

North Somerset Council  
**Local Development Framework**

# Core Strategy

**Topic paper**  
Natural Environment

## **Natural Environment**

This Topic Paper sets out the evidence base for the natural environment-based topics of climate change, biodiversity, green infrastructure, countryside, natural environment and flooding. It summarises the existing policies and describes how these could be taken forward in the Core Strategy.

This is part of a series of topic papers summarising the evidence base for the North Somerset Core Strategy.

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- **Demography, Deprivation and Social Exclusion**
- **Housing**
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- **Sustainable Construction / Design Quality including Heritage**
- **Settlement Function and Hierarchy**
- **Spatial Portrait of North Somerset**

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# Natural Environment

## ***Introduction***

- 1.1 This paper brings together the related topics of climate change, biodiversity, green infrastructure, countryside, natural environment, aspects of the sensory environment and flooding in support of the evidence base to support the production of the North Somerset Core Strategy. All of these themes are related and dependent on activity in another, for example flooding issues and biodiversity are heavily dependent on climate change.

## **Climate Change**

- 1.2 There can be little doubt that the climate is changing. The Stern Review<sup>1</sup> makes it clear that human activity is changing the climate and that there will be significant implications, physical and financial for global and national prosperity, people's health and welfare and for the natural environment.
- 1.3 A key message is that even with effective policies designed to reduce emissions of greenhouse gases such as carbon dioxide, there would still be significant changes in the climate over the period of the North Somerset Core Strategy and beyond. For North Somerset, as with the rest of the world, there will be implications and a need to adapt to changing circumstances.
- 1.4 One of the key principles of national planning policies identified in PPS1 Delivering Sustainable Development is that:

*“Regional planning bodies and local planning authorities should ensure that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change through policies which reduce energy use, reduce emissions (for example, by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight), promote the development of renewable energy resources, and take climate change impacts into account in the location and design of development.”*

- 1.5 The draft Regional Spatial Strategy points to the threat from climate change including the potential net rise in sea level in the South West of between 20cm and 80cm by the 2080s. This would have major implications for the coastline, low-lying areas, infrastructure and major coastal towns and cities. The draft Regional Spatial Strategy expects Local Authorities in their local development documents to demonstrate how they intend to contribute towards the required 60% cut in CO<sub>2</sub> emissions by 2050 and how they intend to identify and respond to the potential impacts of climate change in their area.

Draft policy SD2 of the draft Regional Spatial Strategy identifies a range of measures by which the region's contribution to climate change will be reduced. These include mitigation measures in relation to the most vulnerable communities and ecosystems; avoiding the need for development in flood risk areas; “future proofing” development; and improving the resilience and reliability of infrastructure to cope with changes in the climate.

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<sup>1</sup> Stern Review: The Economics of Climate Change, HM Treasury (October 2006)

- 1.6 The draft Regional Spatial Strategy seeks to reduce CO<sub>2</sub> emissions by other measures such as concentrating growth in Strategically Significant Cities and Towns; through improved public transport and demand management and by sustainable construction, including proposing that all major new development should be carbon neutral, and ensure energy efficiency of existing building stock is improved.
- 1.7 This sets a challenging agenda for the North Somerset Core Strategy and associated local development documents. The need to reduce carbon emissions will be a major priority for the Core Strategy and associated plans and programmes. This will be guided in due course by the Climate Change Act and proposed guidance on Planning and Climate Change being prepared as a supplement to PPS1.

