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Highways

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Cogges Link Road Habitats and Species Overview

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Cogges Link Road
Habitats and Species Overview

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Executive Summary

- This report summarises the results of the initial data search and site surveys of the Cogges Link Road (CLR) area.
- No internationally or nationally designated sites fall within the search area.
- Witney Marsh, a local, non-statutory designated site is present. This is one of only two grazed marshes along the Windrush in Oxfordshire, and one of only four extensive grazed marshes in the county.
- Records show the presence of several protected and notable species, however, many of the records are historic, and there is a paucity of current information.
- A Phase I habitat survey identified a variety of habitats. Those of local importance include woodland, swamp, scrub and hedgerow. No rare or protected plant species were found.
- A river corridor survey found a good range of aquatic vegetation in slower flowing sections of the river, but no rare or notable species.
- The scoping analysis recommended that a number of specialist Phase II surveys be carried out, including those for bats, great crested newt, reptiles and riparian mammals.
- In the time since the original surveys, there is the potential that the ecological situation has changed, and a number of the surveys have therefore been updated.
- The remaining semi-natural habitats within the area are increasingly sensitive, and further development has the potential to result in loss of biodiversity.
- Potential impacts result from direct loss of habitat and severance.
- There should be a general presumption against loss of semi-natural habitats, however, where this is unavoidable, similar areas of at least equivalent size should be provided.
- Standard mitigation measures should be employed during construction.
- A detailed ecological monitoring programme would be incorporated into the long term management plan for the area, to ensure that there is no lasting detriment to the ecological environment.

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Appendix 1 – Oxfordshire Wildlife and Landscape Study (OWLS) - an investigation of landscape character and biodiversity across Oxfordshire.

Appendix 2 - Supplementary Information

Oxfordshire Biological Records Centre Data Search (2002)

- Species list

Thames Valley Environmental Records Centre Data Search (2007)

- List of protected and notable species
- Map of designated sites
- Citation for designated sites

Phase I Habitat Survey

River Corridor Survey

1 Introduction

- 1.1.1 This report contains details relating to the ecological and nature conservation interest within the study area for the proposed Cogges Link Road (CLR). It summarises the results of the initial data search and site surveys, as well as scoping of additional specialist surveys. The key impacts arising from the proposed scheme and suggested mitigation measures are discussed in broad terms within this report.
- 1.1.2 There is a comprehensive system of legislation, both domestic and international, which aims to protect biodiversity at the landscape, habitat or ecosystem and species level which are relevant to this scheme.

1.2 International Legislation

EC Council Directive on the Conservation of Wild Birds (79/409/EEC)

- 1.2.1 All member states are required to take measures to protect wild birds and also to preserve sufficient diversity of habitat for all species naturally occurring within the territories in order to maintain their populations at an ecologically and scientifically sound level. The mechanism for protection is through the designation of Special Protection Areas (SPAs). Species whose status is a cause for concern are specifically identified in Annex 1 of the Directive for special conservation measures.

Ramsar Convention on the Conservation of Wetlands of International Importance

- 1.2.2 The Convention has the status of a legal treaty and requires parties to inform the secretariat to the Convention of any changes or likely changes to the ecological character of designated sites.

Berne Convention on the Conservation of European Wildlife and Natural Habitats 1979

- 1.2.3 The Convention carries an obligation to protect and conserve a wide range of flora and fauna, including their habitats, especially those listed as endangered or vulnerable. It requires contracting parties to ensure the conservation of the habitats of wild flora and fauna species, especially those listed in Appendices I (rare plants) and II (animals). It also requires that special attention be paid to the protection of areas of importance for migratory species such as estuaries.
- 1.2.4 Bonn Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention)

- 1.2.5 This convention provided a world wide system offering protection for all threatened migratory species. It operates through a series of species related Agreements. Bats are included in appendix 3.

EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

- 1.2.6 The Conservation (Natural Habitats etc) Regulations 1994 are the British response to the Habitats & Species Directive 1992 issued by the European Community (EC). They offer protection to a number of plant and animal species throughout the EC via the designation of Special Areas of Conservation (SACs). Proposals that would affect European protected species would be dependent on the successful submission of a licence application to the Wildlife and Management Service of Natural England. European protected species include the great crested newt *Triturus cristatus*, European otter *Lutra lutra*, all species of bats and the hazel dormouse *Muscardinus avellanarius*. From April 2008 the water vole *Arvicola terrestris* will also be protected via this mechanism.

1.3 National Legislation

The National Parks and Access to the Countryside Act 1949

- 1.3.1 This legislation is the mechanism under which Areas of Outstanding Beauty (AONBs), National Parks and Local Nature Reserves are designated.

Wildlife and Countryside Act 1981 (WCA 1981) (including subsequent amendments and updates)

- 1.3.2 This is the primary legislation covering endangered species in England and sets out the framework for the designation of Sites of Special Scientific Interest (SSSIs). It confers differing levels of protection on species themselves, their habitats or both, depending on their status. Species covered by the Act are listed in a series of schedules. These are reviewed on a five yearly basis. Protected species are listed under Schedules 1-4 (birds), Schedule 5 (animals and invertebrates) and Schedule 8 (Plants).

The Protection of Badgers Act 1992

- 1.3.3 This Act brings together all the legislation that is specific to badgers, with the exception of their inclusion on Schedule 6 of the Wildlife and Countryside Act 1981, prohibiting certain methods of taking or capture. The Act makes it an offence to intentionally kill or ill treat a badger and to destroy, disturb or obstruct a sett. Specifically, it imposes restriction on works carried out within certain distances of badger setts. Any Works that would directly impact on an existing sett are subject to approval through the issue of a licence from Natural England, formerly English Nature (EN).

Wild Mammals (Protection) Act 1996,

- 1.3.4 This makes it an offence to carry out any act of cruelty to mammals.

Hedgerow Regulations 1997

- 1.3.5 Under these regulations it is against the law to remove countryside hedgerows, or parts of them, that are classified as important under the criteria within the regulations without first notifying the local planning authority.

Countryside and Rights of Way Act 2000

- 1.3.6 This Act affords a greater level of protection to Sites of Special Scientific Interest (SSSIs), provides better management arrangements for Areas of Outstanding Beauty (AONBs) and strengthens wildlife enforcement legislation. This Act has amended the WCA 1981 including the addition of the term 'recklessly' to Section 1(5) and Section 9 (4).

1.4 Non-Statutory Sites of Importance for Nature Conservation

- 1.4.1 These are usually local authority designations for land use planning purposes. They have no statutory protection but are recognised by local authorities and statutory agencies as being of local importance and are highlighted within local plans. In Oxfordshire, these local wildlife sites are referred to as **County Wildlife Sites**.

1.5 National Initiatives

UK Biodiversity Action Plan (UKBAP)

- 1.5.1 The existence of the UK Biodiversity Action Plan, published in 1994, arises from the UK Government's commitment to biodiversity made at the 1992 'Earth Summit' in Rio de Janeiro and in direct response to the resulting Convention on Biological Diversity. To implement the UKBAP, the UK Biodiversity Group has produced a list of Habitat and Species Action Plans (HAPs and SAPs) that are attributed to individual local authorities through Local BAPs.
- 1.5.2 A review of the Habitats and Species lists has been carried out and was published in June 2007 (Report on the Species and Habitats Review, Biodiversity Information and Reporting Group). Species and habitats were selected through the application of criteria based on international importance, rapid decline and high risk. All original UK BAP habitats have been reselected and additional habitats have raised terrestrial and freshwater habitats from 32 to 40. In total, 1149 marine, terrestrial and freshwater species met the criteria for selection and were proposed for inclusion on the

Red Data Book Species

- 1.5.3 On a national scale, species of conservation concern are classified under various Red Data Book Categories. These are defined by a series of categories including RDB1 (endangered), RDB2 (vulnerable), RDB3 (rare), RDBCR (critically endangered), RDBEN (endangered), RDBI (indeterminate *that is not separated into a category*) and RDBK (insufficient information to determine a RDB category) Species listed within the various levels of Red Data Book status have no legal protection unless they are listed on the appropriate schedule on the Wildlife and Countryside Act (1981) as amended or under any of the European legislation mentioned above.
- 1.5.4 In addition, on a more local level, Red Data Books have been produced for species of conservation concern for several counties.

Natural Areas

- 1.5.5 Natural Areas are defined in the UK Biodiversity Action Plan as “*biogeographic zones that reflect the geological foundation, the natural systems and processes and the wildlife in different parts of England and provide a framework for setting objectives for nature conservation.*” Natural Areas (devised by English Nature) are a practical mechanism for achieving nature conservation objectives such as those in the UKBAP at a regional and local level.

1.6 Local Initiatives

Oxfordshire Wildlife and Landscape Study OWLS

- 1.6.1 Oxfordshire Wildlife and Landscape Study (OWLS) is an investigation into the landscape character and biodiversity resource of the county that has produced a biomap of the county and a bioscore based on the type and range of habitats. The study area is within the Upper Thames Vale regional character area. OWLS operates primarily at the landscape scale identifying Landscape Description Units (LDUs). Descriptions of these units for the scheme area encompass the wider LDUs and do not always accurately reflect the detail to be found within the scheme area. For this assessment international and national legislation, together with national and local initiatives have been used to undertake appropriate assessment.

Oxfordshire Biodiversity Action Plan

- 1.6.2 In addition to national Biodiversity Action Plans, many local plans have been produced. The Oxfordshire Biodiversity Action Plan aims to set out the habitats and species of regional, national and international importance within the county and the document is intended to take forward the UK Biodiversity

Action Plan at a county level. A number of habitat action plans have been published for the county including woodland, open habitats, wetlands and farmland. These set out the current status of the habitats within the county along with targets for their future management.

1.7 **Non Government Organisations**

IUCN Red List

- 1.7.1 The Species Survival Commission (SSC) of the International Union for the Conservation of Nature (IUCN) maintains lists of threatened species. The IUCN Red List is the world's most comprehensive inventory of the global conservation status of plants and animals. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. There are seven Categories of Threat in the IUCN Red List system: Extinct, Extinct in the Wild, Critically Endangered, Endangered, Vulnerable, Near Threatened and Least Concern. A species is listed as threatened if it falls in the Critically Endangered, Endangered or Vulnerable categories.

Birds of Conservation Concern 1996

- 1.7.2 The UK's leading bird organisations have agreed priorities for the bird conservation after reviewing the status of all bird species in the UK, Channels and Isle of Man. The list is divided into three sections, red, amber and green. The red list identifies those species that are of greatest concern and require action, amber are of medium concern whilst green represents species of least concern but require continued monitoring.

2 Desk Study

2.1.1 A desk study has been carried out for designated sites (both statutory and non-statutory) and protected, biodiversity action plan or notable species. Information relating to these species and sites was obtained from the Thames Valley Environmental Records Centre (TVERC) in 2007, updating the original 2002 search. Both the original species list from 2002 and the updated search from 2007, which only includes records of protected, notable or rare species, are included in Appendix 1. Records were gathered for the study area and a further 1km zone around the area. Bat records were requested for the study area and a 5km zone. Whilst it is recognised that many species are mobile over distances greater than 1km, this search area will identify most of the species present or provide information with regards to the habitat suitability for them.

2.2 Nationally and Internationally Designated Sites

2.2.1 No nationally or internationally designated sites fall within 1km of the scheme centre. Ducklington Mead Site of Special Scientific Interest (SSSI) is the nearest statutory designated site, approximately 2 kilometres away. This is an area of unimproved meadow situated between the two arms of the River Windrush. A diverse range of native wild flowers are found within the SSSI including greater burnet *Sanguisorba officinalis*, pepper saxifrage *Silaum silaus*, cowslip *Primula veris* and devil's bit scabious *Succisa pratensis*. Additionally, the meadow contains a large population of the rare snake's-head fritillary *Fritillaria meleagris*. The ditches surrounding the meadow also contain an interesting array of species including whorl-grass *Catabrosa aquatica* and brookweed *Samolus valerandi*.

2.3 Non-Statutory Designated Sites

2.3.1 One local wildlife site, Witney Marsh, is present within the 1km search area. Witney Marsh is comprised of marshy grassland and sedge dominated swamp communities. The site supports the rare slender spike rush *Eleocharis uniglumis* and uncommon marsh arrowgrass *Triglochin palustre* and round fruited rush *Juncus compressus*.

2.3.2 Lowland meadow and fen (sedge swamp) are UK priority BAP habitats. Witney Marsh is one of only two grazed marshes along the Windrush in Oxfordshire and one of only four extensively grazed marshes in the county.

2.3.3 The 1km search area also contains two 'other wildlife sites', Langel Common and Witney Meadows. Langel Common is currently managed by West Oxfordshire District Council and consists of semi-improved lowland meadow habitat. Witney Meadows is managed by Witney Town Council and supports

semi-improved lowland meadow habitat.

- 2.3.4 A number of local wildlife sites are present within the scheme corridor of the proposed development, namely Windrush Pasture and Cogges Manor Museum (both County Wildlife Sites) and The Moors, now part of the Witney Lakes and Meadows Country Park, a local site designated by the District Authority.

2.4 **Country Park**

- 2.4.1 Witney Lakes and Meadows Country Park, managed by Witney Town Council, would be directly affected by the road scheme. This area, although not designated as an ecological site, has been included here as a result of the ecological interest resulting from the presence of the river and its associated habitats. The country park encompasses the two arms of the River Windrush along with a smaller mill stream. Species of note recorded within the park include grass snake, several species of bat and kingfishers. To the north of the A40 and east of Witney, habitats within the country park include the riparian zones, willow dominated scrub, a shallow *Typha latifolia* choked pond and an area of wet meadow.

- 2.4.2 South of the A40, and south west of the study area for the scheme lies the southern part of the Witney Lakes and Meadows Country Park. This site is dominated by a large fishing lake along with the riverside habitat.

2.5 **Oxfordshire Biodiversity Action Plan**

- 2.5.1 The proposed scheme would directly impact upon a number of habitats for which habitat action plans have been produced as part of the Oxfordshire Biodiversity Action Plan. These include open habitats, as represented by hedgerows and grassland, and wetlands, as represented by the channels of the Windrush and the pond. Species associated with these habitats would also potentially be impacted upon by the development.
- 2.5.2 Ponds are now amongst the additional Priority Habitat Types (PHT's) that were designated as a result of the UKBAP Species and Habitat Review. Rivers are a new habitat that incorporates an existing habitat (chalk rivers). Guidelines are being developed for the identification of non-qualifying degraded rivers / sections that are excluded from being a riverine PHT.
- 2.5.3 Neutral grasslands lowland meadows, improved floodplain grassland and arable field margins are existing PHT's and there has been no change to their status as a result of the review. Ancient and / or species-rich hedgerows have been re-named as "hedgerows" to provide an expanded scope to the category.

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2.5.4 Various individual Species Action Plans including a number of bat species are part of the Oxfordshire BAP. Species relevant to the scheme study area are the water vole and the bat species noctule, Daubentons and common pipistrelle.

2.5.5 The UKBAP Species and Habitat Review resulted in, amongst other species, hedgehogs, slow worms and toads being added to the list of UK BAP species. The habitat types used by these species are present within the scheme study area.

2.6 Protected and Notable Species Records

2.6.1 The desk-top study of data provided by TVERC provides information as to the richness of the biodiversity in this area. This information may not necessarily provide complete information with regards to protected species, but it does give a general overview of the species present on the site.

2.6.2 Protected species records provided by TVERC have been summarised in Table 1. Grid references for badger records have been omitted due to the sensitivity of the information.

