting the best and most versatile agricultural land, Natural England, January 2009

Grade 1 and 2 land, with a similar percentage graded as sub grade 3a land. These grades are the best and most versatile land grades as classified under the Agricultural Land Classification System.[95]

The UK has a diversity of mountain ranges and flood plains. In England, the southern part of the country is predominantly lowland, with mountainous terrain north-west of the Tees-Exe line (the Lowland-Upland divide across England), which includes the Cumbrian Mountains of the Lake District, the Pennines and limestone hills of the Peak District, Exmoor and Dartmoor. [96]

There are an estimated 2,050 geological SSSIs in UK.[97, 98, 99]

Across the UK there are also a number of non-statutory geological and geomorphological sites designated at a local level, i.e. often known as Local Geological Sites (formerly Regionally Important Geological and Geomorphological Sites (RIGS)). There are over 50 Local Sites groups in the UK[100].

In 2005 there was estimated to be around 413,906 hectares of land affected by industrial activity in England and Wales which may be contaminated, (around 2% of the land area in England and Wales)[101].

UK - Land Use

The UK covers an area of 2,472,900 hectares (242,514km^2). England comprises the largest land area in the UK, covering an area of 13,028,100 hectares (130,281km^2). The smallest land area in the UK is Northern Ireland, which covers an area of 1,357,600 hectares (13,576km^2).

Average population density of UK is 247 people per km^2.

Table 4.1 shows land cover in the UK as it stood in 2007 and shows that arable and horticulture and improved grassland are the most common land cover types in the UK, constituting 20.4% and 19.9% of total land area in the UK respectively.

[95] England's geology, Natural England, http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/default.aspx
[96] State of the Environment Report 2008, Natural England, 2008, http://naturalengland.etraderstores.com/NaturalEnglandShop/NE85
[97] Geoconservation Sites, http://www.geoconservation.com/sites/sssi.htm
[98] Natural England RIGS, http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/lgs/default.aspx
[99] The Scottish Soil Framework, Scottish Government, May 2009, http://www.scotland.gov.uk/Publications/2009/05/20145602/13
[100] Geoconservation Sites, http://www.geoconservation.com/sites/sssi.htm
[101] Indicators for Land Contamination, Science Report SC030039/SR, Environment Agency, August 2005

Table 4.1 Estimated Area of Broad Habitats in the UK in 2007[102]

Land Type	'000 hectares	% land area
Broadleaved, mixed and yew woodland	1406	6.2
Coniferous woodland	1319	5.8
Linear features	496	2.2
Arable and horticulture	4608	20.4
Improved grassland	4494	19.9
Neutral grassland	2176	9.6
Calcareous grassland	57	0.3
Acid grassland	1589	7.0
Bracken	260	1.1
Dwarf shrub heath	1343	5.9
Fen, Marsh, Swamp	392	1.7
Bog	2232	9.9
Standing open waters[1]	204	0.9
Rivers and streams[1]	58	0.3
Montane	42	0,2
Inland rock	84	0.4
Built-up areas and gardens	1323	5.8
Other land	113	0.5
Unsurveyed land[2]	522	2.3
Total[3]	**22627**	

[102] ONS (2009) http://www.statistics.gov.uk/STATBASE/Expodata/Spreadsheets/D5325.xls (accessed 22.10.2009)

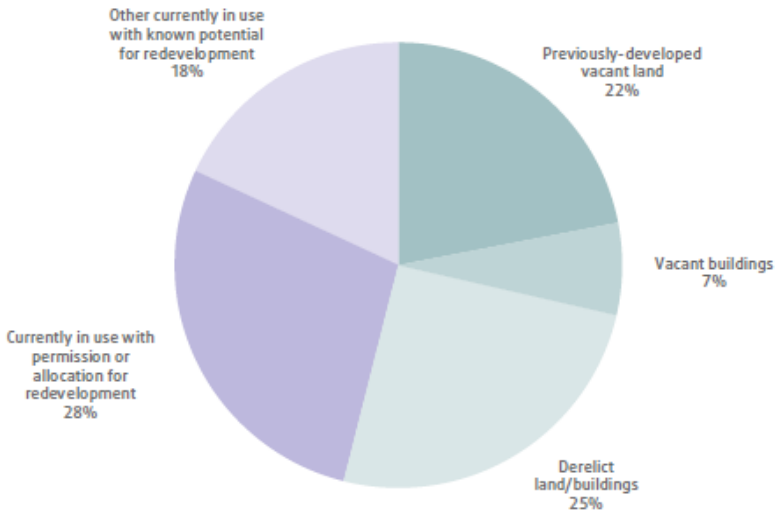
England - Soils and Geology

Within England, 87.7% of the land area is classed as agricultural land[103]. Of the remainder, 5% is non agricultural and 7.3% is urban. Of the 87.7% of land classed as agricultural, 65.1% is classed as moderate or better.

In England there was estimated to be around 307,672ha of land that may be contaminated. A total of 659 sites had been determined as 'contaminated land' in England by the end of March 2007. At the time of reporting, no site has been determined as contaminated land due to radioactivity [104].

The results from the 2009 National Land Use Database of Previously Developed Land (PDL)[105] published by the Homes and Community Agency show that local authorities had identified an estimated 61,920 hectares of PDL. An estimated 33,390 hectares of this were vacant or derelict - 54% of the total (**Figure 4.1**).

Figure 4.1 Previously Developed Land by Type



[103] Agricultural land classification (ALC) Statistics from the digital 1:250,000 scale Provisional ALC map (www.magic.gov.uk)
[104] Dealing with contaminated land in England and Wales A review of progress from 2000-2007 with Part 2A of the Environmental Protection Act, Environment Agency, January 2009
[105] http://www.homesandcommunities.co.uk/sites/default/files/our-work/nlud-report-2009.pdf

There are no formal international designations for geodiversity sites equivalent to the SPA and SAC designations for biological features, although the geodiversity of the Dorset and East Devon Coast is recognised through designation as a World Heritage site.

Natural England (2008) report that there are 1,214 SSSIs designated for their geodiversity features covering 1,704 Geological Conservation Review (GCR) sites (which identified nationally important features of geological interest). Many SSSIs have more than one GCR feature and some GCR features extend over more than one SSSI, giving a total of 1,735 SSSI-GCR combinations, or 'geo-features'. The proportion of GCRs in favourable/recovering status varied between 76-94% depending on its category of GCR (each category is reported separately).

England contains two Geoparks: the English Riviera in Devon and the North Pennines AONB. These are areas considered by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) to be of international importance for geological heritage that should be safeguarded and sustainably managed and include strong local involvement. Two further areas in England (Abberley and Malvern Hills and the Cotswold Hills) identify themselves as Geoparks.

England – Land Use

The average population density of England is 385 people per km^2 [106].

Table 4.2 shows land cover in England as it stood in 2007 and highlights arable and horticulture and improved grassland as the most common land use covers (covering 30.4% and 21.7% of total land in England respectively).

Table 4.2 Land Cover in England in 2007[107]

England Land Cover 2007	'000 ha	% area
Broadleaved, Mixed and Yew Woodland	981	7.4
Coniferous Woodland	257	1.9
Boundary and Linear Features	353	2.7
Arable and Horticulture	4,002	30.4
Improved Grassland	2,856	21.7

[106] Office of National Statistics, http://www.statistics.gov.uk/geography/uk_countries.asp
[107] ONS (2009) http://www.statistics.gov.uk/STATBASE/Expodata/Spreadsheets/D5325.xls (accessed 22.10.2009)

England Land Cover 2007	'000 ha	% area
Neutral Grassland	1,453	11.0
Calcareous Grassland	30	0.2
Acid Grassland	396	3.0
Bracken	91	0.7
Dwarf Shrub Heath	331	2.5
Fen, Marsh and Swamp	117	0.9
Bog	140	1.1
Standing Open Water and Canals	97	0.7
Rivers and Streams	29	0.2
Built-up Areas and Gardens	1,038	7.9
Other land	580	4.4
Unsurveyed Urban Land	428	3.5
TOTAL	13,180	100

The majority of land in England (around 72%) is in agricultural use. A further 8.6% is used for woodland and forestry. Whilst developed land accounts for around 10% of the total area, only a very small proportion of the land (1.14%) is occupied by domestic buildings (e.g. houses), with domestic gardens accounting for almost half of the 'developed area' (over 4% of the national land area). Roads account for around 2% and rail 0.14% of the total.

4.3.2 West Midlands

Soils and Geology

The geology of the West Midlands is dominated by the South Staffordshire Coalfield, the exploitation of which has contributed greatly to the industrial and economic development of the area[108]. Upper Carboniferous Coal Measures underlie the main conurbation of Wolverhampton, Walsall, West Bromwich and Dudley. Surrounding these shales, sandstones and mudstones are Triassic aged rocks

[108] http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/counties/area_ID38.aspx

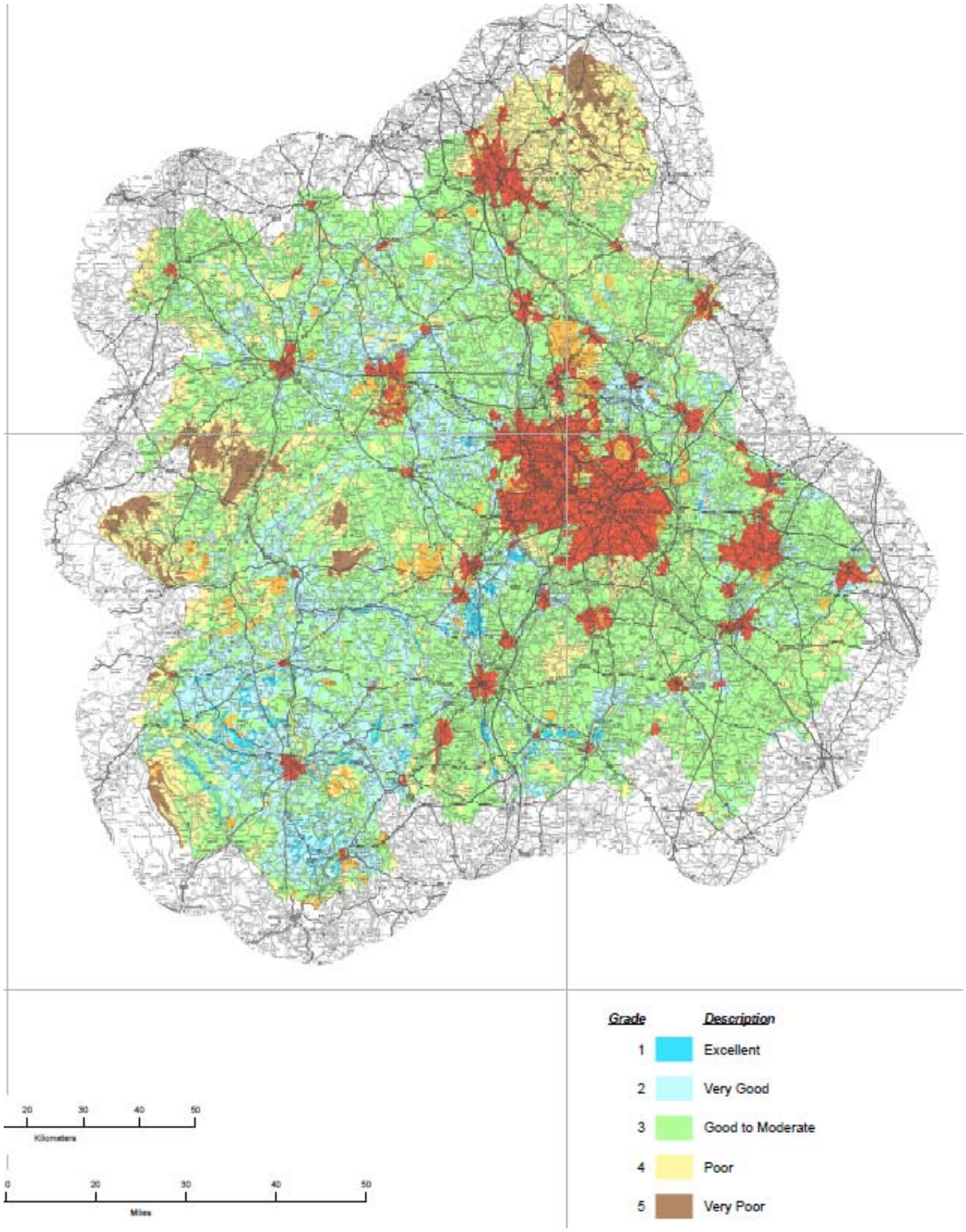
which comprise red mudstones and sandstones. These underlie much of Birmingham and form the solid geology up to Sutton Coldfield. Within the main mass of the Coal Measures are a number of isolated outcrops of older Silurian rock. These shallow water limestones and shales contain a wide range of marine fossils and form the famous outcrops at Wren's Nest and Dudley Castle Hill. There are also a number of igneous intrusions into the Coal Measures. Much of the area has been mantled in thick deposits of boulder clay and sands and gravel deposited by ice sheets and meltwaters during the Ice Ages of the last two million years.

The 'Black Country' is defined by geology; being the name given to the area where the 30 foot (9.15 metre) coal seam of the Coal Measures occurs. This is Britain's thickest and richest seam of coal which, together with its adjacent seams of thin coal, iron, limestone and clay, supported the development of the industrial region. The coal lies beneath Wednesbury, Darlaston, Wednesfield, Bilston, Coseley, Tipton, Dudley, Brierley Hill and Halesowen and at greater depth beneath West Bromwich, Oldbury and Smethwick. From the early 1700's scores of industrial townships and villages grew in the area to exploit the mineral wealth. The development of the coal industry directly fuelled the industrial revolution, making the area the economic powerhouse of Britain.

The Agricultural Land Classification map for the West Midlands[109] illustrates in particular the high proportion of land classified within Grades 1-3 (**Figure 4.2**). Grade 3 (Good to Moderate) land is the most extensive. Unfortunately Grade 3a land is not distinguished from 3b so it is not possible to determine the extent of 'best and most versatile agricultural land (i.e. Grades 1-3a) within the region. Much of the south west of the region (around Hereford) is classified as Grades 1 and 2, as is the land between Shrewsbury and Wolverhampton. There is also a significant area of Grade 1 land running north to south from Kidderminster to Worcester.

[109] http://publications.naturalengland.org.uk/publication/130044?category=23033

Figure 4.2 West Midlands Agricultural Land Quality



Land Use

Although the West Midlands is an important industrial region, agriculture accounts for nearly 75 per cent of land use[110]. Over 960,000 hectares of land in the West Midlands is used for agriculture and there are more than 27,000 farms in the region. Nearly half of these are small farms with less than five hectares of land. More than half of the region's cattle and pig farming is located in Staffordshire and Shropshire. Herefordshire has the biggest share of region's poultry and sheep farming. Nearly three-quarters of the region's horticultural farming is located in Herefordshire and Worcestershire and nearly half of the region's arable crops are in Warwickshire and Shropshire.

DCLG statistics record that in 2007 there were 5,930 hectares of previously developed land in the West Midlands that is unused or may be available for development[111]. Of this, 2480 hectares was considered to be suitable for housing, based on sites judged by local authorities to be suitable for residential development. The region had the largest decrease in the amount of derelict land in England between 2008 and 2009 (down by 16%)[112]. The statistics also show that the West Midlands also had the largest decrease in land currently in use with potential for redevelopment over the same period (down by 31%).

Data on the extent of contaminated land in the region is unknown. While local authorities have a duty to maintain a register of contaminated sites they are not required to report it. The 2009 Annual Monitoring Report for the West Midlands[113] stated that only a small number of derelict land sites are included on contaminated land registers, suggesting that the barriers to reclamation may not be the severity of contamination of sites. However, the number of contaminated sites may be underestimated, as it was not possible to identify all contaminated sites in the regional derelict land survey.

4.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

4.4.1 National

UK - Soil and Geology

Human activity has left a legacy of soil contamination and pollution that pose a risk to water quality, ecosystems and human health as well as to land and property value.

Significant areas across the UK carry a burden of contamination from industrial activity, although this is

[110] Environment Agency - West Midlands State of the Environment
[111] http://www.communities.gov.uk/planningandbuilding/planningbuilding/planningstatistics/livetables/livetables/
[112] http://www.homesandcommunities.co.uk/sites/default/files/our-work/nlud-report-2009.pdf
[113] http://www.wmra.gov.uk/documents/AMR_2009.pdf

progressively being cleaned up as sites are redeveloped. Whilst contamination is remediated during redevelopment, the process can be expensive.

Disturbance of contaminated sites carries the risk of pollution pathways being created or re-opened for any existing ground contamination.

There is currently increasing pressure on rural and agricultural land from developers as urban areas expand. Future population growth leading to an increase in the need for housing and related urban development infrastructure will put more pressure on protected land including important geological sites.

Soils in England continue to be degraded by human actions including intensive agriculture, historic levels of industrial pollution and urban development, making them vulnerable to erosion (by wind and water), compaction and loss of organic matter[114]. Effects include:

- Soil erosion by wind and rain: erosion affects both the productivity of soils but also water quality and aquatic ecosystems.
- Compaction of soil reduces agricultural productivity and water infiltration, and increases flood risk through higher levels of run-off.
- Organic matter decline: the loss of soil organic matter reduces soil quality, affecting the supply of nutrients and making it more difficult for plants to grow, and increases emissions to the atmosphere.

As the climate (including temperature and rainfall patterns) changes in the future, it is likely that soils have the potential to be further degraded, both as a result of the direct and indirect impacts of climate change, for example as land managers adapt their practices and the crops that they grow. Climate change and loss of organic matter are the most significant threats to Scottish soils[115]. The effect of industry, agricultural practices, forestry and climate change upon soils, particularly carbon rich peat soils, is also a key issue. Key pollutants include chemicals, oil or waste. Organic waste, including sewage sludge, is one of the main sources of heavy metal contamination of soils from human activities[115].

In Wales the small proportion of land that is classified as 'best and most versatile' agricultural land needs to be conserved. There is also a need to protect soils in uplands and wetlands which contain high amounts of carbon and are vulnerable to acidification[116].

[114] http://www.defra.gov.uk/food-farm/land-manage/soil/
[115] State of the environment and trends – Scotland, http://www.seaguidance.org.uk/11/State-of-the-Environment.aspx
[116] Environment Strategy for Wales, Welsh Assembly Government, 2006, http://wales.gov.uk/topics/environmentcountryside/epq/envstratforwales/strategy/?lang=en

The main pressures in Northern Ireland are development, infrastructure, mineral extraction industries, and tourism. A major problem in farmland is the over-accumulation of phosphorus in the soil, due to agricultural fertilisers. The intensification and expansion of agriculture is a key pressure on soil quality and erosion[117].

UK - Land Use

Of UK land 5.6% is currently classed as 'built up.' Development pressure remains a constant factor in parts of the country, and it is not expected that previously-developed land will be able to fully deliver the UK's future needs. This will continue to place development pressures in rural areas and the urban fringe.

When greenfield land is used for development, it is likely to result in the permanent loss of that land from other uses such as agriculture. There are similar pressures to build across each of the UK administrations, however the details differ slightly between each.

The 2008 State of the Natural Environment report[118] noted that within rural England, the area of developed land had increased by about 4% since 1990, largely by using agricultural land and that between 1998 and 2003 substantial greenfield development has occurred near many urban areas, notably at key growth points, but also in former coalfield belts. It said the pace of development within England was increasing, particularly for housing in response to demand and a historic shortfall in housing provision and that this was expected to have a dramatic effect on a large part of central and southern England though the series of the then identified Growth Areas and Growth Points.

4.4.2 West Midlands

The regional strategy targets 58% of the total housing provision over the period 2011-2021 to the Major Urban Areas (MUAs), made up of Birmingham, Solihull, Dudley, Sandwell, Walsall, Wolverhampton, Coventry, Stoke on Trent and Newcastle-under-Lyme.

[117] Planning and Land Contamination, Northern Ireland Environment Agency, http://www.ni-environment.gov.uk/land-home/land-quality.htm
[118] Natural England (2008) http://www.naturalengland.org.uk/publications/sone/default.aspx

4.5 Likely Evolution of the Baseline

4.5.1 National

UK - Soils and Geology

There is little data on the long term trends associated with soil. In 2010, the Foresight Project completed the Land Use Futures Project to take a long-term view of all types of land use to analyse future land use challenges through looking at pressures and trends and developing scenarios and models, including the consideration of soil issues[119]. The Natural Environment White Paper commits the Government to undertake a significant research programme over the next four years to explore how soil degradation can affect the soil's ability to support vital ecosystem services such as flood mitigation, carbon storage and nutrient cycling; and how best to manage lowland peatlands.

There is a steady loss of soils to development, contaminated sites, damage by muddy floods and water pollution by silt and fertilisers. Continued pressure of development will result in the loss of productive soil, although it is also likely to lead to the remediation of contaminated soils. As more brownfield land is developed there may be more pressure for development on greenfield land which is likely to increase loss of soil resources. Climate change means that the UK is likely to see an increase in rainfall intensity which could lead to increased soil loss due to erosion. However, the increase in public and policy awareness regarding geological SSSI sites and Geoparks may lead to an increase in the number of sites protected and managed. As quarries come to the end of their working lives there is potential for their identification and conservation as geologically important sites.

As there are now more stringent statutory controls on land contamination and remediation, increased areas of historic contamination are being remediated and fewer areas are being left in a contaminated state following decommissioning of commercial and industrial sites. Major remediation, regeneration and development projects, such as the Olympic Park and Thames Gateway developments in London are likely to further decrease the total area of contaminated land within the UK. There are a number of European directives that are either currently being implemented or are under discussion that may influence the way in which land contamination is managed in the future (i.e. the Environmental Liabilities, Soil, Water, Groundwater and the Waste Framework Directives). The implementation of these regimes into UK legislation is likely to affect how contaminated land is dealt with[120].

[119] http://www.bis.gov.uk/assets/foresight/docs/land-use/luf_report/8614-bis-land_use_futures_exec_summ-web.pdf

[120] Dealing with contaminated land in England and Wales A review of progress from 2000-2007 with Part 2A of the Environmental Protection Act, Environment Agency, January 2009

UK – Land Use

The estimated broad habitat type in the UK and how it has changed from 1984 to 2007 was calculated by the Office of National Statistics[121] and is shown in **Table 4.3**. It shows that the area of land cover under arable and horticulture has decreased by 9.1% between 1998 and 2007. The area of grassland land cover has generally increased with improved grassland increasing by 5.7%. Built-up areas and gardens have increased by 3.4% between 1998 and 2007.

Table 4.3 Estimated Area ('000 ha) of Broad Habitats in the UK in 1984, 1990, 1998 and 2007

Land Type	1984	1990	1998	2007	% change between 1998 and 2007
Broadleaved, mixed and yew woodland	1317	1343	1328	1406	5.9
Coniferous woodland	1243	1239	1386	1319	-4.8
Linear features	491	581	511	496	-2.9
Arable and horticulture	5283	5024	5067	4608	-9.1
Improved grassland	5903	4619	4251	4494	5.7
Neutral grassland	467	1669	2007	2176	8.4
Calcareous grassland	75	78	61	57	-6.6
Acid grassland	1476	1821	1503	1589	5.7
Bracken	439	272	315	260	-17.5
Dwarf shrub heath	1388	1436	1299	1343	3.4
Fen, Marsh, Swamp	428	427	426	392	-8.0
Bog	2303	2050	2222	2232	0.5
Standing open waters[1]	284	200	196	204	4.1
Rivers and streams[1]	70	70	65	58	-10.8
Montane	41	n/a	41	42	2.4
Inland rock	38	76	111	84	-24.3
Built-up areas and gardens	1268	1266	1279	1323	3.4
Other land	n/a	57	107	113	n/a
Unsurveyed land[2]	n/a	522	522	522	n/a

[121] http://www.statistics.gov.uk/STATBASE/Expodata/Spreadsheets/D5325.xls (accessed 22.10.2009)

Land Type	1984	1990	1998	2007	% change between 1998 and 2007
Total[3]	22514	22632	22601	22627	

It is not known whether the decrease in arable and increase in improved grassland is likely to continue at the same rate in the future although it does seem likely that the extent of built up areas will continue to increase as some development will inevitably take place on greenfield land.

The area land occupied by agricultural holdings and the area in actual use for agriculture has changed very little across the UK in the past 25 years. The total area of land in agricultural holdings in the UK fell on average by about 15,400ha per annum between 1983 and 2008. This was equivalent to a rate of 0.09% per annum, or about 1% per decade, although over the latter 10 years of that period the reduction in land area was minimal[122].

The clearest trend in land use change in the UK over the past quarter of a century has been the conversion of land from agriculture to forestry and woodland. Forestry Commission estimates of the area of forest and woodland cover in the UK imply an average annual net increase of 25,000ha since 1980, equivalent to 1.05% per year. There seems to have been some reduction in the rate of growth from 2000 to 2008 with the net increase in tree cover in this period being about 7,000ha per annum (or 0.24%). These recent patterns of woodland expansion continue a very clear upwards trend, which has led to a doubling of the area of UK woodland since World War II.

New planting has predominantly responded to subsidy and has involved the expansion of small broadleaved woodlands within agricultural holdings. The average annual increase in woodland on farms (14,500ha per annum) accounts for more than half of the net increase in the wooded area as a whole. The area of woodland within agricultural holdings has thus more than doubled since the early 1980s.

In 2008, there was an estimated 63,750ha of previously-developed land in England, up from 2.6% from 62,130ha in 2007. An estimated 32,400ha of previously-developed land was vacant or derelict, 51% of the total. The remaining 31,350ha was in use but with potential for redevelopment[123]. The conversion of previously undeveloped land accounted for about 5,000ha per annum between 2000 and 2006. This is equivalent to 0.04% of England's land area, and about one-third of the average annual flow of 15,700ha estimated for the period 1945-1975. Of all greenfield land developed between 2000 and 2006, roughly

[122] Foresight Land Use Futures Project (2010). Final Report.

[123] Previously Developed Land that may be Available for Development: Results from the 2008 National Land Use Database of Previously-Developed Land in England, Homes and Communities Agency, February 2010, http://www.homesandcommunities.co.uk/nlud-pdl-results-and-analysis.htm

57% was for residential uses, with 20% being for industrial, commercial and related activities, and the remaining 23% for other developed uses, predominantly transport.

England - Soils and Geology

The Natural Environment White Paper (2011) established an ambition that by 2030 all of England's soils will be managed sustainably and degradation threats tackled successfully, in order to improve the quality of soils and to safeguard their ability to provide essential ecosystem services and functions for future generations.

England - Land Use

In 2008, there was an estimated 63,750ha of previously-developed land in England, up from 2.6% from 62,130ha in 2007. This reversed a trend that occurred in the previous five years, where the total amount of previously-developed land in England declined by 6%. Between 2002 and 2007, the amount of vacant and derelict land declined by 17.5% while land currently in use with potential for redevelopment increased by 12%[124].

There have also been changes in the changes to land use related to broad habitat types. Between 1998 and 2007 in England there was a significant increase in the area of Broadleaved Woodland (5.8%), Neutral Grassland (12.6%), Dwarf Shrub Heath (15.1%) and Standing Open Water and Canals (5.3%6). The increase in the area of Dwarf Shrub Heath between 1998 and 2007 followed a decrease in area between 1990 and 1998. The increase in the area of Standing Open Water and Canals6 recorded in England between 1998 and 2007 continued the increases recorded by Countryside Survey since 1990[125].

On the other hand, there was a significant decrease in the area of Arable and Horticulture Broad Habitat (8.8%) in England across the same period. No statistical change in extent was detected in the Coniferous Woodland, Improved Grassland, Bracken, Bog, Fen, Marsh and Swamp and Calcareous Grassland Broad Habitats in England between 1998 and 2007.

4.5.2 West Midlands

The Region has a high proportion of best and most versatile agricultural land. Much of this is managed under agri-environmental schemes. Uptake of such schemes is likely to increase (although this is outside the scope of the planning system or the influence of the Regional Strategy), bringing with it soil

[124] Communities and Local Government 2008
[125] Countryside Survey for England (2007)
http://www.countrysidesurvey.org.uk/sites/default/files/pdfs/reports2007/england2007/CS-England-Results2007-Chapter02.pdf

protection measures.

However, the Region is subject to significant development pressure. While this is concentrated in existing urban areas with a high level reuse of previously developed land, the amount of PDL land available for development is falling (at the fastest rate of any region in England) and it is therefore likely that with time there will be greater pressures to extend beyond existing settlements and increasingly use greenfield land. The ALC map presented above indicates that some of this could be accommodated on lower grade agricultural land which predominates in the urban fringes of some settlements, but this will be more difficult to achieve in others.

The region has two geological National Nature Reserves and 122 geological Sites of Special Scientific Interest. The interest features have been destroyed in two of these sites. Of the rest, 87% are in favourable condition and 13% are unfavourable. There are 648 Regionally Important Geological/geomorphological Sites but, at present, there is no information on their condition. It is expected that the overall condition of the SSSI will be maintained or improved because of the legal requirements on landowners.

Geological Sites of Special Scientific Interest

Green - Favourable geological SSSI's

Red - Unfavourable geological SSSI's

Blue - Regionally Important Geological/geomorphological Sites (RIGS)

Figure 4.3 Geological Sites of Special Scientific Interest

Source: Natural England

4.6 Assessing significance

Table 4.4 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the soil and geology. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 4.4 Approach to determining the significance of effects on geology and soils

Effect	Description	Illustrative Guidance
++	Significant positive	• Alternative would restore and significantly improve soil quality and land stability to conditions beyond current levels and remove all soil contamination so that soil functions and processes would be significantly improved in the long term. • Alternative would minimise, and protect from irreversible damage high quality agricultural land (i.e. best and most versatile, grades 1, 2, and 3a of the Agricultural Land Classification). • Alternative would have a significant and sustained positive impact on a national designated geological site. • Alternative would seek to minimise use of any undeveloped land, and look to preferentially reclaim and redevelop significant areas of previously-developed or derelict land.
+	Positive	• Alternative would cause minor improvements in soil quality and land stability so that soil functions and processes would be improved in the long term. • Alternative would reduce any potential damage to high quality agricultural land (i.e. best and most versatile, grades 1, 2, and 3a of the Agricultural Land Classification). • Alternative will reduce any potential hazard associated with existing soil contamination. • Alternative would have a minor and temporary positive impact on a national designated geological site. • Alternative would seek to preferentially make use of previously developed land; however, would allow for development of undeveloped.
0	No (neutral effects)	• Alternative would not cause damage or loss to soil such that soil function and processes will not be affected. • Alternative would not affect land stability. • Alternative would not involve significant loss of any undeveloped or developed land.
-	Negative	• Alternative would lead to an increase in pollutant discharges to soil, however these would be less than permitted limits, such that there will be minor short term increases in land contamination. • Alternative would cause minor increases in potential hazards associated with existing soil contamination. • Alternative would cause a temporary loss of soil so that soil function and processes would be negatively affected in the short/medium term. • Alternative would cause minor short term negative effects on geological conservation sites/important geological features or soils of high importance. • Alternative would lead to the majority of development using undeveloped land or land that has reverted to a 'wild' state.
--	Significant negative	• Alternative would lead to a statutory limit being reached or exceeded in relation to land contamination, such that there would be a major and sustained increase in land contamination. • Alternative would cause major and sustained increases in potential hazards associated with existing soil contamination. • Alternative would cause considerable loss of soil quality, such that soil function and processes will be irreversibly and significantly affected. • Alternative would cause a substantial and permanent loss of or damage to soil of high importance and/or designated geological conservation sites/important geological features. • Alternative would not develop derelict or previously-developed land, but would lead to development of significant areas of undeveloped land/ land that has reverted to a 'wild' state.

