Swindon’s Urban Area Landscape-scale Conservation Framework

Presenting a framework for landscape scale conservation planning and delivery within Swindon urban centre

July 2013
The review of the Wiltshire and Swindon Biodiversity Action Plans (BAPs) was coordinated by the Wiltshire and Swindon BAP Steering Group which is made up of representatives from Wiltshire Wildlife Trust, Wiltshire County Council, Swindon Borough Council, Natural England, Link2Nature (Wiltshire & Swindon Local Nature Partnership), Royal Society for the Protection of Birds (RSPB), Wiltshire and Swindon Biological Records Centre, Cotswold Water Part Trust, Longleat Center Parcs and the North Wessex Downs Area of Outstanding Natural Beauty (AONB).

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All maps were created using data from the Wiltshire & Swindon Biological Records Centre.

All website links in this document are accessed at the user’s own risk and the Wiltshire Wildlife Trust cannot take responsibility for the content of external sites.

This document has been made available to communicate the outcomes of a six month review of the Wiltshire and Swindon Biodiversity Action Plans. This document supports information available on the new Wiltshire and Swindon Local Nature Partnership (Link2Nature) website which should be consulted for further details www.link2nature.org.uk
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1. Background

Swindon town lies within Swindon Borough, a unitary authority to the northeast of the county of Wiltshire. The town owes its existence to the establishment of the Great Western Railway in the 1840s and, following extensive growth and post-war development, Swindon has transformed itself from a town dominated by the railway industry into one with a prosperous economy with a mix of modern industries. Roughly 86% of the population of Swindon Borough now live within the Swindon urban area, which contrasts greatly in character with the predominantly rural districts of Wiltshire.

1.1 Swindon Biodiversity Action Plan

The decision was made to produce a separate Biodiversity Action Plan (BAP) for the Swindon urban area to reflect the very different pressures experienced by habitats and species within the urban context compared to those within the wider, predominantly rural surroundings of Wiltshire and the Swindon Borough.

It is important to consider the Swindon BAP alongside a number of other documents including the Swindon Core Strategy, Swindon Green Infrastructure Strategy and the Wiltshire BAP 2008 and the Cotswold Water Park BAP.

In line with the methodology adopted for the landscape addition to the Wiltshire BAP, the Swindon BAP focusses on the best opportunities for protecting and enhancing priority habitats within the urban area. It looks to establish links between fragmented habitats to produce a coherent and resilient ecological network which can buffer the effects of climate change and allow the movement of species between them.

This BAP attempts to adopt a more ecosystem-wide, landscape-scale approach in line with the Government’s recommendations put forward in the Natural Environment White Paper and the desired outcomes outlined in the England Biodiversity Strategy.

1.2 Biodiversity

The green spaces and priority habitats within Swindon Borough have experienced many and varied pressures in recent decades, including urban development and agricultural intensification. Within the urban area there are 24 County Wildlife Sites (CWS), sites designated as being of substantive biodiversity importance (see map in Appendix, Figure 8). These cover a number of habitats including Neutral grassland (6), Broadleaved Woodland (9), Calcareous grassland (1), Fens, marsh and swamp (1), River (1), Standing open water (3), Wet woodland (2) and a mosaic of habitats (1).

There are some very valuable areas of priority habitat and green spaces within and adjacent to the urban limits of the town including the historic parkland of Lydiard Park which borders the east of the urban area and beyond this, the remaining extent of the former hunting forest of Braydon Forest. The extent of the North Wessex Downs AONB extends to the southeast corner of the Swindon urban area and extensive woodland areas have been developed around the town via the Community Forests initiative, such as at Shaw Forest Park to the northeast of the town and Wroughton Wood to the south.
There are four Sites of Special Scientific Interest (SSSIs) within the urban limits of the town (Appendix, figure 8), primarily designated for their Earth Heritage or geological importance, being either disused quarry sites or railway cuttings. Additionally there are eight Sites of Special Scientific Interest (SSSIs) within the Swindon peri-urban area which have the potential to be impacted by future development and expansion of the Swindon urban area (Click on table to left to view details).

The underlying geology of Swindon is characterised by two large bands of Kimmeridge and Oxford clays running horizontally across the town, split by a band of limestone fossilised coral beds. In the south of the town lies an area of Purbeck and Porton stone which is of particularly high geological interest being rich in fossil deposits.

The River Ray, a tributary of the River Thames whose catchment encompasses the area to the north of Swindon, passes through the western suburbs of Swindon urban area and represents a primary focus of wildlife and conservation efforts within the urban limits. Lowland meadow and wetland habitats associated with the Thames tributaries of the River Ray and the River Cole to the east of the urban area represent the main priority habitats within the urban area.

The historic line of the Wilts & Berks Canal runs to the south of the urban area and on to Abingdon in Oxfordshire, whilst the historic line of the North Wilts Canal forms a spur linking the Wilts & Berks to the Thames and the River Severn north of Cricklade. Some sections of the canal network have been restored under the auspices of the Canal Trusts, and are currently ‘in water’.

Swindon urban area falls across two National Character Areas; the Upper Thames Clay Vales and the Midvale Ridge. These define the character of the wider landscape and group areas according to geology and both present-day and past land use rather than administrative boundaries. They provide a more meaningful basis on which to evaluate the wildlife and geological resources of an area and offer a better way of planning nature conservation action at an ecosystem or landscape scale.