Table 1: TVERC Records of Legally Protected Species

Common Name	Scientific Name	Date	Grid Ref	UK Legislation	European Legislation
Kingfisher	<i>Alcedo atthis</i>	20 September 1996	SP36060973	Schedule 1 (W&C Act 1981)	
Kingfisher	<i>Alcedo atthis</i>	20 September 1996	SP36090932	Schedule 1 (W&C Act 1981)	
Kingfisher	<i>Alcedo atthis</i>	19 September 1996	SP35920965	Schedule 1 (W&C Act 1981)	
Kingfisher	<i>Alcedo atthis</i>	Pre 1982	SP360091	Schedule 1 (W&C Act 1981)	
Water Vole	<i>Arvicola terrestris</i>	1975	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Water Vole	<i>Arvicola terrestris</i>	8 January 1975	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Grass Snake	<i>Natrix natrix</i>	5 September 1978	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Common Lizard	<i>Lacerta vivipara</i>	10 June 1983	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Grass Snake	<i>Natrix natrix</i>	25 June 1984	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Slow-worm	<i>Anguis fragilis</i>	16 May 1989	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	

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Common Name	Scientific Name	Date	Grid Ref	UK Legislation	European Legislation
Brown Long-eared Bat	<i>Plecotus auritus</i>	24 August 1994	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	Conservation Regulations 1994
Brown Long-eared Bat	<i>Plecotus auritus</i>	28 September 1997	SP362095	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	Conservation Regulations 1994
Badger	<i>Meles meles</i>	25 February 1995		Badger Act 1992	
Natterer's Bat	<i>Myotis natterei</i>	September 1986	SP3711	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	Conservation Regulations 1994
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	28 September 1998	SP358102	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	Conservation Regulations 1994
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	20 October 1998	SP358102	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Water Vole	<i>Arvicola terrestris</i>	Pre 1982	SP360091	Schedule 5, parts 4(a) and (b) (W&C Act 1981).	
Badger	<i>Meles meles</i>	6 May 2000		Badger Act 1992	
Badger	<i>Meles meles</i>	7 February 2002		Badger Act 1992	

2.6.3 The data demonstrates a historical presence of some protected species; however, most of the records are at least 15 years old. This does not necessarily mean that the species are now absent, but does reflect a lack of current information relating to the area. Further surveys for each species have been carried out to help establish their likely current presence or absence.

2.6.4 The records also show the historical presence of a diversity of birds. Wintering bird and breeding bird surveys have again been carried out to establish their current presence or absence. The presence of barn owl and kingfisher has been established from both historical records and through the recent surveys. These are Schedule 1 species, protected under the Wildlife and Countryside Act 1981.

3 Scoping Stage

3.1.1 Initial site surveys carried out during May and June 2002 included a Phase I habitat survey and a river corridor survey covering both branches of the River Windrush and the adjacent stream.

3.2 Phase I Habitat Survey

3.2.1 The Phase I habitat survey identified a variety of habitats within the survey corridor, namely coarse grasslands, species poor semi-improved grassland, swamp, scrub, tall ruderal and woodland/hedgerow habitat. No locally or nationally rare or protected plant species were observed. Evidence of protected bats, badgers and possibly otters was noted as part of the survey.

3.2.2 Three hedgerows containing five woody species per 30 metre stretch were considered to be of high local conservation value. Habitats of local importance within the corridor are woodland, species poor semi improved grassland, swamp, scrub, tall ruderal areas and coarse grassland along with the rivers and the species poor hedgerows.

3.2.3 Full details of the Phase I survey are presented in Appendix 1.

3.3 Riparian Habitats

3.3.1 A river corridor survey was carried out during early June 2002, following the guidelines published by the NRA (1992). This identified the broad species distribution of plants within the channels of the River Windrush to be affected by the proposed development.

3.3.2 No rare or notable species of plants were found within the channels surveyed. A good range of aquatic vegetation was observed in the slower flowing sections of the river and along the berms. Species present included *Mentha aquatica* water mint, *Myosotis scorpioides* water forget me not, *Filipendula ulmaria* meadow sweet, *Rumex hydrolapathus* water dock, *Lycopus europaeus* gipsywort, *Phalaris arundinacea* reed canary grass, *Glyceria maxima* reed sweet grass, *Sparganium erectum* branched bur reed, *Typha latifolia* common reedmace, *Carex* sp sedges., *Ranunculus* sp water crowfoot and *Callitriche* sp water starwort.

3.3.3 Full details of the river corridor survey are presented in Appendix 1.

3.3.4 Following these initial surveys, a scoping assessment was carried out (Table 2), detailing the potential impacts that the proposed scheme may have.

Table 2: Habitats and Species Potentially at Risk

Habitat within the Study Area	Direct/ Indirect Impact	Species
Standing Water (Ponds)	Direct	Amphibians, Aquatic Invertebrates, Flowering Plants, Reptiles, Fish, Water Vole
Running Water	Direct	Aquatic Invertebrates, Birds, Flowering Plants, Otter, Reptiles, Water Vole, White Clawed Crayfish, Fish
Willow Scrub	Direct	Amphibians, Bats, Birds, Otters, Reptiles, Small Mammals, Terrestrial Invertebrates
Semi-improved Grassland	Direct	Amphibians, Flowering Plants, Reptiles, Small Mammals, Terrestrial Invertebrates
Hedgerows	Direct & Indirect	Amphibians, Badgers, Bats, Birds, Dormice, other Small Mammals, Terrestrial Invertebrates and Reptiles
Farmland	Direct & Indirect	Badgers, Bats, Birds

3.3.5 As part of this initial stage, a number of more specialist Phase II surveys were recommended. The purpose of these was to clarify the presence / absence or abundance of species, and nature of any impacts. These recommendations are detailed in Table 3.

Table 3: Scoping of Additional Surveys

Survey	Reason for recommendation
Hedgerow Habitats	To assess whether any of the hedgerows to be directly affected qualify under the wildlife criteria of the Hedgerow Regulations (1997).
Otter	A possible otter footprint was found on the west bank of the River Windrush, and there was a report of a recent sighting by a local on the same river. Otter is a rare species protected in full under the Wildlife and Countryside Act 1981 (as amended) and the EC Habitats Directive.
Water Vole	The data search noted that water voles were present at Cogges Manor Farm adjacent to the River Windrush (date of survey unknown). Water vole is a declining species in Britain afforded full protection under the Wildlife and Countryside Act 1981 (as amended) from April 2008 and listed as a species of conservation concern under the EC Habitats Directive 1992.
Bats	The data search revealed the presence of brown long eared bats and the natterer's bat. All species of bat are fully protected under both the Wildlife and Countryside Act 1981 (as amended) and the EC Habitats Directive 1992.
Great Crested Newt	Following completion of the walkover survey, great crested newts were identified as potentially using the pond in the country park
Reptiles	An interpretive panel at the entrance to the country park identifies that grass snakes use the area. The disused railway embankment close to the A40 also provides potentially good reptile habitat. The slow worm, common (or viviparous) lizard and grass snake were all identified from the data search. All native species of reptiles are protected against intentional killing under the Wildlife and Countryside Act (1981) as amended.
Crayfish	To assess the likely impact of the diversion of the eastern channel of the River Windrush on the aquatic environment. The white-clawed crayfish <i>Austropotamobius pallipes</i> is the only native crayfish species found in Britain and TVERC records indicate its presence at Witney Bridge on the River Windrush. The native crayfish is scheduled under the Wildlife and Countryside Act (1981) and is also listed under the EC Habitats Directive giving it the 'European Protected Species Status'. As such, any works affecting the white-clawed crayfish would require a licence from the Department for the Environment Food and Rural Affairs (DEFRA).
Aquatic	To assess the likely impact of the diversion of the eastern

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Survey	Reason for recommendation
Invertebrates	channel of the River Windrush on the aquatic environment
Terrestrial Invertebrates	Many hedgerows and a large area of grassland would be affected by the scheme. A number of Red Data Book and notable invertebrate species have also been recorded in the nearby Cogges Manor Museum.
Fisheries	From the information supplied by the initial Oxfordshire Records Centre database search (2002), fifteen species of fish were recorded within the channels of the River Windrush. A full fisheries survey was recommended to assess the impact that the channel diversion would have upon the aquatic environment.
Birds (Wintering and Breeding)	The footprint of the road would impact on a number of habitats which are likely to support bird populations, namely the scrub, hedgerows, grassland and the riverine habitats. All species of birds are protected under the Wildlife and Countryside Act, 1981 (as amended).
Badger	Badgers receive special protection under the Protection of Badgers Act, 1992, and a number of records of their presence were found within the TVERC data. As such, a preliminary walkover badger survey was incorporated into the Phase 1 survey. Badger trails were identified within the survey corridor but no setts were located. It was therefore recommended that a more detailed badger survey be carried out.
Dormouse	The Phase I survey indicated that hedgerows in the area have the potential to support dormice. The dormouse is a rare species in Britain afforded full protection under both the Wildlife and Countryside Act 1981 (as amended) and EC Habitats Directive 1992.
Phase 2 Botanical	To more fully assess the potential impacts on local flora, particularly in areas to be directly affected by the footprint and working zone of the road (especially in the country park, the eastern channel of the Windrush and the hedgerows to be severed).

4 Further Surveys

4.1.1 All surveys detailed above except the white-clawed crayfish survey were carried out and reported on during 2002 and 2003. The crayfish survey was assessed as not being necessary after consultation with the Environment Agency indicated the presence of an established signal crayfish population in the catchment (predators of the white-clawed crayfish). The surveys carried out formed part of the Environmental Statement submitted with the 2004 planning application for the CLR. Ecological surveys are not valid indefinitely, due to the inherently mobile nature of many species, and a number of the reports have therefore been updated to take into account more recent survey work mostly carried out during 2006. Some of the original surveys, for example those of vegetation or less mobile fauna, are still valid and have not been updated. Table 4 sets out the different surveys that have been undertaken and clarifies whether or not they have been updated for this 2007 Environmental Statement.

Table 4: Location and status of different ecological reports

Survey	Date of report for 2004 ES	Update for 2007 planning application?	Location of data within this ES
Phase I Habitat Survey	2002	No update	Appendix to this report
River corridor survey	2002	No update	Appendix to this report
Initial hedgerow survey	2002 (Updated by full hedgerow survey 2003)	No further update	ES Volume 2C Document B0834600/Doc/CLR/20
Full hedgerow survey	2003	No update	ES Volume 2C Document B0834600/Doc/CLR/20
Initial water vole survey	2002 (Updated by full riparian mammal survey 2003)	See riparian mammal survey	ES Volume 2C Document B0834600/Doc/CLR/22
Riparian mammal survey	2003	Updated in 2006	ES Volume 2C Document B0834600/Doc/CLR/22
Bats in trees survey	2002 (Updated by full bat survey 2003)	No further update	ES Volume 2C Document B0834600/Doc/CLR/12
Full bat survey	2003	No update	ES Volume 2C Document

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Survey	Date of report for 2004 ES	Update for 2007 planning application?	Location of data within this ES
			B0834600/Doc/CLR/12
Great created newt habitat suitability index	2002 Updated by full GCN survey 2003)	See full GCN survey	ES Volume 2C Document B0834600/Doc/CLR/19
Great crested newt survey	2003	2003 report remains applicable, however, a repeat exercise was carried out in 2006 for suitable ponds	ES Volume 2C Document B0834600/Doc/CLR/19
Aquatic invertebrate survey	2004	No update	ES Volume 2C Document B0834600/Doc/CLR/12
Badger survey	Badger and dormouse survey 2002	Updated by 2006 badger survey	ES Volume 2C Document B0834600/Doc/CLR/13
Botanical Survey Phase 2	2003	No update	ES Volume 2C Document B0834600/Doc/CLR/15
Wintering bird survey	2003	Updated in 2006	ES Volume 2C Document B0834600/Doc/CLR/16
Dormouse survey	Badger and dormouse survey 2002 and Dormouse nest tube survey 2003	Updated by 2005 dormouse survey	ES Volume 2C Document B0834600/Doc/CLR/17
Fish population survey	2002	No update	ES Volume 2C Document B0834600/Doc/CLR/18
Reptile surveys	2002 and 2003	No update	ES Volume 2C Document B0834600/Doc/CLR/21
Terrestrial invertebrate survey	2003	No update	ES Volume 2C Document B0834600/Doc/CLR/23
Breeding bird survey	2003	No update	ES Volume 2C Document B0834600/Doc/CLR/24

5 Evaluation of Existing Conditions

- 5.1.1 This evaluation of the existing conditions has been carried out based on the initial Phase I and river corridor surveys, with reference to the Ratcliffe criteria, which are used for the assessment of biological sites of scientific interest. The results presented here do not take into account any results or conclusions from the additional specialist surveys. These can be found in the remainder of Volume 2C.
- 5.1.2 A summary of the ecological and nature conservation interest, as represented by site designations and United Kingdom Biodiversity Action Plans, along with protected species, is presented in Table 5.

Table 5: Summary of Nature Conservation Designations and Protected Species Impacted upon by the Proposed Route

Nature Conservation Indicators	Habitats and species within survey corridor	Habitats and species within the footprint of CLR
Internationally Designated Sites	No	No
Nationally Designated Sites	No	No
Locally Designated or Non-Statutory Sites	Witney Marsh CWS Langel Common Witney Meadow Country Park	Witney Meadows Country Park
Habitat Action Plans	Standing Water Rivers Hedgerows Grassland	Standing Water Rivers Hedgerows Grassland
European Protected Species	Bats Otters (<i>possibly</i>) Great Crested Newt (<i>possibly</i>) White clawed crayfish (<i>possibly</i>)	Bats Otters (<i>possibly</i>) Great Crested Newt (<i>possibly</i>) White Clawed Crayfish (<i>possibly</i>)
Nationally Protected Species	Water Vole* Reptiles Amphibians Birds (all species of)	Water Vole* Reptiles Amphibians Birds (all species of)
UK Biodiversity Action Plan Species	Brown Hare* Otter* Water Vole* Dormouse* Hedgehog	Brown Hare* Otter * Water Vole * Dormouse* Hedgehog

	Toad Slow worm Grass snake Common lizard	Toad Slow worm Grass snake Common lizard
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Note * relates to the fact further information from additional surveys is required.

UKBAP Species: Table updated as a result of the UKBAP Species and Habitat Review 2007

5.2 **Habitat Fragility**

5.2.1 The remaining semi-natural habitats within the survey corridor that still have wildlife associated with them, are increasingly sensitive. Any further development which results in additional reduction in habitat size or additional isolation of habitats through loss of connectivity has the potential to cause further loss of biodiversity within the area. The past and current developments within an area should be considered since the species or habitats present on a site may already be at a critical level as a result of the site history or current management practices.

5.2.2 There are reports of otters using the western channel of the River Windrush (Table 3). All three channels of the Windrush are to be crossed by the CLR and this has the potential to sever the connectivity of the habitat. Similarly, some hedgerows across the arable farmland would also be severed as a result of the scheme.

5.3 **Rarity**

5.3.1 The habitats resulting from land management practices within the study area are typical of the area with arable agriculture, small scale industrial use, new housing estates and grazing pasture within the eastern and western channels of the River Windrush.

5.4 **Diversity and Potential Value**

5.4.1 The wildlife interest and diversity within the survey area is mainly restricted to the remaining semi-natural habitats of the river channels and grassland in between, along with the scrub and hedgerows of the surrounding farmland. The information provided by TVERC suggests that the remaining semi-natural habitats are of at least local importance in terms of the biodiversity which they support.