### **Flooding**

- 1.8 Significant areas of North Somerset are low-lying and are liable to flood risk over the period of the Core Strategy. The impact of climate change and increased risk will be assessed in a Strategic Flood Risk Assessment. The approach of the draft Regional Spatial Strategy is to recognise this risk and to take account of this increased risk by giving priority to:
- defending existing properties and where possible to locate new development in places with little or no risk of flooding.
  - protecting flood plains and land liable to tidal or coastal flooding from development.
  - follow a sequential approach to development in flood risk areas.
  - use development to reduce the risk of flooding through location, layout and design.
  - relocate existing development from areas of the coast at risk, which cannot realistically be defended, and
  - identify areas of opportunity for managed realignment to reduce the risk of flooding and create new wildlife areas.
- 1.9 The Core Strategy will need to have regard to the approach of the Regional Spatial Strategy to flooding. It will be necessary to ensure that new development takes into account the increased risks of flooding as a result of changes to the climate and how this affects North Somerset and to protect vulnerable areas from sea and river flooding.

### **Biodiversity**

- 1.10 Biodiversity means the variety of life on earth including plants, animals and fungi. National and international law protects a range of wildlife habitats and species. North Somerset is rich in both protected sites such as Sites of Special Scientific Interest and Special Areas of Conservation and legally protected species (see North

Somerset Council, Action for Nature, North Somerset Biodiversity Action Plan, 2005 for further details). Examples include many birds, bats, otters, dormice, great crested newts and the brown hare, and a number of these species enjoy legal protection. Many species that have undergone severe national declines are still to be found in North Somerset.

- 1.11 The United Kingdom Government signed the Convention on Biological Diversity at the first Earth Summit in 1992. This led to the production of plans (Biodiversity Action Plans) setting out actions to conserve and enhance the UK's priority (key) habitats and species. The Natural Environment and Rural Communities Act 2006 also creates a duty to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.
- 1.12 The conservation of wildlife contributes towards policies concerned with quality of human life, environmental sustainability, community involvement, and physical and mental wellbeing. Biodiversity can also contribute to reducing flood risk and ameliorating local climates.

### **The characteristic wildlife areas of North Somerset**

- The Somerset Levels and Moors with grazed pastures, seasonal wetlands and linear networks of rhynes (wet ditches) and hedgerows, which support a range of species.
- The Severn Estuary, which includes extensive areas of coastal mudflats and supports internationally important populations of wintering and migratory wading birds and wildfowl, invertebrates and migratory fish.
- An international site (termed a Special Area of Conservation) designated for rare greater horseshoe bats (which also supports lesser horseshoe bats). Linear features such as hedges are particularly important to support these bat species as well as livestock grazing and features such as ponds, wetlands and woodland edges; and
- The Mendip limestone grasslands, which support a high diversity of plants and invertebrates.

### **Opportunities to enhance the wildlife of North Somerset**

- Link and expand features such as hedgerows, rough grass verges, woodlands and wetlands to support key bat populations and other wildlife;
- Create new wetlands, for example through flood storage schemes;
- Retain existing, and incorporate new features for wildlife within new developments;
- Improve the management of land for wildlife;
- Raise awareness of the need for, and the nature of, management for wildlife;
- Improve our knowledge and understanding of wildlife in North Somerset through survey and monitoring; and

- Enhance and create substantial areas of new habitats (see Strategic Nature Areas section below).

### **Pressures on wildlife**

- From housing and other development, including the planned addition of 26,000 new homes within North Somerset.
- From the public to create and maintain 'tidy' landscaping and public open space.
- The predicted effects of climate change and sea level rise will have impacts upon wildlife.
- The loss of features such as hedgerows, rough grassland, wetlands and ponds which support an abundance of wildlife, and
- A reduction in the amount of traditional land management such as livestock grazing and the laying of hedges.

### **Constraints upon wildlife conservation**

- New housing and other development can have impacts on wildlife conservation with the associated public pressure to create and maintain 'tidy' landscaping.
- Roads, railways and other built infrastructure can limit the scope to link together areas of land.
- Uncertainty concerning the rate of predicted climate change, and
- Limits to the resources that are available to support nature conservation initiatives.

### **Needs**

- There is a need for continued support for conservation land management schemes such as Environmental Stewardship.
- There is a need to promote large scale habitat restoration (see Strategic Nature Areas below).
- There is a need for greater appreciation of the value of green infrastructure (the total network of nature reserves, woodlands, hedgerows, tall grass verges and other wildlife corridors, parks etc.).
- There is a need to raise awareness of wildlife-friendly land management and wildlife gardening to maximise the biodiversity of open spaces to offset losses caused by development.