1.3 Threats to Biodiversity

Swindon is one of the fastest growing towns in Europe with a current population of around 175,000 and a prominent location along major road and rail corridors making it ideally placed for business and new housing developments. On the basis of new economic projections described in the Swindon Borough Core Strategy, and to meet locally derived demand for new housing, around 29,000 additional houses are required in Swindon Borough for the period 2006-2026, a figure which is mirrored by a projected population growth of around 21% over the same period.

Swindon town centre will be the main focus for development and regeneration, including new retail and leisure opportunities. To complement development in the urban area, additional housing is allocated at Tadpole Farm, Commonhead and the Eastern Villages around South Marston. Work is also currently underway on the Wichelstowe development area to the south of the town, which will include around 4,500 homes and associated facilities.
With the increasing urban population and the fast pace of urban development there is a very real and immediate need to protect and enhance the remaining green spaces and priority habitats within the Swindon urban area. This need is particularly acute at the urban fringes where conversion of farmland and green field sites to housing can lead to the potential loss of priority habitats including woodland, hedgerows, lowland meadows and veteran trees, as well as potential habitats for priority species such as bats, Great crested newts and Dormice.

Effective management of water resources is needed to protect and enhance biodiversity in the rivers, streams and groundwater bodies that provide Swindon with water for public use, agriculture and industry. Water quality has suffered from pollution and only 18% of Swindon Borough’s rivers have good ecological status. As a result of climate change, extreme and unpredictable weather events including heatwaves, droughts, heavy rains and floods are predicted to increase, with significant impacts on habitats and species. Action is need to reduce abstraction levels by controlling leakage and reducing demand, to protect natural floodplains, to treat waste water and sewage effectively and to plan for new water supply needs.

1.4 Priority Areas for Conservation

The first outcome of the England Biodiversity Strategy was to achieve an ‘Integrated large-scale approach to conservation’ and within this actions included ‘Establish a more coherent and resilient ecological networks on land’. Within the Swindon urban area it was felt that the best way to achieve these outcomes was to focus conservation efforts in the areas which provide the best opportunities for creating coherent ecological networks which will benefit biodiversity and best adapt to the pressures on climate change. These have been identified for the Swindon urban area and focus on the Strategic Nature Areas, identified in the South West Nature Maps Rebuilding Biodiversity project, and the Swindon Green Infrastructure Networks identified via Swindon Borough Council’s Green Infrastructure Strategy.

<table>
<thead>
<tr>
<th>Priority Habitat</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland calcareous grassland</td>
<td>0.02</td>
</tr>
<tr>
<td>Lowland meadows</td>
<td>36.28</td>
</tr>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>11.27</td>
</tr>
<tr>
<td>Reedbeds</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Table 1: Outlines the extent of confirmed priority habitats within the urban limits of Swindon (see Appendix, figure 9 for map of priority habitats). Priority habitats are those identified in the UK BAP as being of particular importance for biodiversity conservation.

Strategic Nature Areas (SNAs) identified using the South West Wildlife Trust’s ‘Rebuilding Biodiversity’ methodology represent landscape-scale areas where opportunities exist for both the maintenance and restoration/expansion of priority habitats. Crucially, it provides a scientifically robust methodology for defining quantitative targets for creating viable landscape-scale blocks of land which can support a mosaic of habitats that can support wildlife in the long term (in terms of habitat size, quality and landscape context). There are three SNAs within or adjacent to the Swindon urban area, as well as the River Ray which has been identified as a watercourse of strategic natural importance. Details of these and the SNAs of the peri-urban area can be accessed via the table on the left.
1.5 Swindon’s Green Infrastructure (GI) strategy

Swindon Borough Council has undertaken an extensive audit of the green spaces within the Borough and from this has identified a GI Network of green spaces and regional and sub-regional links which connect them. Swindon Borough Council’s Green Infrastructure Strategy aims to identify the best opportunities for maintaining and enhancing the network of green spaces within the Borough.

“Green Infrastructure is the interconnected network of parks, woodlands, waterways and open spaces that help sustain Swindon’s environmental health, economy, and quality of life.”

The SNAs identified in the South West Nature Map are the focus for Swindon’s strategic GI network. Green Infrastructure in an urban setting aims to create a more diffuse landscape for wildlife movement across town by:

- Enhancing strategically important green corridors running through town and proposed development areas.
- Enhancing and improving connectivity within existing wildlife ‘hotspots’ such as County Wildlife Site and SSSIs within the town and the urban fringe areas.
- Improving connectivity between identified corridors and hot spots through local connective corridors/ linking features
- Providing a greater patchwork of habitats across town, recognizing the importance of green space, green roofs and gardens
- Increasing tree cover.

The Green Infrastructure Strategy identifies four existing and two planned GI Networks across Swindon urban area. These represent the focus for conservation efforts within this landscape addition to the Swindon Biodiversity Action Plan.

**Existing GI Networks**

- River Ray Parkway
- Sevenfields
- Stratton Woods and Stanton Park
- Coate Water and The Lawn

**Planned GI Networks**

- Wichelstowe
- The Eastern Villages Development Area

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1 A Green Infrastructure Strategy for Swindon 2010-2026.  
Figure 1: Map illustrating the Swindon GI Networks and Strategic Nature Areas. Each network is coloured and individually named; Strategic Nature Areas are coloured according to their main priority habitat type and identified with their unique SNA Number.

