

## ENVIRONMENT

### BIODIVERSITY

**OBJECTIVE:** to conserve and enhance Oxford's biodiversity, particularly in relation to priority habitats and species.

Indicator/type of indicator		Targets	On target?
19 contextual	Local biodiversity measures	Development should not result in a reduction in areas or populations of biodiversity importance.	✓

#### 19. Local Biodiversity Measures

##### i. Change in area of UK Biodiversity Action Plan (BAP) priority habitat.

As reported in previous years, although the aim is for the habitat data to record actual changes in UK BAP priority habitats on a year-on-year basis, there is still an overall lack of data to adequately capture the baseline situation. This situation is improving, but slowly. The tabulated data represent a refining of the baseline position as new mapping of the survey data is undertaken. Only the habitat types relevant to Oxford have been included in table 1 below.

**Figure 40: UK BAP priority habitat resource in Oxford City**

	Area (hectares) 2006	Area (hectares) 2007	County context 2006	County context 2007	UK context
Eutrophic standing water	10.2	10.2	919.0	929.6	1785km <sup>2</sup>
Fens	17.3#	17.2#	131.8#	142.9#	No data avail.
Lowland meadows	233.9	233.2	993.7	1080.0	15,000
Lowland mixed deciduous woodland	40.3	47.7	3961.1	4555.0	No data avail.
Lowland wood pastures and parkland	12.1	11.2	1448.9	1844.0	10,000-20,000
Reedbeds	1.1	1.0	25.8	25.8	5,000
Wet woodland	6.1	6.2	108.7	138.4	50,000-70,000
<b>Total area of BAP priority habitat</b>	320.87	326.7	9259.1	10664.6	No data avail.

# Combined figure of Fen and Reedbed resource

##### ii. Change in number of UKBAP priority species.

There has been a change in the numbers of species of UK BAP priority species as a consequence of a national review undertaken in the last 18 months. The list of species has increased considerably. As a consequence, the number of UK BAP priority species found within Oxford has increased from 23 recorded in 2006 to 96 in 2007. The increase does not

represent improvements in the management of biodiversity in Oxford, simply a reflection of the new longer list.

### iii. Change in areas of sites designated for their intrinsic environmental value

Figure 41 provides details of the areas of the various sites designated for their intrinsic environmental importance and their associated area. There has been no change in area in many of these sites between 2006 and 2007, as changes to them are infrequent. However, changes in the area of County Wildlife Sites in Oxfordshire (although not in Oxford) have occurred.

**Figure 41: Areas of sites designated for their intrinsic environmental value**

Designated site	Area in hectares (2007)	Area in hectares (2008)
Sites of Special Scientific Interest (SSSI)	278.2	278.2
Special Areas of Conservation (SACs)	177.1	177.1
County Wildlife Sites	63.5	63.5
Sites of Local Interest for Nature Conservation (SLINCs)	202.5	202.5
Local Nature Reserves	11.5 (3 sites)	11.5 (3 sites)
Regionally Important Geological or Geomorphological Sites (RIGS)	2.0 (2 sites)	2.0 (2 sites)
Losses additions of sites		0

### iv. Distribution and Status of Water Vole

Information for this indicator is entirely from systematic survey work carried out by trained volunteer surveyors and co-ordinated by the Buckinghamshire, Berkshire and Oxfordshire Wildlife Trust (BBOWT) as part of a wider water vole project. The local Wildlife Trust (BBOWT) has only recently recruited a new water vole project officer and, consequently, water vole survey data have not been gathered for a full reporting year. It is envisaged that new data will be forthcoming in 2009.

