

## PROTECTING THE NATURAL ENVIRONMENT

<b>Indicator 33 (Core)</b>	<b>Change in areas and populations of biodiversity importance, including:</b> i. change in priority habitats and species (by type); and ii. change in areas designated for their intrinsic environmental value including sites of international, national, sub-regional or local significance.
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### Objective

To conserve and enhance Oxford's biodiversity, particularly in relation to priority habitats and species.<sup>1</sup>

### Target

Local policy on biodiversity is set out in the Oxford Local Plan 2001 – 2016 and the Oxford Community Strategy which states that the City Council will work to conserve, enhance, and increase access to the natural environment in Oxford by supporting the development of a partnership action list with local and community conservation groups by April 2005. This is to include the development of guidance for developers on protecting and promoting biodiversity. Work has commenced on this project and it is hoped that the action list and guidance for developers will be produced by April 2006.

To avoid development (or land management) which adversely affects priority species and habitats. To enhance, or restore, sites containing priority habitats or species and take measures to reduce their fragmentation and isolation by creating linkages between sites where the opportunity arises.

### Data analysis

#### i. UK BAP Priority Habitats & Species

In this first year of monitoring, the data establishes the baseline information. In future years changes in the area will be measured.

#### Priority Habitats

The figures provided by the Environmental Record Centre indicate that there are the following UK BAP priority habitats in Oxford:

Habitat Type	Oxford (ha)	County Context (ha)	% of County Total in Oxford
Lowland mixed deciduous woodland	10.7	2,467.5	0.43%
Wet woodland	5.8	98.4	5.89%
Wood pasture & parkland	12.1	101.3	11.94%
Lowland meadow	235.9	1,100.8	21.4%
Fen	16.2	92.6	17.6%
Reedbeds	1.0	6.5	15.38%

<sup>1</sup> Priority habitats and species have been identified by the UK Biodiversity Steering Group, set up by the Government to advise on the implementation of the UK Biodiversity Action Plan (BAP). Priority habitats fulfil at least one of the following criteria: they are at risk, experiencing a high rate of decline, or are important habitats for priority species. Priority species are globally threatened or are rapidly declining in the UK, ie by more than 50% in the last 25 years.

The data only relates to sites designated for their nature conservation interest. Generally recent data (5 years old) has been used for Sites of Local Importance for Nature Conservation (SLINC), but older data (approximately 15 years old) for Sites of Special Scientific Interest (SSSI). Non-designated sites will be mapped for UK BAP priority habitats by 2006.

The above figures reveal that Oxford contains a significant area of several UK BAP Priority Habitats. This is particularly marked in the case of lowland meadow, where over a fifth of Oxfordshire's area of this habitat is found within Oxford. Indeed owing to the severe losses of this habitat since 1945, Oxford now has 1.57% of the total UK habitat area for this habitat.

Almost equally significant is the 16.2 ha of fen, which provides 17.6% of Oxfordshire's area of this habitat. Fen is a nationally rare and threatened habitat, which is virtually confined to parts of Oxfordshire, East Anglia and North Wales. There are no UK figures available for fen habitat, but it is likely that Oxford's contribution is as significant as for lowland meadows.

## UK BAP Priority Species

The Environmental Record Centre has indicated that 19 UK BAP Priority Species are found in Oxford.<sup>2</sup> There are 69 UK BAP Priority Species in Oxfordshire and 382 UK BAP Priority species in the UK as a whole.

### ii. change in areas designated for their intrinsic environmental value including sites of international, national, sub-regional or local significance

The data supplied by the Environmental Record Centre indicates that there are the following areas of land which have been designated for their nature conservation importance in Oxford:

Type of Site	Oxford (ha)	County Context (ha)	% of County Total in Oxford
Special Area of Conservation (SAC)	177.7		
Sites of Special Scientific Interest (SSSIs)	278.2 <sup>3</sup>	4,401.1	6.32%
Sites of Local Importance for Nature Conservation (SLINCS) <sup>4</sup>	202.5		

Oxford has part of one site of international importance for nature conservation. This is the Oxford Meadows Special Area of Conservation, which consists of Port Meadow/Wolvercote Common and the meadows north of Wolvercote, as well as a large area north of the A34, which is outside the city boundary. English Nature has designated 12 SSSIs that are wholly or partly within Oxford, on account of their national ecological or geological importance. The table above indicates that Oxford has a significant proportion of the total area given SSSI status in Oxfordshire. A large area has also been given SLINC status, a local designation made by the City Council. As 6.1% of Oxford consists of SSSIs and a further 4.45% has been given SLINC status, the total area, which has been designated for its nature conservation value is 10.55%, a very significant part of Oxford, given its predominantly urban character. The percentage of land given SSSI status is also far above that in neighbouring districts, with only 1.7% of the whole area of Oxfordshire having received this designation.