5.5 **Intrinsic Appeal**

- 5.5.1 The area covered by the proposed development has high importance at the local level, acting as a 'green gap' between the urban areas of Witney and Cogges.

6 Influences on Existing Ecology and Nature Conservation

6.1 Past Influences

6.1.1 The area through which the proposed road would pass is already fragmented by the existing A40 trunk road.

6.2 Current Influences

6.2.1 Land management practices currently have the following effects on biodiversity in the area:

- Grazing of the country park has resulted in the creation of berms along the channel edge allowing a more diverse array of aquatic and marginal vegetation to develop.
- Scrub encroachment along the western and mill stream channels of the Windrush are restricting the channel vegetation due to lack of light reaching the channel.
- Lack of management of the hedgerows on the adjacent arable farmland has resulted in 'gappy' hedgerows, which hinder the movement of the species along them.

6.3 Future Influences on the Current Biodiversity

6.3.1 The CLR would impact upon the biodiversity of the area, as a result of direct loss of land and habitats, along with the further severance of habitats. These impacts have been detailed more fully in the Environmental Impacts and Mitigation section below, and in the specialist reports in the remainder of Volume 2C.

7 Environmental Impacts and Mitigation

7.1 Environmental Impact and Mitigation for Habitats and Species

7.1.1 Direct impacts of the scheme would be through the actual loss of habitat such as the grassland of the country park and the loss of semi-mature trees. General mitigation measures proposed for the wider countryside would take the following format:

- All habitats adjacent to, but unaffected by the road scheme would be protected throughout the clearance and construction phases of the development through the installation of temporary exclusion fencing.
- Cut off or hooded lighting should be used to minimise the impact upon wildlife.
- Any protected species which are found to be present within the corridor for works, as identified by the specialist surveys, would be safeguarded and appropriate dispersal methods would be employed to avoid harm to the populations concerned.
- Where habitat loss is unavoidable, it should be replaced on a like for like basis. Any created habitats would be subject to a management agreement to ensure that their objectives with regard to biodiversity are fulfilled.

7.2 Environmental Impact and Mitigation for Designated and Non Designated Land

7.2.1 As stated above, there would be a general presumption against loss of any semi-natural habitats. Where the loss of habitat of conservation value is inevitable, similar areas of at least equivalent size as those lost would be provided. If sufficient areas of land within the confines of the scheme are not available to provide such measures, mitigation areas elsewhere along the approved scheme would be sought.

7.2.2 Under the proposals, there would be a direct impact upon the Witney Meadows Country Park through direct land take. No internationally designated sites would be directly impacted upon by this development. The nearest Site of Special Scientific Interest, Ducklington Mead, is 2km away from the scheme.

7.2.3 The primary impacts upon the designated and non designated land relate to the grassland, hedgerows, scrub, trees, a single pond and the three channels of the River Windrush.

7.3 **Direct Loss**

Loss of Habitat

- 7.3.1 The proposed scheme would involve the loss of grassland, riparian habitat, ruderal vegetation, scrub and trees, hedgerows and the pond within the country park. The loss of these habitats would potentially impact upon populations of terrestrial and aquatic invertebrates, bats, water voles, otters, small mammals, bats, birds, reptiles and fish using the area.

Habitat Severance

- 7.3.2 The proposed scheme would require the crossing of the three channels of the River Windrush in the area of the country park. Depending upon the design of the crossings, they may impede movement of otter and water voles along the channels. In addition, a number of hedgerows would be severed. This would further isolate the hedgerow habitats which may be used by bats, birds, reptiles, and small mammals as habitat and for commuting and foraging.

7.4 **Indirect Impacts**

Dust

- 7.4.1 During the construction phase, uncontrolled dust generation may affect the aquatic habitats through increased deposition into the water bodies. This impact would be controlled by water spreading during periods of dry weather.

Soils

- 7.4.2 Indirect impacts upon the soil caused by the development would result from compaction from the use of plant machinery, along with the potential for importing or spreading invasive, non-native species through the importation of top soil.

Nutrient Enrichment

- 7.4.3 Any excavation works are likely to release nutrients into the soil. This would increase the fertility of the soil, with the potential to alter the vegetation composition of the area. Similarly, any release of nutrients could lead to eutrophication of the river channels, with potential negative impacts on their flora and fauna.

Pollution

- 7.4.4 During the construction and operation of the road, the likelihood of a pollution incident occurring and entering the river channels would be increased. Sources of pollution include petrol, road salt, and exhaust fumes. Light

pollution may also impact upon certain bird, bat and invertebrate species if the road is to be lit.

- 7.4.5 The corridor is already subject to heightened levels of pollutants from the existing A40, which crosses the western and eastern channel of the River Windrush.

Disturbance

- 7.4.6 The new carriageway may cause an increase in wildlife disturbance within the corridor of the road, resulting from an increase in vehicular movements. This may have an impact upon breeding and nesting birds using the hedgerows and scrub habitats.
- 7.4.7 The western end of the corridor already suffers from human disturbance as a result of the country park, along with existing road traffic on the A40.

7.5 Habitat Mitigation

- 7.5.1 In order to ensure that the impacts of the proposed development are fully mitigated, whilst maintaining and where possible enhancing, the biodiversity of the area, the objectives of the Oxfordshire Biodiversity Action Plan would be followed:

Habitat Protection

- All of the habitats which are to be retained would be clearly marked and fenced off prior to any works commencing, to prevent construction personnel and machinery entering these areas.
- Pollution of the water courses would be prevented by the setting up of clearly defined areas for storage of materials. To prevent spillages entering the water courses, drip trays would be used and machinery regularly checked for leaks.
- Pollution of the water courses would be minimised through the installation of filtering systems for surface run-off. In addition, petrol interceptors would be installed as part of the drainage scheme to prevent petrol from entering the water course.

Habitat Creation

- Planting associated with the scheme would be in keeping with that already found in the area and would use native stock of local provenance where available. Full consultation would take place with the relevant Statutory Agencies with regards to the planting strategy.
- A methodology for the creation of the new channel for the western branch of the Windrush and the diversion of the existing channel would need to be agreed with the Environment Agency and fully consider the needs of any protected species identified by the specialist surveys.

- The new crossings over all three channels of the River Windrush would take into account the need to maintain passage for mammals during normal flow and also during flood conditions.
- Pond creation to compensate for the loss of a single pond in the Country Park
- Where practical, all hedgerow and tree felling would take place during the early autumn. This is the optimal time to cause minimal impact upon bats and is also outside of the breeding bird season. If tree felling or scrub clearance needs to take place outside this season, a full check for the presence of nesting birds and bats would be conducted immediately prior to felling. In addition, Natural England would be consulted.

Habitat Enhancement and Management

- The resulting landscape from the proposed development would be managed to enhance the biodiversity value of the corridor. A long-term management strategy would be drawn up in agreement with the landowners for both the existing and newly created habitats.
- For the riparian habitats, enhancement may involve the creation of berms, along with the opening up of the western and mill stream channels to allow more light to enter the channel.
- The remaining hedgerow habitats would be enhanced by planting up any gaps and also the planting of new sections to restore connectivity between the hedgerows. All planting would be of species appropriate to the area and of local provenance where available.

7.6 Environmental Impacts and Mitigation for Protected and Notable (Nationally Scarce, Red Data Book, UKBAP, and Local BAP) species

7.6.1 The proposal has the potential to directly impact upon a number of wildlife species offered various levels of protection under both domestic and international law. Such species include the water vole and otter, bats, great crested newts, grass snakes and birds. Additionally, the scheme would have the potential to impact upon a number of nationally scarce and biodiversity action plan species.

7.6.2 The primary impacts of the scheme on protected species would result from increased levels of disturbance and the loss of suitable habitat, along with habitat severance and fragmentation.

Mitigation

7.6.3 General mitigation for protected species would take the following format:

- All contractors would be briefed in advance of works on all ecological issues relevant to the scheme.
- Depending upon the nature of the mitigation, adjacent areas would be assessed for both their habitat suitability and capacity to receive

dispersed animals. These areas would be set aside for this purpose in consultation with wildlife experts. Any such areas would be subject to ongoing, sympathetic management relevant to the particular species concerned in order to sustain a viable population.

- Where possible, all clearance of vegetation would take place at the appropriate time of year to minimise the impact upon all species concerned within the development area.
- Adjacent, unaffected habitats would be protected throughout the construction phase through the installation of temporary fencing to exclude construction plant and personnel from areas where there are currently no physical barriers.
- If any habitats are to be further severed or fragmented as a result of the scheme, the habitat replacement and enhancement scheme would strive to reconnect these habitats.
- In order to evaluate the success of the mitigation measures, a programme of ongoing monitoring would be initiated to ascertain whether a favourable conservation status is maintained for all of the protected species affected by the scheme

7.6.4 Specific mitigation issues relating to the impacts of the development upon the populations of individual protected species are discussed in more detail in the specialist reports found elsewhere within Volume 2C.

8 Monitoring

- 8.1.1 The proposed scheme would impact directly upon a number of habitats of varying biodiversity interest including the river channels, the country park, hedgerows and arable farmland. These habitats may provide important refuges for both protected and non-protected species within the area.
- 8.1.2 The scheme would result in a slight to moderate adverse impact upon the ecology and nature conservation value of the area, resulting from the loss of habitats combined with potential disruption to, reptile, bird, bat, invertebrate and mammal populations, including otter, and water vole, along the corridor of the road.
- 8.1.3 In the longer term, with appropriate mitigation and habitat compensation, combined with subsequent habitat management, the adverse impact can be lessened. A detailed ecological monitoring programme would be incorporated into the long-term management plan for the area. The aims of the monitoring would be to ensure that the mitigation measures implemented are fulfilling their objectives to maintain, and where possible, enhance the conservation status of the protected species within the corridor of the road development. Close supervision along with follow up monitoring of the mitigation measures would be necessary to ensure that these objectives are met.

9 References

NRA (1992) *River Corridor Surveys Methods and Procedures: Conservation Technical Handbook Number 1*. NRA, Bristol.

Oxfordshire County Council *Oxfordshire Biodiversity Action Plan*. Oxfordshire County Council

Biodiversity Information and Reporting Group (June 2007). Report on the Species and Habitats Review.

Appendix 1

Oxfordshire Wildlife and Landscape Study (OWLS) - an investigation of landscape character and biodiversity across Oxfordshire.

Extracts from the web site

<http://owls.oxfordshire.gov.uk/wps/wcm/connect/OWLS/Home>

The study was jointly sponsored by: [Oxfordshire County Council](#), [English Nature](#), [the Countryside Agency](#) and [the Northmoor Trust](#). Its main purpose was to investigate the landscape character and biodiversity resource of the county and use the results of the survey work to help safeguard, maintain and enhance this resource. All the data collected has been incorporated into a large database accompanied by a final report. A website provides a simplified version of the database which displays the information as a series of separate map layers which link to relevant parts of the report.

There are twenty-four separate landscape types within Oxfordshire, made up of individual landscape description units (LDU's) with a similar pattern of geology, topography, land use and settlements. Their names reflect their characteristic land cover. Each landscape type was further subdivided into separate Local Character Areas.

Within the scheme study area the following LDU's are present; river meadowlands, terrace farmland and wooded estate lands. Parishes falling within the scheme study area have been viewed and the information from the OWLS study on local character areas specific to the study area are reproduced below.

The data used for the biodiversity appraisal was derived from two main sources:

- Field survey data collated at the L.D.U. level.
- Existing habitat data for designated statutory (S.A.C.s/S.S.S.I.s) and non statutory (C.W.S.) wildlife sites within the county.

In order to try and reflect any variation in habitat biodiversity between different L.D.U.s a simple, arithmetic scoring system was devised.

It was based on:-

- The number of habitats within each L.D.U.
- The type of habitats within each L.D.U.
- The parameters of size, extent, proximity and condition of each habitat within an L.D.U.
- The relative status (S.A.C./S.S.S.I./C.W.S.) of each habitat within an L.D.U.

By scoring individual habitats within a L.D.U a bioscore could be derived. The bioscores are based on habitat and not species data. There was a wide range of bioscores across all the L.D.U.s and, to simplify the process, the scores were grouped into six biobands valued from low to very high.

For the CLR scheme the following local character areas fall within the study area.

Lower Windrush Valley has a bioband evaluated as Medium.

Cogges Bridge Cottage has a bioband evaluated as Low.

Freeland has a bioband evaluated as High/Medium.

More detailed descriptions of the landscape types and the relevant landscape character areas are included below.

10. RIVER MEADOWLANDS

Regional character areas

Northamptonshire Uplands, Northamptonshire Vales, Cotswolds, Upper Thames Vale, Vale of White Horse and Vale of Aylesbury.

Location

This landscape type covers the flood plains and valley floors of the rivers Cherwell, Thames, Thame, Evenlode, Windrush, Swere and Sor Brook.

Overview

This is a linear riverine landscape with a flat, well defined alluvial floodplain. It has pastoral character with meadows, wet and semi-improved pasture.

Key characteristics

- Flat, low-lying topography with seasonally flooded alluvial floodplains.
- Meandering river channels.
- Grazing meadows and small fields of permanent pasture.
- Riparian character with a strong pattern of riverside willows and tree-lined ditches.
- Sparsely settled with a few roads.

Local character areas

L. Lower Windrush Valley (UT/19)

Landscape Character

The area has small semi-improved grass fields and some arable farming. Fields are enclosed by blackthorn, hawthorn and elm hedges, often adjacent to ditches. Hedges bordering roads are usually tall, thick and in good condition, whereas field hedges are sometimes low, gappy and, in places, replaced by fences. Throughout the area there are ash and willow trees in the hedges and alongside ditches, and the river is lined by a dense corridor of

pollarded willows and the occasional poplar plantation. Over the past 50 years there has been extensive gravel extraction in the valley and this has resulted in many flooded gravel pits surrounded by semi-improved grassland, tree planting and tall hedges. The majority of these pits are used for water-based recreation including sailing, angling and water-skiing.

Biodiversity

Bioscore/bioband: 88/M

Locally important habitats in the valley include plantations, semi-improved grassland, species-poor hedges with trees and trees lining the river. There is also a small field of unimproved neutral grassland near Ducklington that is cut for hay, and lengths of the river support species-rich marginal vegetation. The dominant habitats in the area are associated with the large number of flooded gravel pits and these include reedswamp and species-rich margins. The pits are also recognised for their ornithological interest, particularly those that are relatively undisturbed and therefore attract significant numbers of overwintering wildfowl.

15. TERRACE FARMLAND

Regional character areas

Upper Thames Vale, Vale of Aylesbury, Vale of White Horse and Chilterns.

Location

This landscape type extends over the terraces of the River Thames and its tributaries, covering a large expanse around Wallingford and Dorchester. It also includes the terraces of the River Thame.

Overview

A flat, open, intensively farmed landscape overlying river gravel terraces.

Key characteristics

- Broad, flat or low-lying gravel terraces.
- A large scale, regularly shaped field pattern of predominantly arable land.
- Localised tree-lined ditches.
- Nucleated villages.

Local character areas

B. Cogges Bridge Cottage (UT/54)

Landscape character

In this area there are medium-sized arable fields and some improved grassland. Roadside hedges are tall, thick and intact, and include species such as hawthorn, blackthorn, elm and wild privet. Field hedges are often low and fragmented. Tree cover is limited to hedgerow trees and deciduous plantations, either within or adjacent to roadside hedges.

Biodiversity

Bioscore/bioband: 17/L

This area supports a very limited range of locally important habitats including species-poor hedges with trees, a deciduous plantation and some species-poor watercourses.