### v. Condition of Site of Special Scientific Interest (SSSIs)

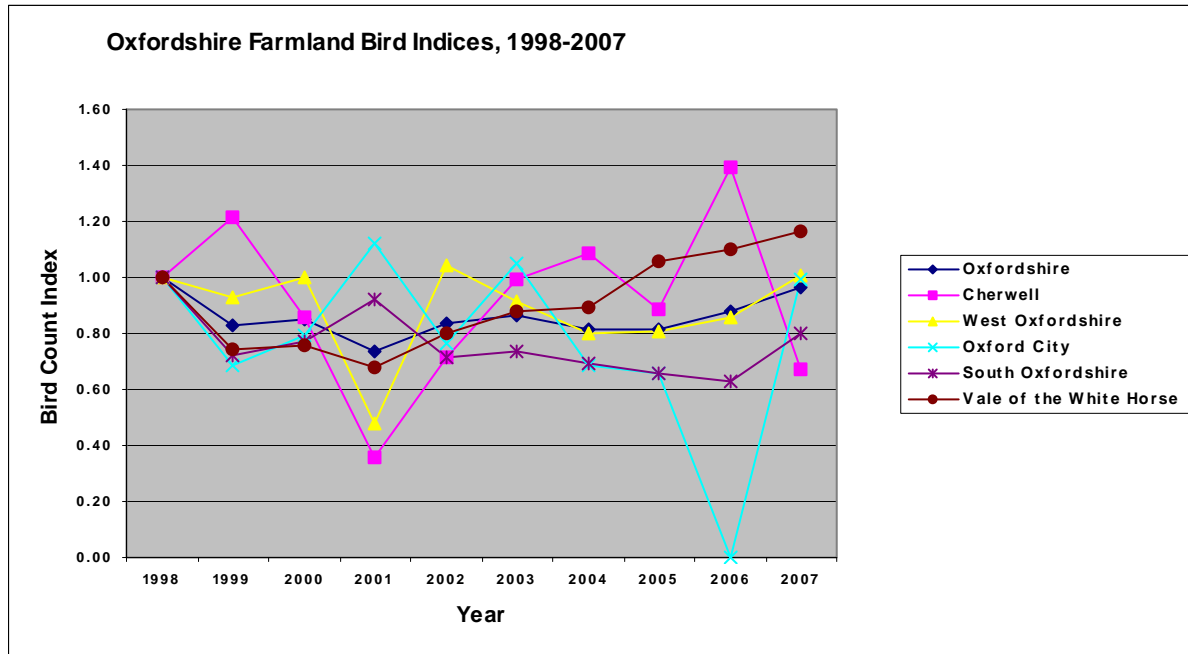
The figures for Oxford are broadly the same as for 2006/7 and indicate that in 2007/8 88% of Oxford's SSSIs are in a favourable condition. However, a 9.46% are in an unfavourable but declining condition. Overall the figures are very encouraging and indicate that Oxford is meeting the Government's target for 2010 for SSSI land. The figures for Oxford also far exceed those for Oxfordshire and England.

### vi. Distribution and status of farmland birds

This indicator uses an established list of 19 species, identifiable as farmland birds, compiled by the Royal Society for the Protection of Birds (RSPB). Records associated with these species generated through British Trust for Ornithology breeding bird surveys in specific 1km x 1km squares are then used to determine a farmland bird index. The Thames Valley Environmental Records Centre has obtained these records and followed the RSPB methodology to plot the trend in changes in the index over time. To establish a timeframe from which any kind of meaningful trend can be identified, a shifting baseline has been used and changes in bird populations in subsequent years (over a 10 year window) are then relative to that baseline year. In this case, the figures have used a baseline of 1998.

There has been a marked improvement in the farmland bird index in Oxford from 2006 to 2007 as no surveys were undertaken in Oxford during 2006. The numbers of species identified in 2007 surveys was an improvement on those surveyed in the last two years when surveys were undertaken (2004 and 2005). 9 species were recorded in 2007 whilst only 5 and 6 species were recorded in 2005 and 2004 respectively.

**Figure 42: Distribution and status of farmland birds in Oxfordshire**



#### iv. Distribution and Status of garden butterflies

A complete set of garden butterfly data for 2007 was not available from Butterfly Conservation this year for analysis and presentation within this AMR. The view of local experts is that the long term trends for the 22 indicator butterflies remain the same in previous years. However, there is no doubt that the summer weather conditions for butterflies in 2007 were not favourable.

### Conclusions – Biodiversity

The monitoring data shows that Oxford maintains a strong biodiversity resource. Further evidence gathering over the next few years will enable more meaningful comparisons to be made. Improvements in the bird count index have been made and the majority of SSSIs are in favourable condition.