- There is a need for greater support for ecological survey and monitoring, and
- There is a need for a wider recognition of the contribution that exposure to wildlife and natural environments makes to quality of life, mental and physical health and sense of well-being and that the environmental quality of new developments is likely to have an impact on the future well-being of communities.

### **Strategic Nature Areas**

- 1.13 The highest priority for wildlife conservation is to retain and enhance existing high quality habitats and populations of species. In North Somerset this includes Wildlife Sites, Sites of Special Scientific Interest, and Special Areas of Conservation. However, in addition to this there is a need to make good the losses of habitats and species, which have resulted from a range of causes including the development, agricultural intensification and fragmentation (splitting up) of areas of land. This requires an active approach to restoring or rebuilding biodiversity.
- 1.14 A map has been developed which identifies the best areas to conserve, create and connect wildlife habitats at a high (landscape) scale within North Somerset. The habitats that have been chosen are those that have been identified as high priorities within the United Kingdom Biodiversity Action Plan. These areas are termed Strategic Nature Areas. The approach taken takes account of the likely impacts of climate change and forms part of a South West England-level approach.

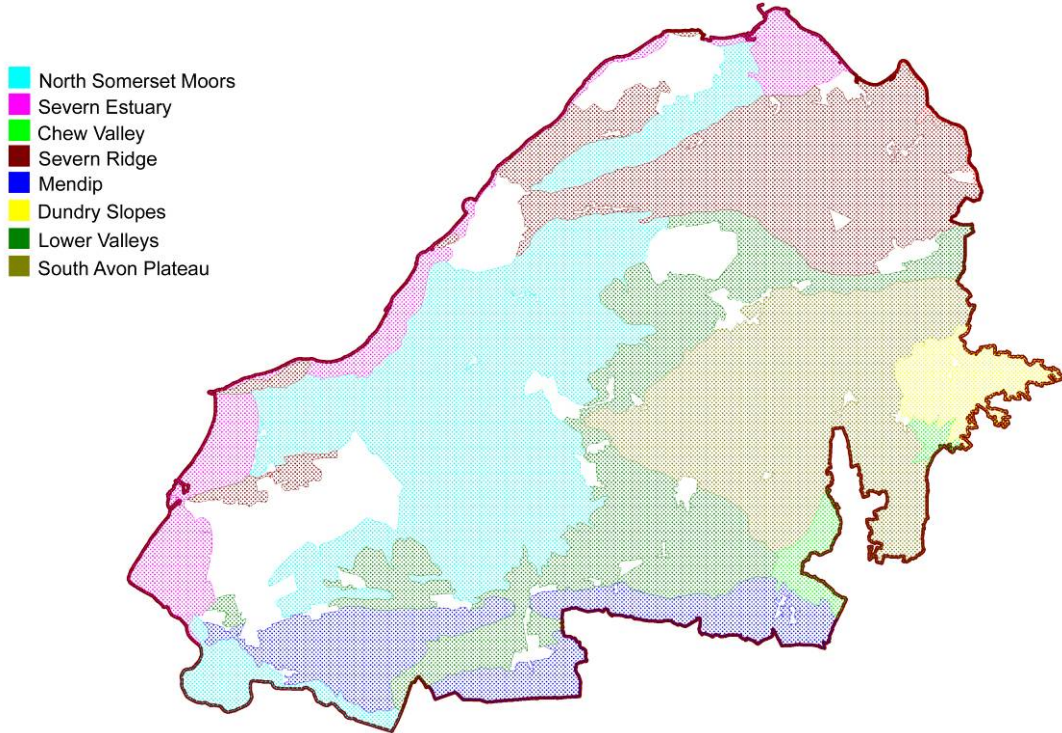
### **The Way Forward**

- 1.15 An important challenge for the Core Strategy will be to maintain and enhance biodiversity in the context of pressure for development and climate change.
- 1.16 North Somerset Council will:
- expect developers to maximise the opportunities for biodiversity enhancement within developments. In the case of major developments this may include off-site contributions towards the conservation and restoration of Strategic Nature Areas (see above).
  - together with its partners, continue to promote the Local Biodiversity Action Plan for North Somerset - Action for Nature and awareness of the value of wildlife.
  - promote the conservation management of existing high quality sites.
  - promote work to conserve and enhance Strategic Nature Areas, and
  - support partnership projects that conserve and restore North Somerset's wildlife, and
  - provide advice and small grants for the conservation of wildlife.

### **Natural Environment**

- 1.17 Detailed work has been carried out within the Landscape Character Assessment (SPD) including a *description*, *evaluation*, and *strategy* for each landscape type

identified within North Somerset. Broad landscape areas identified as Landscape Character Areas are illustrated below.



SOURCE: North Somerset Council