19. WOODED ESTATELANDS

Regional character areas

Cotswolds, Northamptonshire Uplands, Midvale Ridge and Upper Thames Vale.

Location

This landscape type includes parklands at the eastern end of the Cotswolds, ranging from the area around Blenheim Park, Steeple Barton, Middleton Park and as far as Shelswell Park to the north of Bicester. Further south it includes Eynsham Hall Park and Bladon Heath Wood and also covers the majority of the wooded and parkland areas in the undulating landscape of the Corallian Ridge.

Overview

A wooded estate landscape characterised by arable farming and small villages with a strong vernacular character.

Key characteristics

- Rolling topography with localised steep slopes.
- Large blocks of ancient woodland and mixed plantations of variable sizes.
- Large parklands and mansion houses.
- A regularly shaped field pattern dominated by arable fields.
- Small villages with strong vernacular character.

E. Freeland (UT/24)

Landscape Character

The area has medium-sized fields with a mix of land uses including some small pasture fields on the steep valley sides in the eastern part of the area. The landscape has a very strong wooded character, resulting from the large ancient semi-natural woods and mixed plantations of ash, oak and conifers that are largely associated with the parklands at Eynsham Hall and Freeland. The mature oak and ash hedgerow trees reinforce this wooded character, although they are sparser to the south of Cogges Wood where arable farming dominates. The belts of semi-natural woodland associated with the valley sides and floor reinforce the intimacy of this pastoral landscape. Fields are enclosed by thorn hedges and woods, and the grass fields on the valley sides are bordered by watercourse trees and fences. Hedges are generally tall and in good condition, but are more intensively maintained and gappy where they enclose arable land.

Biodiversity

Bioscore/bioband: 99/MH

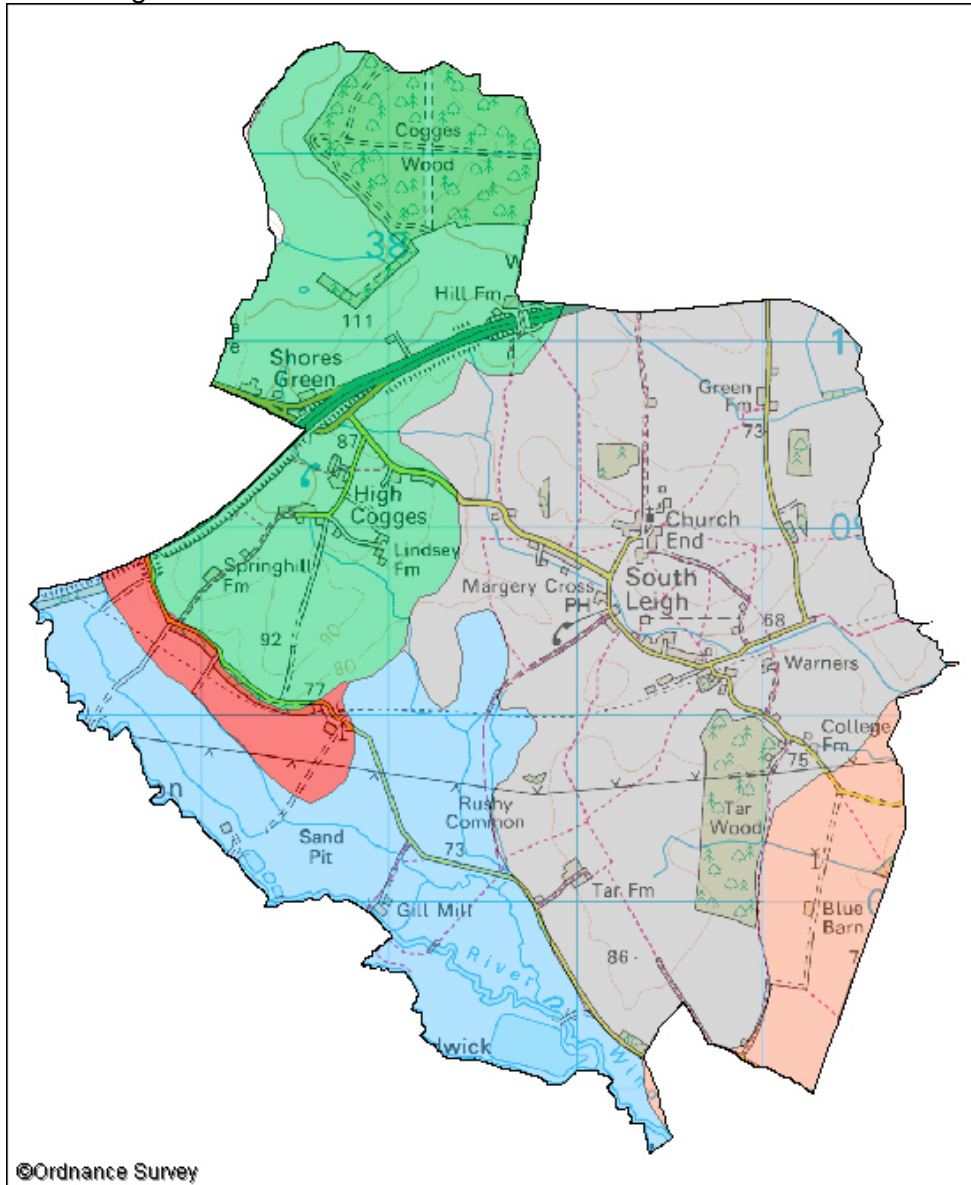
Locally important habitats include deciduous woodland, plantations, semi-improved grassland, species-poor hedges with trees and tree-lined watercourses. There are several significant blocks of ancient semi-natural woodland including Cogges and Pinsley Woods. Eynsham Hall Park with its mature trees and lakes is also important. A small area of neutral grassland near Freeland partially overlaps with an adjacent landscape type.

Oxfordshire Highways
Cogges Link Road
Habitats and Species Overview

Maps for the various Parish Council boundaries falling within the study area are shown below. Landscape types are identified in the key.

(Figures are taken from the website referenced above, and no OS copyright was provided)

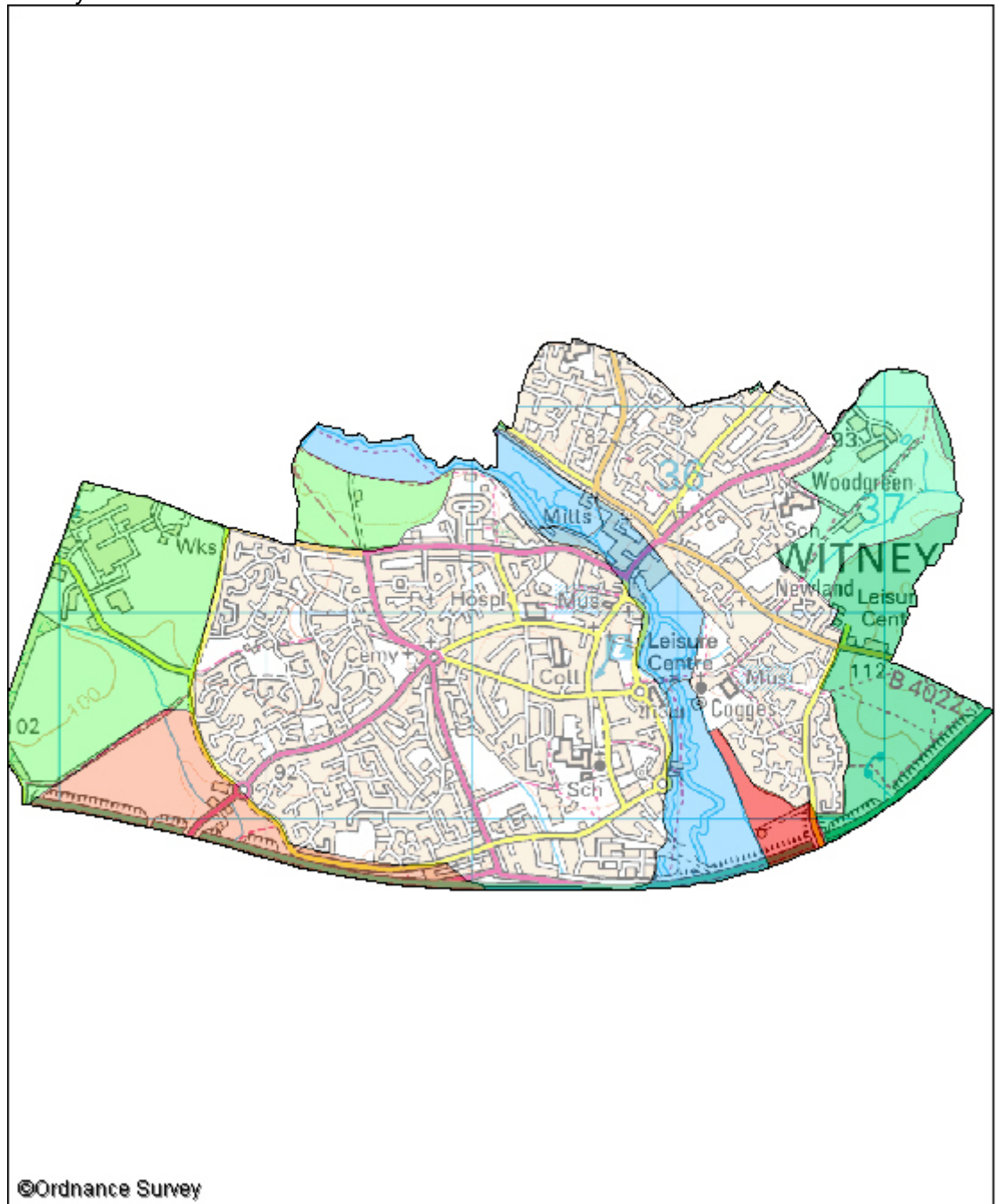
South Leigh




Landscape Types

-  Lowland Village Farmlands
-  River Meadowlands
-  Rolling Clayland
-  Terrace Farmland
-  Wooded Estatelands

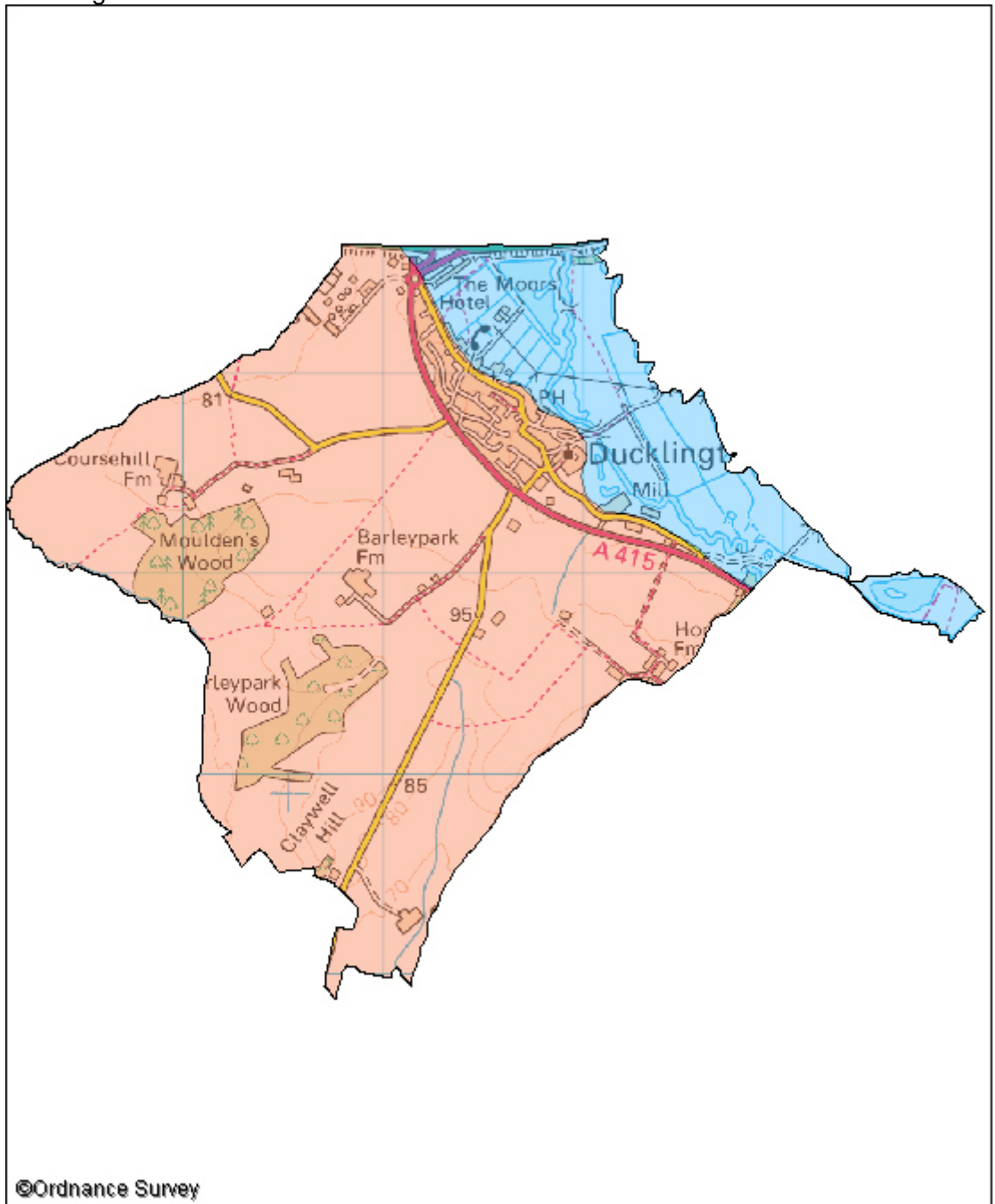
Witney





Landscape Types

-  Estate Farmlands
-  Lowland Village Farmlands
-  River Meadowlands
-  Settled Ancient Pastures
-  Terrace Farmland
-  Wooded Estatelands

Ducklington



Landscape Types

-  Lowland Village Farmlands
-  River Meadowlands

Appendix 2: Supplementary Information

Oxfordshire Biological Records Centre Data Search (2002)

- Species list

Thames Valley Environmental Records Centre Data Search (2007)

- List of protected and notable species
- Map of designated sites
- Citation for designated sites

Phase I Habitat Survey – please note that the figure accompanying this report shows a previous scheme design. The habitats noted remain current.