Effect	Description	Illustrative Guidance
?	Uncertain	• From the level of information available the impact that the alternative would have on this objective is uncertain.

4.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

There were no significant effects (either positive or negative) identified in the detailed assessment of the effects of revocation and retention of the West Midlands Regional Spatial Strategy policies against the soil and geology topic.

4.7.1 Effects of Revocation

The main adverse impacts on soil resulting from the Regional Spatial Strategy are linked to development. However, while most of the agricultural land in the West Midlands comprises Grade 3 land and below, with relatively limited areas of the highest grades (i.e. Grades 1 and 2), there remain significant areas of previously developed land. Policies in the NPPF seek to protect best and most versatile land (i.e. ALC Grades 1-3a) and to encourage the use of brownfield land. Paragraph 112 states that where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality, while paragraph 111 seeks the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value.

The geological SSSIs in the region are protected by legislation (The Countryside and Rights of Way Act 2000). Paragraph 109 of the NPPF states that the planning system should contribute to, and enhance, the natural and local environment by, for example, protecting and enhancing valued landscapes, geological conservation interests and soils. Paragraph 117 states that to minimise impacts on geodiversity, planning policies should aim to prevent harm to geological conservation interests.

4.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or

- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or

- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

4.7.1 Effects of Retention

The likely effects are judged to be as for revocation.

4.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

5. Water Quality and Resources

5.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals to revoke the regional strategy on water quality and resources. Information is presented for both national and regional levels.

Water quality and resources within this context are defined as inland surface freshwater and groundwater resources, and inland surface freshwater, groundwater, estuarine, coastal and marine water quality.

There are links between the water quality and resources topic and a number of other SEA topics, in particular the effects and interactions of water quality and resources on biodiversity, population and human health.

5.2 Summary of Plans and Programmes

5.2.1 International

The ***Water Framework Directive*** (WFD) is the most substantial piece of EC water legislation to date and replaces a number of existing Directives including the Surface Water Abstraction Directive. It establishes a framework for the protection of inland surface waters, transitional waters, coastal water and groundwater and is designed to improve and integrate the way water bodies are managed, including encouraging the sustainable use of water resources. The key objectives at European level are general protection of the aquatic ecology, specific protection of unique and valuable habitats, protection of drinking water resources, and protection of bathing water.

In accordance with Article 4(1), the Directive objectives for surface water, groundwater, transitional and coastal water bodies are to:

- prevent deterioration;
- reduce pollution;
- protect, enhance and restore condition;
- achieve 'good status' by 2015, or an alternative objective where allowed; and

- comply with requirements for protected areas .

The WFD adopts the 'polluters pays principle' in seeking to ensure that the costs and benefits of discharging pollutants to the water environment are appropriately valued, and that implementation of the Directive is achieved in a fair and proportionate way across all sectors.

The aim of the ***Marine Strategy Framework Directive (2008)*** is to protect more effectively the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend.

With specific regard to coastal water quality, the ***Bathing Waters Directive (2006/7/EC)*** sets standards for the quality of bathing waters in terms of:

- the physical, chemical and microbiological parameters;
- the mandatory limit values and indicative values for such parameters; and
- the minimum sampling frequency and method of analysis or inspection of such water.

The ***Floods Directive (2007/60/EC)*** aims to provide a consistent approach to managing flood risk across Europe. The approach is based on a 6 year cycle of planning which includes the publication of Preliminary Flood Risk Assessments, hazard and risk maps and flood risk management plans. The Directive is transposed into English law by the Flood Risk Regulations 2009.

The ***Urban Waste Water Treatment Directive (91/271/EEC)*** has the objective of protecting the environment from the adverse effects of untreated 'urban waste water' ('sewage'). The directive establishes minimum requirements for the treatment of significant sewage discharges. An important aspect of the directive is the protection of the water environment from nutrients, (specifically compounds of nitrogen and phosphorus), and/or nitrates present in waste water where these substances have adverse impacts on the ecology of the water environment or abstraction source waters. It was transposed into English law through the Urban Waste Water Treatment (England and Wales) Regulations 1994 (as amended).

In addition, the following European Directives have relevance to the protection of the water environment and resources:

- Dangerous Substances Directive (76/464/EEC);
- Quality of Shellfish Waters Directive (79/923/EEC);
- Directive on Priority Substances (2008/105/EC);

- Groundwater Directive (80 /68/EEC);
- Waste Framework Directive (2008/98/EC);
- Industrial Emissions Directive ((2010/75/EU); and
- Drinking Water Directive (98/83/EC).

5.2.2 National

UK

The ***Flood and Water Management Act (2010)*** makes provisions about water, including those related to water resources, including;

- To widen the list of uses of water that water companies can control during periods of water shortage, and enable Government to add to and remove uses from the list.
- To encourage the uptake of sustainable drainage systems by removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SUDS for new developments and redevelopments.
- To reduce 'bad debt' in the water industry by amending the Water Industry Act 1991 to provide a named customer and clarify who is responsible for paying the water bill.
- To make it easier for water and sewerage companies to develop and implement social tariffs where companies consider there is a good cause to do so, and in light of guidance that will be issued by the Secretary of State following a full public consultation.

The ***Marine and Coastal Access Act (2009)*** sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. The main objectives of the ***Marine Policy Statement (2011)*** are to enable an appropriate and consistent approach to marine planning across UK waters, and to ensure the sustainable use of marine resources and strategic management of marine activities from renewable energy to nature conservation, fishing, recreation and tourism.

England

In England, the implementation work related to the Water Framework Directive is undertaken by the Environment Agency, working in partnership with key partners. For these reason the majority of data and programmes regarding Water Quality and Resources cover both administrations and therefore

England and Wales are considered collectively in this chapter.

There are 11 River Basin Districts in England and Wales which each require (under the Water Framework Directive) a ***River Basin Management Plan (RBMP)*** including objectives for surface water, groundwater, transitional and coastal water bodies.

The Government's 2011 White Paper '***Water for Life'*** sets out the Government's vision for future water management in which the water sector is resilient and which water is valued as a precious resource. The key reforms set out in the White Paper are:

- the introduction of a reformed water abstraction regime, as signaled in the Natural Environment White Paper changes to deal with the legacy of over-abstraction of our rivers;
- a new catchment approach to dealing with water quality and wider environmental issues;
- with the Environment Agency and Ofwat provide clearer guidance to water companies on planning for the long-term, and keeping demand down;
- consultation on the introduction of national standards and a new planning approval system for sustainable drainage; and
- collaboration with water companies, regulators and customers to raise awareness of the connection between how we use water and the quality of our rivers.

Water for people and the environment - Water resources strategy for England and Wales (2009) published by Environment Agency, includes the following objectives:

- enable habitats and species to adapt better to climate change;
- allow protection for the water environment to adjust flexibly to a changing climate;
- reduce pressure on the environment caused by water taken for human use;
- encourage options resilient to climate change to be chosen in the face of uncertainty;
- better protect vital water supply infrastructure;
- reduce greenhouse gas emissions from people using water, considering the whole life-cycle of use; and
- improve understanding of the risks and uncertainties of climate change.

Other relevant strategies include the Environment Agency's ***Catchment Abstraction Management***

Strategies (CAMS) which have identified a number of catchments in England and Wales which are designated as Over-Licensed or Over-Abstracted. That is, the current level of licensed abstraction could result in an unacceptable stress on the catchment's ecology (designated over-licensed) or possibly is resulting in an unacceptable effect (designated over-abstracted).

National Policy Statements (2011 and 2012) brings together national government policy for nationally significant infrastructure projects (NSIPs) for energy, wastewater and ports infrastructure. The National Policy Statements set out the policy framework for decisions on major infrastructure projects that meet the NSIPs thresholds established in the Planning Act 2008.

The ***National Planning Policy Framework (NPPF) (2012)*** expects the planning system to contribute to conserving and enhancing the natural environment and reducing pollution, and take full account of flood risk. In particular, the planning system is expected to prevent new development from contributing to unacceptable levels of water pollution.

Local planning authorities are expected to set out the strategic priorities for their area in the Local Plan including strategic policies to deliver the provision of infrastructure for water supply, wastewater, flood risk and coastal change management. In preparing the evidence base for their Local Plans, they are expected to work with other authorities and providers to assess the quality and capacity of the existing infrastructure and its ability to meet forecast demands. Public bodies have a duty to co-operate on planning issues that cross administrative boundaries particularly those which relate to strategic priorities.

The Framework expects inappropriate development in areas of flood risk to be avoided and sets out how this should be achieved through the preparation of Local Plans and in determining planning applications. Supporting technical guidance has been provided to ensure the effective implementation of the policy.

Local plans are expected to take account of climate change over the longer term including factors such as flood risk, coastal change and water supply. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change.

5.2.3 West Midlands

The Environment Agency is developing **Catchment Abstraction Management Strategies (CAMS)** which consider how much water can be abstracted from watercourses and groundwater without damaging the environment within a catchment - the most appropriate scale for planning for water. They recognise the needs of abstractors whilst also reflecting the requirements of the Water Framework Directive.

The water companies are required by provisions in the Water Resources Management Plan Regulations 2007 to prepare **Water Resources Management Plans** every five years to address the challenges to

water supplies from growth, climate change and environmental legislation. They are also required to prepare **Drought Management Plans**. These set out how they will maintain the water supply during periods of low rainfall when supply becomes depleted. Severn Trent Water published its Drought Plan in 2009[126]. As explained in the drought plan, a key requirement of drought management is the monitoring of a developing situation and the timeliness of action, and good co-operation and communication with the Environment Agency is an essential part of drought management. They continually monitor reservoir storage and groundwater abstraction rates, thereby giving sufficient lead time to deploy the actions described in this Plan.

The Environment Agency also produces and monitors the delivery of action arising from **Catchment Flood Management Plans** (CFMPs) which give an overview of the flood risk across each river catchment. They recommend ways of managing those risks now and over the next 50-100 years. There are two CFMPs which apply to the West Midlands. The River Trent Catchment Flood Management Plan[127] covers the entire River Trent catchment from its source above Stafford down to the boundary with the shoreline management plan (SMP) at Keadby Bridge. It incorporates Birmingham and the Black Country. The River Severn Catchment Flood Management Plan[128] covers the catchment down to Gloucester, including tributaries, e.g. the Avon and Teme. The CFMP includes much of the counties of Shropshire, Worcestershire, Warwickshire and Gloucestershire.

5.3 Overview of the Baseline

5.3.1 National

UK

The UK has a diversity of inland and coastal waters (such as reservoirs, lakes, rivers, canals, estuaries, transitional waters, and coastal waters). Protected water features include waters designated for human consumption (including those abstracted from groundwater); areas designated for the protection of economically significant aquatic species (e.g. shellfish or freshwater fish); bathing waters (under the Bathing Waters Directive); nutrient-sensitive areas; and areas with waters important to protected habitats or species under the Habitats Directive or the Birds Directive.

There are 182 protected areas in UK inshore waters with a marine element, which includes 81 Special Protection Areas (SPAs) with marine habitats for birds, 98 Special Areas of Conservation (SACs) with marine habitats or species and three Marine Nature Reserves. In total the area coverage of these sites

[126] http://www.stwater.co.uk/upload/pdf/Final_Drought_Plan_2010v2.pdf
[127] http://publications.environment-agency.gov.uk/PDF/GEMI1109BRDZ-E-E.pdf
[128] http://publications.environment-agency.gov.uk/PDF/GEMI0909BQYM-B-E.pdf

exceeds 1.8 million hectares, or 2.2% of UK waters.[129]

The principal aquifers of the UK are located in the lowlands of England. The most important are the Chalk, Permo-Triassic sandstones, the Jurassic limestones and the Lower Greensand. Around 81% of groundwater bodies in England are at risk of failing Water Framework Directive objectives because of diffuse pollution.

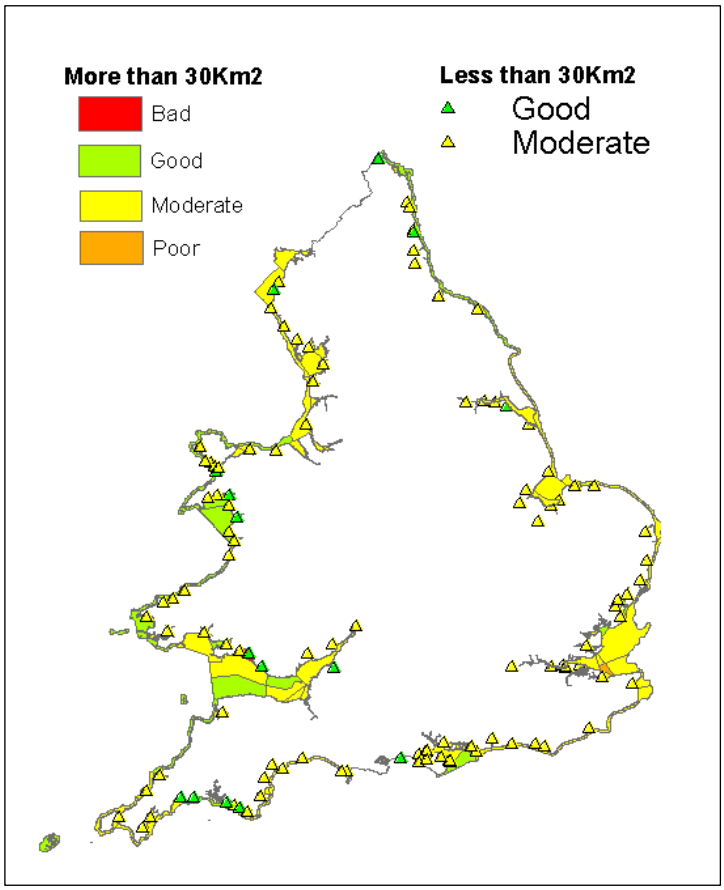
As the majority of data regarding water resources and quality is collected by the Environment Agency (covering both England and Wales), Scottish Environment Protection Agency and Northern Ireland's Department of Ireland, there is little available data on a UK level and therefore for this chapter the remainder of the baseline is considered by these divisions of administrations.

England

Coastal water quality has improved over the last two decades, however current WFD draft classification results and maps produced by the Environment Agency indicate that there are still a large proportion of coastal waters in England (and Wales) that are classified as being of Moderate Ecological Status (**Figure 5.1**) i.e. are failing to meet 'Good Ecological Status' (GES) on the basis of a number of physio-chemical and biological standards and are therefore in need of measures to achieve GES.

[129] http://www.defra.gov.uk/foodfarm/fisheries/documents/mpp2009-10info.pdf

Figure 5.1 Ecological Status/Potential of Estuaries and Coasts in England and Wales



Source: *Framework Directive results and maps* available at http://www.environment-agency.gov.uk/research/library/data/97343.aspx (accessed 21/10/2009)

River water quality in England has been steadily increasing since 1990 and in 2009, 73% of rivers were of good biological quality. Between 2006 and 2007, the percentage of rivers of 'good' chemical quality rose from 74% to 76% (based on the General Quality Assessment system[130] which is based on 3 determinands - dissolved oxygen, biochemical oxygen demand and ammoniacal nitrogen). In 2009 this rose to 80 per cent. High levels of phosphorus can result in increased algal growth in freshwater and high levels of nitrate are of concern in relation to drinking water abstractions. Rivers with the highest concentrations of phosphate and nitrate are mainly in central and eastern England reflecting geology, agricultural inputs and higher population density.

The consumption of water abstracted from non-tidal surface and groundwater in England and Wales has

[130] The GQA system is being superseded by the Water Framework Directive regime, however the transition is on-going.

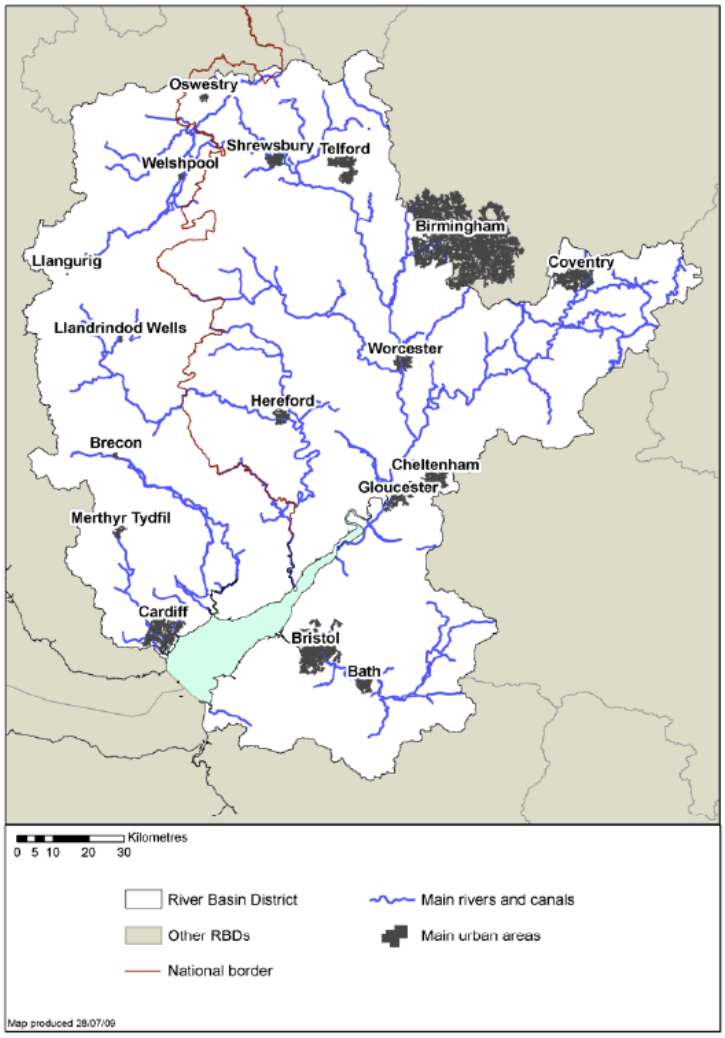
fallen from an estimated 41.2 thousand megalitres/day in 2000 to 33.6 thousand megalitres/day in 2009.

5.3.2 West Midlands

The West Midlands falls predominantly within the River Basin Management District of the River Severn (e.g. Hereford, Shrewsbury Telford, Coventry and the south west of Birmingham) and to a smaller extent the Humber District (most of Birmingham and Stoke on Trent).

The Severn River Basin (**Figure 5.2**) covers an area of 21,590km^2, with about one third of the district in Wales and parts of the South West region including Cheltenham, Gloucester, Bristol and Bath. The majority of the Humber River Basin District stretches across the East Midlands and Yorkshire and Humber.

Figure 5.2 The Severn River Basin District



Past and present activities within the river basin district put pressures on the water environment. Rural land management is a source of diffuse pollution from nutrients, sediments and pesticides. Sewage treatment works and other intermittent discharges from the sewerage network also increase nutrient levels whilst these and other point sources increase the pressure from ammonia and dangerous substances. Run-off and drainage from urban areas can contain a range of pollutants whilst historic mining activity has left a legacy of metal and other pollution.

Abstractions from rivers and groundwaters for public water supply and to a lesser extent for industry and agriculture impact on river flows and groundwater levels. Many rivers and lakes have been subject to some form of physical modification which has had negative impacts on habitats and wildlife.

Water Resources

Average annual rainfall in the region is 754 mm compared to the England and Wales average of 900mm. The driest areas are in the east and south-east of the West Midlands, whilst the wettest are the western edges of Shropshire and Herefordshire and the Staffordshire Moorlands in the north-east.

The two main water users in the region are public water supply and power generation. Together they account for 87 per cent of all water abstraction in the region. Water use in all sectors has shown a general downward trend in recent years.

Water supply to the Midlands comes from abstraction of water from tidal and non-tidal surface waters (rivers and reservoirs) and groundwater. Surface water provides 78 per cent of total abstraction and groundwater provides 22 per cent. Total abstraction of water has been showing a general downward trend since a peak in 2002. In 2007, 4800 million litres were abstracted each day, a 30 per cent reduction on the previous year. Domestic water consumption is close to 130 litres per person per day. Households with a meter use on average around 20 litres less water per person per day than unmetered households.

Water Quality

The Severn River Basin District River Basin Management Plan published in December 2009 identified that around 29% of surface waters are at good or better ecological status, while 53% were classified as moderate and 18% as poor or bad. However, 37% of assessed water bodies were of good or higher biological status, but 31% were poor or worse.

The reasons for surface waters failing to meet 'good' status include diffuse source pollution from agriculture, point source discharges from water industry sewage works and a range of reasons due to

physical modifications.

Table 5.2 Main Reasons for Rivers Not Achieving Good Ecological Status or Potential

Reason for failure	Key elements impacted
Diffuse source agricultural	ammonia (phys-chem), dissolved inorganic nitrogen, dissolved oxygen, fish, invertebrates, macrophytes, phosphate, phytobenthos, phytoplankton, total phosphorus
Point source water industry sewage works	ammonia, phosphate, dissolved oxygen
Physical modification barriers to fish migration	fish
Physical modification urbanisation	fish, invertebrates, mitigation measures assessment
Physical modification land drainage	dissolved oxygen, fish, mitigation measures assessment
Physical modification flood protection	fish, invertebrates, mitigation measures assessment
Physical modification water storage and supply (including for power generation)	fish, mitigation measures assessment
Diffuse source mixed urban run-off	dissolved oxygen, invertebrates, phosphate, benzo (ghi) perelyene and indeno (123-cd) pyrene.

Drinking water supplied to households by water companies is of high quality and complies with strict standards enforced by the Drinking Water Inspectorate. Where water is abstracted from a water body for human consumption, the water body is designated as a Drinking Water Protected Area (DrWPA) – additional objectives apply and where necessary, additional action is put in place to protect the quality of the raw water abstracted. According to the RBMP, the Environment Agency are reasonably confident that the DrWPA objective is at high risk of not being complied with, a Safeguard Zone has been identified. In the Safeguard Zone additional actions will take place. These may include voluntary agreements, pollution prevention campaigns and targeted enforcement action of existing legislation. Additional monitoring is taking place to assess whether those DrWPAs currently not assessed at high risk, need a Safeguard Zone and additional action taken.

In parallel with this approach, the Environment Agency is continuing to develop work on regulatory measures, such as piloting Water Protection Zones in England. If voluntary approaches are shown not to work in a Safeguard Zone, we are ready and able to ensure progress is made before 2015.

Fish are one of the biological quality elements used to assess water bodies under the Water Framework Directive (WFD). Their populations are measured and classified into one of the five ecological status classes (high, good, moderate, poor or bad). The WFD requires continued improvement in fish stocks by

reducing the pressures they face. For example, low water quality caused by diffuse pollution problems, physical habitat damage, and reduced water quantity and flow caused by unsustainable abstractions. The Environment Agency are committed to undertaking habitat and water quality improvement projects to ensure all local rivers meet the WFD 2015 target for fish status.

5.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

5.4.1 National

In some urban areas in England there is relatively little water available per rata, and abstraction is above its sustainable level. The Environment Agency have derived assessments on availability of water resources for new abstraction based on Catchment Abstraction Management Strategy (CAMS) assessments and large areas of England, most notably in the South East, have been identified as areas where water for new abstractions will be limited to winter months when flows are high.[131]

This issue is likely to continue in the future based on projections on the future rainfall and demand has lead to the classification of all south-eastern areas as seriously water stressed. The remainder of the UK is classified as either having low or moderate water stress.

Recently published River Basin Management Plans (which have been established in accordance with the Water Framework Directive) have designated a number of freshwater (surface and groundwater), transitional (estuaries) and coastal water bodies in England as failing to meet "*Good Ecological Status*" (GES) on the basis of a number of physio-chemical and biological standards. Flows in rivers and freshwater inputs to transitional waters are considered to be a 'supporting element' in the achievement of GES.

In Southern and Eastern regions of England, where rainfall is comparatively low, per capita water consumption tends to be higher than elsewhere. In some areas, abstraction is above its sustainable level and this combined with projections for rainfall and demand has lead to the classification of all south-eastern areas as seriously water stressed.

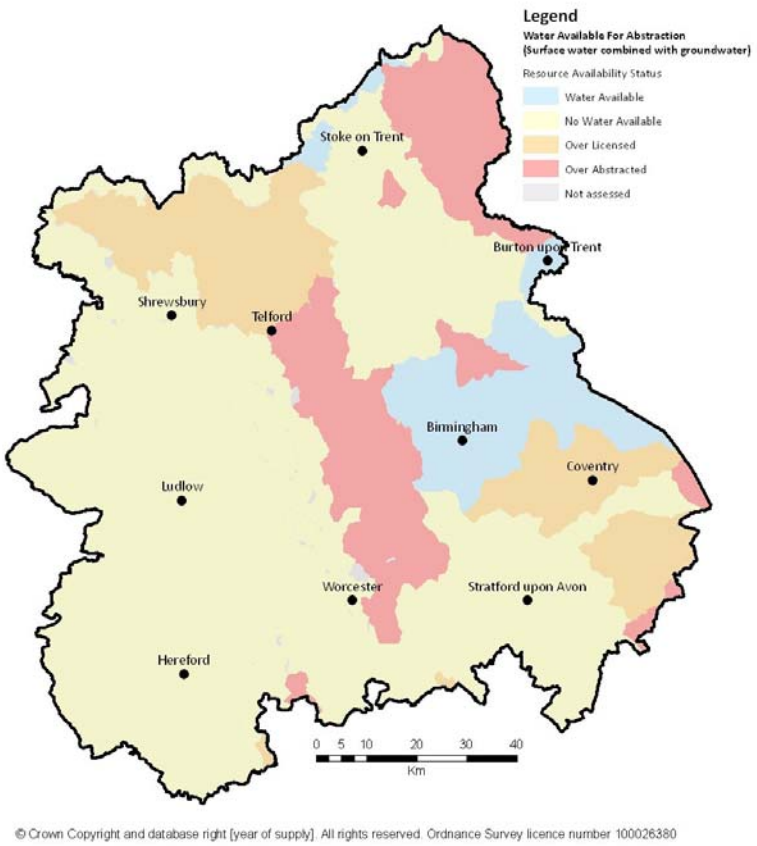
[131] http://sd.defra.gov.uk/2010/07/measuring-progress-sustainable-development-indicators-2010/

5.4.2 West Midlands

Water Resources

The key issue relating to water resources is the ability to continue to supply existing developments and deal with forecast growth without having an adverse effect of the environment. Water resources are already heavily utilised across the region with most areas having no (additional) water available for abstraction without causing environmental damage. Significant portions of the region already suffer from over abstraction or over licensing problems. The areas most likely to be effected in terms of the ability to supply water will therefore be the major urban areas and other centres identified to accommodate significantly more housing. **Figure 5.3** shows water availability for abstraction across the West Midlands[132].

Figure 5.3 West Midlands Water Availability for Abstraction

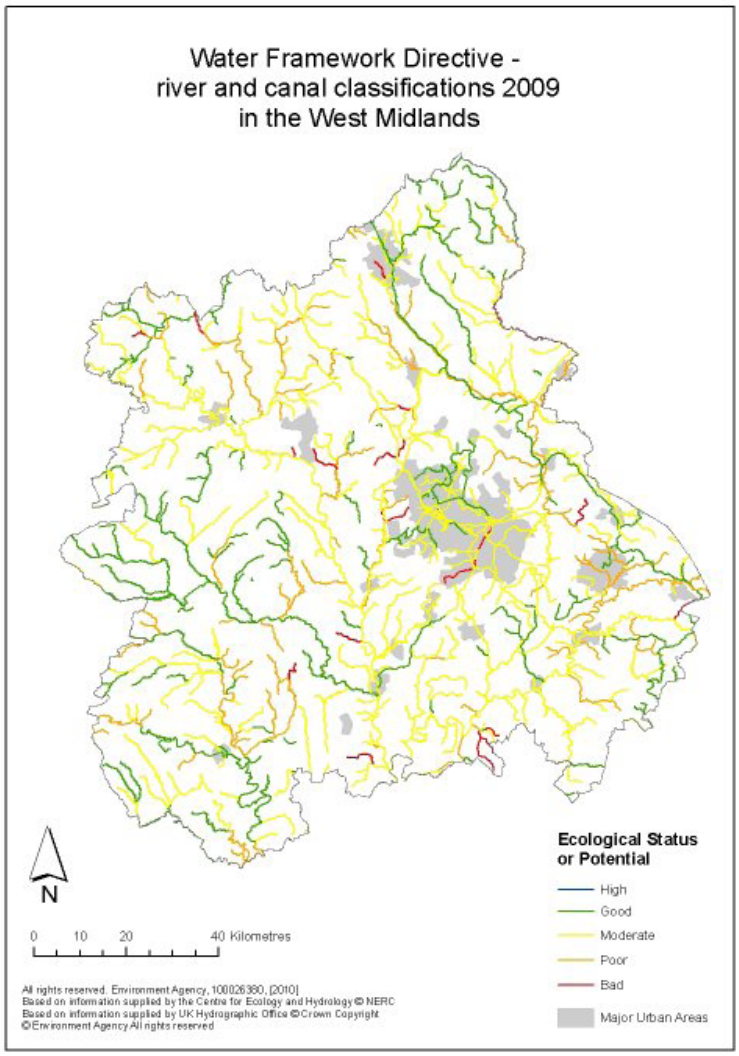


[132] Environment Agency State of the Environment Report (2009)

Water Quality

In the Severn river basin district 29 per cent of surface waters meet good ecological status/potential or better; 71 per cent do not meet good ecological status/potential (619 water bodies). 75 per cent of groundwater bodies are at good quantitative status with the rest being poor status. **Figure 5.4** indicates the ecological status of the rivers and canals in the West Midlands in 2009[133].