<sup>2</sup> The 19 UK BAP priority Species found in Oxford are Brown Hare, Pipistrelle Bat, Water Vole, Bullfinch, Common Scoter (occasional visitor), Corn Bunting, Linnets, Reed Bunting, Skylark, Song Thrush, Spotted Flycatcher, Tree Sparrow, Turtle Dove, Creeping Marshwort, Great Crested Newt, Buttoned Snout Moth, *Pisidium tenuilineatum* (a pea mussel), *Lucanus cervus* (Stag Beetle), and *Ceutorhynchus insularis* (a weevil).

<sup>3</sup> This includes the area designated as a Special Area of Conservation as this area also has SSSI status.

<sup>4</sup> This includes sites designated in the Oxford Local Plan 2001 – 2016 which is due to be adopted in December 2005.

## Commentary

The data presented above indicates that Oxford contains a very significant resource for biodiversity. Government guidance on this topic has recently been strengthened by the publication of Planning Policy Statement 9 on 'Biodiversity and Geological Conservation'. This document states that a key principle of plan policies and planning decisions should be to maintain, and enhance, restore or add to biodiversity and geological conservation interests. It also encourages local planning authorities to use Local Development Frameworks to identify areas or sites for the restoration or creation of new priority habitats, which will contribute to regional targets. The statement also points out that development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. In the years ahead the City Council will need to take advantage of these opportunities in order to ensure that Oxford's biodiversity resource is maintained and enhanced and that it continues to perform well against these indicators. While this year the City Council is establishing the baseline situation, the facts and figures present an encouraging picture for biodiversity in Oxford.

On target? ✓

<b>Indicator 34 (Contextual)</b>	<p><b>To assess the richness of local biodiversity and the impact of habitat enhancement measures by monitoring:</b></p> <ul style="list-style-type: none"> <li>• The distribution and status of water voles;</li> <li>• The condition of Sites of Special Scientific Interest (SSSIs);</li> <li>• The distribution and status of farmland birds;</li> <li>• Distribution and status of garden butterflies.</li> </ul>
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### Objective

To conserve and enhance the biodiversity of Oxford.

### Target

To halt further decline. In relation to SSSIs the Government's Public Service Agreement target is for 95% of SSSI land to be in a favourable or recovering condition by 2010.

### Data analysis

These indicators have been chosen as a representative sample to indicate the biodiversity health of Oxford. They have been selected to reflect the different types of wildlife found in Oxford and because these groups of organisms/sites are already monitored, so data is readily available. The Environmental Record Centre has collected data for these indicators across Oxfordshire so it is possible for the City Council to compare the situation with other parts of the County. Brief details about these indicators and the potential for the City Council to influence their status are provided in Appendix 3.

### The distribution of Water Voles

1,054.9 ha of Oxford has been measured as a Key Area positive for Water Voles. The total Key Area in Oxfordshire is 9,645.2 ha. 10.93% of the total Key Areas for Water Voles in Oxfordshire, therefore occur in Oxford. A Key Area is a watercourse where major or important populations have been found. The Key Areas in Oxford where Water Voles are found are Bayswater Brook, Oxford Canal, Littlemore and Northfield Brook and Osney Ditch/Bullstake Stream. These areas are regularly monitored and the data is derived from the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT). Despite the discovery of some new colonies, numbers of Water Voles in Berkshire, Buckinghamshire and Oxfordshire have severely declined in the last two years. Water Voles are a UK BAP priority species.

### Condition of SSSIs

The condition of SSSIs in Oxford is set out in the table below:

Condition	Sum of hectares	% of District Resource
Favourable	244.82	88
Unfavourable declining	5.05	2
Unfavourable no change	3.71	1
Unfavourable recovering	24.66	9
TOTAL	278.24	100

Source: English Nature Web site. Data collected by Environmental Record Centre. The data was collected predominantly in 2004 and 2005 but a small amount was collected from earlier years.

The figures indicate that 88% of Oxford's SSSIs are in a favourable condition and a further 9% is in an unfavourable but recovering condition. This is a major achievement and indicates that Oxford is already meeting the Government's target for 2010 for SSSI land. The SSSI situation in Oxford also compares very favourably with that in the other Oxfordshire districts, the County as a whole and the overall England figures as indicated by the table below.