River Corridor Survey

Species list for Cogges Manor Farm

*includes
Lancel Common.*

Diploschistes muscorum	a lichen	Unknown
Dasyscyphus pudibundus	an ascomycete fungus	Unknown
Acarospora glaucocarpa	a lichen	Nationally Scarce
Aspicilia calcarea	a lichen	Unknown
Aspicilia contorta	a lichen	Unknown
Catillaria lenticularis	a lichen	Unknown
Cladonia pocillum	a lichen	Unknown
Collema auriforme	a lichen	Unknown
Collema crispum	a lichen	Unknown
Diploicia canescens	a lichen	Unknown
Diplotomma alboatrum	a lichen	Unknown
Lecania erysibe	a lichen	Unknown
Lecanora campestris	a lichen	Unknown
Lecanora conferta	a lichen	Unknown
Lecanora crenulata	a lichen	Unknown
Lecanora dispersa	a lichen	Unknown
Lepraria incana	a lichen	Unknown
Leptogium lichenoides	a lichen	Unknown
Mycobilimbia sabuletorum	a lichen	Unknown
Phaeophyscia orbicularis	a lichen	Unknown
Physcia adscendens	a lichen	Unknown
Physconia grisea	a lichen	Unknown
Protoblastenia rupestris	a lichen	Unknown
Rinodina bischoffii	a lichen	Unknown
Sarcogyne regularis	a lichen	Unknown
Tephromela atra	a lichen	Unknown
Placynthium nigrum	a lichen	Unknown
Caloplaca aurantia	a lichen	Unknown
Caloplaca citrina	a lichen	Unknown
Caloplaca flavescens	a lichen	Unknown
Caloplaca holocarpa	a lichen	Unknown
Caloplaca lactea	a lichen	Unknown
Caloplaca luteoalba	Orange-fruited Elm-liche	Vulnerable
Caloplaca saxicola	a lichen	Unknown
Caloplaca teicholyta	a lichen	Unknown
Caloplaca variabilis	a lichen	Unknown
Xanthoria calcicola	a lichen	Unknown
Catapyrenium lachneum	a lichen	Unknown
Dermatocarpon miniatum	a lichen	Unknown
Verrucaria baldensis	a lichen	Unknown
Verrucaria muralis	a lichen	Unknown
Verrucaria nigrescens	a lichen	Unknown
Verrucaria viridula	a lichen	Unknown
Hirneola auricula-judae	Jew's Ear	
Piptoporus betulinus	Birch Polypore	Unknown
Lophocolea heterophylla	a liverwort	Common
Porella platyphylla	a liverwort	Common
Metzgeria furcata	a liverwort	Common
Ceratodon purpureus	a moss	Common
Ceratodon purpureus ssp. purpureus	a moss	Common
Dicranoweisia cirrata	a moss	Common
Fissidens taxifolius	a moss	Common
Tortula ruralis	a moss	Common
Tortula intermedia	a moss	Common
Tortula muralis	a moss	Common
Tortula muralis var. muralis	a moss	Common
Tortula latifolia	a moss	Common
Phascum cuspidatum	a moss	Common
Barbula convoluta	a moss	Common
Barbula convoluta var. convoluta	a moss	Common

<i>Barbula unguiculata</i>	a moss	Common
<i>Barbula hornschuchiana</i>	a moss	Common
<i>Barbula vinealis</i>	a moss	Common
<i>Schistidium apocarpum</i> sens. lat.	a moss	Common
<i>Grimmia pulvinata</i>	a moss	Common
<i>Bryum capillare</i>	a moss	Common
<i>Bryum flaccidum</i>	a moss	Common
<i>Bryum caespiticium</i>	a moss	Common
<i>Bryum bicolor</i> sens. lat.	a moss	Common
<i>Bryum argenteum</i>	a moss	Common
<i>Bryum ruderale</i>	a moss	Local
<i>Mnium hornum</i>	a moss	Common
<i>Plagiomnium undulatum</i>	a moss	Common
<i>Aulacomnium androgynum</i>	a moss	Common
<i>Zygodon viridissimus</i>	a moss	Common
<i>Zygodon viridissimus</i> var. <i>viridi</i>	a moss	Common
<i>Orthotrichum anomalum</i>	a moss	Common
<i>Orthotrichum diaphanum</i>	a moss	Common
<i>Thamnobryum alopecurum</i>	a moss	Unknown
<i>Amblystegium serpens</i>	a moss	Common
<i>Amblystegium riparium</i>	a moss	Common
<i>Isothecium myurum</i>	a moss	Common
<i>Homalothecium sericeum</i>	a moss	Common
<i>Brachythecium rutabulum</i>	a moss	Common
<i>Brachythecium velutinum</i>	a moss	Common
<i>Cirriphyllum crassinervium</i>	a moss	Common
<i>Rhynchostegium confertum</i>	a moss	Common
<i>Eurhynchium praelongum</i>	a moss	Common
<i>Eurhynchium praelongum</i> var. <i>stok</i>	a moss	Local
<i>Eurhynchium swartzii</i>	a moss	Common
<i>Hypnum cupressiforme</i> sens. lat.	a moss	Common
<i>Hypnum cupressiforme</i> var. <i>cupres</i>	a moss	Common
<i>Hypnum cupressiforme</i> var. <i>resupi</i>	a moss	Common
<i>Polypodium vulgare</i> agg.	Polypody	Hedgerow Bill Sc
<i>Polypodium vulgare</i> sens. str.	Polypody	Hedgerow Bill Sc
<i>Asplenium adiantum-nigrum</i> sens.	Black Spleenwort	Unknown
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	Unknown
<i>Asplenium ruta-muraria</i>	Wall-rue	Unknown
<i>Caltha palustris</i>	Marsh Marigold	Unknown
<i>Eranthis hyemalis</i>	Winter Aconite	Unknown
<i>Ranunculus acris</i>	Meadow Buttercup	Unknown
<i>Ranunculus repens</i>	Creeping Buttercup	Unknown
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	Unknown
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	Unknown
<i>Ranunculus ficaria</i>	Lesser Celandine	Unknown
<i>Ranunculus trichophyllus</i>	Thread-leaved Water-crow	Unknown
<i>Ranunculus aquatilis</i> sens. lat.	Water Crowfoot	Unknown
<i>Ranunculus fluitans</i>	River Water-crowfoot	Unknown
<i>Papaver rhoeas</i>	Common Poppy	Unknown
<i>Ulmus glabra</i>	Wych Elm	Hedgerow Bill Sc
<i>Ulmus procera</i>	English Elm	Hedgerow Bill Sc
<i>Urtica dioica</i>	Common Nettle	Unknown
<i>Urtica urens</i>	Small Nettle	Unknown
<i>Parietaria judaica</i>	Pellitory-of-the-Wall	Unknown
<i>Quercus petraea</i>	Sessile Oak	Hedgerow Bill Sc
<i>Quercus robur</i>	Pedunculate Oak	Hedgerow Bill Sc
<i>Betula pendula</i>	Silver Birch	Hedgerow Bill Sc
<i>Betula pubescens</i>	Downy Birch	Hedgerow Bill Sc
<i>Alnus glutinosa</i>	Alder	Hedgerow Bill Sc
<i>Corylus avellana</i>	Hazel	Hedgerow Bill Sc
<i>Chenopodium album</i> agg.	Fat Hen	Unknown

<i>Stellaria media</i>	Common Chickweed	Unknown	
<i>Stellaria holostea</i>	Greater Stitchwort	Unknown	
<i>Cerastium fontanum</i>	Common Mouse-ear	Unknown	
<i>Myosoton aquaticum</i>	Water Chickweed	Unknown	
<i>Lychnis flos-cuculi</i>	Ragged Robin	Unknown	
<i>Silene latifolia</i>	White Campion	Unknown	
<i>Persicaria maculosa</i>	Redshank	Unknown	
<i>Polygonum aviculare</i> agg.	Knotgrass [agg.]	Unknown	
<i>Fallopia convolvulus</i>	Black Bindweed	Unknown	
<i>Rumex acetosa</i>	Common Sorrel	Unknown	
<i>Rumex hydrolapathum</i>	Water Dock	Unknown	
<i>Rumex crispus</i>	Curled Dock	Unknown	
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Unknown	
<i>Hypericum perforatum</i>	Perforate St. John's-wor	Unknown	
<i>Hypericum tetrapterum</i>	Square-stalked St. John'	Unknown	
<i>Hypericum hirsutum</i>	Hairy St. John's-wort	Unknown	
<i>Tilia cordata</i> x <i>platyphyllos</i> (T.	Lime	Unknown	
<i>Althaea hirsuta</i>	Rough Marsh-mallow	Endangered	
<i>Bryonia dioica</i>	White Bryony	Unknown	
<i>Populus alba</i>	White Poplar	Hedgerow	Bill Sc
<i>Populus alba</i> x <i>tremula</i> (P. x can	Grey Poplar	Hedgerow	Bill Sc
<i>Populus x canadensis</i> (P. deltoid	Hybrid Black Poplar	Unknown	
<i>Salix fragilis</i>	Crack Willow	Hedgerow	Bill Sc
<i>Salix viminalis</i>	Osier	Hedgerow	Bill Sc
<i>Salix caprea</i>	Goat Willow	Hedgerow	Bill Sc
<i>Salix cinerea</i>	Grey Willow	Hedgerow	Bill Sc
<i>Sisymbrium officinale</i>	Hedge Mustard	Unknown	
<i>Alliaria petiolata</i>	Garlic Mustard	Unknown	
<i>Barbarea vulgaris</i>	Winter-cress	Unknown	
<i>Nasturtium officinale</i> agg.	Water-cress Spp	Unknown	
<i>Rorippa amphibia</i>	Greater Yellow-cress	Unknown	
<i>Cardamine pratensis</i>	Cuckoo-flower	Unknown	
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	Unknown	
<i>Erophila verna</i> sensu Stace	Common Whitlowgrass	Unknown	
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	Unknown	
<i>Sinapis arvensis</i>	Charlock	Unknown	
<i>Primula veris</i>	Cowslip	Unknown	
<i>Anagallis arvensis</i>	Scarlet Pimpernel	Unknown	
<i>Ribes uva-crispa</i>	Gooseberry	Hedgerow	Bill Sc
<i>Sedum acre</i>	Biting Stonecrop	Unknown	
<i>Sedum album</i>	White Stonecrop	Unknown	
<i>Sedum dasyphyllum</i>	Thick-leaved Stonecrop	Unknown	
<i>Saxifraga tridactylites</i>	Rue-leaved Saxifrage	Unknown	
<i>Filipendula ulmaria</i>	Meadowsweet	Unknown	
<i>Rubus fruticosus</i> agg.	Bramble	Unknown	
<i>Rubus caesius</i>	Dewberry	Unknown	
<i>Potentilla anserina</i>	Silverweed	Unknown	
<i>Potentilla reptans</i>	Creeping Cinquefoil	Unknown	
<i>Geum urbanum</i>	Herb Bennet	Hedgerow	Bill Sc
<i>Sanguisorba officinalis</i>	Great Burnet	Unknown	
<i>Rosa canina</i> sens.str.	Dog Rose	Hedgerow	Bill Sc
<i>Rosa rubiginosa</i> agg.	Sweet-briar	Hedgerow	Bill Sc
<i>Prunus spinosa</i>	Blackthorn	Hedgerow	Bill Sc
<i>Prunus domestica</i>	Wild Plum	Unknown	
<i>Sorbus aucuparia</i>	Rowan	Hedgerow	Bill Sc
<i>Crataegus monogyna</i>	Hawthorn	Hedgerow	Bill Sc
<i>Lathyrus pratensis</i>	Meadow Vetchling	Unknown	
<i>Medicago lupulina</i>	Black Medick	Unknown	
<i>Trifolium repens</i>	White Clover	Unknown	
<i>Trifolium dubium</i>	Lesser Trefoil	Unknown	
<i>Trifolium pratense</i>	Red Clover	Unknown	

Lythrum salicaria	Purple-loosestrife	Unknown
Epilobium hirsutum	Great Willowherb	Unknown
Epilobium roseum	Pale Willowherb	Unknown
Chamerion angustifolium	Rosebay Willowherb	Unknown
Cornus sanguinea	Dogwood	Hedgerow Bill Sc
Euonymus europaeus	Spindle	Hedgerow Bill Sc
Ilex aquifolium	Holly	Hedgerow Bill Sc
Mercurialis perennis	Dog's Mercury	Hedgerow Bill Sc
Euphorbia helioscopia	Sun Spurge	Unknown
Aesculus hippocastanum	Horse-chestnut	Unknown
Acer campestre	Field Maple	
Acer pseudoplatanus	Sycamore	Unknown
Geranium pratense	Meadow Crane's-bill	Unknown
Geranium dissectum	Cut-leaved Crane's-bill	Unknown
Geranium pusillum	Small-flowered Crane's-b	Unknown
Geranium molle	Dove's-foot Crane's-bill	Unknown
Geranium robertianum	Herb-robert	Hedgerow Bill Sc
Hedera helix	Ivy	Unknown
Anthriscus sylvestris	Cow Parsley	Unknown
Conopodium majus	Pignut	Hedgerow Bill Sc
Aegopodium podagraria	Ground-elder	Unknown
Conium maculatum	Hemlock	Unknown
Apium nodiflorum	Fool's Water-cress	Unknown
Angelica sylvestris	Wild Angelica	Unknown
Heracleum sphondylium	Hogweed	Unknown
Torilis japonica	Upright Hedge-parsley	Unknown
Solanum nigrum	Black Nightshade	Unknown
Solanum dulcamara	Bittersweet	Unknown
Convolvulus arvensis	Field Bindweed	Unknown
Calystegia sepium	Hedge Bindweed	Unknown
Symphytum officinale	Common Comfrey	Unknown
Myosotis scorpioides	Water Forget-me-not	Unknown
Myosotis arvensis	Field Forget-me-not	Unknown
Stachys sylvatica	Hedge Woundwort	Unknown
Lamium album	White Dead-nettle	Unknown
Lamium purpureum	Red Dead-nettle	Unknown
Scutellaria galericulata	Skullcap	Unknown
Glechoma hederacea	Ground-ivy	Unknown
Prunella vulgaris	Selfheal	Unknown
Mentha aquatica	Water Mint	Unknown
Plantago major	Greater Plantain	Unknown
Plantago media	Hoary Plantain	Unknown
Plantago lanceolata	Ribwort Plantain	Unknown
Fraxinus excelsior	Ash	Hedgerow Bill Sc
Ligustrum vulgare	Wild Privet	Hedgerow Bill Sc
Scrophularia nodosa	Common Figwort	Unknown
Scrophularia auriculata	Water Figwort	Unknown
Cymbalaria muralis	Ivy-leaved Toadflax	Unknown
Veronica chamaedrys	Germander Speedwell	Unknown
Veronica beccabunga	Brooklime	Unknown
Veronica anagallis-aquatica	Blue Water-speedwell	Unknown
Veronica arvensis	Wall Speedwell	Unknown
Galium verum	Lady's Bedstraw	Unknown
Galium mollugo	Hedge Bedstraw	Unknown
Galium aparine	Cleavers	Unknown
Sambucus nigra	Elder	Hedgerow Bill Sc
Viburnum opulus	Guelder-rose	Hedgerow Bill Sc
Symphoricarpos albus	Snowberry	Unknown
Dipsacus fullonum sens. lat.	Wild Teasel	Unknown
Arctium lappa	Greater Burdock	Unknown
Arctium minus	Lesser Burdock	Unknown