1.18 An important landscape Issue is the need to ensure that development reflects and supports the local landscape character. For more detailed information see the Landscape Character Assessment Supplementary Planning Document. This also highlights local distinctiveness. Important protected landscapes in North Somerset include part of the Mendip Hills Area of Outstanding Natural Beauty, where there is a need to conserve and enhance natural beauty.

### Green Infrastructure

1.19 Green Infrastructure consists of strategic networks of accessible, multifunctional sites such as parks, woodland, informal open spaces, nature reserves, wildlife corridors for example rivers and large hedgerows, streams and historic sites. It contributes to sustainability and the quality of life of North Somerset residents and will be a valuable asset to the new residents living in the two urban extensions. The following table categorises the different types of Green Infrastructure.

### Types of Green Infrastructure

1. Formal Green Infrastructure	Definition / Primary Purpose & Function
	Typically sites have a formal layout with a network of paths and vegetation structure, notably trees. The site is likely to have been the result of some kind of design. Ornamental



	<p>planting may also be a feature. Sites may also offer opportunities for informal recreation and community events.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Urban and country parks (private and public ownership)</li> <li>• Formal gardens (in private and public ownership)</li> <li>• Civic space (formal squares and greens of civic significance and hard surfaced areas designed for pedestrians).</li> </ul>
<p><b>2. Natural Green Infrastructure</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b></p> <p>Sites where the predominant function is one of conserving / enhancing biodiversity and providing people with access to, and experience of, nature.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Woodland (rural and urban)</li> <li>• Scrub, grasslands (e.g. downlands, commons and meadows), wastelands and derelict open land and rock areas (e.g. cliffs, quarries and pits)</li> <li>• Designated sites (local and national - SSSI, NNR, LNR etc)</li> <li>• Sites of historical/ archaeological interest/ designation</li> <li>• Cemeteries, churchyards and burial grounds (CCB).</li> </ul>
<p><b>3. Informal Green Infrastructure</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b></p> <p>Sites most commonly, but not exclusively in urban areas, offering opportunities for informal activities close to home or work or enhancement of the appearance of residential or other areas.</p> <p>Amenity Green Infrastructure is informal in layout and character, and may contain path routes where the principal emphasis is on informal recreation and amenity.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Informal recreation spaces</li> <li>• Greenspaces in and around housing</li> <li>• Village greens</li> <li>• School grounds</li> <li>• Business grounds and gardens</li> </ul>