Figure 5.4 Ecological status of the rivers and canals in the West Midlands in 2009



[133] Source: Environment Agency State of the Environment Report

A number of sensitive locations are potentially vulnerable to the over abstraction of water, or further development within the floodplain, excessive land drainage and low rainfall as follows:

European and Ramsar sites

According to the 2009 sustainability appraisal of the review of the West Midlands Plan, the following European designated sites were identified as being susceptible to over extraction of local ground water or surface water or other water resource related issues or water quality

- Cannock Extension Canal SAC - maintaining good water quality;
- Fens Pools SAC - water quality and quantity;
- Pasturefields Salt Marsh SAC - quality of water supply;
- River Clun SAC – water quality;
- River Mease SAC - water supply and quality;
- South Pennine Moors SAC - water quantity;
- Humber Estuary pSAC - water quantity and water quality
- Severn Estuary pSAC – recreational pressure and disturbance, water quality, water quantity;
- Peak District Moors (South Pennine Moors Phase I) SPA - water quality, water quantity;
- Humber Flats, Marshes and Coast (Phase I) SPA - water quality, water quantity;
- Midlands Meres and Mosses Phase I Ramsar Site - water quality, water quality;
- Midlands Meres and Mosses Phase II Ramsar Site – water quality;
- Humber Flats, Marshes and Coast (Phase I) Ramsar Site - water quality

5.5 Likely Evolution of the Baseline

5.5.1 National

UK

The current trend in water condition is generally towards increased water quality across natural environments, drinking water and bathing waters[134]. Current climate change predictions indicate that rainfall patterns will become increasingly seasonal, with lower amounts of flow in the summer. This will lead to lower summer river flows, especially in those catchments with a low groundwater component. This could lead to increased abstraction pressure, increased stress on sensitive hydrological systems and a decrease in dilution potential leading to a failure against water quality targets. Increased flooding and storm events also have the potential to increase runoff of pollutants into controlled waters, thus reducing water quality. Population pressures are predicted to increase in certain parts of Great Britain, for example in the south-east. Increased population density will result in an increased pressure on natural resources and could exacerbate current problems or cause new ones.

[134] Defra, Sustainable Development Indicators (2009)http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf

The Marine and Coastal Access Act (2009) allows for the creation of Marine Conservation Zones (MCZs) in Great Britain (Northern Ireland MCZs will be introduced through separate legislation). MCZs will protect nationally important marine wildlife, habitats, geology and geomorphology. Sites will be selected to protect the range of marine wildlife[135]. This should lead to greater protection and improvement of marine habitats in the future.

In 2011, all but 14 of the 597 coastal bathing waters in the UK met the mandatory (basic) standards of the European Bathing Water Directive[136]. Under the revised Bathing Water Directive all bathing waters will be required to achieve at least 'sufficient' quality by 2015, which is twice as stringent as the current mandatory standard. The overall quality of bathing waters is therefore likely to increase as water quality is improved to meet the increased standards.[137]

England

The Environment Agency's Catchment Abstraction Management Strategies (CAMS) have identified a number of catchments in England which are designated as Over-Licensed or Over-Abstracted. Climate change is likely to result in lower summer rainfalls and more frequent/sever winter flood events. Such changes are likely to increase pressure on summer freshwater water availability and increase pollutant runoff into controlled waters during flood events. Unsustainable groundwater and surface water abstraction may contribute to environmental damage of rivers and wetlands at 500 sites in England and Wales, important conservation sites, including sites of national and international conservation importance.

The Environment Agency aims that by 2030 water use per person in England should fall by 130 litres/ day.[138]

The Water Framework Directive (Directive 2000/60/EEC) requires that river basin management plans are prepared by December 2009. The objectives of the river basin management plans are required to be achieved by 2015.[138] Those objectives are to:

- prevent deterioration, enhance and restore bodies of surface water, achieve good chemical and ecological status of such water and reduce pollution from discharges and emissions of hazardous substances;
- protect, enhance and restore all bodies of groundwater, prevent the pollution and

[135] Natural England. http://www.naturalengland.org.uk/ourwork/marine/protectandmanage/mpa/mcz/default.aspx
[136] Defra, Environmental Statistics – Key Facts Dec 2011
[137] Environment Agency http://www.environment-agency.gov.uk/research/library/data/112170.aspx
[138] EU http://europa.eu/legislation_summaries/agriculture/environment/l28002b_en.htm

deterioration of groundwater, and ensure a balance between groundwater abstraction and replenishment; and

- preserve protected areas.

Defra aims that by 2030 at the latest, England has improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from its taps; sustainably manage risks from flooding and coastal erosion, with greater understanding and more effective management of surface water; ensure a sustainable use of water resources, and implement fair, affordable and cost reflective water charges; cut greenhouse gas emissions; and embed continuous adaptation to climate change and other pressures across the water industry and water users.[139]

Environment Agency aims to enhance water supply by up to 1,100Ml/d above present levels by the improvement of existing schemes and the development of some new resources. [140.]

There is a trend of improving quality of rivers within England; between 1990 and 2008 the percentage of rivers of good biological quality in England rose from 63 to 72%. Over the same time period the percentage of rivers of good chemical quality rose from 55 to 79%[141].

5.5.2 West Midlands

The Water Resource Management Plan published by Severn Trent Water in draft in 2008[142] provides forecasts of the supply-demand balance to enable them to plan to maintain secure water supplies for their domestic and commercial customers. Demand is forecast by combining population and housing growth data with expected water consumption, enabling them to predict where demand is likely to increase and by how much. Their analysis focused on the first five years of the Management Plans planning period, 2010 to 2015.

The Oswestry zone in the north of the region is supported by a number of groundwater sources, an import from the Shrewsbury sub area of the Severn Water Resource Zone (WRZ) and an import from United Utilities at Llanforda. The Water Company had indicated that United Utilities had given notice to terminate an agreement to supply water from Llanforda and Severn Trent water were a new groundwater source at Nescliffe to replace that water. It was considered that the Oswestry zone will have adequate water resources once the new groundwater source is licensed and commissioned.

[139] Future Water, the Government's Water Strategy for England
[140] EA, Water Resources for the Future: A Strategy for England and Wales
[141] Defra, Sustainable Development Indicators (2010) http://sd.defra.gov.uk/2010/07/measuring-progress-sustainable-development-indicators-2010/
[142] http://www.stwater.co.uk/upload/pdf/WRMP09_vol_1_-_consultation_version_small_file.pdf

The Staffs and East Shropshire WRZ is considered as five sub areas:

- The Leek & Stoke area, the largest area, which is supplied by a large number of water sources and includes the Market Drayton area which is partially linked to the Stoke system. Some constraints were identified and consideration was being given to potential changes to the Tittesworth reservoir compensation system.

- Telford, which is a larger stand alone system supported by local water sources, with a small import from the Severn WRZ. There were some surplus water resources available. It was recognised that Telford was a housing growth point area but provided the volume of licensed abstraction currently available was not reduced, there was adequate resource available to support this growth, although further resilience measures may be required.

- Stafford & Stone, is a small system which has some support from the Stoke area, and a link with South Staffs Water in the south for emergency purposes. The area has some surplus water, however, it is under pressure from some water quality issues and potential reductions in abstraction licence quantities. As the size of the surplus and the pressures on it become more certain following further investigations, the water company indicated that they may propose a solution to release surplus water to the Stoke and Leek sub zone. Some potential resilience measures will also need further consideration.

- Whitchurch & Wem, has a small stand-alone distribution system supported by local water sources. Supply and demand are broadly in balance for annual average demand, but the water company had identified a potential predicted deficit in the supply-demand balance under peak week demands.

- Much Wenlock, the smallest of the five sub-systems, being a standalone distribution system supported by a local water source.

The Severn WRZ covers much of the West Midlands. It is divided into six sub-regions including:

- The Worcestershire, Warwickshire, Gloucestershire and South Shropshire area is the largest supply system. Within this area there are some limitations on the capacity of the linkages. This system can also be supported by imports from the Birmingham WRZ and the East Midlands WRZ;

- Wolverhampton forms another supply system fed by a surface water source, shared with South Staffs Water, and a number of groundwater sources. There is a small export from this system to the Telford area of the Staffs and East Shropshire WRZ;

- Stourbridge forms another system which is supplied from groundwater sources and an import

from the Birmingham WRZ;

- The Shrewsbury system is supplied from a surface water source and a number of groundwater sources. This area also provides water which is exported to the Oswestry WRZ. A source in the Telford area of the Staffs and East Shropshire WRZ can supply a limited amount of water to this system;

The Birmingham WRZ is considered to hold adequate supplies and the water company considers that it is able to support the significant growth point projections for this zone. Further resilience measures are also under consideration for this WRZ.

Losses of water put into supply occur through distribution pipes owned by the water companies and supply pipes connecting customers to the mains. Total leakage losses for the two main water companies in the Midlands (Severn Trent Water and South Staffordshire Water Company) were 561 million litres per day in 2007. Losses due to leakage are reducing but are still high[143].

However, the implementation of a series of measures including additional household metering, household and non-household water efficiency programmes, leakage control through combination of active leakage control, mains replacement and pressure control are making water use more efficient.

Annex C to the River Basin Management Plan for the Severn River Basin District sets out a programme of measures for key sectors to deliver the objectives of the plan[144]. Many of the actions are aimed at agriculture and rural land management as over three quarters of the land in the Severn river basin district is managed for agriculture or forestry. The sector has the potential to impact on the water environment as an abstractor of water for irrigation and as a source of pollution. Although direct pollution incidents from agriculture have fallen in recent years, the industry remains a contributor to diffuse pollution of rivers and groundwater from sediment, manures, fertilisers and pesticides. This pollution can have ecological impacts as well as affecting the quality of water abstracted for public water supply, leading to expensive and unsustainable water treatment. Runoff problems are likely to be exacerbated by predicted climate change. Coniferous forests also contribute to the acidification of rivers in the upper catchment. Resolving these problems will have clear benefits to the ecology of waters and to water users. There will also be a range of significant additional benefits: to farmers from improved soil management, to water customers through a reduction in the costs and impacts arising from treating drinking water and to householders in areas vulnerable to surface water flooding.

Quarrying, mainly for limestone, and its associated industries are very important especially in the East Mendips. The Avonmouth industrial complex covers a large area and the drainage is directly into the

[143] Environment Agency - State of the Environment Report West Midlands.
[144] http://publications.environment-agency.gov.uk/PDF/GEMI0910BSSO-E-E.pdf

Severn Estuary. All businesses have some environmental footprint by emitting pollution, using water, producing waste or simply using power. Actions therefore include efficient use of water and compliance with regulatory requirements including on the use of hazardous substances.

The plan also contains specific actions for local Government such as including strong water efficiency policies in spatial strategies and local plans. Current and historical land-use around the major towns and cities in the district gives rise to pollution pressures. Runoff and drainage from urban areas and transport infrastructure can contain a range of contaminants including sewage, metals, sediment and other substances that wash directly into rivers or enter via the sewerage network. Extreme runoff events are likely to become more frequent as climate change continues. The legacy of land contamination in some former industrial areas has led to pollution of groundwater resources and some rivers. Substantial planned housing growth in and around several towns and cities in the district will also increase pressure on the water environment unless the potential impacts are well managed. Encouraging the sustainable use and management of water resources and a move to more sustainable drainage systems will help reduce the impacts associated with abstraction and urban runoff, with benefits for all water users. Sustainable and integrated drainage systems also offer potential benefits for managing the risk of flooding in urban areas.

It is expected that future reviews of the river basin management plans will identify further actions, but overall it is expected that the quality of surface and ground waters in the area will continue to improve in line with the legal requirements.

5.6 Assessing Significance

Table 5.2 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the water quality and resources. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 5.2 Approach to Determining the Significance of Effects on Water Quality and Resources

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Alternative would lead to a major reduction in water use such that the risk of water shortages in the region is significantly decreased and abstraction is at least at a sustainable level in the long term. • Alternative would significantly decrease the amount of waste water, surface runoff and pollutant discharges so that the quality of that water receptors (including groundwater, surface water, sea water or drinking receptors) will be significantly improved and sustained and that all water targets (including those relevant to chemical and ecological condition) are reached and exceeded.

Effect	Description	Illustrative Guidance
+	Positive	• Alternative would lead to a minor reduction in water use such that the risk of water shortages in the area is decreased in the short term and abstraction is closer to sustainable levels than prior to development. • Alternative would lead to minor decreases in the amount of waste water, surface runoff and/or pollutant discharges so that the quality of water receptors (including groundwater, surface water, sea water or drinking receptors) may be improved to some level temporarily and that some water targets (including those relevant to chemical and ecological condition) will be reached/exceeded.
0	No (neutral effects)	• Alternative would not significantly affect water demand and abstraction levels will not be altered. • Alternative would not change amount of waste water, surface runoff and/or pollutant discharges so that the quality of water receptors will not be affected.
-	Negative	• Alternative would lead to a minor increase in water use such that the risk of water shortages in the area is increased to some level in the short term and abstraction is further removed from sustainable levels. • Alternative would lead to minor increases in the amount of waste water, surface runoff and/or pollutant discharges so that the quality of water receptors (including groundwater, surface water, sea water or drinking receptors) may be decreased to some level temporarily and it may prevent some water targets (including those relevant to chemical and ecological condition) from being achieved.
--	Significant negative	• Alternative would lead to major increases in water use such that the risk of water shortages in the area is significantly increased and abstraction is beyond sustainable levels. • Alternative would lead to an exceedence of an abstraction license limit. • Alternative would lead to major increases in the amount of waste water, surface runoff and/or pollutant discharges so that the quality of water receptors (including groundwater, surface water, sea water or drinking receptors) will be considerably increased and will prevent some or all water targets (including those relevant to chemical and ecological condition) from being achieved.
?	Uncertain	• From the level of information available the impact that the alternative would have on this objective is uncertain.

5.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 5.3 summarises the significant effects identified in the detailed assessment of the West Midlands Regional Spatial Strategy policies against the water topic.

Table 5.3 Significant Effects against the Water Topic

Regional Spatial Strategy Policy		Score			Commentary
		Short Term	Medium Term	Long Term	
CF3 Levels and distribution of housing	Revocation	0	-	--/?	The revocation of the plan would not remove the pressure on water supply given the policy to significantly boost the supply of housing.

Regional Spatial Strategy Policy		Score			Commentary
		Short Term	Medium Term	Long Term	
development					There may be a short term reduction in effect due to uncertainty caused by some local authorities not having an up to date plan.
	Retention	0	-	- -/?	There are significant areas where over-abstraction of water is currently an issue. The Environment Agency's Catchment Abstraction Management Strategies (CAMS) have identified a number of catchments which are designated as Over-Licensed or Over-Abstracted, and some licences are being reviewed. While demand management (e.g. compulsory water metering in new buildings and hose pipe bans in droughts) and water efficiency measures mean that there are sufficient resources now, it is highly likely that additional capacity will be required in the future. The significant negative scoring reflecting the existing problems of over abstraction and the potential effects this has on the environment.
QE1 Conserving and Enhancing the Environment	Revocation	+	+	++	The provisions of the NPPF under the Duty to Co-operate means that joint working between Local Authorities, Water Companies and the Environment Agency will continue in the absence of the policy to have regard to the environmental impacts of over-abstraction and manage resources accordingly. Over the longer term, this mitigation should have positive impacts and be similar in effect to retention of the policy.
	Retention	+	+	++	The Policy seeks that In bringing forward development, all agencies and developers should adopt high standards for sustainable natural resource use and management. As such, the management of water resources should be a significant aspect of this approach and thus overtime be part of a more sustainable approach to development.
QE9 The Water Environment	Revocation	0	+	++	Much of the water planning and management work is led by the Environment Agency and the water companies, with local authority involvement mainly under the requirements of the Water Framework Directive. As river catchments can cross regional boundaries, for integrated water management, catchment level planning is more appropriate scale to operate and this would continue in the absence of the regional strategy.
	Retention	0	+	++	The Policy seeks the co-ordination of plans and policies in order to, *inter alia*, manage demand, conserve supply, promote local recycling of water and the multiple use of water resource. Whilst the policy is non-specific without targets, over the longer term should help to develop a more managed approach to the use of water resources across the region.

5.7.1 Effects of Revocation

Water availability is an important issue in the region, and the planned scale of development of homes and employment areas which is likely to continue irrespective of whether the regional strategy is revoked

will exacerbate matters. Given the legal requirements for water companies to work with local planning authorities to plan for water supply and waste water treatment, underpinned by the policies in the NPPF explained above, it is concluded that removal of these policies will not have any effects in so far as they relate to water.

A number of policies which would be removed with revocation of the plan seek to mitigate these adverse effects. Policy QE9 in particular relates to the protection of water resources. Its main intention is to coordinate development plan policies and plans of the Environment Agency and other agencies, including where necessary across local authority boundaries. It seeks to protect or improve water quality and where necessary significantly reduce the risk of pollution especially to vulnerable surface and groundwater. It looks to local authorities and others to manage demand, conserve supply, promote local recycling of water and the multiple use of water resources; to ensure that abstraction from watercourses and aquifers does not exceed sustainable levels; that the timing and location of development respects potential economic and environmental constraints on water resources, while stating that development that poses an unacceptable risk to the quality of groundwater or surface water in this or other regions should therefore be avoided. Policy QE1 is closely related as it refers to local authorities protecting and where possible enhancing other irreplaceable assets and those of a limited or declining quantity, which are of fundamental importance to the Region's overall environmental quality, such as river environments and groundwater aquifers.

Strategic planning for new infrastructure for water supply and waste treatment is the statutory responsibility of the water companies, in association with the Environment Agency, local authorities and other organisations. The River Basin Management Plan (RBMP) for the Severn and Humber District's, their Water Resource Management and Drought Plans explain that close working between local authorities, the Environment Agency, water companies and Ofwat is ongoing. The periodic review of water industry investment includes carrying out investigations, and specific improvement schemes to address water resources (and water quality). Cited examples include water companies reducing leakage through active leakage control and customer pipe repair policies and improvements to water company assets under the next round of company investment to deliver water quality improvements and continue to reduce the impact of abstraction under a range of environmental Directives.

Paragraph 156 of the NPPF states that local planning authorities should set out the strategic priorities for the area in the Local Plan, which should include strategic policies to deliver the provision of infrastructure water supply and wastewater, while paragraph 162 states that local planning authorities should work with other authorities and providers to assess the quality and capacity of infrastructure for water supply and the treatment of wastewater. While the duty to cooperate will provide a basis for strategic cross boundary working between local authorities, this is also being delivered at the catchment/river basin level through river basin management planning as explained above. Revocation of these policies is therefore unlikely to have any material environmental effects.

5.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The likely significant effects on water associated with the revocation and retention of the quantitative policies are summarised in Table 5.3 for Policy CF3. The identified effect concerns the substantial increase in consumer demand for water in an already water scarce region. However, the effect is generally also identified for retention of the West Midlands Regional Strategy and Policy CF3. The revocation of Policy CF3 was assessed as not leading to significantly negative effects in the short term to medium term. However, in the longer term there could be significant negative effects associated with water scarcity, although the extent and timing of this is uncertain, as well as being subject to mitigation through the management of abstraction licences, for example.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

5.7.3 Effects of Retention

Pressures on water supplies and water quality will continue in the absence of the Regional Strategy as the region already suffers a water deficit and water quality in many river catchments. While improving, water quality falls short of the standards required by the Water Framework Directive. Ultimately the effect will depend on the quantum of growth in the region, its broad location and actions required (mainly through the Water Framework and other Directives) to achieve greater water efficiency and improved water quality.

5.8 Mitigation Measures

Assuming that the level of growth in the region will be more or less the same irrespective of whether the Regional Strategy is revoked, the main mitigation measures to address limited water availability will continue in the short to medium term to be linked to demand management, for example, water metering in all new developments and retrofitting of existing buildings and continued improvements in the amount of water lost to leakage. Through the management of abstraction licences Environment Agency will be able to avoid over extraction and the environmental effects of this.

Improvements in water quality will continue to be driven by the requirements of the Water Framework Directive and other related Directives, for example, on Nitrates and Urban Waste Water.

6. Air Quality

6.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals to revoke the regional strategies on air quality. Information is presented for both national and regional levels.

Air quality within this context concerns the levels of pollutants emitted into the air and their significance, in terms of the risk of adverse effects on the environment and/or human health. Carbon dioxide and other greenhouse gas emissions are excluded from the air quality topic and are reported under the climate change and adaptation topic.

There are links between the air quality topic and other topics in the SEA, specifically population, human health, climate change and material assets.

6.2 Summary of Plans and Programmes

6.2.1 International

The ***Air Quality Framework Directive*** (96/62/EC) and its Daughter Directives set a framework for monitoring and reporting levels of air pollutants across EU member states, setting limits or reductions for certain air pollutants.

The ***Ambient Air Quality and Cleaner Air for Europe Directive*** (2008/50/EC) consolidated earlier air quality directives and also defines and establishes objectives and targets for ambient air quality to avoid, prevent or reduce harmful effects on human health and the environment as a whole. It sets legally binding limits for concentrations in outdoor air of major air pollutants that impact on public health such as particulate matter (PM10 and PM2.5) and nitrogen dioxide (NO2). The 2008 directive replaced nearly all the previous EU air quality legislation and was made law in England through the ***Air Quality Standards Regulations 2010***, which also incorporates the 4th air quality daughter directive (2004/107/EC) that sets targets for levels in outdoor air of certain toxic heavy metals and polycyclic aromatic hydrocarbons. Equivalent regulations exist in Scotland, Wales and Northern Ireland.

The UK monitors and models air quality to assess compliance with the air quality limit and target values set out in the EU legislation above. The results of the assessment are reported to the commission on an annual basis. Air quality monitoring is also carried out by local authorities to meet local air quality management objectives.

In early 2011, the European Commission began a review of EU air quality policy which will culminate with the publication of new proposals on ambient air quality and emissions ceilings in 2013. On 30 June 2011, the Commission launched a public consultation inviting views on the best way to improve the EU's air quality legislation. The consultation closed in October 2011.

The ***EU Thematic Strategy on Air Quality (2005)*** identifies that despite significant improvements in air quality across the EU, a number of serious air quality issues still persist. The strategy promotes an approach, which focuses upon the most serious pollutants, and that more is done to integrate environmental concerns into other policies and programmes. The objective of the strategy is to attain levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment. The strategy emphasises the need for a shift towards less polluting modes of transport and the better use of natural resources to help reduce harmful emissions.

The ***Industrial Emissions Directive (IED) (2010/75/EU)*** combines seven existing air pollution directives, including the Large Combustion Plant Directive and the Integrated Pollution Prevention and Control (IPPC) Directive. As with previous directives aimed at minimising emission release, part of the benefit of the Industrial Emissions Directive is that it includes several new industrial processes, sets new minimum emission limit values (ELVs) for large combustion plant and addresses some of the implementation issues of the IPPC.

The ***National Emissions Ceilings Directive (2001/81/EC)*** came into force in 2001, and Member States were required to transpose it into their national legislation by November 2002. This Directive sets 'ceilings' (maximum values to be achieved by 2010) for total national emissions of four pollutants: sulphur dioxide; oxides of nitrogen; volatile organic compounds; and ammonia. These four pollutants contribute to acidification, eutrophication, and formation of ground level ozone.

6.2.2 National

UK

The ***Air Quality Standards Regulations (2010)*** transpose into UK law Directive 2008/50/EC on ambient air quality and cleaner air for Europe and Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclicaromatic hydrocarbons in ambient air. The objective of the Regulations is to improve air quality by reducing the impact of air pollution on human health and ecosystems. The standards set out air quality objectives, limit values and target values for pollutants, namely benzene, 1,3 butadiene, carbon monoxide, lead, nitrogen dioxide, PM_{10}, sulphur dioxide and PM_{25}.

The ***Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)*** sets out a way forward for work and planning on air quality issues.

The ***Environment Act (1995)*** was enacted to protect and preserve the environment and guard against pollution to air, land or water. It requires local authorities to undertake local air quality management (LAQM) assessments against the standards and objectives prescribed in regulations. Where any of these objectives are not being achieved, local authorities must designate air quality management areas and prepare and implement remedial action plans to tackle the problem.

The ***Ozone-Depleting Substances (Qualifications) Regulations (2009)*** introduces controls on the production, use and emissions from equipment of a large number of "controlled substances" that deplete the ozone layer.

England

The ***National Planning Policy Framework (NPPF) (2012)*** expects the planning system to prevent new development from contributing to unacceptable levels of air pollution. Planning policies and decisions are therefore expected to ensure that new development is appropriate for its location and take into account "*The effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or proposed development to adverse effects from pollution*". (paragraph 120).

The Framework expects planning policies to "*sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan*."(paragraph 124). In doing so, local planning authorities are expected to focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes.

6.2.3 West Midlands

Defra published an air quality plan for the achievement of EU air quality limit values for nitrogen dioxide in the West Midlands in September 2011[145].

There are a number of air quality action plans relevant to the region including for Birmingham, Coventry, Dudley, East Staffordshire, Hereford, North Warwickshire, Sandwell, South Staffordshire, Stoke on Trent

[145] http://uk-air.defra.gov.uk/library/no2ten/documents/UK0035.pdf

and Walsall[146].

6.3 Overview of the Baseline

6.3.1 National

UK

Air quality in the UK is generally good. In 2008 urban background particulate levels averaged 20 micrograms per cubic metre (µg m-3) (Air Quality Strategy Objective and EU Limit Value is 40µg m-3); roadside particulate levels averaged 28µg m-3; urban background ozone levels averaged 59µg m-3; and rural ozone levels averaged 71µg m-3.[147] The long-term decrease in urban background particulate concentrations has levelled off in the last two years, remaining at 19 micrograms per cubic metre (µg m-3) since 2008. Roadside levels increased slightly in 2010 to 23µg m-3, although this followed a relatively large decrease in 2009, and there is an overall decreasing trend.

In 2010, 234 Local Authorities in the UK (58% of all UK authorities) had declared Air Quality Management Areas (AQMAs), a designation made by a Local Authority where an assessment of air quality results in the need to devise an action plan to improve the quality of air.[148] AQMAs are predominantly in urban areas along busy and congested road networks and are generally related to nitrogen dioxide (NO_2) (in 93% of cases) and particulates (PM_{10}) (in 33% of cases). Transport is identified as the main source of pollution in 92% of all AQMAs.[148]

In the UK 26 days of moderate or high air pollution were recorded in urban areas, and 45 days of moderate or high air pollution were recorded in rural areas respectively in 2008.

England

Within England, in December 2010, there were 221 local authorities with AQMAs, 33 of which were within London[149]. In total there were 586 AQMAs, of which 493 (84%) were for NO_2 pollution and 85 (14%) were for PM_{10} pollution. There were also 8 AQMAs for SO_2. In 91% of cases the source of pollution was from transport and 2.3% the source was from industry.

Overall, trends in PM_{10} concentrations for all metrics in all parts of England appear to have levelled out in

[146] Copies available from the Defra website - http://uk-air.defra.gov.uk/library/no2ten/index?rid=35
[147] Defra, Environment in your Pocket Statistics (2009) http://www.defra.gov.uk/evidence/statistics/environment/eiyp/
[148] Defra, Review of local air quality management (2009) http://archive.defra.gov.uk/environment/quality/air/airquality/local/documents/laqm-report.pdf
[149] http://uk-air.defra.gov.uk/library/annualreport/viewonline?year=2010_issue_2

recent years. However, four sites in England (London Marylebone Road, London Camden roadside, Brighton roadside and Bradford Centre) were over the 24 hour objective for PM_{10} meaning that more than the 35 days were recorded as being in exceedance of a 24 hour average value of 50µg.m^{-3}.[150]

In 2003 it was estimated that 2161.7 km of road exceeded an annual mean value of 31.5 µg.m^{-3} (closely equivalent to the objective value), 935.9 km of which was within London making up 43.2% of the total length of road exceedance.[150]

In 2003 the population mean weighted $PM_{2.5}$ concentration for England (excluding London) was 14.4µg.m-^{3}, 17.4µg.m^{-3} in Inner London and 16.9µg.m^{-3} in Outer London.[150]

Four sites in England (London Marylebone Road; London A3 roadside; Camden roadside and Bristol Old Market roadside) exceeded the AQS 1 hour objective for NO_2 meaning there were more than 18 exceedences of the 200µg/m3 target in 2005.[150]

6.3.2 West Midlands

There are four zones and agglomerations for ambient air quality reporting. The majority of the West Midlands is included within the West Midlands non-agglomeration zone. The three agglomeration zones cover the West Midlands Urban Area, the Potteries (Newcastle under Lyme and Stoke on Trent) and Coventry/Bedworth. **Table 6.1**, derived from Defra's 2010 report on air quality in England, indicates that limit values for NO_2 were exceeded in all four zones, PM_{10} was within relevant limit values and ozone met the target value but was above the long term objective in each zone. The four zones in the West Midlands also met the target values for arsenic, cadmium, nickel and benzo(a)pryrene in 2010, with the exception of the West Midlands non-agglomeration where the target value for benzo(a)pryrene was exceeded.

[150] Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Vol 2 (2007) http://archive.defra.gov.uk/environment/quality/air/airquality/strategy/documents/air-qualitystrategy-vol2.pdf

Table 6.1 Air Quality Exceedances in the West Midlands

Zone	NO2 Limit Value for health (no more than 18 hourly exceedances of 200 µgm-3 in a year)	NO2 Limit Value for health (annual mean no more than 40 µgm-3)	PM_{10} Limit Value (daily mean)	PM_{10} Limit Value (annual mean)	Ozone Target Value (TV) and Long Term Objective (LTO) for health (8 hr mean)	Ozone measured exceedances of long term objective for health - days and maximum concentration
West Midlands non-agglomeration	OK	>LV (modelled)	OK	OK	Meets TV, >LTO	Leamington Spa (3 days, 153 µg $^{m-3}$.) Leominster (3 days, 130 µg $^{m-3}$.)
West Midlands urban area	OK	>LV (51 µg $^{m-3}$)	OK	OK	Meets TV, >LTO	Birmingham Tyburn (3 days, 140 µg $^{m-3}$.) Birmingham Tyburn Roadside (2 days, 121 µg $^{m-3}$.) Sandwell West Bromwich (3 days, 147 µg $^{m-3}$.)
The Potteries	OK	>LV (modelled)	OK	OK	Meets TV, >LTO (modelled)	
Coventry/Bedworth	OK	>LV (modelled)	OK (modelled)	OK (modelled)	Meets TV, >LTO	

In recent years, as a result of the UK's Air Quality Strategy local authorities have increasingly taken a central role in air quality management. Authorities are required to carry out regular "Review and Assessments" of air quality in their area and take action to improve air quality when the objectives set out in regulation cannot be met by the specified target dates.