<i>Carduus crispus</i>	Wetted Thistle	Unknown
<i>Cirsium vulgare</i>	Spear Thistle	Unknown
<i>Cirsium palustre</i>	Marsh Thistle	Unknown
<i>Cirsium arvense</i>	Creeping Thistle	Unknown
<i>Centaurea nigra</i>	Common Knapweed	Unknown
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	Unknown
<i>Sonchus asper</i>	Prickly Sow-thistle	Unknown
<i>Mycelis muralis</i>	Wall Lettuce	Unknown
<i>Taraxacum officinale</i> agg.	Dandelion	Unknown
<i>Crepis capillaris</i>	Smooth Hawk's-beard	Unknown
<i>Hieracium umbellatum</i>	a hawkweed	Unknown
<i>Bellis perennis</i>	Daisy	Unknown
<i>Artemisia vulgaris</i>	Mugwort	Unknown
<i>Achillea millefolium</i>	Yarrow	Unknown
<i>Leucanthemum vulgare</i>	Oxeye Daisy	Unknown
<i>Matricaria discoidea</i>	Pineapple Weed	Unknown
<i>Senecio jacobaea</i>	Common Ragwort	Unknown
<i>Senecio vulgaris</i>	Groundsel	Unknown
<i>Tussilago farfara</i>	Colt's-foot	Unknown
<i>Eupatorium cannabinum</i>	Hemp-agrimony	Unknown
<i>Arum maculatum</i>	Lords-and-ladies	Hedgerow Bill Sc
<i>Glyceria maxima</i>	Reed Sweet-grass	Unknown
<i>Phalaris arundinacea</i>	Reed Canary-grass	Unknown
<i>Sparganium erectum</i>	Branched Bur-reed	Unknown
<i>Sparganium emersum</i>	Unbranched Bur-reed	Unknown
<i>Fritillaria meleagris</i>	Fritillary	Nationally Scarc
<i>Hyacinthoides non-scripta</i>	Bluebell	Hedgerow Bill Sc
<i>Iris pseudacorus</i>	Yellow Iris	Unknown
<i>Theodoxus fluviatilis</i>	River Nerit	Local
<i>Valvata piscinalis</i>	Valve Snail	Local
<i>Potamopyrgus jenkinsi</i>	Jenkins' Spire Snail	Naturalised
<i>Bithynia tentaculata</i>	a spire snail	Common
<i>Carychium minimum</i> seg.	a hollow-shelled snail	Common
<i>Physa fontinalis</i>	a bladder snail	Common
<i>Lymnaea truncatula</i>	a pond snail	Common
<i>Lymnaea auricularia</i>	a pond snail	Local
<i>Lymnaea peregra</i>	Wandering Snail	Common
<i>Planorbis carinatus</i>	Keeled Ramshorn	Common
<i>Gyraulus acronicus</i>	a ramshorn snail	RDB2
<i>Ancylus fluviatilis</i>	River Limpet	Common
<i>Succinea putris</i>	an amber snail	Common
<i>Cochlicopa lubrica</i>	a moss snail	Common
<i>Pyramidula rupestris</i>	a rock snail	Local
<i>Pupilla muscorum</i>	a moss snail	Local
<i>Lauria cylindracea</i>	a moss snail	Common
<i>Vallonia costata</i>	a grass snail	Common
<i>Vallonia pulchella</i> seg.	a grass snail	Common
<i>Vallonia excentrica</i>	a grass snail	Common
<i>Ena obscura</i>	a bulin snail	Common
<i>Punctum pygmaeum</i>	a discus snail	Common
<i>Discus rotundatus</i>	a discus snail	Common
<i>Arion ater</i>	Great Black Slug	Common
<i>Arion circumscriptus</i> agg.	a roundback slug	Common
<i>Arion hortensis</i>	Southern Garden Slug	Common
<i>Vitrina pellucida</i>	a glass snail	Common
<i>Oxychilus draparnaudi</i>	a glass snail	Local
<i>Oxychilus cellarius</i>	a glass snail	Common
<i>Oxychilus alliarius</i>	Garlic Snail	Common
<i>Zonitoides nitidus</i>	a glass snail	Local
<i>Milax budapestensis</i>	Budapest Slug	Common
<i>Boettgerilla pallens</i>	Worm Slug	Naturalised

<i>Limax maximus</i>	Great Grey Slug	Common
<i>Limax flavus</i>	Yellow Slug	Common
<i>Deroceras laeve</i>	Marsh Slug	Common
<i>Deroceras reticulatum</i>	Netted Slug	Common
<i>Euconulus alderi</i>	a glass snail	Local
<i>Cochlodina laminata</i>	a door snail	Common
<i>Clausilia bidentata</i>	a door snail	Common
<i>Trichia striolata</i>	a snail	Common
<i>Trichia hispida</i>	Hairy Snail	Common
<i>Arianta arbustorum</i>	a snail	Common
<i>Cepaea nemoralis</i>	Brown Lipped Snail	Common
<i>Cepaea hortensis</i>	a snail	Common
<i>Helix aspersa</i>	a snail	Common
<i>Sphaerium corneum</i>	an orb mussel	Common
<i>Pisidium amnicum</i>	a pea mussel	Common
<i>Pisidium milium</i>	a pea mussel	Common
<i>Nanogona polydesmoides</i>	a flat-backed millipede	Common
<i>Blaniulus guttulatus</i>	Spotted Snake Millipede	Common
<i>Tachypodoiulus niger</i>	White-legged Snake Milli	Common
<i>Cylindroiulus caeruleocinctus</i>	a julid snake millipede	Local
<i>Cylindroiulus punctatus</i>	Blunt-tailed Snake Milli	Common
<i>Cylindroiulus britannicus</i>	a julid snake millipede	Common
<i>Ophiulus pilosus</i>	a julid snake millipede	Common
<i>Polydesmus gallicus</i>	a flat-back millepede	Common
<i>Brachydesmus superus</i>	a flat-back millepede	Common
<i>Macrosternodesmus palicola</i>	a millipede	Local
<i>Cryptops hortensis</i>	a centipede	Common
<i>Geophilus osquidatum</i>	a centipede	Local
<i>Necrophloeophagus flavus</i>	a centipede	Common
<i>Brachygeophilus truncorum</i>	a centipede	Common
<i>Haplophilus subterraneus</i>	a centipede	Common
<i>Schendyla nemorensis</i>	a centipede	Common
<i>Lithobius forficatus</i>	a centipede	Common
<i>Lithobius melanops</i>	a centipede	Common
<i>Lithobius microps</i>	a centipede	Common
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	Common
<i>Ischnura elegans</i>	Blue-tailed Damselfly	Common
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	Common
<i>Calopteryx splendens</i>	Banded Demoiselle	Local
<i>Aeshna grandis</i>	Brown Hawker	Common
<i>Aeshna cyanea</i>	Southern Hawker	Common
<i>Aeshna mixta</i>	Migrant Hawker	Local
<i>Anax imperator</i>	Emperor Dragonfly	Common
<i>Sympetrum striolatum</i>	Common Darter	Common
<i>Leuctra geniculata</i>	a stonefly	Local
<i>Meconema thalassinum</i>	Oak Bush Cricket	Common
<i>Pholidoptera griseoptera</i>	Dark Bush Cricket	Common
<i>Leptophyes punctatissima</i>	Speckled Bush Cricket	Common
<i>Tetrix subulata</i>	Slender Ground Hopper	Local
<i>Tetrix undulata</i>	Common Ground Hopper	Common
<i>Omocestus viridulus</i>	Common Green Grasshopper	Common
<i>Chorthippus albomarginatus</i>	Lesser Marsh Grasshopper	Local
<i>Chorthippus parallelus</i>	Meadow Grasshopper	Common
<i>Forficula auricularia</i>	Common Earwig	Common
<i>Acanthosoma haemorrhoidale</i>	Hawthorn Shieldbug	Common
<i>Elasmucha grisea</i>	Parent Bug	Common
<i>Legnotus limbosus</i>	a shield bug	Common
<i>Sehirus bicolor</i>	Pied Shieldbug	Common
<i>Eysarcoris fabricii</i>	a shield bug	Common
<i>Palomena prasina</i>	a shield bug	Common
<i>Piezodorus lituratus</i>	Gorse Shieldbug	Common

<i>Zicrona caerulea</i>	a shield bug	Local
<i>Heterogaster urticae</i>	Nettle Groundbug	Common
<i>Chilacis typhae</i>	a ground bug	Common
<i>Ischnodemus sabuleti</i>	a ground bug	Common
<i>Kleidocerys resedae</i>	a ground bug	Common
<i>Drymus sylvaticus</i>	a ground bug	Common
<i>Scolopostethus affinis</i>	a ground bug	Common
<i>Scolopostethus thomsoni</i>	a ground bug	Common
<i>Cymus glandicolor</i>	a stiltbug	Common
<i>Berytinus minor</i>	a stiltbug	Common
<i>Tingis ampliata</i>	Creeping Thistle Lacebug	Common
<i>Tingis cardui</i>	Spear Thistle Lacebug	Common
<i>Physatocheila dumetorum</i>	a lacebug	Common
<i>Dictyla convergens</i>	a lacebug	Local
<i>Reduvius personatus</i>	an assassin bug	Local
<i>Nabis ferus</i>	Field Damsel Bug	Common
<i>Nabis rugosus</i>	Common Damselbug	Common
<i>Aptus mirmicoides</i>	a damsel bug	Common
<i>Anaptus major</i>	a damsel bug	Common
<i>Himacerus apterus</i>	a damsel bug	Common
<i>Nabica flavomarginata</i>	Broad Damselbug	Common
<i>Nabica limbata</i>	Marsh Damselbug	Common
<i>Temnostethus gracilis</i>	a flower bug or bloodsuc	Local
<i>Temnostethus pusillus</i>	a flower bug or bloodsuc	Common
<i>Anthocoris confusus</i>	a flower bug or bloodsuc	Common
<i>Anthocoris simulans</i>	a flower bug or bloodsuc	Local
<i>Anthocoris nemoralis</i>	a flower bug or bloodsuc	Common
<i>Anthocoris gallarum-ulmi</i>	a flower bug or bloodsuc	Local
<i>Anthocoris nemorum</i>	Common Flower Bug	Common
<i>Orius majusculus</i>	a flower bug or bloodsuc	Common
<i>Orius vicinus</i>	a flower bug or bloodsuc	Common
<i>Orius laevigatus</i>	a flower bug or bloodsuc	Common
<i>Orius niger</i>	a flower bug or bloodsuc	Common
<i>Deraeocoris lutescens</i>	a plantbug or grassbug	Common
<i>Deraeocoris ruber</i>	a plantbug or grassbug	Common
<i>Megalocoleus molliculus</i>	a plantbug or grassbug	Common
<i>Macrotylus solitarius</i>	a plantbug or grassbug	Common
<i>Orthonotus rufifrons</i>	a plantbug or grassbug	Common
<i>Harporera thoracica</i>	a plantbug or grassbug	Common
<i>Phylus coryli</i>	a plantbug or grassbug	Common
<i>Phylus melanocephalus</i>	a plantbug or grassbug	Common
<i>Psallus ambiguus</i>	a plantbug or grassbug	Common
<i>Psallus betuleti</i>	a plantbug or grassbug	Common
<i>Psallus assimilis</i>	a plantbug or grassbug	Common
<i>Psallus perrisi</i>	a plantbug or grassbug	Common
<i>Psallus wagneri</i>	a plantbug or grassbug	Common
<i>Psallus quercus</i>	a plantbug or grassbug	Local
<i>Psallus falleni</i>	a plantbug or grassbug	Common
<i>Psallus flavellus</i>	a plantbug or grassbug	Common
<i>Psallus haematodes</i>	a plantbug or grassbug	Common
<i>Psallus lepidus</i>	a plantbug or grassbug	Common
<i>Psallus salicis</i>	a plantbug or grassbug	Common
<i>Psallus confusus</i>	a plantbug or grassbug	Common
<i>Psallus mollis</i>	a plantbug or grassbug	Common
<i>Atractotomus mali</i>	a plantbug or grassbug	Common
<i>Plagiognathus arbustorum</i>	a plantbug or grassbug	Common
<i>Plagiognathus chrysanthemi</i>	a plantbug or grassbug	Common
<i>Sthenarus roseri</i>	a plantbug or grassbug	Common
<i>Dicyphus constrictus</i>	a plantbug or grassbug	Local
<i>Dicyphus epilobii</i>	a plantbug or grassbug	Common
<i>Dicyphus errans</i>	a plantbug or grassbug	Common

<i>Dicyphus stachydis</i>	a plantbug or grassbug	Common
<i>Dicyphus globulifer</i>	a plantbug or grassbug	Common
<i>Campyloneura virgula</i>	a plantbug or grassbug	Common
<i>Malacocoris chlorizans</i>	Delicate Apple Capsid	Common
<i>Cyllocoris histrionicus</i>	a plantbug or grassbug	Common
<i>Dryophilocoris flavoquadrimacula</i>	a plantbug or grassbug	Common
<i>Heterotoma meriopterum</i>	a plantbug or grassbug	Common
<i>Blepharidopterus angulatus</i>	Black-kneed Apple Capsid	Common
<i>Orthotylus tenellus</i>	a plantbug or grassbug	Common
<i>Orthotylus flavinervis</i>	a plantbug or grassbug	Common
<i>Orthotylus marginalis</i>	Dark Green Apple Capsid	Common
<i>Orthotylus nassatus</i>	a plantbug or grassbug	Common
<i>Orthotylus ochrotrichus</i>	a plantbug or grassbug	Common
<i>Orthotylus virescens</i>	a plantbug or grassbug	Common
<i>Orthotylus diaphanus</i>	a plantbug or grassbug	Common
<i>Lygus rugulipennis</i>	European Tarnished Plant	Common
<i>Liocoris tripustulatus</i>	a plantbug or grassbug	Common
<i>Orthops cervinus</i>	a plantbug or grassbug	Common
<i>Orthops campestris</i>	a plantbug or grassbug	Common
<i>Lygocoris pabulinus</i>	Common Green Capsid	Common
<i>Lygocoris viridis</i>	a plantbug or grassbug	Common
<i>Lygocoris lucorum</i>	a plantbug or grassbug	Common
<i>Lygocoris spinolai</i>	a plantbug or grassbug	Common
<i>Plesiocoris rugicollis</i>	Apple Capsid	Common
<i>Polymerus palustris</i>	a plantbug or grassbug	Local
<i>Polymerus nigritus</i>	a plantbug or grassbug	Common
<i>Calocoris fulvomaculatus</i>	a plantbug or grassbug	Common
<i>Calocoris quadripunctatus</i>	a plantbug or grassbug	Common
<i>Calocoris stysi</i>	a plantbug or grassbug	Common
<i>Calocoris norvegicus</i>	a plantbug or grassbug	Common
<i>Calocoris roseomaculatus</i>	a plantbug or grassbug	Common
<i>Megacoelum infusum</i>	a plantbug or grassbug	Common
<i>Stenotus binotatus</i>	Timothy Grassbug	Common
<i>Phytocoris longipennis</i>	a plantbug or grassbug	Common
<i>Phytocoris populi</i>	a plantbug or grassbug	Common
<i>Phytocoris tiliae</i>	a plantbug or grassbug	Common
<i>Phytocoris ulmi</i>	a plantbug or grassbug	Common
<i>Phytocoris varipes</i>	a plantbug or grassbug	Common
<i>Capsus ater</i>	a plantbug or grassbug	Common
<i>Pantilius tunicatus</i>	a plantbug or grassbug	Common
<i>Stenodema calcaratum</i>	a plantbug or grassbug	Common
<i>Stenodema laevigatum</i>	a plantbug or grassbug	Common
<i>Notostira elongata</i>	a plantbug or grassbug	Common
<i>Megaloceraea recticornis</i>	a plantbug or grassbug	Common
<i>Leptopterna dolabrata</i>	a plantbug or grassbug	Common
<i>Leptopterna ferrugata</i>	a plantbug or grassbug	Common
<i>Saldula saltatoria</i>	Common Shorebug	Common
<i>Hydrometra stagnorum</i>	a water-measurer	Common
<i>Gerris lacustris</i>	Common Pondskater	Common
<i>Callicorixa praeusta</i>	a waterboatman	Common
<i>Hesperocorixa sahlbergi</i>	a waterboatman	Common
<i>Sigara lateralis</i>	a waterboatman	Common
<i>Sigara nigrolineata</i>	a waterboatman	Common
<i>Cercopis vulnerata</i>	a frog hopper	Common
<i>Aphrophora alni</i>	a frog hopper	Common
<i>Aphrophora salicina</i>	a frog hopper	Local
<i>Philaenus spumarius</i>	Cuckoo-spit Insect	Common
<i>Neophilaenus exclamationis</i>	a frog hopper	Common
<i>Neophilaenus lineatus</i>	a frog hopper	Common
<i>Idiocerus albicans</i>	a leafhopper	Common
<i>Idiocerus confusus</i>	a leafhopper	Common