<b>FLOODING</b>			
<b>OBJECTIVE: To take the Environment Agency's advice into account when determining planning applications which have a potential impact on the water environment.</b>			
<b>Indicators/type of indicator</b>		<b>Targets</b>	<b>On target?</b>
<b>20 core</b>	<b>Permissions contrary to Environment Agency (EA) advice</b>	EA advice should be followed when determining applications.	✓

## **20. Permissions contrary to Environment Agency advice**

**Figure 43:** The Environment Agency objected to 6 major<sup>1</sup> applications on flood defence grounds in 2007/08

<b>Number of applications</b>	<b>Reason for Environment Agency objection</b>	<b>Response by Environment Agency</b>	<b>Outcome</b>
1	Impact on surface water run-off, sequential test not demonstrated, unsatisfactory Flood Risk Assessment (FRA)	Objection subsequently withdrawn	Refused, appeal dismissed
1	Loss of flood storage Unsatisfactory FRA	Objection withdrawn on submission of further work	Refused but allowed on appeal
1	Unsatisfactory FRA		Withdrawn
1	Unsatisfactory FRA		Pending decision
1	Request for FRA		Pending consideration
1	Request for FRA	Objection withdrawn after submission of FRA and further work.	Planning permission granted

<sup>1</sup> See Glossary for definition of major applications

**Figure 44:** The Environment Agency also objected to 14 minor applications in 2007/08

Nos of Applications	Reason for Environment Agency objection	Response by Environment Agency	Outcome
2	Unsatisfactory FRA		Withdrawn
1	Unsatisfactory FRA		Refused
1	Unsatisfactory FRA	Objection maintained after further work submitted	Permission. It is considered that every effort was made to address the Environment Agency concerns. The application was for conversion of a listed building to hotel use (with very limited additional floorspace). Flood risk will not be increased as it is an existing building. Although it was not possible to provide dry access, the hotel has 24 hour staffing and can monitor a flood risk situation, and an evacuation plan was set out for each room. The listing means there are constraints on raising floor levels. The restoration of a Grade II listed building was an important consideration.
3	Request for FRA		Refused
4	Request for FRA		Withdrawn
1	Initial objection withdrawn		Pending decision
1	Request FRA Sequential test not adequately demonstrated		Permitted. The Environment Agency were satisfied with the sequential test and that the development would not increase flood risk, but asked for conditions relating to the flood compensation plan.
1	Sequential test not adequately demonstrated		Withdrawn

**Figure 45:** Number of planning permissions granted contrary to Environment Agency advice on flooding or water quality grounds in 2007/08

	Flooding	Water quality	Total
Number of permissions	1	0	1

**Conclusions – Flooding**

In this monitoring year, one minor application was allowed despite an outstanding Environment Agency objection. The Environment Agency objection was carefully considered and weighed up against other considerations, and it was decided there was little likelihood or increased flood risk from making a decision contrary to their advice. No major applications were allowed contrary to Environment Agency advice. There were no applications during the monitoring period where the Environment Agency objected on water quality grounds.

<b>ENVIRONMENTAL QUALITY</b>			
<b>OBJECTIVE: To maximise the amount of energy produced from renewable energy schemes and thus reduce the amount of energy derived from fossil fuels, thereby reducing greenhouse gas emissions.</b>			
<b>Indicator/type of indicator</b>		<b>Targets</b>	<b>On target?</b>
<b>21 core</b>	<b>Renewable energy capacity installed by type and development complying with Natural Resource Impact Analysis (NRIA) requirements</b>	Qualifying developments should only be approved if there is a suitable NRIA. There should be an increase in renewable energy installed each year.	✓

### **21. Renewable energy capacity installed by type and development complying with NRIA requirements**

#### **i) Planning permissions granted for new renewable energy schemes**

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 it is difficult to monitor the implementation of schemes. However, often a permitted development check is carried out. During the year 2007/8, approval was given for 6 solar panel installations and 1 oil and biomass boiler. In addition, there were 8 permitted development right checks for solar panels. This is an increase on the previous 2 years.

**Figure 46: renewable energy installed by type in 2007/08**

	<b>Wind onshore</b>	<b>Solar photovoltaics</b>	<b>Hydro</b>	<b>Biomass – co-firing of biomass with fossil fuels</b>	<b>Total</b>
Permitted installed capacity MW	0	Data not currently available – aim to address issue in NRIA review	0	0	
Completed installed capacity in MW	0	0.051*	0	1 installed but no info on capacity	

\* Source TV Energy – South East England Statistics 2008

#### **ii) NRIA and sustainable buildings award**

The Natural Resource Impact Analysis SPD requires that a minimum of 20% of the energy requirement of new developments should be produced by on-site renewables. The SPD applies to larger developments of 10 or more dwellings or 2000m<sup>2</sup> or more floorspace. The following table lists the developments that qualify for submitting an NRIA, and the renewable energy technologies that will be installed on each development.