1.6 Work outside of the GI and SNA networks

The GI networks and Strategic Nature Areas therein represent the best opportunities for coordinating conservation efforts to gain the best biodiversity gains at a landscape scale. However, work must continue outside of these areas to ensure that statutory designated sites are in ‘good condition’ and to protect
priority habitats from development. Work that is planned to ‘green’ the urban centre via tree planting and
green roofs is important for increasing the availability and connectivity between habitats, whilst projects are
underway across the Borough to identify and conserve important areas for bats. As major landowners the
approach taken by Swindon Borough Council and the surrounding parish councils to managing their green
spaces will make a significant contribution to the biodiversity value of undeveloped areas in Swindon.
Allowing the establishment of floristically rich verges along roads, footpaths, cycle paths, parks and playing
fields will considerably strengthen the whole GI network and the green spaces between them. Local
communities need to be supported in protecting and enhancing the biodiversity potential of their local
areas, including via the development of supportive planning policies and management plans.
2. Swindon’s Existing GI Networks

2.1 River Ray Parkway

Figure 2.1 Map illustrating the River Ray GI Network and the Strategic Nature Areas therein. SNAs are coloured according to their main priority habitat type and identified with their unique SNA Number.

Reproduced from 1:25,000 Scale Colour Raster by permission of Ordnance Survey® on behalf of HMSO. © Crown copyright 2013. All rights reserved. Licence number 100005798. SNA boundaries © Natural England copyright 2005. Priority habitats data © WSBRC 2012, reproduced with permission of WSBRC.
2.1.1 Background

The River Ray Parkway is a strategically important network in the northwest of Swindon Town, connecting urban Swindon with its rural fringes through four major open spaces and associated links. The River Ray Parkway is an off-road ‘greenway’ between Mouldon Hill and Coate Water Country Park following the line of a dismantled railway line.

The River Ray rises to the south of Swindon and discharges into the Thames north of the town. Designated as a County Wildlife Site, it is a key habitat and linking feature within the network and supports protected species including otters. The Ray is also part of the Strategic Nature Areas encompassing the Shaw Forest Park/Rivermead complex and connects to Freeth’s Wood and meadows to the north. Shaw Forest Park is owned and managed by Swindon Borough Council. Over the past 13 years the 49.4ha former landfill site has been transformed into Swindon’s only urban forest as part of the Great Western Community Forest.

The River Ray Corridor comes under increasing pressure from development as it passes through Swindon with planned extensions to the north of Swindon at Tadpole Farm and Moredon Hill, and Wichelstowe and Commonhead to the south. Restoration work has been carried out on a 1.2km stretch of the River Ray adjacent to the Swindon Lagoons, involving re-meandering and other habitat improvements. The project was led by the Wiltshire Wildlife Trust working closely with Swindon Borough Council, the Environment Agency, Thames Water and local communities and volunteers.

2.1.2 Priority Habitats

There are three SNAs situated within the River Ray Parkway between which there is almost complete coverage of the priority habitats identified within this GI Network. The River Ray represents a valuable priority habitat within the Network which, as well as providing a vital habitat for riverine species of plant and animals, is also crucial in creating the conditions for associated priority habitats and species along its course.

A number of lowland meadows can be found adjacent to the river to the west of the town, as well as areas of lowland fens, standing open water and wet woodland which are all closely associated to the River Ray.

<table>
<thead>
<tr>
<th>River Ray Parkway</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland meadows</td>
<td>31.92</td>
</tr>
<tr>
<td>Lowland beech and yew woodland</td>
<td>5.31</td>
</tr>
<tr>
<td>Rivers</td>
<td>5.31</td>
</tr>
<tr>
<td>Wet woodland</td>
<td>3.8</td>
</tr>
<tr>
<td>Eutrophic standing waters</td>
<td>3.3</td>
</tr>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>2.75</td>
</tr>
<tr>
<td>Lowland calcareous grassland</td>
<td>2.27</td>
</tr>
<tr>
<td>Coastal and floodplain grazing marsh</td>
<td>2.03</td>
</tr>
<tr>
<td>Lowland fens</td>
<td>0.79</td>
</tr>
<tr>
<td>Total</td>
<td>57.48</td>
</tr>
</tbody>
</table>

Hedgerows 178.31m

Table 2.1 Priority habitats within the River Ray Parkway GI Network
2.2 Sevenfields

This GI network is centred on the Seven Fields Local Nature Reserve at Haydon Wick in north Swindon, an area of valuable lowland meadow priority habitat. A rich variety of flowers and grasses have been recorded within the meadow, with iconic meadow plant species including orchids known to occur. Owing to the wide variety of plant species the meadow is an important breeding and feeding station for butterflies, moths, grasshoppers and a multitude of other insects, which in turn attracts small mammals and birds.
The Sevenfields GI Network encompasses several other priority habitats, primarily associated with wetland conditions along the tributaries of the River Ray. The Nature Reserve provides important habitat for plants and animals within a highly developed area of Swindon. Adjoining the nature reserve is a cemetery on Whitworth Road which provides additional habitat for grassland species of plants and animals. Although there are no Strategic Nature Areas represented within the Sevenfields network, opportunities exist to build stronger links between priority habitats along the stream system.

### 2.2.2 Priority Habitats

Lowland meadows comprise the vast majority of the priority habitats within the Sevenfields GI Network. This is almost exclusively concentrated within the Seven Fields Nature Reserve which is managed to protect and enhance its meadows. Additionally, patches of lowland mixed deciduous woodland are found along the footpath and stream which run from Blunsdon Abbey down to the Penhill area.