<p><b>4. Outdoor Sports</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b></p> <p>Provision of space for participation in outdoor sports. A distinction has been drawn between ‘Natural’ and ‘Hard’ surface sports given the more limited contribution of the latter to Green Infrastructure.</p> <p>Many Natural Surface sports are seasonal in nature and generally take place within Formal and Informal Green Infrastructure sites.</p> <p><b>Examples of sites under this typology</b></p> <p>Outdoor Sports – Natural Surface</p> <ul style="list-style-type: none"> <li>• Football/ rugby/ cricket/ hockey etc. pitches, bowling greens, golf courses.</li> </ul> <p>Outdoor Sports – Hard Surface</p> <ul style="list-style-type: none"> <li>• Tennis courts, Astroturf pitches, Multi-Use Games Areas</li> </ul>
<p><b>5. Children and Young People’s Space</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b></p> <p>Spaces specifically designed to increase opportunities for children and young people to play or meet safely within equipped and unequipped environments. Although frequently hard-surfaced and found within other Green Infrastructure types (generally Formal and Informal Green Infrastructure), Children and Young People’s Space is an important element of the Green Infrastructure network and offers scope for Green Infrastructure enhancement.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Children’s Play Space</li> <li>• BMX and Skateboard tracks/ parks</li> <li>• Youth Shelters</li> <li>• Multi-Use Games Areas</li> </ul>
<p><b>6. Allotments &amp; community gardens/ farms</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b></p> <p>Allotment gardens, community gardens and urban farms, giving people the opportunity to grow their own produce and provide opportunities for education, health and social inclusion.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Allotments</li> <li>• Community orchards</li> <li>• Urban and Community Farms</li> </ul>

<p><b>7. Blue Infrastructure</b></p>	<p><b>Definition / Primary Purpose &amp; Function</b>          Inland waterways, bodies and courses (urban and rural) that provide opportunities for formal and informal recreation &amp; tourism, contribute to urban regeneration and biodiversity protection/ enhancement.</p> <p><b>Examples of sites under this typology</b></p> <ul style="list-style-type: none"> <li>• Rivers and canals</li> <li>• City Docks</li> <li>• Lakes and larger water bodies</li> <li>• Rhyne systems</li> </ul>
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- 1.20 Green Infrastructure properly planned and integrated into development, can improve the health and sense of well-being of people and promote a sense of place and community identity. The networks of green spaces and corridors also provide benefits for wildlife and biodiversity.
- 1.21 The draft Regional Spatial Strategy Policy GI1 expects local authorities and partners to develop a Green Infrastructure Plan with a delivery programme to support GI policies. The proposed urban extension in Weston-super-Mare provides for a “Green Heart”. A Green Infrastructure Implementation Strategy for the South West Bristol Urban Extension will be part of a range of infrastructure delivery plans to provide for sustainable development in that location.

***Sensory Environment***

- 1.22 There is growing concern surrounding the impact that increased development is having on quality of life. Two areas include the impact increased development has on the tranquillity of places including open countryside and other places where people go to relax, and the other the impact increased development has in terms of light pollution, and the reduced darkness in some locations<sup>1</sup>. Maps have been produced which show levels of tranquillity based on areas of development, and these can be seen for each area in England on the Campaign to Protect Rural England website.<sup>2</sup>

***Key Issues***

- Ensuring development contributes to reducing carbon emissions.
- Ensuring development takes into account the increased risk of flooding as a result of climate change, in addition to other necessary adaptation measures.
- Maintaining and enhancing biodiversity across North Somerset and mitigating any impacts from development.
- Ensure development reflects and supports the local landscape character.

<sup>1</sup> See Campaign to Protect Rural England website [www.cpre.org.uk](http://www.cpre.org.uk)

<sup>2</sup> [www.cpre.org.uk](http://www.cpre.org.uk)

- The protection of vulnerable areas from sea and river flooding.
- Minimising the impacts on the countryside environment including loss of tranquil environment and the impacts of light pollution.
- Ensuring that contributions are made to green infrastructure in new development as well as existing areas particularly urban areas.

### **References**

North Somerset Council (2005) Biodiversity and Trees, Supplementary Planning Document

North Somerset Council (2005) Landscape Character Assessment, Supplementary Planning Document

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South West Regional Assembly, (2006) The draft Regional Spatial Strategy for the South West 2006 - 2026

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[www.cpre.org.uk](http://www.cpre.org.uk) Website of the Campaign to Protect Rural England

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