In 2006, an award for environmentally friendly, resource efficient buildings was set up as a way to promote best practice. The award is aimed at developments that incorporate resource efficient technologies and sustainable energy approaches. In 2007 the winning development

was The Ruth Deech Building, St Anne's College . The development included, amongst other features, hot water solar collectors located to meet 50% of the annual predicted hot water demand.

**Figure 47: applications received in 2007/08 that required NRIs and whether NRI requirements were met.**

<b>Application and date received</b>	<b>Application status</b>	<b>Type of development</b>	<b>% energy to be generated from renewables and type of technology</b>	<b>NRI requirement met? Reasons and notes</b>
07/01186/FUL Thompson Terrace-dominion oils 24.5.07	YET TO BE DETERMINED	85 residential units	No on-site renewables proposed	No
07/01253/FUL 61 St Aldates 04.06.07	YET TO BE DETERMINED	53 units of student accommodation and ground floor café	Solar water heating	Yes
07/01577/FUL 381-389 Cowley Road 28.06.07	WITHDRAWN	125 student rooms, 4 flats, 3 retail units	Ground Source Heat Pumps (GHSP), Solar cylinders, Photo-Voltaic (PV)	Yes
07/02448/FUL 381 Cowley Road	REFUSED 9.1.08		Ground source heat pumps/solar 20%	N/A
Said business school extension 30.07.07	YET TO BE DETERMINED	Teaching and ancillary accommodation	22.9% from GSHP, 0.7% from solar water heating	Yes
07/01872/FUL Sunnymeade Court 06.08.07	APPROVED 24.9.08	31 dwellings	Solar water and PV, possibly GSHP. Building designed to accommodate these in terms of roof angles and space in ceiling voids.	Yes.
07/02121/RE S Hernes House 10.09.07	REFUSED 19.12.07 Reserved matters application	24 flats	20% from Air to Water Heat Pumps	Yes
07/02332/FUL Exeter House 15.10.07	APPROVED 20.02.08	Accommodation for 118 students	20% from GSHP, Solar heating	Yes
07/02603/RE S	YET TO BE DETERMINED	2 applications	Initial submission failed to meet NRI	No. Application not yet determined.

Mabel Pritchard 19.11.07	Reserved matters application – appeal inquiry	-up to 35 residential units	requirements. No renewable energy. New submission with solar panels but not 20%	
07/02808 12-27 Salesian Gardens 10.12.07	APPROVED 05.03.08	16 dwellings	Solar hot water and PV	Yes
07/02809 DHL- Sandy Lane West 11.12.07	APPROVED 18.6.08	Industrial and warehouse units	Solar Wall	No- Solar wall to supply 20% of energy to large units with identified end user. Small units uncertain end user and likely to have only very small energy requirements of any particular type. Agreed not practical to achieve 20% renewables for this type of development at this time.
07/02830/RE S Plot 26 Science Park 17.12.07	APPROVED 27.02.08	Business park building	11-16% from GSHP depending on end user.	No, but application a reserved matters and NRIA not conditioned at outline stage. Also, good for this type of building.
07/02903 376 Banbury Road 21.12.07	APPROVED 8.8.08	34 room Guest House	Solar water, PV possibly Ground source heat pumps	Uncertain- not enough information available at application stage. Detailed design stage with specialist consultants will include, eg investigation into foundation type and viability GSHP. Condition that NRIA must be submitted and approved before development commences.
07/02871/FUL University sports ground 21.12.07	YET TO BE DETERMINED	Indoor Tennis Courts	22% from GSHPs, 1.7% from solar hot water.	Yes



**Conclusions – Environmental quality**

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. There are signs of an increased interest in installing renewable energy technologies. The NRIA provides a significant tool in persuading developers to include renewable energy in larger new development schemes, and the sustainable buildings award is proving to be a good incentive and provides useful publicity about renewable energy schemes.