<table>
<thead>
<tr>
<th>Sevenfields</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland meadows</td>
<td>15.65</td>
</tr>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>2.69</td>
</tr>
<tr>
<td>Reedbeds</td>
<td>0.27</td>
</tr>
<tr>
<td>Rivers</td>
<td>0.28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.89</strong></td>
</tr>
</tbody>
</table>

Table 2.2 Priority habitats within the Stratton Woods and Stanton Park GI Network

#### 2.2.3 Useful links

[Seven Fields Conservation group website](#)
2.3 Stratton Woods and Stanton Park

Figure 2.3 Map illustrating the Stratton Woods and Stanton Park GI Network and the Strategic Nature Areas therein. SNAs are coloured according to their main priority habitat type and identified with their unique SNA Number.

2.3.1 Background

Stratton Wood

Stratton is a large woodland situated at the north eastern edge of Swindon urban area. The wood was created as part of the Great Western Community Forest Project (GWCF), one of 12 Community Forest projects in England. Formerly the land was arable farmland, and the old field layout can still be seen from
the mature hedgerows in and around the wood. There are floristically diverse meadows which also support ground-nesting species such as skylarks and a range of moths and butterflies. A stream flanked by willows and ashes cuts through the western half of the site. This corridor provides foraging and nectaring opportunities, as well as cover and nesting sites for a wide range of species. Willows and outgrown hedgerows provide further niches and relate to the old field layout.

Most of the surrounding land is a mix of farmland and industrial, commercial and housing developments. The grounds of the Crematorium to the north east are planted as parkland, and there is extensive ancient semi-natural woodland and parkland nearby at Stanton Park, both of which complement the new native woodland planted at Stratton. The layout of the woodland at Stratton provides a good mix of native broadleaved trees and shrubs including: oak, ash, field maple, goat willow and hazel, with stands of walnut, beech and horse chestnut strategically placed in a more parkland setting near the Crematorium Grounds.

The Woodland Trust manages this native, broadleaved wood, with the aim of creating an area of permanent high forest with shrubby margins, old hedge-lines and two woodland fringed wildflower meadows. The broad rides, wildflower meadows and glades are kept open and managed as necessary to provide valuable habitats. There are many woodland edge habitats which are important for nesting birds, invertebrates (particularly butterflies) and woodland/grassland and hedgerow flora. There is potential to enhance links between Stratton Wood and nearby Stanton Country Park through strategic habitat creation and enhancement.

Stanton Park

This 74 hectare country park and Local Nature Reserve is wholly owned by Swindon Borough Council and is situated roughly 5km northwest of the Swindon urban centre. It comprises a mix of habitats including mixed broadleaved woodland, remnants of ancient woodland, mature hedgerows, wildflower neutral meadows, wetlands and a lake, stream and series of restored ponds.

These habitats are home to a correspondingly large variety of species, including birds of prey, wildfowl, amphibians, invertebrates and mammals including roe-deer, badgers and species of bats. Site management is aimed at maintaining its appeal as a parkland habitat and to maintain the wildflower meadows via traditional management techniques of hay cutting and grazing by livestock.

Although the GI network does not contain any Strategic Nature Areas it does represent a significant area of lowland mixed deciduous woodland priority habitat, alongside areas of eutrophic standing open water priority habitat. There are great opportunities available to enhance links between Stanton Park and the newly created community forest at Stratton Wood through enhancement of woodland and hedgerows on the land between them.

2.3.2 Priority Habitats

Lowland mixed deciduous woodland is by far the most abundant priority habitat within the Stanton Park and Stratton Wood GI Network. This reflects the areas of semi-natural woodland within Stanton Park, whilst the comparatively newly planted areas within Stratton Wood are yet to be classified as priority habitat. As this woodland matures it will support a greater number and diversity of associated woodland fauna and flora, providing additional habitat for those woodland species currently utilising the woodlands at Stanton Park. By
enhancing the connectivity between these two sites this will significantly increase the habitat available to these species and will promote dispersal over a wider area. There is over 500m of designated hedgerow priority habitat within the Network and these will aid this dispersal process and provide important habitat for a number of species for feeding, aiding movement and providing nesting opportunities. At present there is one designated traditional orchard within this GI Network but plans are in place for the creation of a small orchard of approximately 30 trees at Stratton Wood which will increase the area of this important habitat for the future.

<table>
<thead>
<tr>
<th>Stratton Woods and Stanton Park</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>22.38</td>
</tr>
<tr>
<td>Rivers</td>
<td>0.48</td>
</tr>
<tr>
<td>Eutrophic standing waters</td>
<td>0.44</td>
</tr>
<tr>
<td>Lowland meadows</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23.63</strong></td>
</tr>
</tbody>
</table>

| Hedgerows                               | 538.06m   |
| Traditional Orchards                   | 1         |

Table 2.3 Priority habitats within the Stratton Woods and Stanton Park GI Network

2.3.3 Useful Links

- [Woodland Trust Stratton Woods website](#)
- [Swindon Borough Council’s guide to Stanton Park](#)
2.4 Coate Water and The Lawns

Figure 2.4 Map illustrating the Coate Water and The Lawns GI Network and the Strategic Nature Areas therein. SNAs are coloured according to their main priority habitat type and identified with their unique SNA Number.