Condition	Cherwell % of District Resource	South Oxfordshire % of District Resource	Vale of White Horse % of District Resource	West Oxfordshire % of District Resource	Oxfordshire % of County Resource	England % of Country's resource
Favourable	44	53	30	46	48	45
Unfavourable declining	11	1	1	1	3	12
Unfavourable no change	19	12	19	2	12	20
Unfavourable recovering	26	33	50	50	38	23
TOTAL	100	100	100	100	100	100

These good figures are a credit to those owning and managing Oxford's SSSIs. In particular this includes the City Council who through its Countryside Service manages Magdalen Quarry; Rock Edge; part of Lye Valley and, in conjunction with the Wolvercote Commoners Committee and the Freemen of Oxford, the large area of Port Meadow and Wolvercote Common. In addition the City Council owns and manages the very large Shotover and Brasenose Wood SSSI which occupies 113.24 ha, most of which is outside the City boundary. All of these areas are in 'favourable' condition, apart from Lye Valley, which is classified as 'unfavourable recovering', but is now well on the way to recovery as a result of the City Council's active management of this site. The City Council also owns most of Iffley Meadows SSSI, which is managed on its behalf by BBOWT and the City Council owned parts are in 'favourable' or 'unfavourable recovering' condition. The good state of Oxford's SSSIs is also a tribute to the other SSSI landowners who include the University Chest; Oxford University Press; various colleges and the Oxford Preservation Trust.

The southern part of the Hook Meadow and Trap Grounds SSSI was in a declining condition, but has been brought into a recovering condition, through City Council officers negotiating with the landowner, St Edwards School, English Nature (who provided a grant) and a local farmer whereby a stock proof fence has been erected and the site has now been brought back into suitable management.

### **The distribution and status of farmland birds**

The farmland bird index is based on a list of 19 farmland bird species.<sup>5</sup> The data is derived from the British Trust for Ornithology (BTO) and the Royal Society for the Protection of Birds (RSPB). The data has been drawn from reliable breeding bird surveys. The number of surveys within districts are, however, relatively small and below the advised thresholds for BTO Breeding Bird Surveys and so the figures should be treated with some caution.

Based on the surveys an index has been derived for farmland birds. The indices for Oxford and Oxfordshire, against a baseline figure of 1, are as follows:

Oxford	1.36
Oxfordshire	0.63

The figures show a rise in the Oxford index against the 1997 Index value, which is when surveys began. The Oxford figures are consistently higher than the Oxfordshire figures, which would seem to indicate that farmland birds are doing better in Oxford than Oxfordshire as a whole. This may be

<sup>5</sup> The 19 farmland bird species that are monitored are Kestrel, Grey Partridge, Lapwing, Turtle Dove, Skylark, Yellow Wagtail, Starling, Tree Sparrow, Linnet, Yellow Hammer, Reed Bunting, Corn Bunting, Woodpigeon, Jackdaw, Rook, Greenfinch, Goldfinch, Stock Dove, Whitethroat,

because much of the farmland in Oxford is managed by traditional agricultural techniques, rather than the intensive agriculture found in many other parts of Oxfordshire. However, it should be noted that the small sample size may be distorting trends and introducing statistical error.

### **Distribution and status of garden butterflies**

22 out of 22 'garden butterflies' are present.<sup>6</sup> 20 are widespread and 2 uncommon. The two uncommon are the Wall and the Essex Skipper.

Most of the common butterfly species would seem therefore to be doing fairly well in Oxford. It should be noted, however, that the results given for this indicator are general and based mainly on information that is over five years old. This indicator will be refined as more up to date information becomes available.

### **Commentary**

The data supplied indicates a generally encouraging situation for wildlife in Oxford. The one exception is the Water Vole which is declining rapidly both in Oxfordshire and the country as a whole. Oxford and the Thames Valley have traditionally been a stronghold of this species. In 1989/90 72% of survey sites in the Thames catchment were found to be occupied. By 1996-98 this figure had fallen to 24%. Sadly numbers are continuing to fall and if present trends continue, the Water Vole is likely to become extinct in the Oxford area before very long. If this decline is to be prevented it is important that habitat is conserved and appropriately managed; that opportunities are taken to create more Water Vole habitat and that the population of American Mink are controlled around sites where Water Voles are found. It is encouraging that a good population of Water Voles have become established at the Oxford Science Park. Under the terms of a planning agreement, these ponds are managed so as to provide suitable habitat for Water Voles. This indicates how new developments can create new areas of habitat as part of the planning process.

The report on the condition of Oxford's SSSIs is very encouraging, given that unlike most other areas, Oxford has already met a Government target for 2010. As the Wildlife and Countryside Act 1981 (as amended<sup>7</sup>) states that public bodies must 'take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of SSSIs', it is important that the City Council seeks to ensure that those small parts of Oxford's SSSIs which are in an unfavourable condition, and are not recovering, are put on the way to recovery. The particular, areas concerned, none of which are in City Council ownership, are:

- Hook Meadows and the Trap Grounds SSSI: Northern part.
- A small part of the Iffley Meadows SSSI on the east bank of the Thames.
- Lye Valley: a privately owned area south of the area managed by the City Council.
- Wolvercote Green where planning permission has been granted for the erection of a 1.5 metre high fence to enable grazing to be reintroduced.