6.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

6.4.1 National

UK

Air quality has improved in the UK over the last sixty years as a result of the switch from coal to gas and electricity for heating of domestic and industrial premises, stricter controls on industrial emissions, higher standards for the composition of fuel and tighter regulations on emissions from motor vehicles. However, poor air quality - particularly from vehicles - remains a significant issue for community health and for biodiversity, especially in/downwind of urban areas and major transport networks.

In 2005, 29% of monitoring sites within the UK exceeded the annual mean NO_2 objective of 40µg.m^{-3} and

4% of monitoring sites exceeded the 1 hour objective of 200µg.m^{-3} more than 18 times a year.[151]

In 2005, roughly 40% of the 85 monitoring network sites exceeded the Air Quality's Strategy objective for O_3.[151]

Air pollution is a significant cause of decline in the condition of 55 of UK SSSIs.[152] However, it is often very difficult to determine the effects of air pollution on SSSIs, given the complex interactions between pollution impacts, management and abiotic influences. As a result, the impacts of air pollution, and the identification of air pollution as an adverse activity affecting condition, are considered to be substantially under-reported.[152]

Research by the Government has found that in a number of urban areas, the least affluent members of society tend to be exposed to the highest levels of air pollution[153]. This is particularly the case in England, where AQMAs declared for NO_2 are often in the most socially deprived areas people in deprived communities exposed to 41% higher concentrations of NO_2 than those people living in average communities[154], although this is less marked in Wales and Scotland. The report concluded that measures to improve air quality can have a more pronounced effect in deprived areas and could help to reduce this social inequality[155].

6.4.2 West Midlands

The areas most likely to be affected are those already associated with air quality problems which have significant levels of planned growth. This suggests that Birmingham (average annual provision of 3000 houses); Coventry (830 homes yr^{-1}), Dudley (975 homes yr^{-1}), East Staffordshire, Hereford, North Warwickshire, Sandwell (975 homes yr^{-1}), South Staffordshire, Stoke on Trent (600 homes yr^{-1}) and Walsall (825 homes yr^{-1}), although the actual effects will depend on the specific location of development (since AQMAs can relate to individual streets).

[151] UK Air Quality Archive, www.airquality.co.uk/archive

[152] Joint Nature Conservation Committee (2006) Common Standards Monitoring for Designated Sites: First Six Year Report, http://www.jncc.gov.uk/pdf/CSM_06summary.pdf

[153] Dept. for Communities and Local Government (2006) Air Quality and Social Deprivation in the UK: an environmental inequalities analysis, www.airquality.co.uk/reports/cat09/0701110944_AQinequalitiesFNL_AEAT_0506.pdf

[154] UK Air Quality Archive, www.airquality.co.uk/archive

[155] Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007) http://www.official-documents.gov.uk/document/cm71/7169/7169_i.asp

European and Ramsar sites

According to the 2009 sustainability appraisal of the West Midlands Plan, the following European designated sites were identified as being susceptible to deterioration in air quality:

- Cannock Chase SAC
- Downton Gorge SAC
- Peak District Dales SAC
- South Pennine Moors SAC
- The Stiperstones and the Holley SAC
- Peak District Moors (South Pennine Moors Phase I) SPA

6.5 Likely Evolution of the Baseline

6.5.1 National

The current trend in air condition is generally towards improved air quality, both in rural and urban settings[156].

Between 1990 and 2008 there was no clear long-term trend in ozone levels with increases in urban background ozone levels of 40.5%, however between 1980 and 2007 nitrogen oxides (NOx) fell by 42%, particulates (PM_{10}) fell by 59% and sulphur dioxide (SO2) by 84% (between 1990 and 2007).[157]

Reductions are a product of: improved technology; changes in energy generation; targeted air quality management policies; and reductions in specific greenhouse gases, CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

Projections of UK total emissions:[158]

Best case scenario (full air quality target compliance):

- NOx: 2010 = 1136.4 ktonnes/yr; 2015 = 963.1 ktonnes/yr; 2020 = 799.1 ktonnes/yr.
- PM10: 2010 = 133.5 ktonnes/yr; 2015 = 129.4 ktonnes/yr; 2020 = 134.4 ktonnes/yr.

Worst case scenario (extension of 2003 baseline):

[156] http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf
[157] http://www.defra.gov.uk/evidence/statistics/environment/eiyp/
[158] http://www.airquality.co.uk/reports/reports.php?action=category&section_id=17

- NOx: 2010 = 1151.0 ktonnes/yr; 2015 = 1030.3 ktonnes/yr; 2020 = 910.7ktonnes/yr.

Measurements and modelling show that, without further measures, objectives for particles such as particulate matter (PM10), nitrogen dioxide (NO2), ozone (03) and polycyclic aromatic hydrocarbons (PAHS) are unlikely to be achieved in some parts of urban areas within the UK[159].

England

PM_{10} pollution overall has been decreasing in recent years and this is predicted to continue in the future. By 2015 71.7km of main urban road is predicted to be in exceedance of 31.5µg/m^3 (roughly equivalent to the Stage 1 PM10 24 hour limit value and objective), this is a 96.7% decrease compared to the 2003 baseline.[160]

Concentrations of NO_2 have been declining on average, although London Marylebone Road (the site with the highest NO_2 levels in England) and several other sites, are showing increasing concentrations in the most recent years. By 2015, 1,331 km of main urban road is predicted to be in exceedance of the annual mean objective of 40µg.m^{-3}, this is an 80.2% decrease compared to the 2003 baseline.

6.5.2 West Midlands

All four of the Air Quality Plans for the achievement of EU air quality limit values for nitrogen dioxide (NO2) in the West Midlands indicate that the annual limit value is likely to be exceeded in 2015 but achieved by 2020 through introduction of measures included in the baseline modelling, a low emission zone (LEZ) scenario (if applied) and the non-quantifiable local measures outlined in this plan.

The projected baselines for NO_2 for each of the four zones to 2020 is provided below.

Coventry/Bedworth

Table 4. Annual mean NO_2 model results in NO_2_UK0017_Annual_1

	2008	2010	2015	2020
Road length exceeding (km)	10.6	1.6	0.0	0.0
Background area exceeding (km^2)	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	51.9	43.5	31.8	22.9

(a) Annual Mean Limit Value = 40 μgm^{-3}

[159] Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, http://www.official-documents.gov.uk/document/cm71/7169/7169_i.asp

[160] Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, /www.official-documents.gov.uk/document/cm71/7169/7169_i.asp

The Potteries

Table 4. Annual mean NO_2 model results in NO_2_UK0014_Annual_1

	2008	2010	2015	2020
Road length exceeding (km)	23.0	18.3	8.3	0.0
Background area exceeding (km^2)	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	80.9	69.3	45.8	28.2

(a) Annual Mean Limit Value = 40 μgm^{-3}

West Midlands Urban Area

Table 8. Annual mean NO_2 model results in NO_2_UK0002_Annual_1. 2015 and 2020 results are for the LEZ scenario. Results for 2008 and baseline projections for 2010 are also shown

	2008	2010	2015	2020
Road length exceeding (km)	265.3	161.4	32.8	0.0
Background area exceeding (km^2)	7	1	0	0
Maximum modelled concentration (μgm^{-3}) (a)	91.2	79.5	50.1	32.1

(a) Annual Mean Limit Value = 40 μgm^{-3}

West Midlands - non-agglomeration

Table 8. Annual mean NO_2 model results in NO_2_UK0035_Annual_1. 2015 and 2020 results are for the LEZ scenario. Results for 2008 and baseline projections for 2010 are also shown

	2008	2010	2015	2020
Road length exceeding (km)	76.3	48.6	11.8	0.0
Background area exceeding (km^2)	0	0	0	0
Maximum modelled concentration (μgm^{-3}) (a)	86.5	74.6	46.7	28.0

(a) Annual Mean Limit Value = 40 μgm^{-3}

It is also expected that other air pollutants in the region will also continue to fall in line with national trends.

6.6 Assessing significance

Table 6.2 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the air quality objective. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 6.2 Approach to determining the significance of effects on air quality

Effect	Description	Illustrative Guidance
++	Significant positive	• Alternative would significantly improve local air quality through a sustained reduction in concentrations of pollutants identified in the national air quality objectives. • Alternative has a strong and sustained positive effect on local communities and biodiversity due to a significant reduction in air and odour pollution and particulate deposition.
+	Positive	• Alternative would lead to a minor improvement in local air quality from a reduction in concentrations of pollutants identified in the national air quality objectives. • Alternative has a positive effect on local communities and biodiversity due to a reduction in air and odour pollution and particulate deposition.
0	No (neutral effects)	• Alternative would not affect local air quality. • Alternative has no observable effects on local communities and biodiversity within the region.
-	Negative	• Alternative would result in a minor decrease in local air quality. • Alternative has a negative effect on local communities and biodiversity due to an increase in air and odour pollution and particulate deposition.
--	Significant negative	• Alternative would cause a significant decrease in local air quality (e.g. leading to an exceedance of air Quality Objectives for designated pollutants and the designation of a new Air Quality Management Area). • Alternative has a strong and sustained negative effect on local communities and biodiversity due to significant increase in air and odour pollution and particulate deposition.
?	Uncertain	• From the level of information available the effects the impact that the alternative would have on this objective is uncertain.

6.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

None of the policies in the West Midlands Regional Strategy were identified to have either significant positive or negative effects on air quality.

6.7.1 Effects of Revocation

The Regional Spatial Strategy contains a range of policies which seek to address transport growth and to achieve more sustainable transport modes such as increased use of public transport, walking and cycling. Taken together the transport policies have the potential, if implemented, to reduce traffic growth and contribute to improving air quality with the related benefits to human health and biodiversity.

However, as indicated above, local authorities have a legal duty to achieve the air quality standards set

by European Directives, which is underpinned by national and locally derived solutions (for example, the Action Plans for Air Quality Management Areas). These are likely to have a greater effect on air quality than the policies in the regional strategy.

This is reflected in paragraph 124 of the NPPF which states that "planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

6.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit

6.7.3 Effects of Retention

Retaining the regional strategy is likely to result in the environmental baseline continuing to evolve as identified in section 6.5.2 above. Many of the policies seek to change behaviour or are outside the direct control of the planning system. Those policies that can be controlled through the planning system are effectively repeated in the NPPF, so as the regional strategy became more out of date, the related policies in the NPPF would bite more.

6.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

7. Climate Change

7.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals for revoking the regional strategies on climate change. Information is presented for both national and regional levels.

Climate change within this context in concerned with increasing the likelihood of climate change effects through greenhouse gas emissions and the ability to adapt to predicted climate change effects.

There are links between the climate change and other topics in the SEA, specifically biodiversity and nature conservation, air, climate change and material assets.

7.2 Summary of Plans and Programmes

7.2.1 International

The ***United Nations Framework Convention on Climate Change*** (UNFCCC) sets an overall framework for international action to tackle the challenges posed by climate change. The Convention sets an ultimate objective of stabilising greenhouse gas concentrations *"at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system."* The Convention requires the development and regular update of greenhouse gas emissions inventories from industrialised countries, with developing countries also being encouraged to carry out inventories. The countries who have ratified the Treaty, known as the Parties to the Convention, agree to take climate change into account in such matters as agriculture, industry, energy, natural resources and where activities involve coastal regions. The Parties also agree to develop national programmes to slow climate change.

The ***Kyoto Protocol***, adopted in 1997, is the key international mechanism agreed to reduce emissions of greenhouse gases. The Kyoto Protocol sets binding targets for 37 industrialised countries and the European Community for reducing greenhouse gas emissions. These targets equate to an average of 5% reductions relative to 1990 levels over the five-year period 2008-2012. The key distinction between this and the UNFCCC is that the Convention encourages nations to stabilise greenhouse gases while the Kyoto Protocol commits them to doing so through greenhouse gas reductions. Countries must meet their targets primarily through national measures however, the Kyoto Protocol offers them an additional means of meeting their targets by way of three market-based mechanisms: emissions trading, the clean development mechanism (CDM) and Joint Implementation (JI).

The Protocol's first commitment period started in 2008 and ends in 2012. At the Durban conference in December 2011, governments decided that the Kyoto Protocol would move into a second commitment period in 2013, in a seamless transition from the end of the second commitment period in 2012. Governments of Parties to the Kyoto Protocol also made a few amendments to the Protocol, among others, the range of greenhouse gases covered. A major outcome of was the establishment of the Durban Platform for Enhanced Action, which spelt out a path to negotiate a new legal and universal emission reduction agreement by 2015, to be adopted by 2020.

In March 2007 the EU's leaders endorsed an integrated approach to climate and energy policy that aims to combat climate change and increase the EU's energy security while strengthening its competitiveness. They committed Europe to transforming itself into a highly energy-efficient, low carbon economy. It set a series of demanding climate and energy targets to be met by 2020, known as the "20-20-20" targets. These are:

- a reduction in EU greenhouse gas emissions of at least 20% below 1990 levels;
- 20% of EU energy consumption to come from renewable resources; and
- a 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

To secure a reduction in EU greenhouse gases, the ***EU Emissions Trading Scheme (EU ETS),*** a Europe wide scheme had been introduced in 2005. EU ETS puts a price on carbon that businesses use and creates a market for carbon. It allows countries that have emission units to spare (emissions permitted to them but not "used") to sell this excess capacity to countries which are likely to exceed their own targets. Since carbon dioxide (CO_2) is the principal greenhouse gas, this is often described as a carbon market or trading in carbon; the total amount of carbon emissions within the trading scheme being limited, and reduced over time. The ***Integrated Climate and Energy Package*** included a revision and strengthening of the Emissions Trading System (ETS). A single EU-wide cap on emission allowances will apply from 2013 and will be cut annually, reducing the number of allowances available to businesses to 21% below the 2005 level in 2020. The free allocation of allowances will be progressively replaced by auctioning, and the sectors and gases covered by the system will be somewhat expanded.

The **Renewable Energy Directive** (2009/28/EC) mandates levels of renewable energy use within the European Union. The directive requires EU member states to produce a pre-agreed proportion of energy consumption from renewable sources such that the EU as a whole shall obtain at least 20% of total energy consumption from renewables by 2020. This is then apportioned across member states. The UK's target is for 15% of energy consumption in 2020 to be from renewable sources. Under Article 4 of the directive each Member State is also required to complete a National Renewable Energy Action Plan that will set out the trajectory and measures that will enable the target to be met.

The ***EU Sixth Environmental Action Plan (EAP) (2002-2012)*** reviews the significant environmental challenges and provides a framework for European environmental policy up to 2012. The four priority areas are Climate Change; Nature and Biodiversity; Environment and Health; Natural Resources and Waste. The European Commission has recently consulted on the EU environment policy priorities for 2020: Towards a 7th EU Environment Action Programme. This looks to further integrating climate and environment into other policies and instruments.

7.2.2 National

UK

In the UK, the ***Climate Change Act (2008)*** introduces legislative targets for reducing the UK's impacts on climate change and the need to prepare for its now inevitable impacts. The Act sets binding targets for a reduction in CO_2 emissions of 80% by 2050, compared to a 1990 baseline. Interim targets and five-year carbon budget periods will be used to ensure progress towards the 2050 target. The Climate Change Act 2008 also requires the Government, on a regular basis, to assess the risks to the UK from the impact of climate change and report to Parliament. The first ***Climate Change Risk Assessment*** was published in 2012. Government will be required to publish and regularly update a programme setting out how the UK will address these likely impacts, based on the principles of sustainable development, thereby ensuring that environmental, economic and social issues are all fully considered. The Climate Change Act 2008 also introduced powers for Government to require public bodies and statutory undertakers (in this context these are utilities companies which provide a public service) to carry out their own risk assessments and make plans to address those risks.

The ***Carbon Plan: Delivering our low carbon future (2011)*** sets out how the UK will achieve decarbonisation within the framework of energy policy: to make the transition to a low carbon economy while maintaining energy security, and minimising costs to consumers, particularly those in poorer households. It includes proposals for energy efficiency, heating, transport and industry.

The ***Energy Act 2011*** provides for some of the key elements of the Government's energy programme and including a step change in the provision of energy efficiency measures to homes and businesses. It also makes improvements to the framework for enabling and securing low carbon energy supplies and fair competition in the energy markets.

England

The **National Planning Policy Framework** (2012) provides a set of core land-use planning principles that should underpin both plan-making and decision-taking. These include supporting "*the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and*

encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy)". The Framework underlines that planning's role in tackling climate change is central to the economic, social and environmental dimensions of sustainable development. Local planning authorities are therefore expected to adopt proactive strategies to mitigate and adapt to climate change (in line with the objectives and provisions of the Climate Change Act 2008), taking full account of flood risk, coastal change and water supply and demand considerations.

To support the move to a low carbon future, local planning authorities are expected to plan for new development in locations and ways which reduce greenhouse gas emissions; actively support energy efficiency improvements to existing buildings and have a positive strategy to promote energy from renewable and low carbon sources. Local Plans are also expected to take account of climate change over the longer term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change.

7.2.3 West Midlands

The Environment Agency produces and monitors the delivery of action arising from **Catchment Flood Management Plans** (CFMPs) which give an overview of the flood risk across each river catchment. They recommend ways of managing those risks now and over the next 50-100 years. There are two CFMPs which apply to the West Midlands. The River Trent Catchment Flood Management Plan[161] covers the entire River Trent catchment from its source above Stafford down to the boundary with the shoreline management plan (SMP) at Keadby Bridge. It incorporates Birmingham and the Black Country. The River Severn Catchment Flood Management Plan[162] covers the catchment down to Gloucester, including tributaries, e.g. the Avon and Teme. The CFMP includes much of the counties of Shropshire, Worcestershire, Warwickshire and Gloucestershire.

7.3 Overview of the Baseline

7.3.1 National

UK

In 2010, UK emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were

[161] http://publications.environment-agency.gov.uk/PDF/GEMI1109BRDZ-E-E.pdf
[162] http://publications.environment-agency.gov.uk/PDF/GEMI0909BQYM-B-E.pdf

estimated to be 590.4 million tonnes carbon dioxide equivalent ($MtCO_2e$)[163]. This was 3.1% higher than the 2009 figure of 572.5 million tonnes. Between 2009 and 2010 the largest increases were experienced in the residential sector, up 15.1%(11.8 $MtCO_2e$), and the energy supply sector, up by 2.8%(5.6 MtCO2e). Emissions from all other sectors were relatively stable, compared to 2009 levels.

Carbon dioxide (CO_2) is the main greenhouse gas, accounting for about 84 per cent of total UK greenhouse gas emissions in 2010[91]. In 2010, UK net emissions of carbon dioxide were estimated to be 495.8 million tonnes (Mt). This was around 3.8% higher than the 2009 figure of 477.8 Mt. There were notable increases in emissions from the residential sector, up by 15.8%(11.8 Mt), and from the energy supply sector, up 3.1%(5.8 Mt). Again, emissions from all other sectors were relatively unchanged from 2009.

All areas of the UK are getting warmer, and the warming is greater in summer than in winter[164].

There is little change in the amount of precipitation (rain, hail, snow etc) that falls annually, but more is falling in the winter, with drier summers, for much of the UK[164]. Sea levels are rising, and are greater in the south of the UK than the north[164]. The widespread flooding events of 2007 cannot be directly attributed to climate change but it is expected to see more extreme rainfall events in the future, and hence more flooding as our climate changes.

England

In 2009 England's net emissions of CO_2 were estimated to be 372 million tonnes - equivalent to an average of 7.2 tonnes of CO_2 emissions per capita[165]. This compares to emissions of 433 million tonnes in 2005 (8.6 tonnes of CO_2 emissions per capita).

In 2008, 29% of CO_2 emissions were from the energy supply sector, 20.3% from road transport, 31.1% from business and 24.1% from residential fossil fuel use.[166]

The 10 warmest years on record have occurred since 1997. Global temperatures for 2000-2008 now stand almost 0.2% warmer than the average for the decade 1990-1999.

[163]DECC Statistical Release February 2012, http://www.decc.gov.uk/assets/decc/11/stats/climate-change/4282-statistical-release-2010-uk-greenhouse-gas-emissi.pdf

[164] Department for Energy and Climate Change: 2007 Greenhouse Gas Emissions, Final Figures 3rd February 2009, http://www.decc.gov.uk/assets/decc/202_20090326104955_e_@@_greenhousegasemissions.pdf

[165] DECC Statistical Release September 2011, http://www.decc.gov.uk/assets/decc/11/stats/climate-change/2750-statistical-summary-la-co2-emissions.pdf

[166] DECC http://www.decc.gov.uk/assets/decc/Statistics/climate_change/localAuthorityCO2/457-local-regional-co2-2005-2008-full-data.xls

Rainfall has decreased in summer and increased in winter since records began in 1766. Winter rainfall has been increasingly falling as heavy events over the past 45 years (rather than longer, more gentle rainfall). This kind of intense rainfall is a key factor in river and surface water flooding.

The frequency of dry summers has increased over the decades, with 10 of the driest summers occurring in the last 30 years.

Sea levels around the UK have risen by 1mm/yr in the twentieth century, (corrected for land movement). The rate for the 1990s and 2000s has been higher. Rising sea levels are the result of various factors including the warming up and expansion of the ocean and the melting of low latitude glaciers due to climate change.

7.3.2 West Midlands

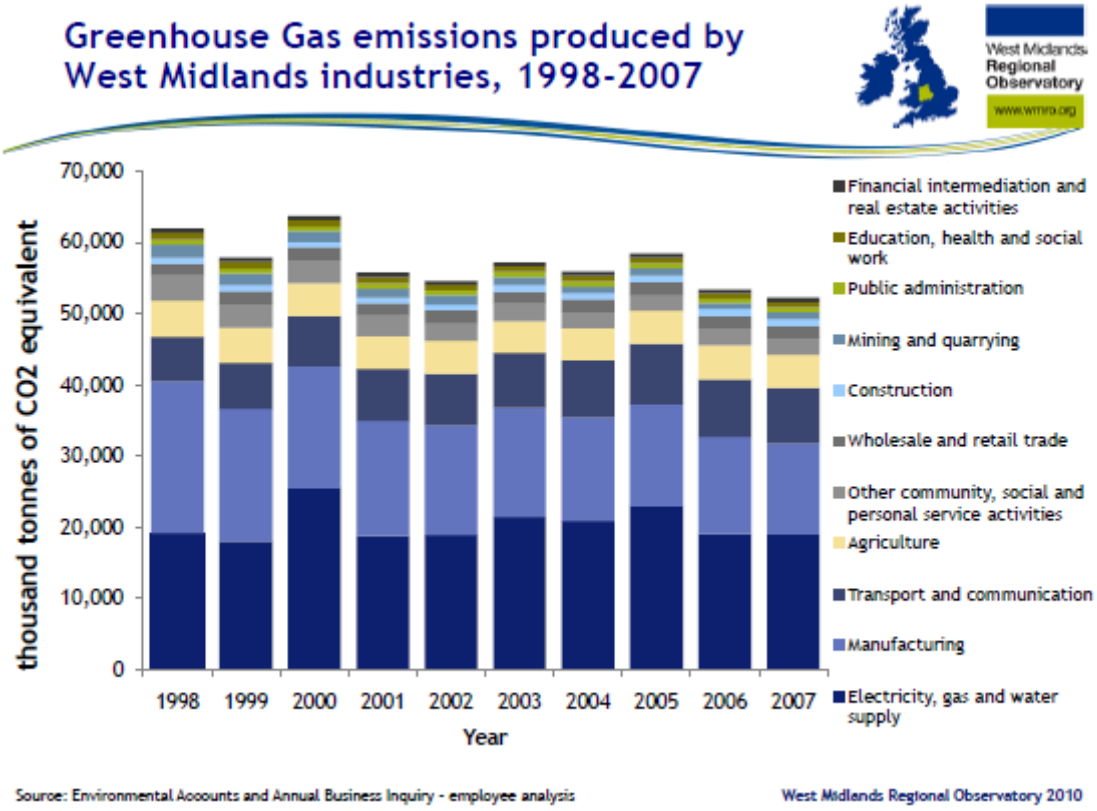
According to UKCIP, mean summer temperatures could rise by 2.6ºC, summer rainfall could decrease by 17 per cent and winter rainfall could increase by 13 per cent in the West Midlands by the 2050s. These are the central estimates for a medium emissions scenario. By the 2050s central England could have irrigation needs similar to those currently seen in central and southern Europe. Mean monthly river flows could decrease by 50 to 80 per cent.

Greenhouse gas emissions

Data published by the West Midlands Regional Observatory[167] indicate that overall greenhouse gas emissions from industries in the West Midlands decreased between 1998 and 2007. Most industries in the West Midlands are less polluting than they were in 1998. The only exceptions were: transport and communication, and construction, where emissions grew by 2.5% a year on average. The biggest reductions in emissions over this period were seen in manufacturing (by 8.5 million tonnes of CO_2 equivalent) and other community, social and personal service activities (by 1.2 million tonnes of CO_2 equivalent). The drop in manufacturing emissions is partly explained by the decline of this sector over 1998 to 2007. The mining and quarrying industry experienced the biggest proportional decrease in emissions over this period (6.8% on average each year). This is because this sector has shrunk – with employment halving from 1998 (**Figure 7.1**).

[167] West Midlands Regional Observatory (2010) West Midlands Greenhouse Gas Emissions Monitoring report

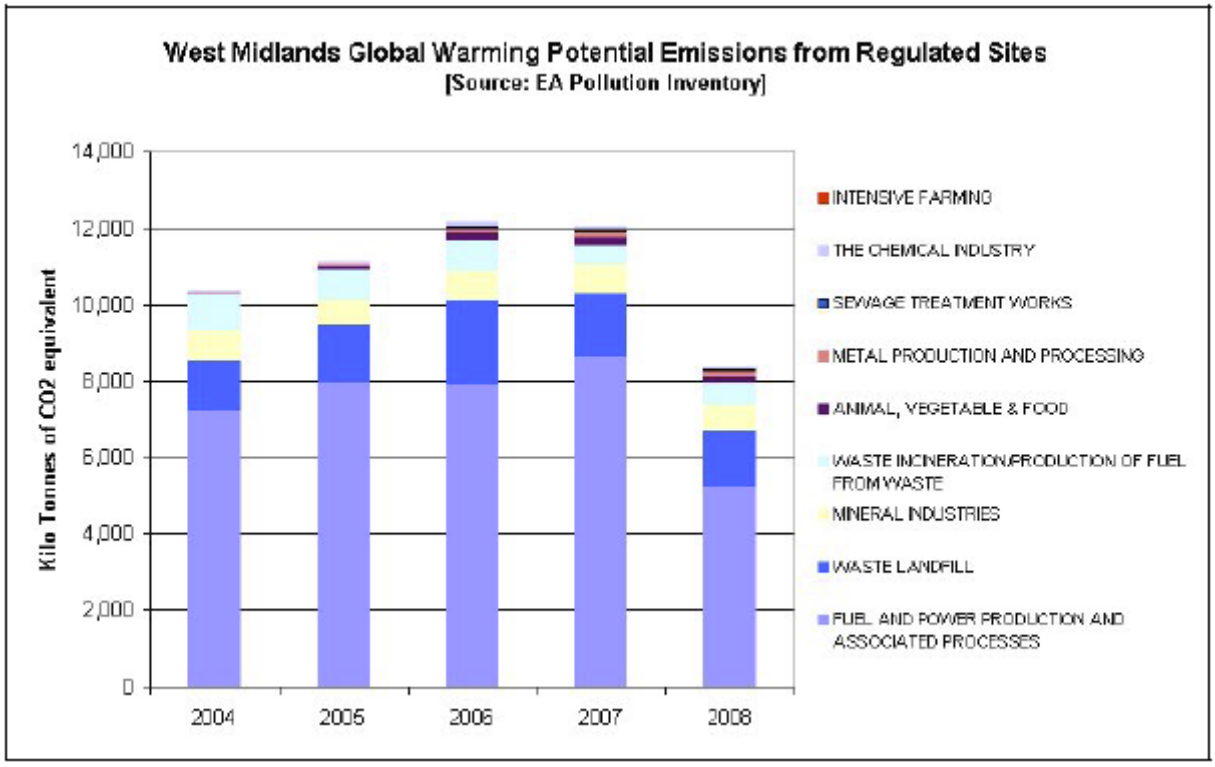
Figure 7.1 Greenhouse Gas Emissions 1998-2007



The Environment Agency receives annual emissions data from eligible regulated industrial sites. The Global Warming Potential (GWP) of the basket of six Kyoto greenhouse gases is calculated from this data to give a figure for kilogrammes of carbon dioxide equivalent for each site. The chart below shows emissions in the West Midlands from 2004-2008168. The considerable drop in emissions from the power sector in 2008 was explained in part by fuel prices making it less profitable to run certain plants which subsequently reduced output. It was also partly because one large plant was temporarily shut down during major works (**Figure 7.2**).

[168] Environment Agency State of the Environment Report.

Figure 7.2 Potential Emissions from Regulated Sites



In 2009, on average, each person in the West Midlands was responsible on average for the emission of 7.9 tonnes of CO_2 (this excludes emissions from air and marine transport, offshore emissions and direct emissions from waste), compared to a UK average of 7.2 tonnes (**Table 7.1**).