2.4.1 Background

Coate Water

Coate Water Country Park is focussed around a 56-acre reservoir built in the 1820s as a headwater tank for the Wiltshire and Berkshire Canal. In the 1970s a smaller lake was created as a flood storage lagoon, which was subsequently made into Wiltshire’s first Local Nature Reserve (LNR) in 1976.
Coate Water has a diverse breeding bird population associated with the two lakes and adjacent semi-natural vegetation. It is also important for wintering waterfowl, particularly teal, coot, great-crested grebe, Canada goose and mallard, and also supports a wide range of dragonflies and damselflies. The water bodies support a wide range of birds and animals, with otters sighted near Coate Water and healthy populations of bat species also within the area. In the wetter areas of the woodland are willow and ash, with oak and birch on drier ground. There are mature trees and hedgerows as well as neutral meadows supporting a suite of meadow flowering plants and grasses. In recognition of its wildlife importance most of the site and all the water have been declared as a Site of Specific Scientific Interest (SSSI), with further details including current condition assessments available via Natural England’s SSSI webpage.

The Lawns

The GI network extends north encompassing The Lawn, a park in the Old Town area of Swindon which covers over 86 acres, making it one of the largest open spaces in the town. The lakes, meadows and avenues are important for wildlife with a wide variety of habitats and its own ancient tree collection with species ranging from Yew, Walnut and Oak to more unusual specimens such as Monkey Puzzle, Medlar & Wellingtonia.

2.4.2 Priority Habitats

The GI network comprises several areas of lowland mixed deciduous woodland priority habitat as well as a small area of wet woodland and an area of lowland calcareous grassland at Ladder Hill. The area surrounding Coate Water reservoir is designated as a SNA for its neutral grassland habitats, but also encompasses the lakes and woodland areas adjacent to them. The Wroughton Area woodland SNA to the southwest of this covers Burderop Woods SSSI and extends south west, encompassing areas of broadleaf woodland and chalk grassland. Burderop Woods remains the largest and most significant ancient semi-natural woodland in Swindon Borough but has experienced high levels of deer grazing which has had consequences for woodland regeneration. Actions are needed to control deer numbers and to implement suitable woodland management strategies to improve the overall woodland structure.

Although there are no confirmed priority habitats within The Lawns this area could be managed to provide a useful stepping stone for wildlife within the urban centre, providing a more cohesive network of habitats between Coate Water and the River Ray Parkway to its northwest. There is an extensive network of designated hedgerow priority habitat within the Coate Water and Lawns GI network. This reflects a high degree of connectivity between woodland habitats, a fact that will aid in the dispersal of species between sites and improve the overall resilience of the network.

<table>
<thead>
<tr>
<th>Coate Water &amp; The Lawn</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>14.71</td>
</tr>
<tr>
<td>Lowland calcareous grassland</td>
<td>4.39</td>
</tr>
<tr>
<td>Rivers</td>
<td>2.37</td>
</tr>
<tr>
<td>Wet woodland</td>
<td>0.95</td>
</tr>
<tr>
<td>Total</td>
<td>22.42</td>
</tr>
<tr>
<td>Hedgerows</td>
<td>5016.01m</td>
</tr>
<tr>
<td>Traditional Orchards</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2.4 Priority habitats within Coate Water and The Lawn GI Network
2.4.3 Useful links

Swindon Borough Council’s Coate water webpage

Swindon Borough Council’s Lawns webpage
3. Swindon’s Planned GI Networks

3.1 Wichelstowe

Figure 3.1 Map illustrating the Wichelstowe GI Network (shaded green) and the Strategic Nature Areas therein. SNAs are coloured according to their main priority habitat type and identified with their unique SNA Number.
3.1.1 Background

Located to the north of the M4 between Junction 16 and Croft Road, Wichelstowe represents a key development area within the Borough with plans for 4,500 homes, shopping facilities and three primary schools set out across three neighbourhoods: East Wichel; Middle Wichel; and West Wichel. Master plans for the urban extension area at Wichelstowe include extensive GI networks within the development site and off-site landscape enhancements, the latter to be developed through the Great Western Community Forest project.

The Wichelstowe development area incorporates extensive networks of green-space with a strong focus on biodiversity, centred on river and stream corridors, including a restored section of the Wilts and Berks canal which will form an important wildlife corridor. The River Ray passes through the GI network and forms an important wildlife corridor, connecting the development area with the River Ray Parkway to the northwest. The Wroughton Brook connects the Wichelstowe GI network with important areas of mixed deciduous woodland and chalk grassland priority habitats to the south which are covered by the Wroughton Area and Clyffe Pypard SNAs.

3.1.2 Priority Habitats

The main concentrations of priority habitats are located at the very southern section of the planned Wichelstowe GI Network, around Clout’s Wood SSSI. This wood forms part of the Wiltshire Wildlife Trust’s Clout’s Wood and Markham Bank reserve where priority lowland mixed deciduous woodland sits next to an outstanding area of lowland calcareous grassland. The woodland wildlife includes wildflowers such as Wood Vetch, Nettle-leaved Bellflower, Bluebells, Yellow Archangel and the rare Bath Asparagus, as well as many fungi in the autumn. At Markham Bank a variety of chalk grassland wildflowers can be found including Common Rockrose, Horseshoe Vetch, Spiny Restharrow and Wild Thyme. Tributaries of the River Ray run from this area with lowland meadows and, in the wetter areas, lowland fens along its course. The farmland areas which comprise the majority of the Wichelstowe GI Network are primarily used for dairy farming and pasture and have retained a good hedgerow structure, reflected in the extent of designated hedgerow priority habitat in this area. The hedgerow network provides important habitats for a range of species and increases connectivity between the woodland areas of this network and the adjoining GI network of Coate Water and the Lawns, as well as up onto the North Wessex Downs to the south.