<i>Idiocerus rutilans</i>	a leafhopper	Local
<i>Idiocerus stigmatalis</i>	a leafhopper	Common
<i>Iassus lanio</i>	a leafhopper	Common
<i>Oncopsis flavicollis</i>	a leafhopper	Common
<i>Macropsis cerea</i>	a leafhopper	Common
<i>Macropsis scotti</i>	a leafhopper	Common
<i>Macropsis scutellata</i>	a leafhopper	Common
<i>Agallia consobrina</i>	a leafhopper	Common
<i>Agallia laevis</i>	a leafhopper	Local
<i>Aphrodes bicinctus</i>	a leafhopper	Local
<i>Aphrodes flavostriatus</i>	a leafhopper	Common
<i>Aphrodes makarovi</i>	a leafhopper	Common
<i>Arthaldeus pascuellus</i>	a leafhopper	Common
<i>Mocydia crocea</i>	a leafhopper	Common
<i>Lamprotettix nitidulus</i>	a leafhopper	Local
<i>Cicadula frontalis</i>	a leafhopper	Common
<i>Cicadula persimilis</i>	a leafhopper	Common
<i>Cicadula quadrinotata</i>	a leafhopper	Common
<i>Macrosteles sexnotatus</i>	a leafhopper	Common
<i>Alebra albostriella</i>	a leafhopper	Common
<i>Alebra wahlbergi</i>	a leafhopper	Common
<i>Empoasca decipiens</i>	a leafhopper	Common
<i>Kybos smaragdulus</i>	a leafhopper	Common
<i>Eurhadina concinna</i>	a leafhopper	Common
<i>Eurhadina pulchella</i>	a leafhopper	Common
<i>Eupteryx atropunctata</i>	a leafhopper	Local
<i>Eupteryx aurata</i>	a leafhopper	Common
<i>Eupteryx florida</i>	a leafhopper	Local
<i>Eupteryx urticae</i>	a leafhopper	Common
<i>Eupteryx vittata</i>	a leafhopper	Common
<i>Zyginidia scutellaris</i>	a leafhopper	Common
<i>Zygina flammigera</i>	a leafhopper	Common
<i>Cixius nervosus</i>	a lacehopper	Common
<i>Cixius simplex</i>	a lacehopper	Local
<i>Stenocranus major</i>	a planthopper	Local
<i>Stenocranus minutus</i>	a planthopper	Common
<i>Javesella pellucida</i>	a planthopper	Common
<i>Psyllopsis discrepans</i>	a jumping plantlouse	Common
<i>Psylla alni</i>	a jumping plantlouse	Common
<i>Sialis lutaria</i>	Alder Fly	Common
<i>Symphorobius pellucidus</i>	a brown lacewing	Local
<i>Chrysopa albolineata</i>	a green lacewing	Common
<i>Chrysopa carnea</i>	a green lacewing	Common
<i>Chrysopa perla</i>	a green lacewing	Common
<i>Nebria brevicollis</i>	a ground beetle	Common
<i>Notiophilus biguttatus</i>	a ground beetle	Common
<i>Elaphrus riparius</i>	a ground beetle	Common
<i>Loricera pilicornis</i>	a ground beetle	Common
<i>Patrobus atrorufus</i>	a ground beetle	Common
<i>Trechus quadristriatus</i>	a ground beetle	Common
<i>Bembidion properans</i>	a ground beetle	Common
<i>Bembidion dentellum</i>	a ground beetle	Local
<i>Bembidion quadrimaculatum</i>	a ground beetle	Common
<i>Bembidion gilvipes</i>	a ground beetle	Notable/Nb
<i>Bembidion articulatum</i>	a ground beetle	Local
<i>Bembidion harpaloides</i>	a ground beetle	Common
<i>Bembidion biguttatum</i>	a ground beetle	Common
<i>Bembidion guttula</i>	a ground beetle	Common
<i>Bembidion lunulatum</i>	a ground beetle	Common
<i>Pterostichus cupreus</i>	a ground beetle	Local
<i>Pterostichus madidus</i>	Black Clock	Common

<i>Pterostichus melanarius</i>	a ground beetle	Common
<i>Pterostichus minor</i>	a ground beetle	Local
<i>Pterostichus nigrita</i>	a ground beetle	Common
<i>Pterostichus nigrita</i> agg.	a ground beetle	Common
<i>Pterostichus strenuus</i>	a ground beetle	Common
<i>Pterostichus vernalis</i>	a ground beetle	Local
<i>Agonum albipes</i>	a ground beetle	Common
<i>Agonum dorsale</i>	a ground beetle	Common
<i>Agonum fuliginosum</i>	a ground beetle	Common
<i>Agonum marginatum</i>	a ground beetle	Local
<i>Agonum muelleri</i>	a ground beetle	Common
<i>Agonum obscurum</i>	a ground beetle	Local
<i>Amara apricaria</i>	a ground beetle	Common
<i>Amara aulica</i>	a ground beetle	Common
<i>Amara familiaris</i>	a ground beetle	Common
<i>Amara ovata</i>	a ground beetle	Common
<i>Harpalus rufipes</i>	Strawberry Seed Beetle	Common
<i>Harpalus ardosiacus</i>	a ground beetle	Notable/Nb
<i>Harpalus rufibarbis</i>	a ground beetle	Common
<i>Stenolophus mixtus</i>	a ground beetle	Local
<i>Acupalpus dubius</i>	a ground beetle	Local
<i>Badister bipustulatus</i>	a ground beetle	Common
<i>Badister unipustulatus</i>	a ground beetle	Notable/Nb
<i>Demetrias atricapillus</i>	a ground beetle	Common
<i>Dromius linearis</i>	a ground beetle	Common
<i>Hydroporus tessellatus</i>	a water beetle	Common
<i>Ilybius ater</i>	a water beetle	Common
<i>Ilybius fuliginosus</i>	a water beetle	Common
<i>Helophorus brevipalpis</i>	a scavenger water beetle	Common
<i>Helophorus minutus</i>	a scavenger water beetle	Common
<i>Atholus duodecimstriatus</i>	a carrion beetle	Local
<i>Nicrophorus humator</i>	Black Sexton Beetle	Common
<i>Ocypus ater</i>	a rove beetle	Common
<i>Dorcus parallelipipedus</i>	Lesser Stag Beetle	Local
<i>Aphodius ictericus</i>	a dung beetle or chafer	Local
<i>Aphodius rufipes</i>	a dung beetle or chafer	Common
<i>Aphodius sphacelatus</i>	a dung beetle or chafer	Common
<i>Melolontha melolontha</i>	Common Cockchafer	Common
<i>Microcara testacea</i>	a marsh beetle	Common
<i>Cyphon coarctatus</i>	a marsh beetle	Common
<i>Cyphon palustris</i>	a marsh beetle	Common
<i>Aplotarsus incanus</i>	a click beetle	Common
<i>Athous bicolor</i>	a click beetle	Local
<i>Athous haemorrhoidalis</i>	a click beetle	Common
<i>Adrastus pallens</i>	a click beetle	Common
<i>Agriotes acuminatus</i>	a click beetle	Common
<i>Agriotes obscurus</i>	a click beetle	Common
<i>Agriotes pallidulus</i>	a click beetle	Common
<i>Agriotes sputator</i>	a click beetle	Common
<i>Cantharis cryptica</i>	a soldier beetle	Common
<i>Cantharis decipiens</i>	a soldier beetle	Common
<i>Cantharis lateralis</i>	a soldier beetle	Local
<i>Cantharis livida</i>	a soldier beetle	Common
<i>Cantharis nigricans</i>	a soldier beetle	Common
<i>Cantharis pallida</i>	a soldier beetle	Local
<i>Cantharis rustica</i>	a soldier beetle	Common
<i>Cantharis thoracica</i>	a soldier beetle	Local
<i>Rhagonycha fulva</i>	Common red soldier beetle	Common
<i>Rhagonycha lignosa</i>	a soldier beetle	Common
<i>Rhagonycha limbata</i>	a soldier beetle	Common
<i>Rhagonycha testacea</i>	a soldier beetle	Common

Malthinus flaveolus

a soldier beetle

Common

<i>Ptilinus pectinicornis</i>	Fan-bearing Wood-borer
<i>Dasytes aeratus</i>	a malachite beetle
<i>Dasytes coeruleus</i>	a malachite beetle
<i>Malachius bipustulatus</i>	Malachite Beetle
<i>Olibrus aeneus</i>	a smut beetle
<i>Stilbus testaceus</i>	a smut beetle
<i>Coccidula rufa</i>	a ladybird
<i>Rhyzobius litura</i>	a ladybird
<i>Chilocorus bipustulatus</i>	a ladybird
<i>Exochomus quadripustulatus</i>	Pine Ladybird
<i>Anisosticta novemdecimpunctata</i>	19-spot Ladybird
<i>Tytthaspis sedecimpunctata</i>	16-spot Ladybird
<i>Adalia bipunctata</i>	Two-spot Ladybird
<i>Adalia decempunctata</i>	Ten-spot Ladybird
<i>Coccinella septempunctata</i>	Seven-spot Ladybird
<i>Calvia quattuordecimguttata</i>	Cream-spot ladybird
<i>Propylea quattuordecimpunctata</i>	14-spot Ladybird
<i>Psyllobora vigintiduopunctata</i>	22-spot Ladybird
<i>Aridius bifasciatus</i>	a mould beetle
<i>Corticarina fuscula</i>	a mould beetle
<i>Cortinicara gibbosa</i>	a mould beetle
<i>Blaps mucronata</i>	Cellar Beetle
<i>Lagria hirta</i>	a darkling beetle
<i>Anaspis humeralis</i>	a tumbling flower beetle
<i>Anaspis maculata</i>	a tumbling flower beetle
<i>Anaspis regimbarti</i>	a tumbling flower beetle
<i>Ischnomera cyanea</i>	a thick-legged flower beetle
<i>Oedemera lurida</i>	a thick-legged flower beetle
<i>Grammoptera ruficornis</i>	a longhorn beetle
<i>Clytus arietis</i>	Wasp Beetle
<i>Tetrops praeusta</i>	a longhorn beetle
<i>Bruchus rufimanus</i>	Bean Beetle
<i>Donacia simplex</i>	a leaf beetle
<i>Oulema melanopa</i>	Cereal Leaf Beetle
<i>Crioceris asparagi</i>	Asparagus Beetle
<i>Chrysolina polita</i>	Knotgrass Leaf Beetle
<i>Phaedon cochleariae</i>	Mustard Beetle
<i>Phaedon tumidulus</i>	Celery Leaf Beetle
<i>Hydrothassa marginella</i>	a leaf beetle
<i>Plagioderma versicolora</i>	a leaf beetle
<i>Phyllodecta laticollis</i>	a leaf beetle
<i>Phratora vitellinae</i>	Brassy Willow Beetle
<i>Galerucella californiensis</i>	a leaf beetle
<i>Galerucella sagittariae</i>	a leaf beetle
<i>Galerucella tenella</i>	a leaf beetle
<i>Lochmaea crataegi</i>	Hawthorn Leaf Beetle
<i>Phyllotreta nigripes</i>	Turnip Flea Beetle
<i>Phyllotreta undulata</i>	Small Turnip Flea Beetle
<i>Aphthona euphorbiae</i>	Large Flax Flea Beetle
<i>Aphthona lutescens</i>	a leaf beetle
<i>Longitarsus ganglbaueri</i>	a leaf beetle
<i>Longitarsus luridus</i>	a leaf beetle
<i>Longitarsus parvulus</i>	Flax Flea Beetle
<i>Longitarsus rubiginosus</i>	a leaf beetle
<i>Longitarsus suturellus</i>	a leaf beetle
<i>Altica lythri</i>	a leaf beetle
<i>Altica oleracea</i>	a leaf beetle
<i>Altica palustris</i>	a leaf beetle

<i>Crepidodera ferruginea</i>	a leaf beetle	Common
<i>Chalcoides aurata</i>	Willow Flea Beetle	Common
<i>Chalcoides aurea</i>	a leaf beetle	Common
<i>Chalcoides fulvicornis</i>	a leaf beetle	Common
<i>Chalcoides plutus</i>	a leaf beetle	Local
<i>Epitrix pubescens</i>	a leaf beetle	Local
<i>Chaetocnema concinna</i>	Beet Flea Beetle	Common
<i>Chaetocnema hortensis</i>	a leaf beetle	Common
<i>Psylliodes affinis</i>	Potato Flea Beetle	Common
<i>Psylliodes chrysocephala</i>	Cabbage Stem Flea Beetle	Local
<i>Psylliodes dulcamarae</i>	a leaf beetle	Local
<i>Psylliodes luteola</i>	a leaf beetle	pRDBK
<i>Cassida rubiginosa</i>	Thistle Tortoise Beetle	Common
<i>Cassida viridis</i>	Green Tortoise Beetle	Common
<i>Protapion fulvipes</i>	White Clover Seed Weevil	Common
<i>Apion frumentarium</i>	a seed weevil	Common
<i>Eutrichapion ervi</i>	a seed weevil	Common
<i>Nanophyes marmoratus</i>	Loosestrife Weevil	Common
<i>Phyllobius argentatus</i>	Silver-green Leaf Weevil	Common
<i>Phyllobius pomaceus</i>	a weevil	Common
<i>Phyllobius pyri</i>	Common Leaf Weevil	Common
<i>Phyllobius roboretanus</i>	Small Green Nettle Weevi	Common
<i>Polydrusus pterygomalis</i>	a weevil	Common
<i>Liophloeus tessulatus</i>	a weevil	Common
<i>Sitona lineatus</i>	Pea and Bean Weevil	Common
<i>Hypera pollux</i>	a weevil	Local
<i>Leiosoma deflexum</i>	a weevil	Common
<i>Cidnorhinus quadrimaculatus</i>	Small Nettle Weevil	Common
<i>Ceutorhynchus erysimi</i>	a weevil	Common
<i>Ceutorhynchus floralis</i>	a weevil	Common
<i>Ceutorhynchus pollinarius</i>	a weevil	Common
<i>Amalus scortillum</i>	a weevil	Local
<i>Anthonomus pedicularius</i>	a weevil	Common
<i>Anthonomus rubi</i>	Strawberry Blossom Weevi	Common
<i>Curculio salicivorus</i>	Willow Gall Weevil	Common
<i>Curculio venosus</i>	a weevil	Local
<i>Rhynchaenus quercus</i>	a weevil	Common
<i>Panorpa communis</i>	a scorpion fly	Common
<i>Panorpa germanica</i>	a scorpion fly	Common
<i>Phryganea grandis</i>	a caddisfly	Local
<i>Halesus radiatus</i>	a caddisfly	Common
<i>Hepialus humuli</i>	Ghost Moth	Common
<i>Hepialus humuli humuli</i>	Ghost Moth	Common
<i>Hepialus sylvina</i>	Orange Swift	Common
<i>Hepialus lupulinus</i>	Common Swift	Common
<i>Zeuzera pyrina</i>	Leopard Moth	Common
<i>Tineola bisselliella</i>	Common Clothes Moth	Unknown
<i>Tinea trinotella</i>	a micro-moth	Unknown
<i>Anthophila fabriciana</i>	Nettle-tap	Common
<i>Glyphipterix simplicella</i>	Cocksfoot Moth	Common
<i>Yponomeuta padella</i>	Orchard Ermine	Common
<i>Yponomeuta cagnagella</i>	Spindle Ermine	Unknown
<i>Paraswammerdamia lutarea</i>	a small ermine moth	Unknown
<i>Plutella xylostella</i>	Diamond Backed Moth	Migrant
<i>Batia unitella</i>	a micro-moth	Local
<i>Hofmannophila pseudospretella</i>	Brown House Moth	Common
<i>Agonopterix arenella</i>	a micro-moth	Common
<i>Bryotropha basaltinella</i>	a micro-moth	Notable/Nb
<i>Bryotropha affinis</i>	a micro-moth	Unknown
<i>Scrobipalpa costella</i>	a micro-moth	Local
<i>Scrobipalpa acuminatella</i>	a micro-moth	Unknown