Table 7.1 Summary local CO_2 emission estimates (by sector) for the West Midlands

Year	Industry and Commercial (kt CO_2)	Domestic (kt CO_2)	Road Transport (kt CO_2)	Land Use, Land Use Change and Forestry (LULUCF)	Total (kt CO2)	Population ('000s, mid-year estimate)	Per Capita Emissions (t)
2005	17,993	13,185	13,119	266	44,563	5,347	8.3
2006	18,265	13,286	12,952	259	44,762	5,362	8.4
2007	17,936	12,877	13,068	260	44,142	5,379	8.2
2008	17,029	12,802	12,580	256	42,668	5,408	7.9
2009	14,792	11,543	12,053	264	38,651	5,431	7.1

Source: http://www.decc.gov.uk/assets/decc/11/stats/climate-change/2751-local-and-regional-co2-emissions-estimates.xls

Renewable Energy

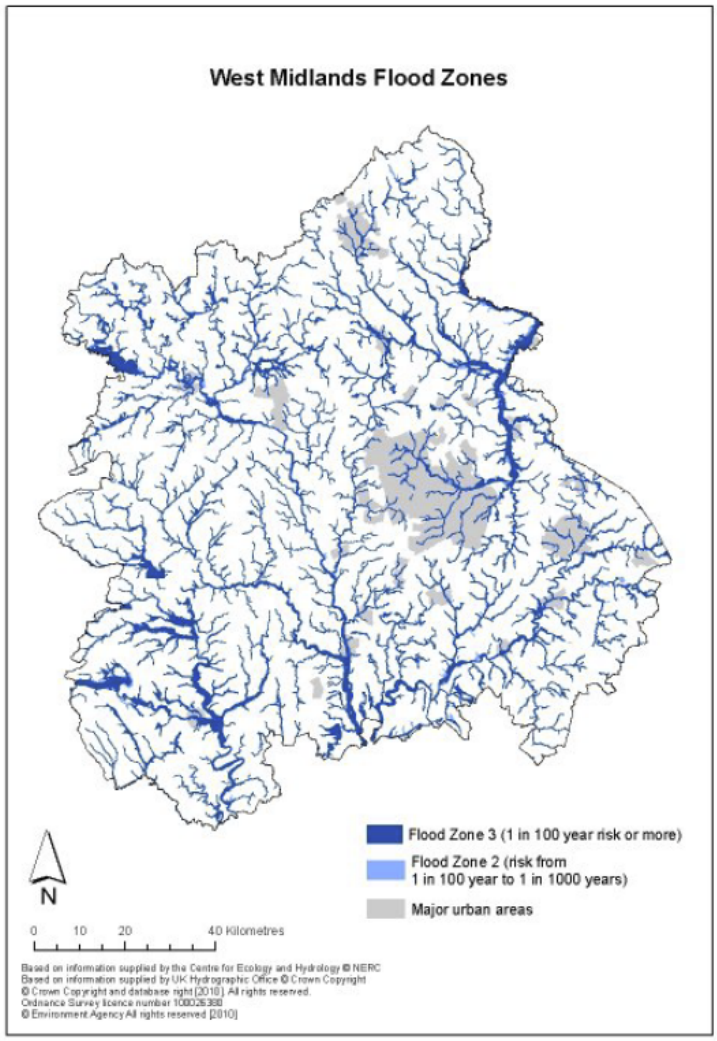
In 2009, renewable energy sources provided 6.7% of the electricity generated in the UK, 1.2% higher than in 2008. In 2008, 697 Gigawatt Hours (GW h) of renewable energy was generated in the West Midlands, the fourth lowest of any region. Outputs were from biofuels and landfill gas only.

Flooding

Around 6.5 per cent of land in the West Midlands has a 1 per cent chance of flooding in any one year, and according to the 2008 National Flood Risk Assessment, around 118,000 properties in the region are at some level of risk from flooding - around 4% of the total. Of these 80,000 are residential properties[169]. Around 21,000 residential and commercial properties are at 'significant' risk from flooding which is the highest category. This means they have a greater than 1 in 75 year chance of flooding. **Figure 7.3** shows the flood zones in the West Midlands. Flood zone 3 is where there is a 1 in 100 year risk or greater of flooding and flood zone 2 is where the risk is between 1 in 100 years to 1 in 1000 years.

[169] http://www.environment-agency.gov.uk/static/documents/Research/MIDS_SOE_West_Flood.pdf

Figure 7.3 Flood Risk Assessment



7.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

7.4.1 National

UK

The main source for determining how the climate of the UK may change is the UK Climate Impacts Programme scenarios, published in 2009 and known as UKCP09. The UKCP09 findings indicate that all areas of the UK are getting warmer, and the warming is greater in summer than in winter. There is little

change in the amount of precipitation (rain, hail, snow etc) that falls annually, but more is falling in the winter, with drier summers, for much of the UK. Sea levels are rising, and are greater in the south of the UK than the north[170].

The Climate Change Risk Assessment[171] (2012) outlines some of the most important risks and opportunities that climate change may present. It provides an indication of their potential magnitude, when they might become significant and the level of confidence in each finding. As well as the overall picture, specific findings are presented for five complementary themes: Agriculture & Forestry, Business, Health & Wellbeing, Buildings & Infrastructure and the Natural Environment. Key messages from the assessment include:

- Flood risk is projected to increase significantly across the UK. Increases in the frequency of flooding would affect people's homes and wellbeing, especially for vulnerable groups (e.g. those affected by poverty, older people, people in poor health and those with disabilities), and the operation of businesses and critical infrastructure systems. Annual damage to UK properties due to flooding from rivers and the sea currently totals around £1.3 billion. For England and Wales alone, the figure is projected to rise to between £2.1 billion and £12 billion by the 2080s, based on future population growth and if no adaptive action is taken.

- UK water resources are projected to come under increased pressure. This is a potential consequence of climate-driven changes in hydrological conditions, as well as population growth and the desire to improve the ecological status of rivers. By the 2050s, between 27 million and 59 million people in the UK may be living in areas affected by water supply-demand deficits (based on existing population levels). Adaptation action will be needed to increase water efficiency across all sectors and decrease levels of water abstraction in the summer months.

- Potentially, there are health benefits as well as threats related to climate change, affecting the most vulnerable groups in our society. These are likely to place different burdens on National Health Service (NHS), public health and social care services. For example, premature deaths due to cold winters are projected to decrease significantly (e.g. by between 3,900 and 24,000 by the 2050s) and premature deaths due to hotter summers are projected to increase (e.g. by between 580 and 5,900 by the 2050s). Other health risks that may increase include problems caused by ground-level ozone and by marine and freshwater pathogens.

- Sensitive ecosystems are likely to come under increasing pressure. Although some species could benefit, many more would be negatively impacted. These impacts would have knock-on

[170] DECC (2007) http://www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/loc_reg_dev/ni185_186/ni185_186.aspx
[171] Defra (2012) http://randd.defra.gov.uk/Document.aspx?Document=Summary_of_Key_Findings.pdf

effects on habitats and on the goods and services that ecosystems provide (e.g. regulating water flows, pollination services).

The UK is experiencing sea level rise of approximately 1mm per year. Global sea-level is rising at about 3mm per year[172]. Central England's temperature has risen by about 0.7ºC over the last century, with 2004 being the warmest on record[173]. Sea-surface temperatures around the UK coast have risen over the past three decades by about 0.7ºC. Global average temperatures are rising at about 0.2ºC per decade. Severe windstorms around the UK have become more frequent in the past few decades, though not above that seen in the 1920s. Annual mean precipitation over England and Wales has not changed significantly since records began; however seasonal rainfall appears to be decreasing in summer and increasing in winter[172] .

Key climate change include that the UK climate is warming and becoming more seasonal; climate changes are more pronounced in south-east of the UK compared to the north-west; sea levels are rising, and UK greenhouse gas emissions are falling with a target of an 80% cut in emissions by 2050 (compared to 1990 levels).

7.4.2 West Midlands

Greenhouse gas emissions from the West Midlands contribute to the UK and global totals. They therefore play an important role in the achieving the UK targets for reducing greenhouse gas emissions, although the influence on global effects is minimal. However, climate change will have direct effects across the region.

Agriculture is an important user of water in the region, with many crops requiring irrigation to ensure high quality and good yields. It is also expected that as the climate changes, there will be significant effects on biodiversity and the distribution of species and habitats. In built up areas the urban heat island effect is likely to intensify.

[172] Defra, Environment in your Pocket Statistics, 2009, http://www.defra.gov.uk/evidence/statistics/environment/eiyp/

7.5 Likely Evolution of the Baseline

7.5.1 National

UK

There has been a steady decrease in the 6 greenhouses gases of the Kyoto basket since 1990. In 2009 566.3 million tonnes of CO_2 equivalent were emitted from the UK, which was a 27.2% decrease compared to volumes emitted in 1990 and a 8.2% decrease compared to values in 2008. However, provisional results for 2010 estimate 582.4 million tonnes of CO2 equivalent were emitted giving an increase of 2.8% compared to 2009 values[174].

UKCP09 provides the following prediction on changes to climate within the UK based on the medium emission scenario with 90% probability[175]:

- **2080 mean winter temperature**: the central estimates of change are projected to be generally between 2 and 3ºC across most of the country, with slightly larger changes in the south-east and slightly smaller in the north-west of Britain.
- **2080 mean summer temperature**: a more pronounced south to north gradient exists with changes in some parts of southern England being just over 4ºC and in parts of northern Scotland about 2.5ºC.
- **2080 mean summer daily maximum temperature**: central estimates show a gradient between parts of southern England, where they can be 5ºC or more, and northern Scotland, where they can be somewhat less than 3ºC.
- **2080 mean annual precipitation**: shows little change (few percent or zero);.
- **2080 mean winter precipitation:** increases are in the range +10 to +30% over the majority of the country. Increases are smaller than this in some parts of the country, generally on higher ground.
- **2080 mean summer precipitation**: general south to north gradient, from decreases of almost 40% in SW England to almost no change in Shetland.

[174] DECC (2011) 2010 Provisional GHG emissions http://www.decc.gov.uk/publications/basket.aspx?filetype=4&filepath=Statistics%2fclimate_change%2f1514-ghg-emissions-provisional-2010.xls&minwidth=true#basket

[175] UKCP09 http://ukclimateprojections.defra.gov.uk/content/view/515/499/

- The range of absolute sea level rise around the UK (before land movements are included) and across the three emissions scenarios is projected to be between 12 and 76 cm for the period 1990–2095, which is a wider spread than that of the global average.

- The projected long-term future trends in storm surge that we find in UKCP09 are physically small everywhere around the UK, and in many places can be accounted for by natural variability. The surge level we expect to be exceeded on average once in 2, 10, 20 or 50 yr is not projected to increase by more than 9 cm by 2100 anywhere around the UK coast (not including the mean sea level change). The largest trends are found in the Bristol Channel and Severn Estuary.

- Seasonal mean and extreme waves are generally expected to increase to the South West of the UK, reduce to the north of the UK and experience a small change in the southern North Sea. Changes in the winter mean wave height are projected to be between –35 and +5 cm. Changes in the annual maxima are projected to be between –1.5 and +1 m.

The Climate Change Act 2008 was passed in November 2008 and creates a new approach to managing and responding to climate change in the UK. This includes putting in place legally binding targets with the aim of reducing emissions by at least 80% by 2050 (compared to 1990 levels) and a set of five-year carbon budgets (legally binding limits on the total quantity of greenhouse gas emissions that the country produces over a five year period) to 2022. Included within the Fourth Carbon Budget the Committee on Climate Change is the recommendation for an indicative 2030 target to reduce emissions by 60% relative to 1990 levels (46% relative to 2009 levels)[176].

The Carbon Plan 2011 explains that if the UK is to cut emissions by 80% by 2050, there will have to be major changes in how energy is generated and used. Energy efficiency will have to increase dramatically across all sectors. The oil and gas used to drive cars, heat buildings and power industry will, in large part, need to be replaced by electricity, sustainable bioenergy, or hydrogen. Electricity will need to be decarbonised through renewable and nuclear power, and the use of carbon capture and storage (CCS). The electricity grid will be larger and smarter at balancing demand and supply. In the next decade, the UK is expected to complete the installation of proven and cost effective technologies that are worth installing under all future scenarios. All cavity walls and lofts in homes, where practicable, are expected to be insulated by 2020. The fuel efficiency of internal combustion engine cars will improve dramatically, with CO_2 emissions from new cars set to fall by around a third. Many of our existing coal-fired power stations will close, replaced primarily by gas and renewables. More efficient buildings and cars will cut fuel costs. More diverse sources of electricity will improve energy security and reduce exposure to fossil fuel imports and price spikes. As part of this, the UK is committed to delivering 15% of

[176] Committee on Climate Change (2010) Fourth Carbon Budget, http://www.theccc.org.uk/reports/fourth-carbon-budget

its energy from renewable sources by 2020.

England

In 2009 England's emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were provisionally estimated to be 436 million tonnes CO_2 equivalent which is a 29.5% decrease compared to emissions in 1990[177].

UKCP09 provides the following changes in climate for England in 2080 based on a medium emission scenario with 90% probability[178]:

- **2080 mean winter temperature**: a change in temperature from 4.0ºC in the Northwest to 4.7ºC in the South and East of England.
- **2080 mean summer temperature**: a change in temperature from 5.4ºC in Yorkshire to 6.5ºC in the South East.
- **2080 mean winter precipitation:** increases are in the range 41% in the East Midlands to 54% in the South West.
- **2080 mean summer precipitation**: no change is expected in Yorkshire to a 7% increase in the South East and London.

England shares the same targets related to climate change and energy use as the rest of the UK. Although there are additional targets on a regional and local authority level contained within strategies there are too many to mention for the purposes of this report.

7.5.2 West Midlands

UKCP09 provides the following changes in climate for the West Midlands in 2050 based on a medium emission scenario with 90% probability[179]:

- an increase in winter mean temperature is 2.1ºC; it is very unlikely to be less than 1.2ºC and is very unlikely to be more than 3.2ºC. A wider range of uncertainty is from 0.9ºC to 3.5ºC.
- an increase in summer mean temperature is 2.6ºC; it is very unlikely to be less than 1.2ºC and is

[177] National Atmospheric Emissions Inventory , Devolved Administration End User GHG Emissions Data http://uk-air.defra.gov.uk/reports/cat07/1109061103_DA_GHGI_report_2009_Main_text_Issue_1.pdf
[178] UKCP09 http://ukclimateprojections.defra.gov.uk/content/view/515/499/
[179] UKCP09 http://ukclimateprojections.defra.gov.uk/content/view/515/499/

very unlikely to be more than 4.4ºC. A wider range of uncertainty is from 1ºC to 4.8ºC.

- an increase in summer mean daily maximum temperature is 3.6ºC; it is very unlikely to be less than 1.3ºC and is very unlikely to be more than 6.5ºC. A wider range of uncertainty is from 1.1ºC to 7.2ºC.
- an increase in summer mean daily minimum temperature is 2.7ºC; it is very unlikely to be less than 1.1ºC and is very unlikely to be more than 4.8ºC. A wider range of uncertainty is from 1ºC to 5.3ºC.
- the change in annual mean precipitation is 0%; it is very unlikely to be less than –5% and is very unlikely to be more than 6%. A wider range of uncertainty is from –6% to 6%.
- the change in winter mean precipitation is 13%; it is very unlikely to be less than 2% and is very unlikely to be more than 27%. A wider range of uncertainty is from 1% to 30%.
- the change in summer mean precipitation is –17%; it is very unlikely to be less than –37% and is very unlikely to be more than 6%. A wider range of uncertainty is from –39% to 14%.

7.6 Assessing significance

Table 7.2 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on climate change. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 7.2 Approach to determining the significance of effects on climate change and energy use

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Alternative would significantly reduce carbon footprint of region (by >34% by 2020 compared to a 1990 baseline). • Alternative will increase resilience/decrease vulnerability to climate change in the wider environment.
+	Positive	• Alternative would reduce carbon footprint of region (by <34% by 2020 compared to 1990). • Alternative may increase resilience/decrease vulnerability to climate change in the wider environment
0	No (neutral effects)	• Alternative would not lead to an overall change in greenhouse gas emissions in a way that will not contribute to climate change or resilience to climate change within the wider environment.

Effect	Description	Illustrative Guidance
-	Negative	• Alternative would increase carbon footprint of region (by <10% by 2020 compared to 1990). • Alternative may decrease resilience/increase vulnerability to climate change in the wider environment. • Alternative could result in increase in people or property at risk or affected by flooding, coastal inundation or sea level rise.
--	Significant negative	• Alternative would increase carbon footprint of region (by >10% by 2020 compared to 1990). • Alternative will decrease resilience/increase vulnerability to climate change in the wider environment. • Alternative could result in increase in significant number of people or property affected by flooding, coastal inundation or sea level rise.
?	Uncertain	• From the level of information available the impact that the alternative would have on this objective is uncertain.

7.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

None of the policies in the West Midlands Regional Strategy were identified to have significant effects on climatic factors.

7.7.1 Effects of Revocation

Climate change could significantly affect the West Midlands. While the regional strategy contains a number of policies that could have minor effects on climatic factors, either by contributing to overall emissions or providing measures to mitigate the effects none of them where considered likely to have a significant effect. The revocation of the regional strategy was also considered not likely to have any significant effects.

One of the 12 core principles of planning set out in paragraph 17 of the NPPF is to support the transition to a low carbon future, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy). Similarly, paragraph 94 of the NPPF states that local planning authorities should adopt proactive strategies to mitigate and adapt to climate change in line with the provisions of the Climate Change Act 2008.

The NPPF seeks to support the move to a low carbon future, by stating that local planning authorities should plan for new development in locations and ways which reduce greenhouse gas emissions; actively support energy efficiency improvements to existing buildings; and when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards. Specifically, local planning authorities are

expected to identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supplies.

Following revocation of regional strategies, local authorities will be expected to continue to work together across administrative boundaries and with the Environment Agency to plan development that properly minimises the effects of climate change, particularly from flooding and coastal change. For flooding matters, local authorities already have a duty to cooperate under the Floods and Water Management Act 2010. This contains provisions that cover regional working and co-operation such as the establishment of Regional Flood and Coastal Committees and the bringing together of lead local flood authorities (unitary and county councils), who will have a duty to cooperate, to develop local strategies for managing local flood risk. In addition, the Flood Risk Regulations 2009 imposes a duty on the Environment Agency and lead local flood authorities to determine whether a significant flood risk exists in an area and if so to prepare flood hazard maps, flood risk maps and flood risk management plans.

7.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit

7.7.3 Effects of Retention

Retaining the regional strategy would see continuation of the baseline identified above. The more recent legislative and national policy requirements which have come into effect since the regional strategy was adopted would in most cases steer development choices in the region, particularly as the regional strategy became more out of date.

7.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

8. Material Assets

8.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals on revoking the regional strategies on material assets including waste and minerals. Information is presented for both national and regional levels.

Waste management in this context is defined as the processing, recycling or disposal of a range of waste types including municipal, commercial and industrial, construction, excavation and demolition and hazardous wastes. However, it is important to note that consideration of the management of waste links to a number of other SEA topics, the most relevant being climate change and adaptation given the potential for waste to be recovered for energy use.

8.2 Summary of Plans and Programmes

8.2.1 International

The ***Waste Framework Directive*** (75/442/EEC as amended by 91/156/EEC, 91/92/EEC and 2008/98/EC) provides the overarching framework for waste management at the EU level. It relates to waste disposal and the protection of the environment from harmful effects caused by the collection, transport, treatment, storage and tipping of waste. In particular, it aims to encourage the recovery and use of waste in order to conserve natural resources. The key principles of the Directive include the 'Waste Management Hierarchy' which stipulates waste management options based on their desirability. In order, these are: prevention; preparing for re-use; recycling; other recovery, e.g. energy recovery; and disposal. Key objectives are to reduce the adverse impacts of the generation of waste and the overall impacts of resource use. This should be done through a variety of mechanisms, including:

- by 2020 requiring member states to recycle 50% of their household waste and 70% of their non-hazardous construction and demolition waste;
- applying the waste hierarchy - promoting waste minimisation followed by reuse and recycling , other recovery (such as energy recovery) and disposal - as a priority order in waste prevention and management legislation and policy;
- ensuring that four specified materials (paper, metal, plastics and glass) are collected separately by 2015,

- taking measures as appropriate to promote the re-use of products and preparing for re-use activities; and
- extending the self-sufficiency & proximity principles to apply to installations for recovery of mixed municipal waste from households.

The Directive was transposed into English legislation through the Waste (England and Wales) Regulations 2011 (SI2011 No.988).

A compromise agreement was reached between the Council of Environment Ministers and the European Parliament in June 2008 on revisions to the Waste Framework Directive. Once formally adopted, these will come into force in 2010. The main changes include EU-wide targets for reuse and recycling 50% of household waste by 2020, and for reuse, recycling and recovery of 70% of construction and demolition waste by 2020. In this context, the ***Landfill Directive*** (European Commission, 1999) focuses on waste minimisation and increasing levels of recycling and recovery. The overall aim of the Directive is to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air and on the global environment, including the greenhouse effect as well as any resulting risk to human health from the landfilling of waste, during the whole lifecycle of the landfill. The Directive sets the target of reducing biodegradable municipal waste landfilled to 35% of that produced in 1995 by 2020.

There are a number of **Producer Responsibility Directives** relating specifically to consumer products. Their purpose is to require businesses to reuse, recover and recycle waste which comes from products they produce, and each Directive sets national targets for recovery and recycling of these wastes.

The ***EU Thematic Strategy on the Prevention and Recycling of Waste (2002-2012)*** is a long-term strategy aims to help Europe become a recycling society that seeks to avoid waste and uses waste as a resource.

The ***Basel Convention*** came into force in 1992 and is a global agreement, ratified by several member countries and the European Union, for addressing the problems and challenges posed by hazardous waste. The key objectives of the Basel Convention are:

- to minimise the generation of hazardous wastes in terms of quantity and hazardousness;
- to dispose of them as close to the source of generation as possible; and
- to reduce the movement of hazardous wastes.

8.2.2 National

UK

Environmental Permitting (England and Wales) Regulations (2010) SI 675 provides a system for environmental permits and exemptions for industrial activities, mobile plant, waste operations, mining waste operations, water discharge activities, groundwater activities and radioactive substances activities. It also sets out the powers, functions and duties of the regulators.

England

The **Waste Strategy (2007)** translates the principles of the previous EU Waste Framework Directive into UK policy. Its key objectives include:

- Decoupling waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use.
- Meeting and exceeding the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020.
- Increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste.
- Secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste.
- Get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.

The Strategy sets national targets for:

- Reducing the amount of household waste that is not either re-used, recycled or composted.
- Recycling and composting of household waste – at least 40% by 2010, 45% by 2015 and 50% by 2020.
- Recovery of municipal waste – 53% by 2010, 67% by 2015 and 75% by 2020.

The Coalition Government carried out a ***National Review of Waste Policy in England (2011)***, looking at the most effective ways of reducing waste, maximising the money to be made from waste and

recycling and considering how waste policies affect local communities and individual households. The report set out a number of 'Principal Commitments' which aims to achieve a more sustainable approach to the use of materials, deliver environmental benefits and support economic growth. These include:

- promoting resource efficient product design and manufacture and target those waste streams with high carbon impacts, both in terms of embedded carbon (food, metals, plastics, textiles) and direct emissions from landfill (food, paper and card, textiles, wood);
- promoting the use of life cycle thinking in all waste policy and waste management decisions and the reporting of waste management in carbon terms, as an alternative to weight-based measures;
- developing a comprehensive Waste Prevention Programme and in the meantime will work with businesses and other organisations across supply chains on a range of measures designed to drive waste reduction and re-use as part of a broader resource efficiency programme;
- continue to help local communities develop fit for purpose local solutions for collecting and dealing with household waste and work with councils to meet households' reasonable expectations for weekly collections, particularly of smelly waste.

Defra's ***Strategy for Hazardous Waste Management in England (2010)*** sets out the following principles for hazardous waste management:

- waste hierarchy;
- infrastructure provision;
- reduce our reliance on landfill;
- no mixing or dilution;
- treatment of hazardous organic wastes; and
- end reliance on the use of Landfill Directive waste acceptance criteria derogations.

PPS10: Planning for Sustainable Waste Management (2005) sets out the national planning framework in relation to waste. It states that planning has a key role in delivering sustainable waste management through both the development of appropriate strategies for growth, regeneration and the prudent use of resources and by providing sufficient opportunities for the development of new waste management facilities. PPS10 states that:

- Waste planning authorities should identify in their plans (development plan documents) sites and areas suitable for new or enhanced waste management facilities for the waste management

needs of their area. Development plans form the framework within which decisions on proposals for development are taken.

- The regional planning body should convene a broadly-based 'Regional Technical Advisory Board' (RTAB) to provide advice on the preparation of the strategy for waste management in the Regional Spatial Strategy and its implementation. PPS10 sets out the role and composition of a RTAB – it should be broadly based drawing from those with a direct interest in and knowledge of sustainable waste management.

- In deciding which sites and areas to identify for such facilities, waste planning authorities should assess their suitability against criteria set out in PPS10. This includes the physical and environmental constraints on development and the cumulative effect of previous waste disposal facilities on the well-being of the local community.

The ***Natural Environment White Paper (2011)*** sets out the ambition that the use of peat will be reduced to zero in England by 2030. This will contribute to the protection of important lowland peat habitats (both here and overseas) and significant carbon stores, and will promote a shift towards the greater use of waste-derived and by-product materials. It also sets ambitious targets for reducing use within individual sectors, to drive action and provide clarity about the long-term direction of policy.

The ***Resource Security Action Plan (2012)*** provides a framework for business action to address risks about the availability of some non-renewable raw materials (including minerals), and sets out high level actions to build on the developing partnership between Government and businesses to address resource concerns. This Action Plan emphasizes the need to make best use of resources currently in use, reducing as far as practicable the quantity of material used and waste generated, and using as much recycled and secondary material as possible, before securing the remainder of material needed through new primary extraction.

The ***NPPF (2012)*** replaced a number of Planning Policy statements, Planning Policy Guidance, Minerals Planning Statements, Minerals Planning Guidance and some Government Circulars. It provides a strong policy framework fro local planning authorities to have regard to in their plan making and in development management, and will provide the main policy framework for local planning authorities, neighbourhood groups and communities following the revocation of the Regional Strategies. Key policies with implications for minerals planning are set out in paragraphs 142-149, 156-157 and 163 of the Framework.

8.2.3 West Midlands

- Staffordshire and Stoke on Trent Waste Local Plan 1998-2011 (adopted 2003) saved policies

- Staffordshire and Stoke on Trent Minerals Local Plan (adopted 1999)
- Black Country Core Strategy (adopted Feb 2011) (joint – Dudley, Sandwell, Walsall and Wolverhampton)
- Herefordshire Unitary Development Plan 1996-2011 (adopted March 2007)
- Warwickshire Waste Local Plan 1995-2005 (adopted 1995)
- Warwickshire Minerals Local Plan 1995-2006 (adopted 1995) saved policies
- Structure Plan for Worcestershire 1996-2011 (adopted June 2001)
- Worcestershire Minerals Local Plan (adopted 1997) saved policies
- Shropshire Waste Local Plan 2002-2014 (adopted October 2004) saved policies
- Shropshire Joint Minerals Local Plan 1996-2006 (adopted April 2000) saved policies
- Shropshire Core Strategy 2011-2026 (adopted March 2011)
- Birmingham Unitary Development Plan (alterations adopted 2005)
- The City of Coventry Unitary Development Plan 1996-2011 (adopted Dec 2001)
- Solihull Unitary Development Plan 2006 (plan period: 2001-2011) (adopted Feb 2006)

8.3 Overview of the Baseline

8.3.1 National

UK

In 2004, total UK non-radioactive waste arisings were around 335 million tonnes. Of this 32% was construction and demolition waste; 29% was mining and quarrying waste; 13% was industrial waste; 12% was commercial waste; 9% was household waste; 5% was dredging waste; and agricultural and sewage wastes made up for less than 1% each. Commercial and industrial waste arisings were therefore around 0.84 million tonnes in 2004. In 2007, 73 million tonnes of waste were sent to landfill (a decrease of 19.5% since 2002). The amount of waste recycled or composted has increased accounting

for 34% of waste in 2007/08.[180]

In 2002, 41% of commercial and industrial waste arisings were landfilled; 33% were recycled; 9% were reused; 4% were treated; 4% were thermally treated; 4% were unrecorded; 3% went to land recovery; 2% were transferred; and 1% was unsampled.[181]

The total hazardous waste produced in UK in 2009 was 4,437,212 tonnes.[182]

England

In 2004, total non-radioactive waste arisings in England were around 272,000,000 tonnes. Of this 32% was construction and demolition waste; 30% was mining and quarrying waste; 13% was industrial waste; 11% was commercial waste; 9% was household waste; 5% was dredged material; and agricultural and sewage wastes made up for less than 1% each.[183] In 2007, 73,000,000 tonnes of waste (household, commerce & industry, and construction & demolition) was sent to landfill (a decrease of 19.5% since 2002).[180]

Commercial and industrial waste arisings in England were estimated to be around 67,900.000 tonnes in 2002/2003. At that time, 41% of commercial and industrial waste arisings were landfilled; 33% were recycled; 9% were reused; 4% were thermally treated; and 2% was recovered by other means.[184]

The total hazardous waste produced in England in 2009 was 4,095,477 tonnes.[185]

8.3.2 West Midlands

Waste

The Environment Agency[186] records the following key facts regarding waste production and

[180] Defra, Sustainable Development Indicators in your Pocket 2009, http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf

[181] Defra, edigest waste statistics, http://www.defra.gov.uk/environment/statistics/waste/wrindustry.htm

[182] Environment Agency 2009 Hazardous Waste Arisings figures, http://www.environment-agency.gov.uk/static/documents/Research/EWHaz09_Final.xls

[183] Waste Strategy for England 2007, Defra, http://www.defra.gov.uk/environment/waste/strategy/strategy07/documents/waste07-strategy.pdf

[184] Commercial and Industrial Waste in England: Statement of aims and actions 2009, Defra, October 2009, http://www.defra.gov.uk/environment/waste/topics/documents/commercial-industrial-wasteaims-actions-091013.pdf

[185] Environment Agency 2009 Hazardous Waste Arisings figures, http://www.environment-agency.gov.uk/static/documents/Research/EWHaz09_Final.xls

management in the West Midlands:

- The West Midlands produced over 2.9 million tonnes of municipal waste in 2008, including 2.6 million tonnes of household waste. The latest commercial and industrial waste data showed the West Midlands produced 7.3 million tonnes of this waste type.
- In 2008, 4.8 million tonnes of waste was disposed of in landfill sites, with 5.5 million tonnes of waste going to waste transfer and treatment facilities. A further 2.1 million tonnes was sent to metal recycling sites.
- Since 2001, waste sent to West Midlands landfill sites has decreased by over 42 per cent, whilst inputs to waste transfer facilities has increased by 13 per cent. Waste going for treatment has increased by 25 per cent to over 1.5 million tonnes.
- At the end of 2008 the West Midlands had landfill capacity of over 79 million cubic metres. At current rates of disposal, this is only enough for another 10 years.
- Over 1.1 million tonnes of waste was incinerated at permitted facilities in the West Midlands in 2008, 85 per cent of which was municipal waste.
- In 2008, 35 per cent of municipal waste was recycled and/or composted. The West Midlands has the highest recovery and recycling rate of 66 per cent per cent for municipal waste, and the lowest percentage of municipal waste going to landfill, when compared with other regions in England and Wales.