<table>
<thead>
<tr>
<th>Wichelstowe</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>14.11</td>
</tr>
<tr>
<td>Lowland calcareous grassland</td>
<td>11.09</td>
</tr>
<tr>
<td>Rivers</td>
<td>3.35</td>
</tr>
<tr>
<td>Lowland meadows</td>
<td>0.89</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29.44</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hedgerows</th>
<th>3643.68m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Orchards</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 3.1 Priority habitats within Wichelstowe GI Network
3.1.3 Useful links

Wichelstowe off site landscape and nature conservation plan

Wichelstowe Development website
3.2 Eastern Villages Development

Figure 3.2 Map illustrating the Eastern Villages GI Network (shaded in pink) and the Strategic Nature Areas therein. SNAs are coloured according to their main priority habitat type and identified with their unique SNA Number.

3.2.1 Background

Following a period of consultation the plans for the Eastern Development Area identified in the Regional Spatial Strategy for the South West (RSS) have been revised and new plans put forward for a scaled back development now termed the Eastern Villages Development. The original target of 12,000 dwellings has been significantly reduced to 7,500 homes by 2026, with a lower overall density of 35 dwellings per hectare.
The countryside surrounding the proposed Eastern Villages development is of a high quality and the North Wessex Downs Area of Outstanding Natural Beauty (AONB) is located beyond the site to the south. The site is located in a predominantly flat, open landscape with a localised high point at Mount Pleasant Farm. The land starts to rise to the south of the site on the escarpment of the Downs, signalling a very obvious change in landscape character. The site includes a network of watercourses including the River Cole, its tributaries and associated flood plain areas.

There are no statutory designated wildlife sites within the development area but the River Cole and its tributaries; the South Marston Brook, Dorcan Stream, Lenta Brook and Liden Brook, is designated as a local County Wildlife Site. Beyond the River Cole Corridor there is evidence of a number of other species and habitats. This includes badgers, reptiles (namely grass snakes), bats, birds and great crested newts in isolated locations as well as veteran trees and bankside vegetation.

3.2.2 Priority Habitats

The South Marston neutral grassland SNA sits within the Eastern Villages GI network. This SNA encompasses Nightingale Woods, a 52 hectare Forestry Commission woodland which is part of the Great Western Community Forest and is planted with a mix of deciduous and coniferous trees. To the south of the wood is Brook Meadow, a designated lowland meadow priority habitat for which the SNA was designated. Ground nesting birds such as Skylark are present here, as well as larger mammals including Roe Deer. Running through Brook Meadow is the South Marston Brook which provides a key habitat for wildlife and acts as a wildlife corridor, linking the site with the surrounding landscape. Mature hedgerows are present within the SNA and these provide important habitat for birds including yellowhammer, redwing and fieldfare.

<table>
<thead>
<tr>
<th>Eastern Villages</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivers</td>
<td>5.93</td>
</tr>
<tr>
<td>Lowland mixed deciduous woodland</td>
<td>1.35</td>
</tr>
<tr>
<td>Lowland meadows</td>
<td>0.92</td>
</tr>
<tr>
<td>Ponds</td>
<td>0.06</td>
</tr>
<tr>
<td>Total</td>
<td>8.26</td>
</tr>
</tbody>
</table>

Hedgerows 570.86m

Traditional Orchards 4

Table 3.2 Priority habitats within the Eastern Villages GI Network

3.2.3 Useful links

East of Swindon Evidence Update 2011

Forestry Commission leaflet for Nightingale Woods

Swindon Eastern Villages Transport Study 2011
4. Delivery Projects and Conservation Opportunities in Swindon

Great Western Community Forest

Initiated in the early 1990s, the Great Western Community Forest (GWCF) is one of England’s 12 Community Forests where local people and organisations are working together to create a better environment. GWCF is creating high-quality environments for local people by diversifying land-use, revitalising derelict landscapes, enhancing biodiversity and providing new opportunities for leisure, recreation, cultural activity, education, healthy living and social and economic development. GWCF continues to play a crucial role in contributing to sustainable development in Swindon, the urban fringes and in the varied and beautiful surrounding countryside.

Swindon Twilight Bat Project

A Heritage Lottery Fund project run by Wiltshire Wildlife Trust which aims to inspire residents of Swindon Borough about bats and engage them in the conservation of their local bat populations. This community focused project aims to train a group of local volunteers in bat work, e.g. the use of bat detectors, bat box checking and other bat conservation measures. Public events, including bat walks, talks and displays, aim to raise awareness and educate a wide range of people about these fascinating but often misunderstood and highly vulnerable creatures. The project also aims to generate bat records and undertake baseline surveys, contributing towards species distribution data across Swindon Borough. The project is also concerned with helping to conserve the priority habitats which are vital to the long term survival of bats such as woodland, riparian and green corridors.

County Wildlife Sites Project

The County Wildlife Sites project is integral to the monitoring and conservation of priority habitats in Wiltshire and Swindon. At present there are more than 1,500 recognised Wildlife Sites in Wiltshire and Swindon, with 24 within the Swindon urban area covering approximately 170 ha of land. The County Wildlife Sites project generally has quite good coverage of neutral and calcareous grassland and larger woodland sites. However, more survey effort is needed to incorporate smaller parcels of priority habitats (generally less than 2 hectares) which have received less monitoring effort or inclusion as Wildlife Sites. This is particularly applicable to areas within and surrounding the Swindon urban area where priority habitats are primarily restricted to smaller patches within the urban environment. Considerable biodiversity benefits could be attained by increasing the scope of the County Wildlife Sites project to include hedgerows, traditional orchards and arable margin habitats which form important components of the wider ecological network and GI structure.