Discussions will take place with English Nature on ways to ensure that these sites come into a recovering condition, so that hopefully in 2010 Oxford will have 100% of its SSSI sites in a 'favourable' or 'unfavourable recovering' condition.

From the data currently available, it would seem that farmland birds and garden butterflies are currently doing reasonably well in Oxford.

### **On target? N/A**

No target appropriate, as this is contextual information.

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<sup>6</sup> The species surveyed are Small Skipper, Essex Skipper, Large Skipper, Brimstone, Large White, Small White, Green-veined White, Orange-tip, Small Copper, Common Blue, Holly Blue, Red Admiral, Painted Lady, Small Tortoiseshell, Peacock, Comma, Speckled Wood, Wall, Marbled White, Gatekeeper, Meadow Brown, and Ringlet.

<sup>7</sup> Amended by the Countryside & Rights of way Act 2000

<b>Indicator 35 (Core)</b>	<b>Number of permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality</b>
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**Objective**

To take the Environment Agency’s advice into account when determining planning applications which have a potential impact on the water environment.

To prevent further development in the undeveloped flood plain; prevent development which will lead to additional flooding problems, and to prevent development which would adversely affect water quality

**Target**

To ensure that all planning applications granted planning permission will not have an adverse impact on flooding or water quality. To support schemes which would improve water quality and reduce the risk of flooding.

**Data analysis**

There were no major applications to which the Environment Agency objected on flood defence grounds during the monitoring period. Major applications are defined in the Glossary.

The Environment Agency did object to two minor applications. In both cases the applications involved the erection of a new dwelling within the curtilage of an existing dwelling. In both cases the City Council took the view that given Government advice supporting the development of previously developed land and the proposed mitigation measures, including the creation of underfloor voids to accommodate flood water, that planning permission should be granted.

There were no applications during the monitoring period where the Environment Agency objected on water quality grounds.

**Commentary**

The data currently available indicates that during the monitoring period the City Council has not approved any major schemes, which are likely to have significant implications for flood risk or water quality. Only two minor schemes were approved contrary to Environment Agency advice. The Oxford Local Plan 2001 – 2016, contains a set of policies on flooding which seeks to protect the undeveloped flood plain from built development, and to ensure that development within existing built up areas, where there is a risk of flooding, are only permitted where the appropriate standard of flood defence is provided, and the development will not lead to an increased risk of flooding elsewhere. These policies are based on the advice in Planning Policy Guidance note 25 on ‘Development and Flood Risk’. The Local Plan also contains a policy on water quality. Provided these policies are applied new development should not have an adverse impact on water quality or accentuate flooding in Oxford.

**On target?** **X**

## ENCOURAGING SUSTAINABLE DEVELOPMENT

<b>Indicator 36 (Core)</b>	<b>Renewable energy capacity (in mega watts) installed by type</b>
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### Objective

To maximise the amount of energy produced from renewable energy schemes in order to reduce the amount of energy derived from fossil fuels and thereby seek to minimise greenhouse gas emissions and create a low carbon economy.

### Target

The Government's target is that by 2010, 10% of electricity should be generated from renewable sources, with the aspiration that this increases to 20% by 2020<sup>1</sup>. Current national estimates of production are around 3%, so there is a long way to go.

To ensure that all new developments are designed to optimise energy efficiency in accordance with Local Plan policy<sup>2</sup>.

### Analysis

The Government indicator requires the City Council to provide details of completed renewable energy schemes, including bio fuels, onshore wind, water, solar energy, and geothermal energy.

One of the problems with monitoring renewable energy schemes in Oxford, is that in most cases they consist of solar hot water and photovoltaic schemes (using sunlight to generate electricity) on domestic properties. Normally these can be installed under permitted development rights without the need for planning permission, so that it is difficult to monitor the implementation of schemes. However, the solar guide to Oxford reveals that there are at least 76 properties with these installations in Oxford. During this monitoring period a total of 12 applications were made for grants to install solar heating systems.

Two other renewable energy scheme installed during the monitoring period consist of a groundwater heating system at 30 Norham Gardens, North Oxford and the installation of photovoltaic slates and a solar thermal panel at Alastair Binnie Architects at 52 St Giles.

### Commentary

At present only a small amount of energy in Oxford is generated from renewable energy. It is very important that this is radically increased in the next few years in order to reduce reliance on fossil fuels and emissions of greenhouse gases, which contribute to global warming.

The adoption of the Local Plan and in particular the production of the Natural Resource Impact Analysis Supplementary Planning Document will provide significant tools in persuading developers to include renewable energy in new development schemes.

**On target?** **X**

<sup>1</sup> Energy White Paper: Our Energy Future – creating a low carbon economy, CM5761, February 2003.

<sup>2</sup> Local Plan policy CP16, the Oxford Local Plan 2001-2016, Oxford City Council, December 2005