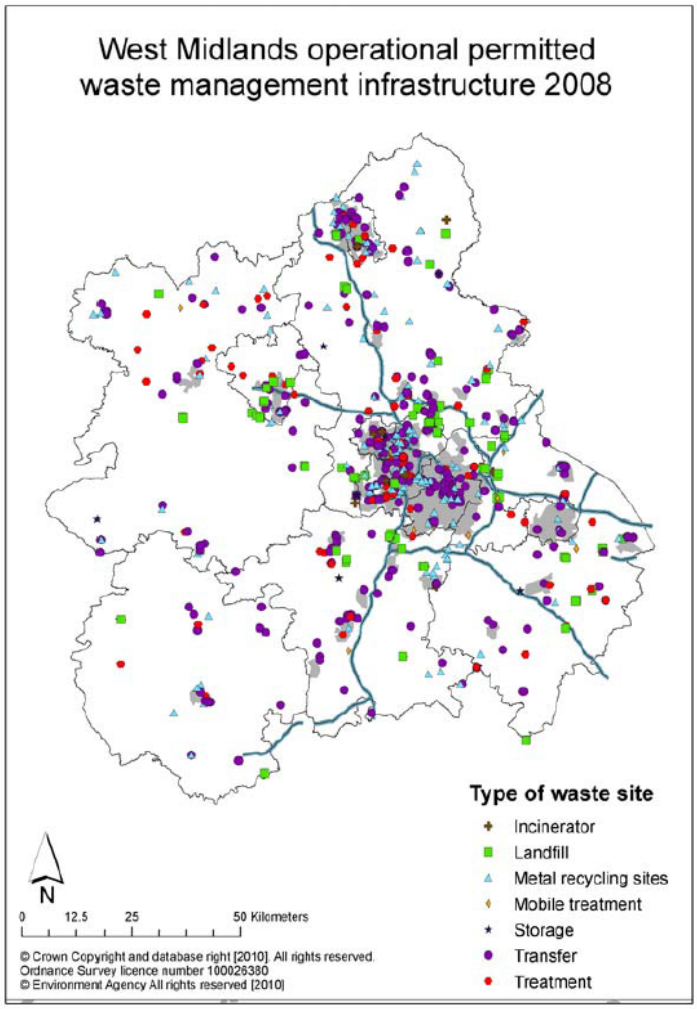
The Environment Agency notes that in 2008 there were 1269 permitted waste management facilities in the West Midlands with a total permitted capacity to handle over 155 million tonnes of Waste per annum. Of these, 532 sites were active (handling waste) during 2008. Each active Waste Facility is required to submit returns to us reporting the amount of waste handled by the facility for the calendar year. Amongst the active permitted Waste Facilities in the West Midlands in 2008 there were

- 36 landfill sites
- 73 waste treatment facilities, with waste inputs of nearly 1.6 million tonnes
- 380 waste transfer stations
- 13 waste incinerators, with an annual capacity to handle 1.4 million tonnes of waste.
- 80 per cent of region's incineration capacity is designated for municipal energy from waste incinerator facilities.

The distribution of licensed waste facilities is shown in **Figure 8.1**.

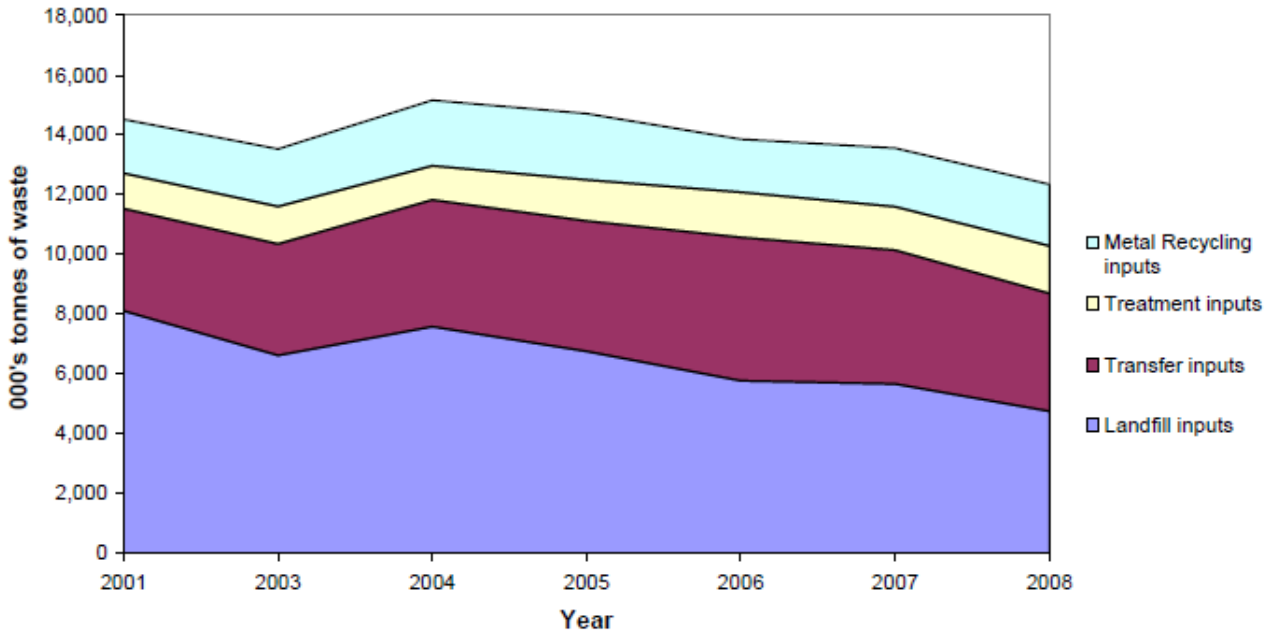
[186] Environment Agency (2010) State of the Environment Report: West Midlands

Figure 8.1 Licensed Waste Facilities



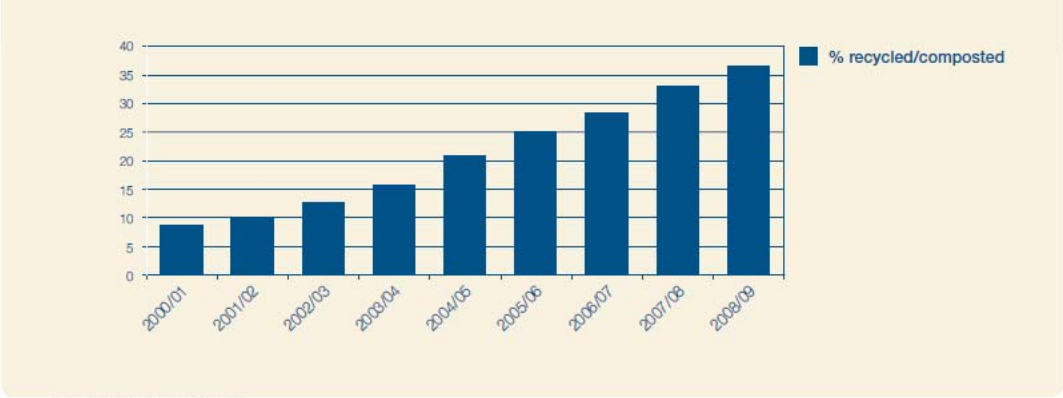
Since 2001 waste inputs to landfill have fallen by 42 per cent in the West Midlands (**Figure 8.2**). During the same period inputs into waste transfer sites and waste treatment sites in the West Midlands have increased by 13 per cent and 25 per cent respectively with nearly 1.6 million tonnes treated.

Figure 8.2 Waste Deposit Trends 2001-2008



Figures 8.3, 8.4 and 8.5 look in more detail at waste management in the West Midlands[187] and reveal that whilst overall recycling rates are increasing significantly for the region as a whole, these appear vary by local authority area, with a number of authorities some distance away from immediate, five year and ten year targets.

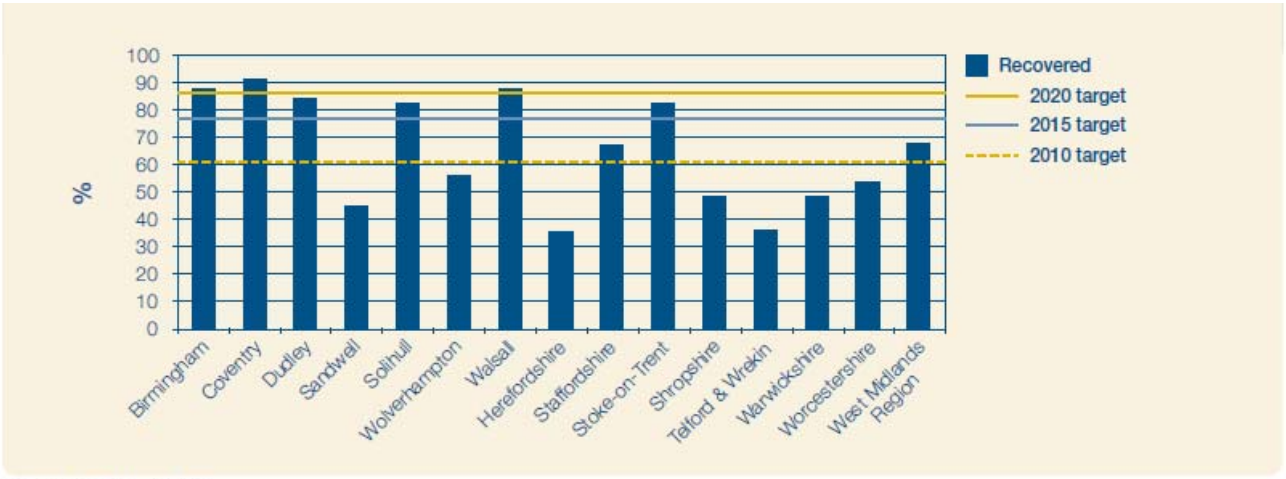
Figure 8.3 Household Waste Recycling



Source: Defra 2000/01 to 2008/09 data.

[187] WMRA (2010) West Midlands Annual Monitoring Report 2009 at: http://www.wmra.gov.uk/documents/AMR_2009.pdf

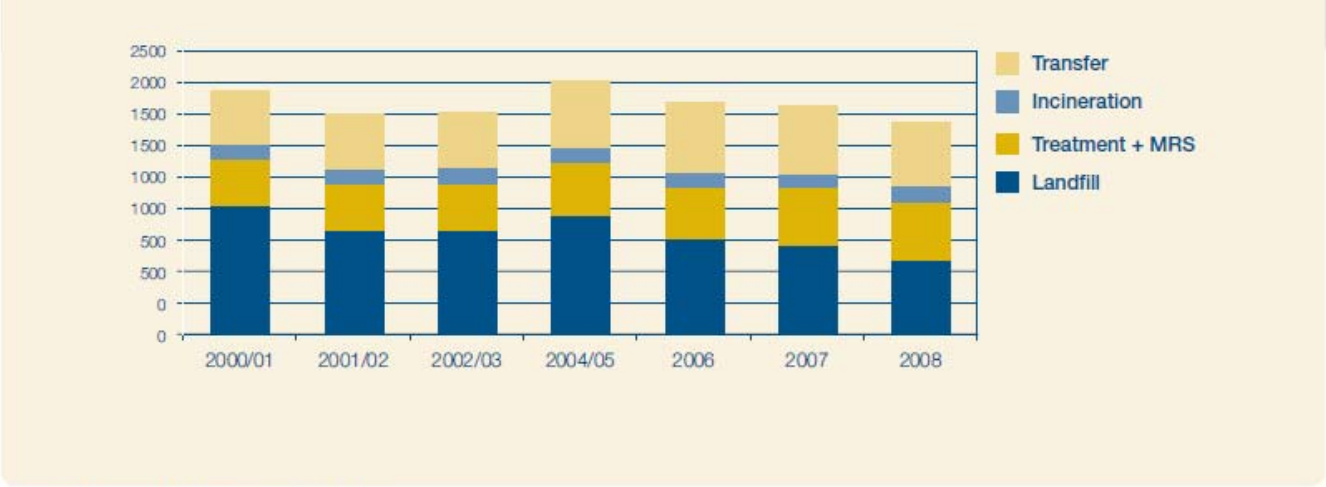
Figure 8.4 Municipal Waste Recovery



Source: Defra 2008/09 data.

Figure 8.5 shows that there has been a modest decrease in overall waste generation and that the proportion going to landfill is decreasing as waste recovery measures gather pace.

Figure 8.5 Waste Management

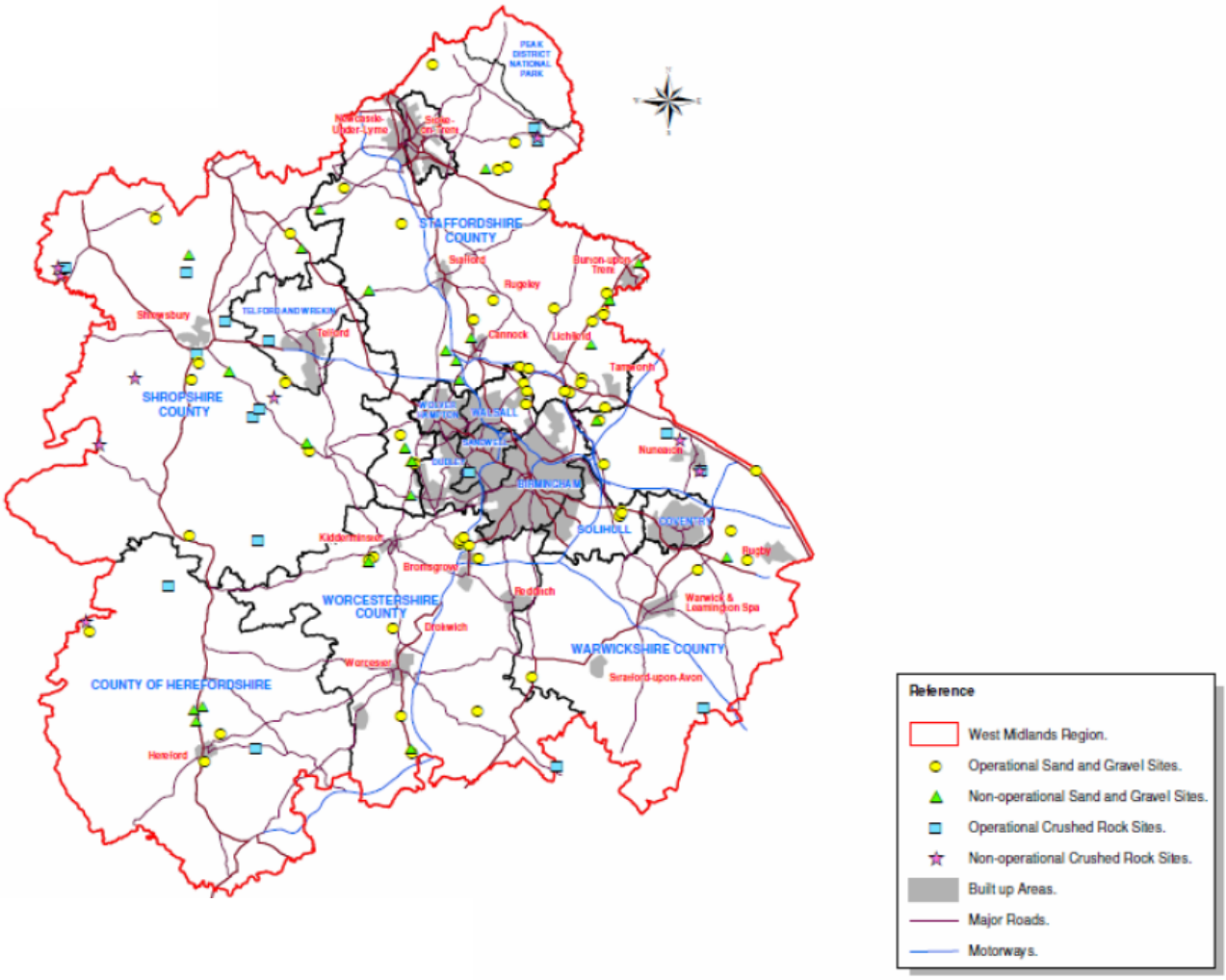


Source: Environment Agency 2000 to 2008 data.

Minerals

Information on minerals demand in the West Midlands is sparse, the most recent data being derived from the RSS AMR (2009) and the West Midlands Aggregates Working Party (2008). **Figure 8.6** shows the distribution of operational and non-operational minerals sites across the region.

Figure 8.6 Operational and Non-Operational Minerals Sites



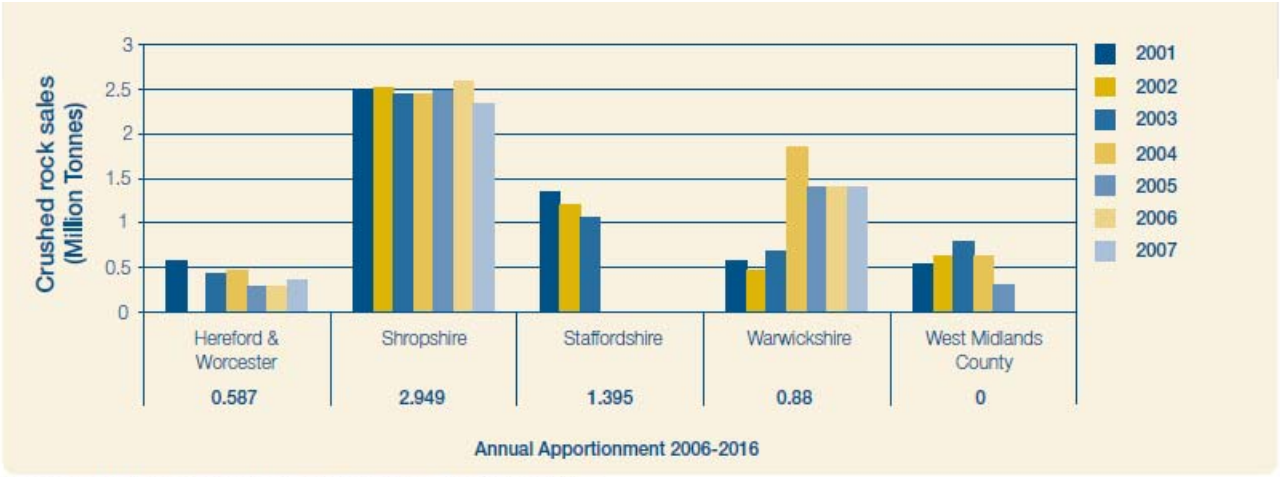
The reserves and sales of crushed rock are shown in **Table 8.1** and **Figure 8.7** respectively, illustrating relatively stable demand, significant reserves and the importance of Staffordshire as a key source of

regional supply.

Table 8.1 Crushed Rock Reserves (mt)

MPA	2004	2005	2006	2007	2008
Herefordshire	16.5	15.9	15.10	14.60	14.44
Worcestershire	confidential	confidential	confidential	confidential	confidential
Shropshire	84.93	96.4	95.5	93.17	116.02
Staffordshire	171.6	162.5	161.2	160.91	160.09
Warwickshire	31.4	29.2	30.8	30.2	29.91
W. Midlands County	0.45	0.28	0	0	0
TOTAL	304.88	304.58	298.0	291.98	306.8

Figure 8.7 Crushed Rock Sales 20012007



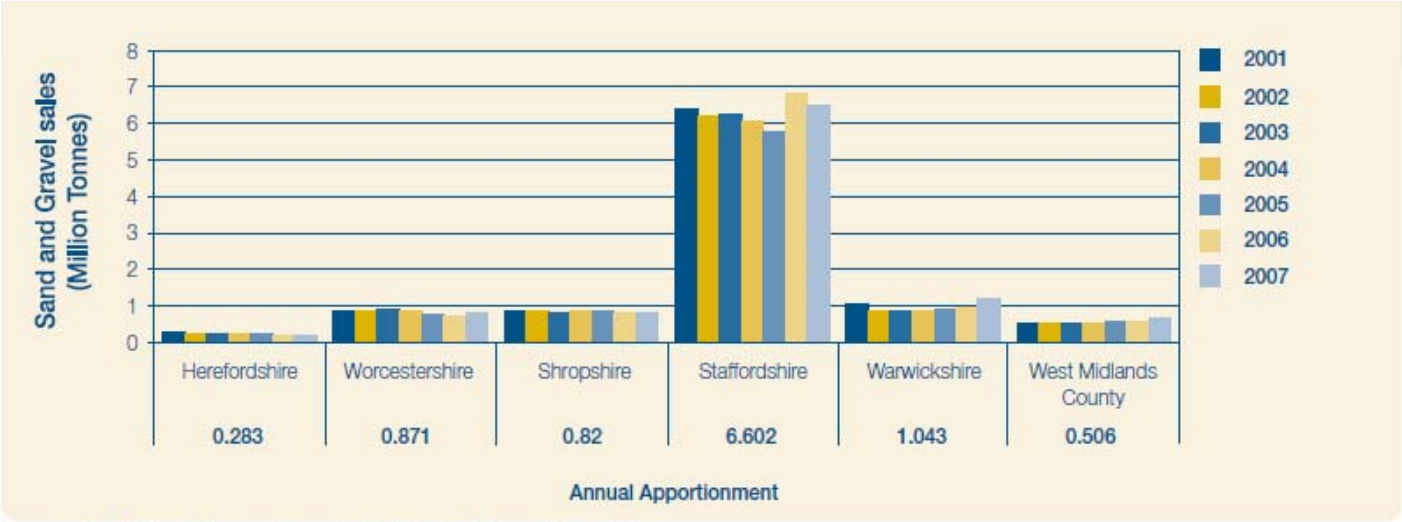
Source: West Midlands Regional Aggregates Working Party Annual Report 2007.
From 2004, the Staffordshire figure is combined with Warwickshire for reasons of confidentiality.

The reserves and sales of sand & gravel are shown in **Table 8.2** and **Figure 8.8** respectively, illustrating relatively stable demand, significant reserves and the importance of Staffordshire as a key source of regional supply.

Table 8.2 Sand & Gravel Reserves (mt)

MPA	2004	2005	2006	2007	2008
Herefordshire	5.7	5.1	5.3	5.1	6.148
Worcestershire	5.58	4.3	3.6	4.1	3.021
Shropshire	13.96	13.8	13.8	13.02	12.23
Staffordshire	97.96	100.15	88.6	82.9	82.88
Warwickshire	8.45	8.5	6.2	5.0	4.756
W. Midlands County	2.5	2.0	1.6	2.39	5.21
TOTAL	134.15	133.85	123.8	112.51	114.25

Figure 8.7 Sand & Gravel Sales 2001-2007



Source: West Midlands Regional Aggregates Working Party Annual Report 2007.

8.4 Environmental characteristics of those areas most likely to be significantly affected

8.4.1 National

UK

Although reuse and recycling rates for industrial wastes are increasing, due to the combined effects of statutory, reputational and financial drivers, there are still high levels of waste being disposed of, with limited opportunity for recycling hazardous and very low-level radioactive materials. There is pressure to achieving as close to zero landfill as possible throughout the UK.[188, 189]

Commercial and industrial waste data is not routinely collated (Defra intend to carry out a national survey of commercial and industrial waste by the end of 2010). However it is subject to similar pressures as municipal waste, namely increased waste prevention, adoption of recycling and reuse alternatives and reduced reliance on landfill.

8.4.2 West Midlands

Waste

It is not possible to draw strong conclusions regarding the performance of the preferred growth strategy in terms of supporting good waste management practices. There is no evidence to suggest a regional limit in terms of waste that can be managed sustainably. Furthermore, whilst growth could be directed only to areas where there is existing good access to waste management facilities, it is impossible to conclude that development could not come forward alongside sufficient waste management infrastructure. The production of construction and demolition waste may result in locational constraints to development, particularly where development involves brownfield sites that are likely to produce hazardous waste.

[188] Wales Waste Information 2008, Environment Agency, http://www.environment-agency.gov.uk/research/library/data/111408.aspx
[189] Scotland's Zero Waste Plan Data, Scottish Environment Protection Agency, June 2010, http://www.sepa.org.uk/waste/waste_data/zero_waste_plan_data.aspx

Minerals

The region as a whole appears to be reasonably well endowed with minerals resources, albeit reliance on Shropshire for a significant proportion of these. Thus through the apportionment according to supply via the West Midlands Regional Aggregates Working Party (WMRAWP), the principal burden will fall on Shropshire for both sand & gravel ad crushed rock, with attendant potential consequences for a range of environmental criteria.

8.5 Likely evolution of the baseline

8.5.1 National

UK

Non-radioactive waste management in the UK is moving towards greater reuse and recycling and less landfill. Between 2002 and 2007 in the UK, there was 19.5% decrease in waste disposed of in landfill sites. This includes waste produced by households, commerce and industry and construction and demolition.[190]

Hazardous waste production in England and Wales has decreased since 2004 by 17%. The majority of the decrease is due to the reduction in liquid inputs to one treatment facility on Teesside in 2009.[191]

England

In England, the total amount of non-radioactive waste sent to landfill has decreased from 80,000,000 tonnes annually in 2000/01 to 72, 500,000 tonnes in 2004/05 at licenced landfill sites: with falls from 50% to 44% for industrial and commercial waste between 1998/99 and 2002/03.4 Between 1998/99 and 2002/03 there was a 1% reduction in the total amount (in tonnes) of commercial and industrial waste produced in England. Within this total, industrial waste had reduced to 38,000,000 tonnes in 2002/3 while the amount of commercial waste had grown to 30,000,000 tonnes. During this period, the tonnage of commercial and industrial waste sent to landfill has decreased, with more waste handled by transfer stations and treatment facilities.[192] In 2002/3 for the first time, recycling and reuse had overtaken landfill as the most common method of waste management. Overall 44% was sent to landfill and 45% recycled.

[190] Waste Strategy for England 2007, Defra

[191] Environment Agency Waste Trends, http://www.environment-agency.gov.uk/research/library/data/123472.aspx

[192] Commercial and Industrial Waste in England: Statement of aims and actions 2009, Defra, October 2009, http://www.defra.gov.uk/environ ment/waste/topics/documents/commercial-industrial-waste-aimsactions-091013.pdf

Defra has established targets for England which includes a greater focus on waste prevention seeking to achieve a fall of 50% per person of household waste arising. Recycling and composting of household waste targets have been established - at least 40% by 2010, 45% by 2015 and 50% by 2020; and recovery of municipal waste - 53% by 2010, 67% by 2015 and 75% by 2020.[193]

On the basis of the policies set out in Waste Strategy for England 2007, levels of commercial and industrial waste landfilled are expected to fall by 20% by 2010 compared to 2004. The Government is considering, in conjunction with the construction industry, a target to halve the amount of construction, demolition and excavation wastes going to landfill by 2012.

8.5.2 West Midlands

- The greatest burden of aggregate production will fall on Shropshire with attendant environmental pressures.
- Demand will respond to changes in economic activity (regionally and nationwide), and with increases in the use of recycled construction materials.
- Perhaps the most significant opportunities for the use waste as part of renewable energy generation exist in urban areas where neighbourhood heating schemes can be developed, perhaps as part of regeneration activity.

8.6 Assessing significance

Table 8.3 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the land use and materials objective. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 8.3 Approach to determining the significance of effects on material assets

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Option will increase capacity of waste management infrastructure. • Option would create no additional hazardous or non-recyclable waste, whilst maximising the proportion of materials that are re-useable or recyclable. • Option will ensure the safe handling of radioactive and hazardous wastes.

[193] Waste Strategy for England 2007, Defra

Effect	Description	Illustrative Guidance
+	Positive	• Option would not create an increase in the volume of hazardous and non-recyclable wastes that require disposal. • Option would increase the volume of materials reused and recycled. • Option will ensure the safe handling of radioactive and hazardous wastes.
0	No (neutral effects)	• Option would not create an increase in the volume of hazardous and non-recyclable wastes that require disposal. • Option will have no effect on the capacity of waste management infrastructure.
-	Negative	• Option will result in an increase in radioactive waste for disposal. • Option will increase volumes of hazardous and non-recyclable waste that would require disposal. • Option may have a limited adverse impact on the capacity of existing waste management systems.
--	Significant negative	• Option will generate high volumes of radioactive waste for disposal. • Option will generate a high volume of hazardous and non-recyclable waste that would require disposal. • Option will impede the achievement of government and national targets for minimising, recovering and recycling waste. • Option will have a significant adverse impact on the capacity of existing waste management systems (e.g. leading to the permitting of additional landfill capacity to accommodate waste). • Option may increase risks associated with the handling of radioactive and hazardous wastes.
?	Uncertain	• From the level of information available the effects the impact that the option would have on this objective is uncertain.

8.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 8.4 Significant Effects against the Material Assets Topic

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	
UR1A: Black Country Regeneration Policies	Revocation	++	++	++	The revocation of policy UR1A will have no negative impacts. This is because the Black Country Joint Core Strategy prepared by the four Black Country local planning authorities (Dudley, Sandwell, Walsall, Wolverhampton) was adopted in February 2011. The Black Country Joint Core Strategy was prepared within the regional planning policy framework set out by policy UR1A in the West Midlands Regional Strategy. This has ensured that the sub regional high level strategic planning approach to promote the regeneration of the Black Country have effectively been

					coordinated by the four Black Country local planning authorities through their joint core strategy. Given the existence of the up to date Black Country Core Strategy, it is expected that the policy or variations of this policy through the implementation of the policies in the joint core strategy by the four Black Country local planning authorities will be delivered at the local level and the environmental effects of revocation would be the same as retention.
	Retention	++	++	++	Policy UR1A identifies the Black Country sub region in the West Midlands as a primary focus for regeneration activity, hence development and investment will be centred on four strategic centres and growth corridors in the Black Country. The specific locations of the centres and corridors will be defined in the Black Country Joint Core Strategy and Local Development Documents. Policy UR1A also states development and environmental enhancement should be planned for and encouraged in other locations across the Black Country which support local centres and communities, use suitable sites and be accessible by public transport.