Swindon Green Infrastructure Strategy

Swindon Borough Council has already produced a Green Infrastructure Strategy 2010-2026. Planning for, and enhancing Swindon’s Green Infrastructure is an essential part of realising the long term aspirations embedded within Swindon’s Community Strategy and the medium term priorities set out in One Swindon. The Swindon GI Strategy should be consulted for strategic guidance on restoring and enhancing the interconnected network of open spaces and green corridors across Swindon Borough and beyond. If GI is to play a central role in Swindon’s sustainable growth it is essential that GI planning is integrated with, and supports, other key local plans and strategies and ultimately the Community Strategy and its delivery plan:
One Swindon. Moreover, the delivery of components of the proposed GI network and wider GI is dependent on plans and activities embedded within other key documents such as the Great Western Community Forest Plan, North Wessex Downs AONB Management Plan, Cotswold Water Park, and National Trails’ strategies.

Swindon Local Plan 2026

The Swindon Local Plan 2026 includes specific policies for the conservation and enhancement of areas identified in the Swindon Urban Area section of the Landscape addition to the Wiltshire and Swindon Biodiversity Action Plans. The Local Plan outlines the council’s policies for the Borough, including specific policies relating to the urban area. Policy SC2 relates to Swindon’s urban centre. This policy states that the priorities for the green space network across Swindon’s urban area are:

- Strengthening the connections along and extending Swindon’s existing green corridors;
- Greening Swindon town centre through the delivery of a ‘green spine’.

A section on ‘Safeguarding our environment for future generations’ is included within the Swindon Local Plan. This includes policies which aim to:

- Protect and enhance Swindon’s sense of place, landscape and historic setting;
- Adapt to and mitigate the impact of climate change;
- Deliver a network of green spaces for people and wildlife;
- Reduce waste and make more efficient use of all environmental resources;
- Maximise opportunities to deliver energy from local renewable sources.

Suitable development sites that are necessary to delivery of the Local Plan have been identified through the council’s Site Allocations Development Plan Document (DPD). Future developments are currently focussed on Wichelstowe, the Eastern Villages, Tadpole farm, Commonhead and the regeneration of the town centre. It is important to ensure that the vision and policies outline in the Local Plan are implemented to safeguard and enhance the natural environment within and adjacent to these development areas.

Swindon’s Central Area Action Plan (CAAP)

The CAAP details proposals for regeneration of Swindon Town centre and the wider central area of the town. The CAAP includes policies and proposals on green roofs, enhancing GI through Central Swindon and reinstatement of the canal through Swindon. Improvements to the GI within the town centre are focused around the development of a Green-Spine with enhanced links to existing parks and open spaces. Green roofs have a particularly important role to play within Swindon’s Town Centre where opportunities for creating new green-spaces are limited and where the benefits of enhanced GI could be far-reaching.

Water Framework Directive and Flood Risk Management

The Environment Agency is leading actions to improve water quality and achieve good ecological status in rivers and other water bodies by 2015 to comply with the EU Water Framework Directive. It is also working with partners to ensure that water supplies and waste water are well managed, to help reduce abstraction and pollution. In particular, work is underway to reduce the impact on the River Kennet of water abstraction to supply Swindon by securing alternative supplies. In addition to this it is important to ensure that the new statutory duties imposed on local authorities to manage flood risk also benefit biodiversity. There have been significant works put in place to manage waterways in areas of Swindon at risk from flooding such as at Haydon Wick. These works have included the removal of vegetation and scrub along the Haydon Wick Brook.
which provide important nesting sites for birds and cover for other wildlife. Flood risk management works should not negatively impact biodiversity, with efforts made to increase overall biodiversity through mitigation and offsite measures.

**Local Community Action and volunteering**

Community action and local volunteering are key to the approach for wildlife conservation in Swindon. Decision making is being localised in Swindon with power being devolved to the Localities of which there are seven in Swindon; North, North East, North Central, East, West, South and Town Centre (see Appendix, figure 10). There are increasing efforts to move decision making to the heart of communities and organisations such as ‘One Swindon’ are helping to tap into grass roots grants held by the Localities. Local groups are important in conserving the priority habitats within their local area with examples of community working at Seven Fields Local Nature Reserve, Peatmoor Copse, Highworth Countryside Park, vision for Wroughton. Additionally, there are active volunteers groups coordinated by the Wiltshire Wildlife Trust and Swindon Borough Council Volunteer Rangers.

**Nature Reserves and Country and Local Parks**

There are a number of Local Nature Reserves in the Swindon urban and peri-urban areas which contribute at a local level to the protection of areas of priority habitat and green spaces. There are four within the Swindon urban area: Seven Fields in north Swindon and Radnor Street Cemetery, Rushey Platt Canal Park, and the Quarry Wildlife Garden in and around south Swindon and Old Town. In the peri-urban area there are several larger reserves; Coate Water to the south of Swindon, Stanton Park to the north and Jubilee Lake near Royal Wootton Bassett. These Local Nature Reserves form a strong component of the GI network and represent important areas for wildlife within the urban area from which green corridors should be established. The Wiltshire Wildlife Trust has four reserves in the Swindon urban area: Swindon Lagoons, Rivermead, Rushey Platt and Hagbourne Copse. There is also a high concentration of reserves within northern Wiltshire and Swindon Borough with twenty further reserves in this area. Further details of WWT reserves can be found via the Trust’s [reserves website](#).