8.7.1 Effects of Revocation

Significant positive effects were identify in respect of regeneration in the Black Country The effects of revocation are considered to be positive given the role of the Black Country JCS, West Midlands MPAs and the overarching guidance of the NPPF in pursuing sustainable resource use. For example, in relation to the use of waste in renewable energy schemes, large-scale regeneration projects can present significant opportunities for delivering large-scale neighbourhood CHP schemes. Revocation is judged not to affect the delivery of such projects within the context of the regeneration of the Black Country, although monitoring of possible effects would be useful.

8.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy

where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit

8.7.3 Effects of Retention

The effects of retention are considered to be positive given the role of the Black Country JCS and the West Midlands MPAs in co-ordinating the use of assets in respect of regeneration activity. Co-ordination of activity under West Midlands RSS policy will assist with realising aspirations for a more sustainable development path, particularly where existing strong partnership working can be drawn upon.

8.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

8.9 Proposals for Monitoring

No specific monitoring is required other than that provided through the annual review of the NPPF and local plan AMRs.

9. Cultural Heritage

9.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals to revoke regional strategies on cultural heritage. Information is presented for both national and regional levels.

Cultural heritage, including architectural and archaeological heritage, within this context is defined as below-ground and upstanding evidence of past human activity and encompasses artefacts, buried and underwater archaeological sites, earthworks, buildings, battlefields, historic gardens, historic landscapes, wrecks, hedgerows and ancient woodland.

There are links between the cultural heritage topic and other topics in the SEA, specifically landscape and material assets (land use and materials).

9.2 Summary of Plans and Programmes

9.2.1 International

The ***World Heritage Convention*** aims to promote co-operation amongst nations to protect heritage that is of such outstanding value that its conservation is important for current and future generations; and established a register of World Heritage Sites. It is intended that properties on the World Heritage List will be conserved for all time. Member states commit themselves to ensure the identification, protection, conservation, and presentation of World Heritage properties.

The World Heritage Committee's ***Operational Guidelines for the Implementation of the World Heritage Convention (2008)*** set out: the procedure from the inscription of properties on the World Heritage List and the List of World Heritage in Danger; the protection and conservation of World Heritage properties; the granting of International Assistance under the World Heritage Fund; and the mobilisation of national and international support in favour of the Convention.

The ***UNESCO Convention for the Protection of the Archaeological Heritage of Europe (revised)*** is a Europe-wide international treaty which establishes the basic common principles to be applied in national archaeological heritage policies. It supplements the general provisions of the ***UNESCO World Heritage Convention (1972)*** and aims to protect archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study. It sets out a framework which requires the member states to:

- maintain an inventory of archaeological heritage and designated protected monuments and areas;
- create archaeological reserves; and
- for finders of any element of archaeological heritage to report and make it available to the competent authority.

The ***European Convention on the Protection of the Archaeological Heritage (1992)*** made a number of important agreements including setting the definition of archaeological heritage as 'all remains and objects and any other traces of mankind from past epochs….shall include structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other kinds as well as their context, whether situated on land or under water.

9.2.2 National

UK

The ***Ancient Monuments and Archaeological Areas Act (1979)*** provides for the scheduling of ancient monuments and offers the only legal protection specifically for archaeological sites. The ***Planning (Listed Buildings and Conservation Areas) Act (1990)*** outlines the level of protection received by listed buildings, scheduled monuments and buildings within Conservation Areas.

There are a number of other Acts which afford protection to cultural and historical assets, including the ***Protection of Wrecks Act (1973)***, which provides protection for shipwrecks of historical, archaeological or artistic value; the ***Protection of Military Remains Act (1986)***, which provides protection for the wreckage of military aircraft and designated military vessels, and the ***Treasure Act (1996)***, which sets out procedures for dealing with finds of treasure, its ownership and rewards, in England, Wales and Northern Ireland.

Conservation areas were introduced by the **Civic Amenities Act 1967** and are designated for their special architectural and historic interest. Most conservation areas are designated by the local planning authority. English Heritage can designate conservation areas in London, where they have to consult the relevant London Borough Council and obtain the consent of the Secretary of State for National Heritage. The Secretary of State can also designate in exceptional circumstances - usually where the area is of more than local interest.

At a national level, the draft ***Heritage Protection Bill*** contains provisions to unify the designation and consent regimes for terrestrial heritage assets, and transfer responsibility for designation of these assets. It also contains provisions to reform the marine heritage protection regime in England and Wales by broadening the range of marine historic assets that can be protected. The draft Bill is based on the

proposals set out in the White Paper, Heritage Protection for the 21st Century (2007), and is one element of a wider programme of on-going heritage protection reforms. There are however, no current plans to enact the Bill and it is not known whether its provisions will become statute.

The Department for Culture, Media and Sport White Paper ***Heritage Protection for the 21st Century (2007)*** sets out a strategy for protecting the historic environment, based on three core principles: developing a unified approach to the historic environment; maximising opportunities for inclusion and involvement; and supporting sustainable communities by putting the historic environment at the heart of an effective planning system.

England

The National Planning Policy Framework (NPPF) (2012) replaces the majority of previously used planning policy including Planning Policy Statements (PPSs), Planning Policy Guidance (PPGs), Mineral Planning Statements (MPSs), Minerals Planning Guidance (MPGs) and some Government Circulars. The NPPF now provides a policy framework to guide and passes more responsibility to, local planning authorities in their plan making and in development management.

Following the publication of the NPPF, the chief national planning policy for historic assets and cultural heritage PPS5, was deleted. However the PPS5 Practice Guide presently remains in place pending a Government review of all national planning policy supporting documents. Furthermore, the new policies in the NPPF are complimentary to the text in the Practice Guide meaning a useable set of guidance is maintained. In regard to historic assets, of particular note are the broad principles that planning policies and decisions should recognise and address the value of connections between people and places and to ensure that new development integrates in a positive way with the historic environment.

There are several references throughout the NPPF to the importance of maintaining historic and cultural resources and how both plans and development proposals must be mindful of historic resource in all design, decisions and implementation. For example, the NPPF states that "*Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance*."

The final words of this example are a repeated core theme in the NPPF with regard to historic and cultural assets; that policies and development actions should be made or undertaken "*in a manner proportionate to their importance and the impact*". The NPPF is very clear that any polices or decisions should quantify and take clear account of the worth of any asset to then respond accordingly.

English Heritage, the Government's statutory adviser on the historic environment in England, have

published a number of guidance documents for the protection of the historic environment, including ***Wind Energy and the Historic Environment (2005)***, ***Biomass Energy and the Historic Environment (2005)***, ***Climate Change and the Historic Environment (2005)*** and ***Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (2008)***.

9.2.3 West Midlands

English Heritage (2010) Putting the Historic Environment to Work: A Strategy for the West Midlands 2010-2015

9.3 Overview of the Baseline

9.3.1 National

UK

The UK has over 459,000 listed buildings, approximately 33,720 scheduled monuments, 2416 historic parks and gardens, in excess of 10,259 conservation areas and 28 World Heritage Sites.[194]

England

In England there are approximately 374,081 listed building entries, 19,717 scheduled monuments, 1,601 registered historic parks and gardens, 9,080 conservation areas, 43 registered historic battlefields, 46 designated wrecks and 17 World Heritage Sites. Nearly 19,446 sites in England are 'at risk'.

The density of shipwreck remains in the English territorial sea is amongst the highest in the world due to the combined effects of historically high volumes of shipping traffic, a long history of seafaring and an often hazardous coastline.[195]

English Heritage have identified the following proportions of heritage sites as at risk within England:

- 3.1% of grade I and II listed buildings;
- 7.4% of conservation areas (from those that were included within the report);
- 17.2% of scheduled monuments;

[194] Department of Culture, Media and Sport, 2009, http://www.culture.gov.uk/4168.aspx
[195] English Heritage, http://www.english-heritage.org.uk/caring/listing/what-can-we-protect/listed-buildings/

- 6.1% of registered parks and gardens;
- 14% of registered battlefields, and;
- 17% of protected wreck sites.[196]

A nationwide survey of conservation areas, conducted by English Heritage and the 75% of England's local planning authorities who responded, indicates that approximately 1 in 7 is at risk from neglect, decay or unsympathetic change.[197] The main threats identified were:

- unsympathetic replacement doors and windows (83% of conservation areas)
- poorly maintained roads and pavements (60%)
- the amount of street clutter (45%)
- loss of boundary walls, fences or hedges (43%)
- unsightly satellite dishes (38%)
- the effects of traffic calming or traffic management (36%)
- alterations to front elevations, roofs and chimneys (34%)
- unsympathetic new extensions (31%)
- the impact of advertisements (23%)
- neglected green spaces (18%).

9.3.2 West Midlands

Introduction

The character of the West Midlands has founded on the interaction of man and land over millennia, and the cultural legacy is both multilayered and deeply influential over the current geography of settlement and economic activity. Significant remnants of early and continuous occupation exist in the monuments

[196] English Heritage, 2010, Heritage at Risk Summary, http://www.english-heritage.org.uk/publications/har-2010-summary/
[197] http://www.english-heritage.org.uk/content/publications/publicationsNew/heritage-at-risk/Conservation_Areas_at_Risk/caar-booklet-acc.pdf

of burial mounds and stone circles such as at Mitchell's Fold in Shropshire, hillforts such as British Camp, Malvern, in Worcestershire, and Offa's Dyke in Shropshire, an eighth century ditch and bank earthwork, being part of one of the most heavily defended frontiers in Europe[198]. Many of the West Midland's towns and cities were built on the foundations of Roman towns and settlements, and are connected by a network of roads that were established two thousand years ago. In the early medieval period, towns grew as economic centres, surrounded by the productive rural hinterland. Some have important religious houses and cathedrals at their heart, such as at Coventry, Hereford, Worcester and Lichfield[199].

The West Midlands exerted a global influence as the birthplace of the Industrial Revolution in Ironbridge, today recognised through its World Heritage Site status. This burgeoned into a network of industrial activity centred in the 450 mile canal network and subsequently railways and roads, yielding a wealth of industrial and domestic architecture which is appreciated and protected today. Associated with this activity, the region is famous for some great historical and cultural figures. In the West Midlands innovation is tradition. Industrialists and pioneers such Josiah Wedgwood, Matthew Boulton, James Watt, Erasmus Darwin, Charles Darwin, Abraham Darby, and Joseph Priestley expanded our knowledge and use of science and technology. William Shakespeare, Edward BurneJones, George Eliot, Doctor Samuel Johnson, Clarice Cliff, Cardinal Newman and William Penny-Brookes also have associations with the region.[200] Twentieth Century change has also produced valuable cultural heritage, some of which is being recognised today through the listing of buildings.

Historic Environment Assets

English Heritage[201] identify the following assets in the region for 2011:

- World Heritage Sites 2
- Scheduled Monuments 1,423
- Listed Buildings Grade 1 615
- Listed Buildings Grade II* 2,144
- Listed Buildings Grade II 31,481
- Registered Parks and Gardens 150
- Registered Battlefields 6

[198] English Heritage (2010) **Putting the Historic Environment to Work: A Strategy for the West Midlands 2010-2015** http://www.english-heritage.org.uk/content/imported-docs/p-t/putting-historic-environment-to-work.pdf
[199] ibid
[200] English Heritage (2010) **Putting the Historic Environment to Work: A Strategy for the West Midlands 2010-2015** http://www.english-heritage.org.uk/content/imported-docs/p-t/putting-historic-environment-to-work.pdf
[201] English Heritage (2010) Heritage Counts at: http://hc.english-heritage.org.uk/content/pub/2011/hc-2011-west-midlands.pdf

- Conservation Areas 773
- Designated Collections 20
- Accredited Museums 146

Table 9.1 shows these by area, illustrating a particularly rich heritage across all five counties in respect of Listed Buildings, and ancient monuments for Shropshire, for example.

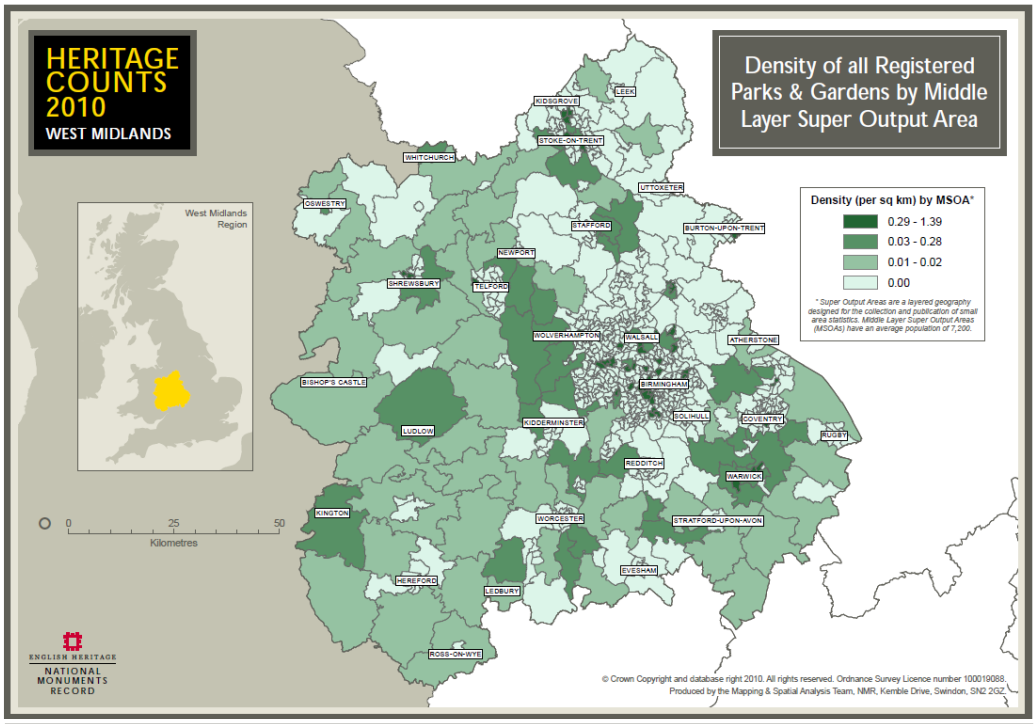
Table 9.1 Historic Assets by Area

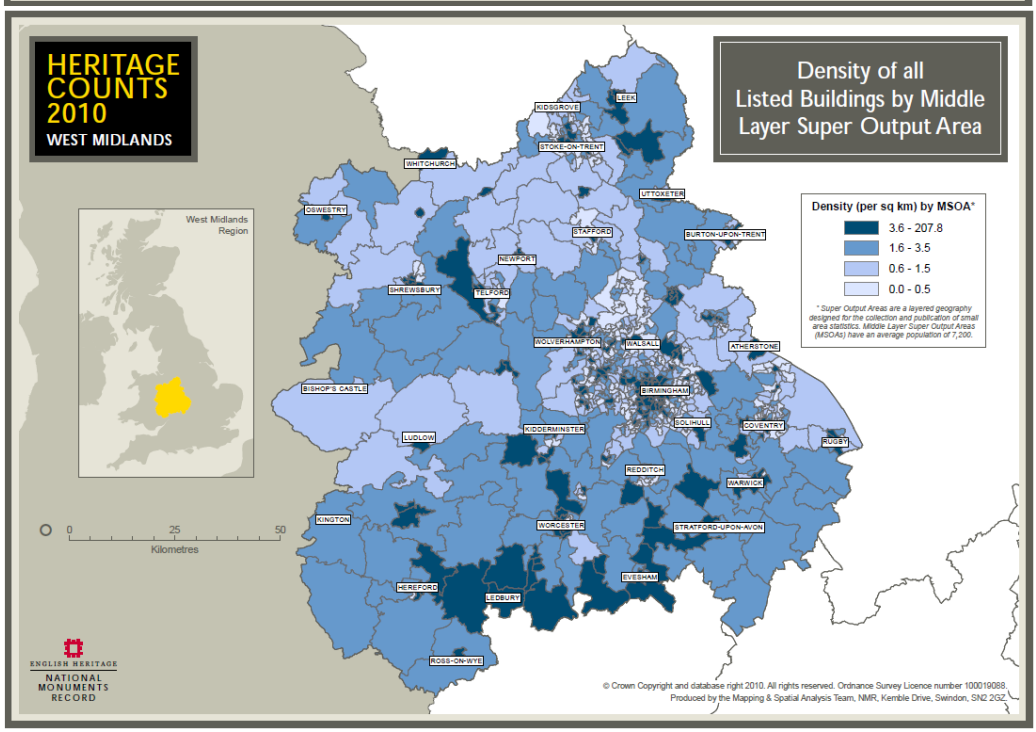
Area	Listed buildings I & II*	Listed buildings II	Scheduled Monuments	Registered Parks & Gardens	Conservation Areas
Shropshire	668	7,008	470	39	126
Staffordshire	435	4,804	288	23	168
Worcestershire	427	5,923	181	17	136
Warwickshire	465	5,523	182	32	138
Herefordshire	483	5,408	266	24	64
Urban West Midlands	282	2,831	67	34	141

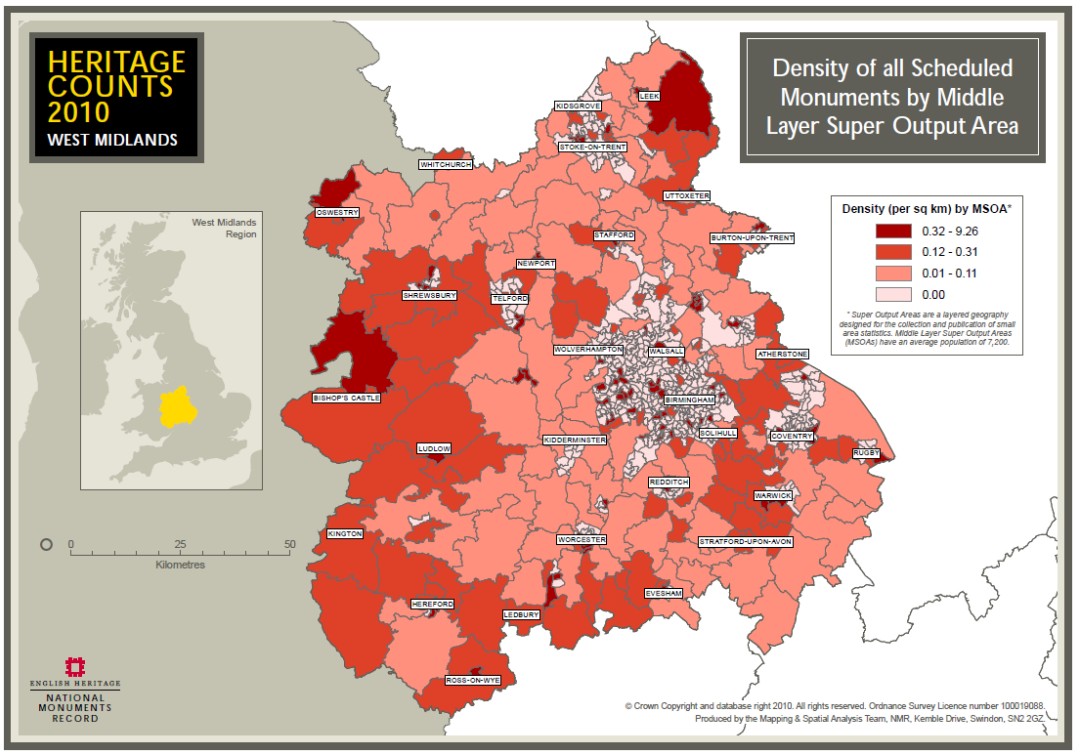
Source: English Heritage (2011)

Figure 9.1 maps the density of these heritage assets in the East Midlands, with notable clusters of Listed Buildings in Birmingham and the southern reaches of the Region, and Scheduled Ancient Monuments (as is to be expected) around the western periphery.

Figure 9.1 Density of heritage asses in the West Midlands







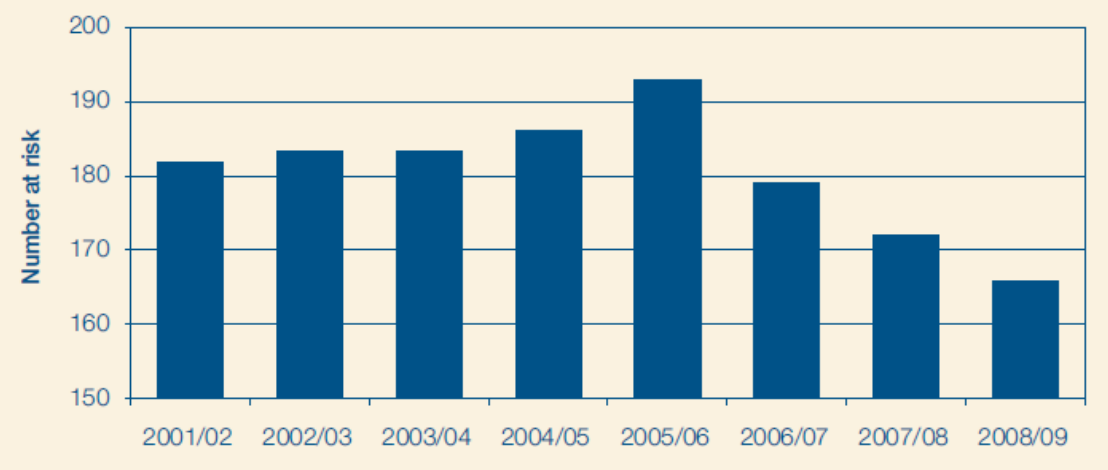
Protection and enhancement of historic buildings and structures, and other historic assets makes an important contribution to the quality of the environment, and is a significant aspect of sustainable communities that are distinctive with a strong sense of place and identity. Historic assets represent an important resource in the renewal of the Black Country and North Staffordshire conurbation. They also underpin the essential character of the Region's towns and cities, market towns, villages and the wider countryside.[202]

Safeguarding the Region's historic environment is a priority for both urban and rural areas. At 4.5%, the Region still has one of the highest proportions of buildings (Grade I and II*) at risk against a national average of 3.1%. Some 35% of the buildings are in the highest priority category (immediate risk of further rapid deterioration or loss of fabric) double that nationally. A significant proportion of entries on the at risk register occur across the region's shire counties and in particular in Herefordshire, Shropshire and Staffordshire. **Figure 9.2** shows the progressive improvement in the number of buildings at risk across the Region over a decade. However, in 2009, 20.1% of the region's scheduled monuments are still assessed to be at risk[203].

[202] WMRA (2010) West Midlands Annual Monitoring Report 2009 at: http://www.wmra.gov.uk/documents/AMR_2009.pdf

[203] ibid

Figure 9.2 Change in the number of Buildings/Ancient Monuments at Risk in the West Midlands



9.4 Environmental characteristics of those areas most likely to be significantly affected

9.4.1 National

UK

Although from 2000 to 2007 there has been a steady decrease in the number of buildings identified as at risk, for the first time between 2007 and 2008, the number of entries within the Buildings at Risk Register rose for the first time.[204] Furthermore, the average cost of repairing each building on the Register has steadily increased.

Redundancy is a major factor driving listed buildings into risk. The kinds of historic buildings now at greatest risk are those associated with defence (15%), agriculture (8%) and manufacturing industry (13%).

There are concerns that the current recession will reduce public spending which will further reduce conservation staff for local authorities and reduce grants and subsidies to problem sites at a time when there will be an reduction in the willingness of developers to take on more challenging buildings at risk, an increase in vacancy rates and a decrease in funds owners will be abele to invest in repair and maintenance.

[204] English Heritage, Heritage at Risk Report 2010, http://www.english-heritage.org.uk/publications/har-2010-report/

9.4.2 West Midlands

Key characteristics identified for the West Midlands include:

- Significant resources of nationally, regionally and locally important historic environment assets across the region.
- Clear clusters of assets in particular areas, such as Ancient Monuments around the periphery of the region and Listed Buildings to the south.
- Relatively high proportions of Ancient Monuments and Buildings at Risk, despite these numbers reducing in recent years.

9.5 Likely evolution of the baseline

9.5.1 National

UK

The current trend in cultural heritage condition is generally towards little change in the number of historic assets and a decline in the percentage that are at risk.[205]

English Heritage report that there has been little change in the total number of historic assets between 2002 and 2009; the total number of listed buildings in England has increased by 0.9% during this period with the largest increase in Grade II* (1.4%). The number of scheduled monuments has increased by 1.9% over the same period whilst registered parks and gardens increased by 7.3% (104) between 2002 and 2009. The number of scheduled monuments increased by 1.9% between 2002 and 2009.[206]

9.5.2 West Midlands

- Continuing pressures on vulnerable buildings and landscapes from a variety of causes including tourism, recreation and climate change.
- Improvement in awareness of Ancient Monuments and Buildings at Risk, and associated action

[205] http://www.english-heritage.org.uk/hc/upload/pdf/HC08_National_Acc.pdf)
[206] English Heritage, Heritage Counts 2009, England, http://hc.english-heritage.org.uk/upload/pdf/HC09_England_Acc.pdf?1286268742

to tackle the problem.

- Increasing recognition of the role of cultural heritage as a significant part of community and regional identity and its use within economic development initiatives.

9.6 Assessing significance

Table 9.1 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on cultural heritage. It should not be viewed as definitive or prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 9.1 Approach to determining the significance of effects on cultural heritage

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Alternative would make a significant positive and long-term contribution to the setting and conservation of designated cultural heritage features (e.g. – through enhancement of settings, permanent removal of structures creating a negative visual impact, large scale enhancement of designated features).
+	Positive	• Alternative would bring minor short-term improvements to the setting and conservation of designated or locally important cultural heritage features.
0	No (neutral effects)	• Alternative would not have any significant effects on any cultural heritage sites or assets.
-	Negative	• Alternative would bring minor short-term degradation to the setting and conservation of designated cultural heritage features.
--	Significant negative	• Alternative would cause long-term degradation to the setting and conservation of designated and locally important cultural heritage features (e.g. – through direct and permanent loss or damage to designated sites, introduction of structures that will have a considerable and permanent negative visual impact).
?	Uncertain	• From the level of information available the effects the impact that the alternative would have on this objective is uncertain.

Assessment of Significant Effects of Retention, Revocation and Partial RevocationTable 9.2 Significant Effects against the Cultural Heritage Topic

Regional Spatial Strategy Policy	Alternative	Score			Commentary
		Short Term	Medium Term	Long Term	

QE5: Protection and Enhancement of the Historic Environment	Revocation	++	++	++	Legislation protecting listed buildings, scheduled monuments, conservation areas and registered historic parks and gardens remain in place. Paragraphs 126-141 of the National Planning Policy Framework set out strong national policy on conserving and enhancing the historic environment. It states that local planning authorities should set out in their local plans a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the conservation of historic assets in terms of building stock and historic landscapes. The more important the historic asset, the greater the weight should be given to its protection, conservation and enhancement.
	Retention	++	++	++	Policy QE5 encourages local authorities working with partners to prepare local plans which contain strategies for the protection, conservation and enhancement of the region's historic environment and to develop regeneration strategies which build upon the region's historic assets whether in or outside the region's Major Urban Areas. The identification, protection, conservation and enhancement of the historic environment, both built environment and wider landscape help to strengthen the historical regional character of the West Midlands. This has positive impacts upon population and human health in terms of encouraging a sense of identity and well being amongst the residents of the region as well as securing the region's material assets.

9.6.1 Effects of Revocation

Paragraph 132 of the NPPF states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.

In addition, local planning authorities should refuse consent where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply: the nature of the heritage asset prevents all reasonable uses of the site; no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; conservation by grant-funding or some

form of charitable or public ownership is demonstrably not possible; and the harm or loss is outweighed by the benefit of bringing the site back into use (paragraph 133).

Revocation of Policy QE5 is unlikely to have any material effects on heritage assets as the requirement to not adversely affect areas designated for their historic value, and to maximise opportunities for the built heritage to contribute to regeneration and which should respect the quality and distinctiveness of traditional buildings is implicit in the NPPF approach.

Careful monitoring of potentially varying approaches to the development of policy would be required to check that spatial inconsistencies or unintended effects are not being produced as a result of revocation.

9.6.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The likely significant effects on landscape associated with the revocation of the quantitative policies are summarised in **Table 9.2** for Policy QE5. These demonstrate that the likely effects do not change as a result of revocation, where cultural heritage assets are protected and enhanced in the short, medium and longer term.

The assessment has found that there are no policies in the West Midlands Regional Spatial Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit

9.6.3 Effects of Retention

Recognition of the value and role of cultural heritage as a part of regional and local identity will yield significant positive effects over the short, medium and longer term through policies which promote the establishment of positive policies at a local scale. The conservation and enhancement of historic assets is recognised as central to local and regional identity and as a key part of economic development. As

such there is every incentive for the continued positive management – whether is sufficiently comprehensive or quick to be of sufficient benefit to buildings and monuments at risk is a wider debate.

9.7 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.

9.8 Proposals for Monitoring

No specific monitoring is required other than that provided through the annual review of the NPPF and local plan AMRs.

10. Landscape and Townscape

10.1 Introduction

The overview of plans and programmes and baseline information contained in this section provides the context for the assessment of potential effects of the proposals to revoke the regional strategies on landscape and townscape. Information is presented for both national and sub-regional levels.

Landscape in this context is defined by **The European Landscape Convention** as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'. This definition is stated as covering natural, rural, urban and peri-urban (i.e. the urban-rural fringe) and includes land, inland water and marine areas. For the purposes of this appraisal though, landscape is taken to apply to rural areas and townscape to urban areas. Visual effects are those effects that influence how people see a landscape or townscape, such as the erection of a building.

10.2 Summary of Plans and Programmes

10.2.1 International

The ***European Landscape Convention*** is principally directed at the national level, but emphasises the importance of landscape as a cultural as well as an aesthetic asset. It commits signatories to promoting the protection, management and enhancement of landscapes across a country, and integrating landscape considerations into all relevant policies. The Convention's definition of landscape reflects the idea that landscapes evolve through time, as a result of being acted upon by natural forces and human beings. It also underlines that a landscape forms a whole, the natural and cultural components of which are taken together, not separately. The convention also calls for improved public involvement in landscape matters. The UK became a signatory to the European Landscape Convention in 2006.