**Biological Monitoring and State of the Environment Report**

The Wiltshire and Swindon Biological Records Centre now have over one million records. This provides an important resource and a great opportunity for monitoring species and habitat data within Wiltshire and Swindon. Advanced filtering and analysis of this data is required to identify reliable long term data sets which can be used to analyse trends in species and habitats numbers. The annual State of the Environment report for Wiltshire and Swindon produced by Wiltshire Wildlife Trust provides data and analysis of the status and trends in a wide range of environmental issues, including land use, climate change, air quality and waste. The reports and further detailed sources of information are available on the [Wiltshire Intelligence Network website](#).
5. **Glossary**

**Areas of Outstanding Natural Beauty (AONBs)** - AONBs are designated areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes.

**Biodiversity** - Biodiversity is a term used to describe the variety of living things. It includes all species of plants and animals, the genetic variation amongst them, and the complex ecosystems of which they are a part. The term itself is formed from the combination of the two words ‘Biological’ and ‘Diversity’.

**Chalk Downland** - Downland is formed when chalk formations are raised above the surrounding rocks. The chalk slowly erodes to form characteristic rolling hills and valleys. As the chalk layer is generally tilted, chalk downland formations typically have a marked scarp slope on one side, which is very steep (an escarpment), and a dip slope on the other. Areas of downland are often referred to as 'downs'.

**Condition Assessments** - The condition of the SSSI land in England is assessed by Natural England, using categories agreed across England, Scotland, Wales, and Northern Ireland through the Joint Nature Conservation Committee. There are six reportable condition categories: favourable; unfavourable recovering; unfavourable no change; unfavourable declining; part destroyed and destroyed.

  - **Main habitat** - The broadest classification of the feature on the unit selected from a list of habitats based on the BAP Broad Habitat classification.

  - **Favourable** - Favourable condition means that the SSSI land is being adequately conserved and is meeting its 'conservation objectives', however, there is scope for the enhancement of these sites.

  - **Unfavourable declining** - This means that the special interest of the SSSI unit is not being conserved and will not reach favourable condition unless there are changes to site management or external pressures. The site condition is becoming progressively worse.

  - **Unfavourable recovering** - Unfavourable recovering condition is often known simply as 'recovering'. SSSI units are not yet fully conserved but all the necessary management measures are in place. Provided that the recovery work is sustained, the SSSI will reach favourable condition in time.

**County Wildlife Site (CWS)** - This is a non-statutory designation for sites of county significance for wildlife or geology. Positive management of CWSs is encouraged and development affecting them is controlled by Local Plan policies.

**Earth Heritage** - These sites display sediments, rocks, fossils, and features of the landscape that make a special contribution to our understanding and appreciation of Earth science and the geological history of Britain.

**Ecosystem** - An ecosystem is a functional unit consisting of all the living organisms (plants, animals, and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be of any size, for example: a log, a pond, field, forest, or the earth's biosphere. However, it always functions as a whole unit.

**Green Infrastructure** - Green Infrastructure is the interconnected network of parks, woodlands, waterways and open spaces that help sustain Swindon’s environmental health, economy, and quality of life.
Local Nature Reserve (LNRs) - Local Nature Reserves are for both people and wildlife. They are places with wildlife or geological features that are of special interest locally. They offer people opportunities to study or learn about nature or simply to enjoy it. There are now over 1500 LNRs in England - visit the Natural England website to find out more.

Neutral meadow - These occur on soils that are neither markedly acid nor basic. The term applies to areas that have not been subject to any significant degree of agricultural intensification.

Sites of Special Scientific Interest (SSSI) - SSSIs cover 8% of England's land area - they are the country's best wildlife and geology sites. Visit the Natural England website for more information, including documents on how sites are designated as SSSIs.

Swindon Green Infrastructure Networks – Identified in the Swindon Green Infrastructure Strategy, Swindon’s GI Networks are based around existing resources are proposed at three spatial scales: Strategic, sub-regional and local urban/peri-urban. Collectively, they provide a focus for investment in GI across the Borough and identify the best opportunities for connecting up Swindon’s remaining green spaces and areas of important habitat.

Unitary Authority - A unitary authority is a type of local authority, which has a single-tier and is responsible for all local government functions within its area. Swindon Borough is now a Unitary Authority separate from Wiltshire.
6. Appendix - Supporting Maps

Figure 6.1 Statutory and non-statutory wildlife site designations in Swindon.

Wildlife Site Designations
- Wiltshire Wildlife Trust Reserves
- Local Nature Reserves
- Sites of Special Scientific Interest
- County Wildlife Sites

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Figure 6.1 Priority habitats, Strategic Nature Areas and GI Networks in Swindon. Reproduced from 1:25,000 Scale Colour Raster by permission of Ordnance Survey® on behalf of HMSO. © Crown copyright 2013. All rights reserved. Licence number 100005798. SNA boundaries © Natural England copyright 2005. Priority habitats data © WSBRC 2012, reproduced with permission of WSBRC.
Figure 6.2 The seven Swindon Localities: North, North East, North Central, Town Centre, East, West and South.