10.2.2 National

UK

In the UK, there are numerous Acts governing the protection of the countryside, landscape and natural environment. The ***National Parks and Access to the Countryside Act 1949*** makes provision for National Parks, confers powers for the establishment and maintenance of nature reserves, makes provision for the recording, creation, maintenance and improvement of public paths and for securing access to open country and confers further powers for preserving and enhancing natural beauty.

National Parks are areas of relatively undeveloped and scenic landscape. Designation as a national park may include substantial settlements and human land uses which are often integral parts of the landscape. Land within a national park remains largely in private ownership. There are currently thirteen national parks in England and Wales. Each park is operated by its own national park authority, with two "statutory purposes":

- to conserve and enhance the natural beauty, wildlife and cultural heritage of the area, and
- to promote opportunities for the understanding and enjoyment of the parks.

The Norfolk Broads and Suffolk Broads has the same status as the national parks in England and Wales. The Broads Authority has powers and duties almost identical to the national parks, but is also the third-largest inland navigation authority. Because of its navigation role the Broads Authority was established under its own legislation on 01 April 1989. The Broads Authority Act 2009 improves public safety on the water.

AONBs are areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes. AONB landscapes range from rugged coastline to water meadows to gentle lowland and upland moors. Natural England has a statutory power to designate land as Areas of Outstanding Natural Beauty

The ***Countryside and Rights of Way Act 2000*** increased the duty of provision of public access to the countryside and strengthened legislation relating to Sites of Special Scientific Interest (SSSIs). In particular, it requires public bodies to further the conservation and enhancement of SSSIs both in carrying out their operations, and in exercising their decision making functions.

The ***Marine and Coastal Access Act 2009*** seeks to ensure clean healthy, safe, productive and biologically diverse oceans and seas, by putting in place better systems for delivering sustainable development of marine and coastal environment.

Other relevant Acts include:

- The ***1967 Forestry Act (as amended 1999)*** restricts and regulates the felling of trees. The ***1968 Countryside Act*** enlarges the function of the Agency established under the National Parks and Access to the Countryside Act 1949, to confer new powers on local authorities and other bodies for the conservation and enhancement of natural beauty and for the benefit of those resorting to the countryside.
- The ***1986 Agriculture Act (with numerous revisions)*** covers the provision of agricultural services and goods, agricultural marketing compensation to tenants for milk quotas, conservation and farm grants.

- The ***Commons Act 2006***, which protects common land and promotes sustainable farming, public access to the countryside and the interests of wildlife.

England

The ***Natural Environment and Rural Communities (NERC) Act 2006*** implements key elements of the Government's Rural Strategy published in July 2004. The NERC Act is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy. The NERC Act established a new independent body - Natural England - responsible for conserving, enhancing, and managing England's natural environment for the benefit of current and future generations. The Act made amendments to the both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000, which further enhance provisions to biodiversity generally and SSSIs in particular.

The ***National Planning Policy Framework (2012)*** includes strong protections for valued landscapes and townscapes as well as recognising the intrinsic character and beauty of the countryside. The importance of planning positively for high quality design is underlined and local and neighbourhood plans are expected to "develop robust and comprehensive policies that set out the quality of development that will be expected for the area". Planning policies and decisions are expected to respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation.. The Framework states (paragraph 64) that "Permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions".

The Framework has a number of specific requirements relating to planning and landscape including a clear expectation that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes. Local planning authorities are expected to set criteria based policies against which proposals for any development on or affecting protected landscape aeas will be judged. In doing so, distinctions should be made between the hierarchy of international, national and locally designated sites and "great weight" should be given to "conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty". Local planning authorities in their plan-making are expected to take account of climate change and changes to landscape and contain a clear strategy for enhancing the natural, built and historic environment. Where appropriate, "landscape character assessments should also be prepared, integrated with assessment of historic landscape character, and for areas where there are major expansion options assessments of landscape sensitivity".

10.2.3 West Midlands

No relevant regional plans or programmes were identified under this topic.

10.3 Overview of the Baseline

10.3.1 National

UK

Statutory sites designated (wholly or partially) for their landscape value include National Parks, AONBs, Country Parks, Registered Historic Parks and Gardens, Historic Gardens and Designed Landscapes, National Scenic Areas (NSAs) and Regional Parks (in Scotland) and World Heritage Sites.[207]

Other important (non-statutory) sites include Areas of Great Landscape Value (AGLV) in Scotland; Heritage Coasts (in England and Wales); and National Trust/National Trust for Scotland properties.

The UK has 15 National Parks[208] and (excluding Scotland) 49 AONBs[209]. Each National Park is administered by its own National Park Authority whose duty it is to conserve and enhance natural beauty, wildlife and cultural heritage; and to promote opportunities for the understanding and enjoyment of the special qualities of National Parks by the public. The Broads Authority in England has a third purpose to protect the interests of navigation[210]. The primary purpose of AONB is to conserve and enhance the natural beauty of the landscape.

England

The 'Character of England Landscape, Wildlife and Cultural Features Map' produced in 2005 subdivides England into 159 areas with similar landscape character called National Character Areas (NCA).[211]

There are nine National Parks in England; the most recently designated National Park being the South Downs National Park on 31 March 2010). Together with The Broads (which has similar protection to a National Park) they cover 9.3% of the land area in England.

There are 34 AONBs in England, one of which straddles England and Wales (the Wye Valley AONB). AONBs cover 18% of England and Wales.[212] The East Hampshire and Sussex Downs AONB

[207] JNCC, landscape designations, http://www.jncc.gov.uk/page-1527
[208] Association of National Park Authorities, http://www.nationalparks.gov.uk/
[209] National Association of AONB, http://www.aonb.org.uk
[210] http://www.nationalparks.gov.uk/learningabout/factsandfigures.htm
[211] http://www.naturalengland.org.uk/ourwork/landscape/englands/character/areas/default.aspx
[212] See http://www.aonb.org.uk/wba/naaonb/naaonbpreview.nsf/Web%20Default%20Frameset?OpenFrameSet&Frame=Main&Src=%2Fwba%2Fnaaonb%2Fnaaonbpreview.nsf%2F%24LU.WebHomePage%2F%24first!OpenDocument%26AutoFramed

designations were revoked on the 31 March 2010 when the South Downs National Park Designation Order came into effect. In all, AONB designation covers approximately 15 per cent of the land area of England.

England has been divided into areas with similar landscape character, which are called National Character Areas (NCAs). A total of 159 NCAs have been identified in England. The boundaries of the NCAs are not precise and that many of the boundaries should be considered as broad zones of transition.

Natural England are currently re-writing and re-designing all of England's 159 NCA profiles and aim to publish the first of the new versions from September 2012.

Heritage Coasts are areas defined (they are not statutorily designated) for the beauty and undeveloped nature of the coastline. They represent 33% (1,057km) of England's coastline and are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors. Most Heritage Coasts are within the boundaries of National Parks or AONBs, although some including Lundy, the Durham Coast, and Flamborough Head stand alone.

A national record of nearly 1450 Registered Historic Parks and Gardens which contribute to the landscape is maintained by English Heritage. It is a non-statutory designation but the designation is a material planning consideration.

There are 17 World Heritage Sites in England, the most recent of these to be recognised as such is the Cornwall and West Devon mining landscape which was inscripted by UNESCO in 2006.[213]

10.3.2 West Midlands

The West Midlands region contains a wide range of landscapes as a result of the diverse underlying geology. This determines not only the terrain and the habitats that develop, but also the human use of the landscape, past and present. To the west, merging into the more rugged landscapes of Wales, are uplands and intimate pastoral landscapes of hills and woodland. These contrast markedly with the central and eastern areas, which are mainly lowlands, with broad river floodplains, dominated by arable farming. There are large urban conurbations around the industrial heartlands of Birmingham, the Black Country, the Potteries and Coventry.

The West Midlands hosts several landscapes of national importance including the Southern parts of the Peak District National Park (which for planning purposes is considered in the East Midlands Regional Strategy), Cannock Chase AONB, the northern fringes of the Cotswolds AONB, Malvern Hills AONB, the

[213] http://whc.unesco.org/en/list/

Shropshire Hills AONB, the Wye Valley AONB (**Table 10.1**). Taken together, these areas account for 9% of the region's land area.

Figure 10.1 Areas of Outstanding Natural Beauty – West Midlands[214]

AONB	Total Area (square km)	Local authorities within AONB
Cannock Chase	68	**County:** Staffordshire **District:** Cannock Chase, South Staffordshire, Lichfield, Stafford
Cotswolds	2038	**Counties**: Gloucestershire, Worcestershire, Oxfordshire, Warwickshire **Districts**: Cotswold, Stroud, Wychavon, Cherwell, Stratford on Avon **Boroughs**: Cheltenham, Tewkesbury **Unitary authorities**: Bath and North East Somerset, South Gloucestershire Council, Wiltshire Council
Malvern Hills	105	**Counties:** Gloucestershire, Worcestershire **Districts:** Forest of Dean, Malvern Hills **Unitary authorities:** County of Herefordshire
Shropshire Hills	804	**Unitary authorities**: Telford and Wrekin Council, Shropshire Council
Wye Valley	326	**Counties**: Gloucestershire **Districts**: Forest of Dean **Unitary Authorities**: Herefordshire Council, Monmouthshire.

Cannock Chase AONB is the second smallest AONB in England. It was once an expansive sweep of a great medieval royal hunting forest. It is now a remote area of high sandstone heather and bracken heathland with birch woodland and extensive pine plantations. Dissected by secluded valleys and framed by a gentler landscape of fine parklands and attractive villages, the AONB encloses the last oak remnant of the ancient Cannock Forest. Its unenclosed, semi-natural landscapes provide a valuable contrast to the ordered agricultural landscapes dominating the Midlands region. The AONB is ringed by towns such as Cannock and Rugeley. Land use includes mixed agriculture on the lower slopes plus significant sand and gravel extraction. The Forestry Commission has sizeable commercial plantations[215].

The Cotswolds AONB rises gently west from the broad, green meadows of the upper Thames to crest in a dramatic escarpment above the Severn valley and Evesham Vale. Jurassic limestone gives the Cotswolds their distinctive character. The Cotswolds are nationally important for their rare limestone grassland habitat and for ancient beechwoods with rich flora. Important grasslands such as Cleeve Hill have survived due to their status as ancient common and a National Nature Reserve protects the finest ancient beech complex. Traditionally a landscape formed by sheep grazing, this is now prosperous

[214] http://www.naturalengland.org.uk/Images/AONB-facts-figures0110_tcm6-2398.doc
[215] http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/aonb/cannock.aspx

mixed and arable farming country[216].

The varied geology of the Malvern Hills gives the AONB a series of differing landscapes over a relatively short distance. The ridge, with its high open stretches of semi-natural grassland, owes its hogsback skyline to heavily folded and faulted pre-Cambrian rocks. Sandstones and marls underlie the fertile arable plain to the south-east. To the west, alternate limestone and sandstone beds undulate in pastoral scarps and vales with a pleasing rural pattern of meadows, fields and orchards and a maze of narrow lanes. It is an area of pastoral farming, with dairying and stock-rearing, plus fruit growing, mixed crops and forestry. Large areas are grazed as ancient commons[217].

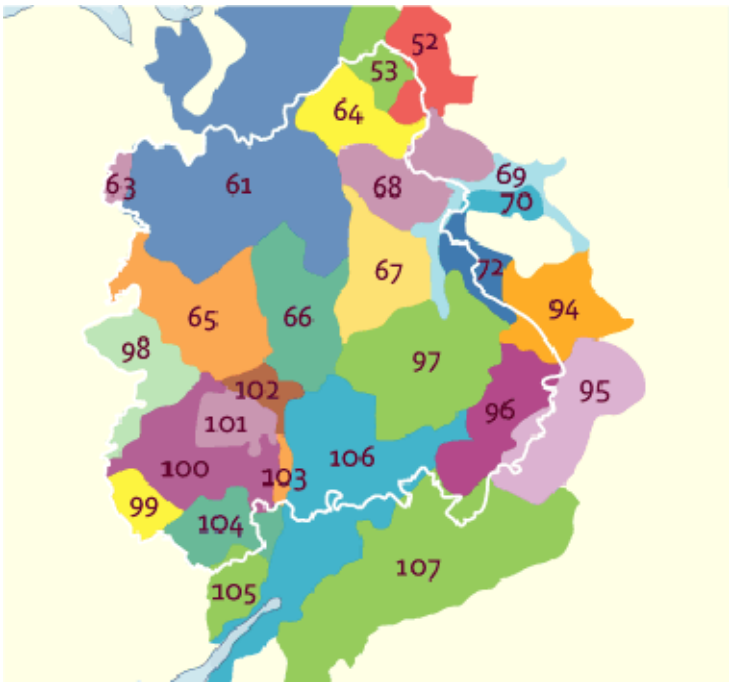
The Shropshire Hills AONB is a distinctive area of the Anglo-Welsh borders where remote upland merges into pastoral lowland. The AONB's parallel hills and valleys run southwest, northeast with the strike of the rocks forming the Long Mynd and Stiperstones, Clun Forest, the Clee Hills, Stretton Hills and The Wrekin, five distinctive upland areas each with their own landscape character. The steep-sided rift valley of Church Stretton lies at the centre of the AONB and from its fertile farmed floor looms the great pre-Cambrian moorland ridge of the Long Mynd. The peak of the Wrekin is a volcanic outlier and the lonely sandstone Clee Hills owe their rounded mass to a basalt cap. In contrast, the limestone outcrop of Wenlock Edge has an altogether softer, wooded character. Agriculture is a major employer and the hills and dales of south Shropshire are traditional sheep and beef farming country with cereals and dairying in favoured areas[218].

The Wye Valley is one of the few lowland AONBs. In the north, the river meanders through the broad meadows, dotted woods and hedgerows of the Hereford plain. Deeply incised meanders have cut into the plateau to form sheer wooded limestone cliffs. Between the gorges are broader valley reaches, with rounded hills and bluffs and a gently rolling skyline. Farming in the AONB still follows a traditional pattern of mixed arable and dairying plus fruit orchards in the fertile north, and is an essential part of the landscape's value. Forestry has been an industry for centuries both here and in the nearby Forest of Dean and the Forestry Commission has substantial landholdings in the AONB. Limestone continues to be actively quarried[219].

There are 25 National Character Areas in the West Midlands[220].

[216] http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/aonb/cotswolds.aspx
[217] http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/aonb/malvernhills.aspx
[218] http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/aonb/shropshirehills.aspx
[219] http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/aonb/wyevalley.aspx
[220] http://www.naturalengland.org.uk/publications/nca/westmidlands.aspx

Figure 10.2 National Character Areas in the West Midlands



Key:

52. White Peak
53. South West Peak
61. Shropshire, Cheshire & Staffordshire Plain
63. Oswestry Uplands
64. Potteries & Churnet Valley
65. Shropshire Hills
66. Mid Severn Sandstone Plateau
67. Cannock Chase & Cank Wood
68. Needwood & South Derbyshire Claylands
69. Trent Valley Washlands
72. Mease/Sence Lowlands
94. Leicestershire Vales
95. Northamptonshire Uplands
96. Dunsmore & Feldon
97. Arden
98. Clun & North West Herefordshire Hills
99. Black Mountains & Golden Valley
100. Herefordshire Lowlands
101. Herefordshire Plateau
102. Teme Valley
103. Malvern Hills
104. South Herefordshire & Over Severn
105. Forest of Dean & Lower Wye
106. Severn & Avon Vales
107. Cotswolds

There are 150 Registered Historic Parks and Gardens in the West Midlands.[221]

10.4 Environmental Characteristics of those Areas most likely to be Significantly Affected

10.4.1 National

UK

The UK has many important and protected landscapes which may be sensitive to development. The character of the UK's landscapes are broadly being maintained, however 20% show signs of neglect.

The natural environment of the UK is much less 'rich' than 50 years ago and remains under pressure from more intense use of the land and sea; continuing economic development, climate change and increased pressures from public access.

Although it is recognised that some changes in landscape, such as restoration of derelict industrial sites, have led to improvements in the quality of the natural environment, Natural England state that landscape change on the whole is resulting in declining diversity, distinctiveness and ecological richness[222].

10.4.2 West Midlands

Despite its industrial past, changes to the landscapes of the West Midlands continue to be influenced most by agricultural activity. Most development remains within existing urban areas and there is a very high percentage of development on brownfield land. National and local policies, often underpinned by legislation (e.g. on contaminated land and mineral working), has seen large areas of former industrial land which was either derelict or vacant being restored and brought back into beneficial use, whether for housing or employment use, for agriculture or forestry or for amenity and nature conservation (e.g. community forests and urban greenspace)[223]. This has transformed the landscape of large parts of the West Midlands.

[221] http://www.english-heritage.org.uk/publications/har-2011-registers/acc-wm-HAR-register-2011.pdf
[222] http://www.naturalengland.org.uk/ourwork/landscape/threats/default.aspx
[223] For example, the Survey of Land for Mineral Workings 2000 identified that almost 2,500 hectares of mineral workings had been reclaimed between 1994 and 2000 of which almost equal amounts were reclaimed to agriculture and amenity uses.

10.5 Likely evolution of the baseline

10.5.1 National

UK

Over the last century the following landscape character trends have been experienced: [224]

- a gradual erosion of local distinctiveness in some areas, through a process of standardisation and simplification of some of the components that make up landscape character;
- a loss of some natural and semi-natural features and habitats such as ancient woodlands and unimproved grassland;
- a decline in some traditional agricultural landscape features such as farm ponds and hedgerows, and a loss of archaeological sites and traditional buildings;
- increased urbanisation, often accompanied by poor design standards and a decline in the variety of building materials, and the importation of urban and suburban building styles into rural areas; and
- a loss of remoteness and reduced tranquillity because of built development and traffic growth.

There are a number of pressures and risks outlined in the ***State of the Natural Environment 2008***) that may affect the quality of landscapes in England. These include[225]:

- **Sea-level rise:** Over the next few decades it is anticipated that there will be major sea incursions inland during storms, particularly on the south and east coasts of England. If measures such as managed retreat are not adopted in low-lying areas, there may be widespread losses of intertidal and coastal habitats. In the coastal zone, sea-level rise may also result in the direct loss of freshwater habitats such as reedbeds and wet grasslands.
- **Fire:** More droughts in the future will make the countryside increasingly vulnerable to wildfire, with potential for heathland, grassland, broadleaved woodlands and bogs to undergo major change in their structure.
- **Grazing management:** More summer droughts may mean that grazing is no longer possible in some open habitats such as fens, grasslands and heathlands due to die-back of vegetation and a lack of drinking water for animals. The spread of diseases (e.g. bluetongue) related to

[224] Natural England, State of the Natural Environment 2008, Landscape Characterisation and Change, http://www.naturalengland.org.uk/publications/sone/sections.aspx
[225] Natural England (2008) State of the Natural Environment http://www.naturalengland.org.uk/publications/sone/default.aspx

climate change may also reduce livestock numbers and restrict movement, altering grazing patterns and landscapes.

- **Energy production:** The production of biofuels in the countryside may result in changes to landscapes. Wind energy developments are likely to be more common.
- **Development pressure:** Within rural England, the area of developed land has increased by about 4% since 1990. It is expected that the pace of development within England will increase in the future to make up for the current shortfall in housing provision. The effect of this increase pressure for development is likely to be felt most acutely in central and southern England, particularly around identified Growth Areas and Growth Points.

England

Natural England report that in 2008 existing landscape character was being maintained in 51% of England's landscapes, whilst in a further 10% existing character was being enhanced. However, 20% of landscapes were showing signs of neglect. [226]

Data from 1990 to 2003 indicates that in England the number of Character Areas with patterns of change that either maintain or enhance character has increased from 36% to 61%. The number of Character Areas with evidence of neglect or erosion of character has decreased. This evidence suggests that the character of the majority of English landscapes, at Character Area scale, is being sustained.

Forestry Commission England seeks to maintain the area of certified woodland and to ensure that 95% of woodland SSSIs are in favourable condition by 2011[227].

The protected nature of National Park and AONB landscapes make it less likely that these landscapes will be affected by some of the risks outlined (e.g. development pressure) although those protected landscapes nearest to existing urban areas are more likely to be at risk.

10.5.2 West Midlands

Over the last century landscape and townscapes have experienced:

- a gradual erosion of local distinctiveness in some areas, through a process of standardisation and simplification of some of the components that make up landscape character;
- a loss of some natural and semi-natural features and habitats such as ancient woodlands and

[226] Natural England, State of the Natural Environment 2008, Landscape Characterisation and Change, http://www.naturalengland.org.uk/publications/sone/sections.aspx
[227] Forestry Commission England, 2008, Delivery Plan 2008-2012: England's Trees, Woods and Forests

unimproved grassland;

- a decline in some traditional agricultural landscape features such as farm ponds and hedgerows, and a loss of archaeological sites and traditional buildings;
- increased urbanisation, often accompanied by poor design standards and a decline in the variety of building materials, and the importation of urban and suburban building styles into rural areas; and
- a loss of remoteness and reduced tranquillity because of built development and traffic growth.

Analysis of changes in key elements of the landscape of the West Midlands indicate:[228]:

- 63% of Landscape Character Areas (LCAs) are neglected or diverging from existing character.
- None of our LCAs was assessed as enhancing.
- National Parks and Areas of Outstanding Natural Beauty have largely maintained their character.
- The region has a major concentration of agricultural landscapes that are neglected or showing diverging patterns of change, particularly in the eastern valleys and floodplains.

Landscapes in the West Midlands face pressure from changes in farming systems, climate change and development. Natural England works with stakeholders and partners to ensure that landscapes continue to evolve in ways that are distinctive and remain highly valued. They must be managed, protected and planned to deliver the goods and services that sustain the region's biodiversity, quality of life, prosperity and cultural identity and to allow for adaptation to climate change. Natural England is also working with farmers to ensure that agri-environment scheme options have the potential to reinforce the distinctive character of landscapes across the region.

10.6 Assessing significance

Table 10.2 sets out guidance utilised during the assessment to help determine the relative significance of potential effects on the landscape and townscape objective. It should not be viewed as definitive or

[228] Natural England (2009) State of the Environment Report West Midlands at: http://publications.naturalengland.org.uk/publication/39008?category=118044

prescriptive; merely illustrative of the factors that were considered as part of the assessment process.

Table 10.2 Approach to determining the significance of effects on landscape and townscape

Effect	*Description*	*Illustrative Guidance*
++	Significant positive	• Alternative would make a significant positive contribution to statutorily-designated landscapes. • Alternative would have a significant positive effect on the setting and attractiveness of local landscapes and townscapes (e.g. through the replacement of poorly designed/derelict buildings with high quality development). • Alternative would enhance public access to the countryside and increase open space provision.
+	Positive	• Alternative would serve to enhance statutorily-designated landscapes. • Alternative would have a positive effect on the setting and attractiveness of local landscapes and townscapes. • Alternative would enhance public access to open spaces and the countryside.
0	No (neutral effects)	• Alternative would not have any effects on landscapes or visual amenity. • Alternative would not enhance or restrict public access to open spaces and the countryside.
-	Negative	• Alternative would have short-term negative effects on statutorily-designated landscapes. • Alternative would have a negative effect on the intrinsic character of landscapes and townscapes. • Alternative would affect the visual amenity of local communities. • Alternative would temporally restrict public access to open spaces and the countryside.
--	Significant negative	• Alternative would have long-term negative effects on statutorily-designated landscapes (such as AONBs). • Alternative would severely affect the intrinsic character of landscapes and townscapes. • Alternative would severely affect the visual amenity of local communities. • Alternative would result in the loss of open spaces and restrict public access to the countryside.
?	Uncertain	• From the level of information available the effects the impact that the alternative would have on this objective is uncertain.

10.7 Assessment of Significant Effects of Retention, Revocation and Partial Revocation

Table 10.3 summarises the significant effects identified in the detailed assessment of the West Midlands Regional Spatial Strategy policies against the landscape topic.

Table 10.3 Significant effects against the Landscape and Townscape topic

Regional Spatial Strategy Policy	Score			Commentary
	Short Term	Medium Term	Long Term	
QE1 Retention	++	++	++	Policy QE1 is the West Midlands Regional Strategy's overarching environmental quality policy, and states that environmental improvement is a key component of the Regional Strategy which underpins its overall approach improving the quality of life and supporting wider economic and social objectives. One of its objectives is to enhance the environmental quality of the region's urban areas. Improving and conserving the region's environment will result in the expansion of wildlife habitats and will positively affect biodiversity, helping to restore range of species and populations within the West Midlands region.
QE1 Revocation	++	++	++	The National Planning Policy Framework contains policies relating to green infrastructure and planning for climate change so as to mitigate the negative effects of development on biodiversity, which is set out in paragraph 99 of the National Planning Policy Framework are also relevant. The magnitude of any enhancement will depend on local circumstances and decisions, meaning that there could be uncertainty over the extent to which significant biodiversity enhancement could be delivered at a meaningful (i.e. landscape) scale over the longer term.
QE2 Retention	0	++	++	The policy encourages local authorities, agencies and local communities to work together to develop strategies to restore degraded land and promote a good quality built and natural environment. Schemes for remediating contaminated and degraded land and to adopt more sustainable technologies than at present, improving the overall effectiveness of remediation and reducing carbon impacts.
QE2 Revocation	0	++	++	The National Planning Policy Framework provides full support for the remediation of contaminated and degraded land such that it is suitable for new uses, and as a minimum, not be capable of being determined as contaminated under Part 11A of the Environmental Protection Act 1990 (paragraph 109 and 121). However, the National Planning Policy Framework is silent on which remediation technologies should be preferred. The effects of revoking Policy QE2 are therefore uncertain, and will depend on whether local planning authorities support sustainable remediation above traditional methods.
QE5 Retention	++	++	++	The identification, protection, conservation and enhancement of the historic environment, both built environment and wider landscape help to strengthen the historical regional character of the West Midlands.
QE5 Revocation	++	++	++	Paragraphs 126-141 of the National Planning Policy Framework set out strong national policy on conserving and enhancing the historic environment. It states that local planning authorities should set out in their local plans a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the conservation of historic assets in terms of building stock and historic landscapes. The more important the historic asset, the greater the weight should be given to its protection, conservation and enhancement
QE6 Retention	++	++	++	The policy encourages local authorities and other agencies through the preparation of their plans and proposals to help restore the quality, diversity and distinctiveness of the landscape character of the region's urban and rural areas. It also encourages sustainable land management methods which would reduce the vulnerability to climate change of the region's urban and rural landscapes, although this is outside of the scope of control

Regional Spatial Strategy Policy	Score			Commentary
	Short Term	Medium Term	Long Term	
				through the spatial planning system.
QE6 Revocation	++	++	++	The aspirations and provisions of Policy OE6 are covered by the provisions of the NPPF which recognises at Section 11 the importance of landscape conservation and enhancement and will in turn be reflected in local plan policies.
QE7 Retention	+	+	++	The policy encourages local authorities when preparing their local plans to seek to draft policies which enhance the region's biodiversity and conserve its natural resources. Local plans clearly identify, protect, maintain and enhance natural, historic and other distinctive features that contribute to the character of landscapes and places within the West Midlands. Biodiversity, geological, and geomorphological resources are increased through the delivery of national, regional and local objectives and targets. Tree and woodland cover increases, with additional some benefits in terms access to countryside and carbon savings.
QE7 Revocation	+	+	++	Paragraph 109 of the framework sets out a strategic policy approach, stating that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils. Paragraph 113 of the framework carries forward the policy in PPS7 requiring local planning authorities to set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged, with distinctions made between the hierarchy of international, national and locally designated sites. Also paragraph 114 requires local planning authorities to plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure, and maintain the character of the undeveloped but distinctive landscapes. Further paragraph 115 places great weight on the conservation of landscape and scenic beauty in National Parks and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. Landscape character assessments should be prepared where appropriate as stated in paragraph 170 of the framework.

10.7.1 Effects of Revocation

The regional strategy contains a number of policies which seek to conserve or enhance the rural and urban landscape in the region. The West Midlands contains many natural and man-made landscapes of importance, with the special qualities of Cannock Chase, the Cotswolds, Malvern Hills, Shropshire Hills and the Wye Valley being recognised by their statutory designation as AONBs. The Regional Spatial Strategy contains a specific policy on the conservation, enhancement and restoration of the Region's landscape, and two supporting policies dealing with historic landscapes (QE5) and biodiversity (QE7). The supporting text (paragraph 8.23 and 8.24) reminds local authorities of the level of protection to be given to these designated landscapes in development plans, while beyond these areas, the character and distinctiveness of the wider countryside must be respected and opportunities to enhance and restore the quality of existing landscapes should be actively pursued.

The statutory and policy protection afforded to AONBs would remains following the revocation of the regional strategy. Paragraph 115 of the NPPF maintains the policy approach previously set out in PPS7 that great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. Paragraph 116 states that planning permission should be refused for major developments in these designated areas except in exceptional circumstances and where it can be demonstrated they are in the public interest. More generally, local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged (paragraph 113).

Making the link to the conservation of the historic landscape, paragraph 170 of the NPPF states that, where appropriate, landscape character assessments should also be prepared, integrated with assessment of historic landscape character, and for areas where there are major expansion options assessments of landscape sensitivity.

10.7.2 Effects of Partial Revocation

The effects of partial revocation concern either

- Revoking all the quantified and spatially specific policies (for instance where a quantum of development, land for development or amounts of minerals to be extracted or waste disposal is allocated to a particular location in the region) and retaining for a transitional period the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period all the spatially specific policies where a quantum of development or land for development is allocated to a particular location in the region and revoking the non spatial policies, ambitions and priorities; or
- Retaining for a transitional period policies, ambitions and/or priorities, the revocation of which may lead to likely significant negative environmental effects.

The likely significant effects on landscape associated with the revocation of the quantitative policies are summarised in **Table 10.3** for Policy QE6.

The assessment has found that there are no policies in the West Midlands Regional Strategy where the act of revocation will cause a significant negative effect whilst retaining the same policy will maintain a significant environmental benefit.

10.7.3 Effects of Retention

The effects of retaining the regional strategy would see a continuation of the baseline, at least in so far as it is influenced by the planning system (e.g. as opposed to the agri-environment schemes), with a

high level of protection given to those landscape of national and local importance. It is expected, as with revocation, that the quality of the urban and suburban landscape will improve over time with the creation of more green infrastructure and more sensitive building design.

10.8 Mitigation Measures

As revocation is not identified to have any significant negative effects, no mitigation measures are proposed.