<i>Agrotis hamana</i>	a micro-moth	Common
<i>Pandemis cerasana</i>	Barred Fruit-tree Tortrix	Common
<i>Pandemis heparana</i>	Dark Fruit-tree Tortrix	Common
<i>Archips podana</i>	Large Fruit-tree Tortrix	Common
<i>Aphelia paleana</i>	Timothy Tortrix	Unknown
<i>Clepsis consimilana</i>	a tortrix moth	Common
<i>Cnephasia stephensiana</i>	Grey Tortrix	Common
<i>Cnephasia incertana</i>	Light Grey Tortrix	Local
<i>Tortrix viridana</i>	Green Oak Tortrix	Common
<i>Croesia bergmanniana</i>	a tortrix moth	Unknown
<i>Croesia forsskaleana</i>	a tortrix moth	Unknown
<i>Celypha striana</i>	a tortrix moth	Common
<i>Hedya dimidioalba</i>	Marbled Orchard Tortrix	Common
<i>Lobesia abscisana</i>	a tortrix moth	Unknown
<i>Epiblema uddmanniana</i>	Bramble Shoot Moth	Common
<i>Epiblema rosaecolana</i>	a tortrix moth	Local
<i>Epiblema foenella</i>	a tortrix moth	Local
<i>Eucosma hohenwartiana</i>	a tortrix moth	Unknown
<i>Spilonota ocellana</i>	Bud Moth	Common
<i>Pammene rhediella</i>	Fruitlet Mining Tortrix	Unknown
<i>Cydia succedana</i>	a tortrix moth	Common
<i>Cydia splendana</i>	a tortrix moth	Common
<i>Cydia pomonella</i>	Codling Moth	Common
<i>Chrysoteuchia culmella</i>	Garden Grass-veneer	Common
<i>Crambus lathoniellus</i>	a pyralid moth	Common
<i>Crambus perlella</i>	a pyralid moth	Common
<i>Agriphila straminella</i>	a pyralid moth	Common
<i>Agriphila tristella</i>	a pyralid moth	Common
<i>Agriphila geniculea</i>	a pyralid moth	Common
<i>Catoptria falsella</i>	a pyralid moth	Local
<i>Acentria nivea</i>	Water Veneer	Common
<i>Scoparia subfusca</i>	a pyralid moth	Common
<i>Scoparia ambigualis</i>	a pyralid moth	Common
<i>Eudonia crataegella</i>	a pyralid moth	Unknown
<i>Eudonia mercurella</i>	a pyralid moth	Common
<i>Evergestis forficalis</i>	Garden Pebble	Common
<i>Pyrausta aurata</i>	a pyralid moth	Local
<i>Eurrhynx hortulata</i>	Small Magpie	Common
<i>Eurrhynx coronata</i>	a pyralid moth	Unknown
<i>Udea lutealis</i>	a pyralid moth	Common
<i>Udea olivalis</i>	a pyralid moth	Common
<i>Nomophila noctuella</i>	Rush Veneer	Migrant
<i>Pleuroptya ruralis</i>	Mother of Pearl	Common
<i>Hypsopygia costalis</i>	Gold Triangle	Common
<i>Aphomia sociella</i>	Bee Moth	Common
<i>Eurhodope advenella</i>	a pyralid moth	Local
<i>Phycita roborella</i>	a pyralid moth	Common
<i>Myelois cribrella</i>	Thistle Ermine	Local
<i>Pterophorus pentadactyla</i>	White Plume Moth	Local
<i>Thymelicus sylvestris</i>	Small Skipper	Common
<i>Ochlodes venata faunus</i>	Large Skipper	Common
<i>Pyrgus malvae</i>	Grizzled Skipper	Local
<i>Gonepteryx rhamni</i>	Brimstone	Common
<i>Pieris brassicae</i>	Large White	Common
<i>Pieris rapae</i>	Small White	Common
<i>Pieris napi</i>	Green-veined White	Common
<i>Anthocharis cardamines</i>	Orange Tip	Common
<i>Callophrys rubi</i>	Green Hairstreak	Local
<i>Celastrina argiolus britanna</i>	Holly Blue	Local
<i>Lycaena phlaeas</i>	Small Copper	Common
<i>Polyommatus icarus</i>	Common Blue	Common

<i>Vanessa atalanta</i>	Red Admiral	Migrant
<i>Cynthia cardui</i>	Painted Lady	Migrant
<i>Aglais urticae</i>	Small Tortoiseshell	Common
<i>Nymphalis polychloros</i>	Large Tortoiseshell	RDB1
<i>Inachis io</i>	Peacock	Common
<i>Polygonia c-album</i>	Comma	Common
<i>Pararge aegeria</i>	Speckled Wood	Common
<i>Lasiommata megera</i>	Wall	Common
<i>Melanargia galathea serena</i>	Marbled White	Local
<i>Hipparchia semele</i>	Grayling	Local
<i>Pyronia tithonus britanniae</i>	Gatekeeper	Common
<i>Maniola jurtina</i>	Meadow Brown	Common
<i>Coenonympha pamphilus</i>	Small Heath	Common
<i>Coenonympha tullia</i>	Large Heath	Local
<i>Aphantopus hyperantus</i>	Ringlet	Common
<i>Malacosoma neustria</i>	Lackey	Common
<i>Drepana binaria</i>	Oak Hook-tip	Common
<i>Cilix glaucata</i>	Chinese Character	Common
<i>Habrosyne pyritoides</i>	Buff Arches	Common
<i>Geometra papilionaria</i>	Large Emerald	Common
<i>Timandra griseata</i>	Blood-vein	Common
<i>Idaea muricata</i>	Purple-bordered Gold	Na
<i>Idaea dimidiata</i>	Single-dotted Wave	Common
<i>Idaea aversata</i>	Riband Wave	Common
<i>Rhodometra sacraria</i>	Vestal	Migrant
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet	Common
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot	Ca Common
<i>Xanthorhoe montanata</i>	Silver-ground Carpet	Common
<i>Xanthorhoe fluctuata</i>	Garden Carpet	Common
<i>Campogramma bilineata bilineata</i>	Yellow Shell	Common
<i>Anticlea derivata</i>	Streamer	Common
<i>Eulithis prunata</i>	Phoenix	Common
<i>Eulithis pyraliata</i>	Barred Straw	Common
<i>Cidaria fulvata</i>	Barred Yellow	Common
<i>Rheumaptera hastata</i>	Argent and Sable	Notable/Nb
<i>Eupithecia haworthiata</i>	Haworth's Pug	Local
<i>Eupithecia centaureata</i>	Lime-speck Pug	Common
<i>Eupithecia intricata</i>	Freyer's Pug	Unknown
<i>Eupithecia vulgata</i>	Common Pug	Common
<i>Eupithecia tripunctaria</i>	White-spotted Pug	Local
<i>Chloroclystis chloerata</i>	Sloe Pug	Common
<i>Chloroclystis rectangulata</i>	Green Pug	Common
<i>Lomaspilis marginata</i>	Clouded Border	Common
<i>Semiothisa liturata</i>	Tawny-barred Angle	Common
<i>Petrophora chlorosata</i>	Brown Silver-line	Common
<i>Opisthograptis luteolata</i>	Brimstone Moth	Common
<i>Ennomos alniaria</i>	Canary-shouldered Thorn	Common
<i>Selenia dentaria</i>	Early Thorn	Common
<i>Odontopera bidentata</i>	Scalloped Hazel	Common
<i>Crocallis elinguaris</i>	Scalloped Oak	Common
<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth	Common
<i>Biston betularia</i>	Peppered Moth	Common
<i>Peribatodes rhomboidaria</i>	Willow Beauty	Common
<i>Bupalus piniaria</i>	Bordered White	Common
<i>Mimas tiliae</i>	Lime Hawk-moth	Common
<i>Laothoe populi</i>	Poplar Hawk-moth	Common
<i>Macroglossum stellatarum</i>	Humming-bird Hawk-moth	Migrant
<i>Deilephila elpenor</i>	Elephant Hawk-moth	Common
<i>Phalera bucephala</i>	Buff-tip	Common
<i>Pheosia gnoma</i>	Lesser Swallow Prominent	Common
<i>Pheosia tremula</i>	Swallow Prominent	Common

<i>Phalodon capucina</i>	Coxcomb Prominent	Common
<i>Pterostoma palpina</i>	Pale Prominent	Common
<i>Glostera curtula</i>	Chocolate-tip	Local
<i>Euproctis chrysorrhoea</i>	Brown-tail	Local
<i>Leucoma salicis</i>	White Satin	Local
<i>Nudaria mundana</i>	Muslin Footman	Local
<i>Eilema griseola</i>	Dingy Footman	Common
<i>Eilema lurideola</i>	Common Footman	Common
<i>Arctia caja</i>	Garden Tiger	Common
<i>Spilosoma lubricipeda</i>	White Ermine	Common
<i>Spilosoma luteum</i>	Buff Ermine	Common
<i>Diaphora mendica</i>	Muslin Moth	Common
<i>Phragmatobia fuliginosa</i>	Ruby Tiger	Common
<i>Tyria jacobaeae</i>	Cinnabar	Common
<i>Nola cucullatella</i>	Short-cloaked Moth	Common
<i>Nola confusalis</i>	Least Black Arches	Local
<i>Agrotis segetum</i>	Turnip Moth	Common
<i>Agrotis clavis</i>	Heart and Club	Common
<i>Agrotis exclamationis</i>	Heart and Dart	Common
<i>Agrotis puta</i>	Shuttle Shaped Dart	Common
<i>Axylia putris</i>	Flame	Common
<i>Ochropleura plecta</i>	Flame Shoulder	Common
<i>Rhyacia simulans</i>	Dotted Rustic	Local
<i>Noctua pronuba</i>	Large Yellow Underwing	Common
<i>Noctua orbona</i>	Lunar Yellow Underwing	Na
<i>Noctua comes</i>	Lesser Yellow Underwing	Common
<i>Noctua fimbriata</i>	Broad-bordered Yellow Un	Common
<i>Noctua janthe</i>	Lesser Broad Bordered Ye	Common
<i>Noctua interjecta caliginosa</i>	Least Yellow Underwing	Common
<i>Peridroma saucia</i>	Pearly Underwing	Migrant
<i>Diarsia dahlia</i>	Barred Chestnut	Local
<i>Diarsia rubi</i>	Small Square-spot	Common
<i>Xestia c-nigrum</i>	Setaceous Hebrew Charact	Common
<i>Xestia triangulum</i>	Double Square-spot	Common
<i>Xestia xanthographa</i>	Square-spot Rustic	Common
<i>Discestra trifolii</i>	Nutmeg	Common
<i>Hada nana</i>	Shears	Common
<i>Polia bombycina</i>	Pale Shining Brown	Local
<i>Heliophobus reticulata</i>	Bordered Gothic	Notable/Nb
<i>Mamestra brassicae</i>	Cabbage Moth	Common
<i>Melanchra persicariae</i>	Dot Moth	Common
<i>Lacanobia thalassina</i>	Pale-shouldered Brocade	Common
<i>Lacanobia oleracea</i>	Bright-line Brown-eye	Common
<i>Hadena rivularis</i>	Campion	Common
<i>Hadena compta</i>	Varied Coronet	Common
<i>Orthosia cruda</i>	Small Quaker	Common
<i>Orthosia gothica</i>	Hebrew Character	Common
<i>Mythimna conigera</i>	Brown-line Bright Eye	Common
<i>Mythimna impura</i>	Smoky Wainscot	Common
<i>Mythimna pallens</i>	Common Wainscot	Common
<i>Mythimna comma</i>	Shoulder-striped Wainsco	Common
<i>Cucullia umbratica</i>	Shark	Common
<i>Agrochola lota</i>	Red-line Quaker	Common
<i>Agrochola litura</i>	Brown-spot Pinion	Common
<i>Omphaloscelis lunosa</i>	Lunar Underwing	Common
<i>Acronicta megacephala</i>	Poplar Grey	Common
<i>Acronicta aceris</i>	Sycamore	Local
<i>Acronicta leporina</i>	Miller	Common
<i>Acronicta psi</i>	Grey Dagger	Common
<i>Cryphia domestica</i>	Marbled Beauty	Common
<i>Cryphia muralis</i>	Marbled Green	Notable/Nb

<i>Amphipyra pyramidea</i>	Copper Underwing	Common
<i>Amphipyra pyramidea</i> agg.	Copper Underwings	Common
<i>Amphipyra tragopoginis</i>	Mouse Moth	Common
<i>Rusina ferruginea</i>	Brown Rustic	Common
<i>Thalpophila matura</i>	Straw Underwing	Common
<i>Euplexia lucipara</i>	Small Angle Shades	Common
<i>Phlogophora meticulosa</i>	Angle Shades	Common
<i>Cosmia trapezina</i>	Dun-bar	Common
<i>Apamea monoglypha</i>	Dark Arches	Common
<i>Apamea lithoxylea</i>	Light Arches	Common
<i>Apamea crenata</i>	Clouded-bordered Brindle	Common
<i>Apamea epomidion</i>	Clouded Brindle	Common
<i>Apamea anceps</i>	Large Nutmeg	Local
<i>Apamea sordens</i>	Rustic Shoulder-knot	Common
<i>Oligia strigilis</i>	Marbled Minor	Common
<i>Oligia latruncula</i>	Tawny Marbled Minor	Common
<i>Oligia fasciuncula</i>	Middle-barred Minor	Common
<i>Mesoligia furuncula</i>	Cloaked Minor	Common
<i>Mesapamea secalis</i>	Common Rustic	Common
<i>Photedes minima</i>	Small Dotted Buff	Common
<i>Luperina testacea</i>	Flounced Rustic	Common
<i>Hydraecia micacea</i>	Rosy Rustic	Common
<i>Nonagria typhae</i>	Bulrush Wainscot	Common
<i>Charanyca trigrammica</i>	Treble Lines	Common
<i>Hoplodrina alsines</i>	Uncertain	Common
<i>Hoplodrina blanda</i>	Rustic	Common
<i>Caradrina morpheus</i>	Mottled Rustic	Common
<i>Caradrina clavipalpis</i>	Pale Mottled Willow	Common
<i>Diachrysia chrysitis</i>	Burnished Brass	Common
<i>Autographa gamma</i>	Silver Y	Common
<i>Autographa jota</i>	Plain Golden Y	Common
<i>Abrostola triplasia</i>	Spectacle	Common
<i>Scoliopteryx libatrix</i>	Herald	Common
<i>Laspeyria flexula</i>	Beautiful Hook-tip	Local
<i>Hypena proboscidalis</i>	Snout	Common
<i>Chloromyia formosa</i>	a soldier fly	Common
<i>Pyrophaena granditarsa</i>	a hoverfly	Common
<i>Episyrphus balteatus</i>	a hoverfly	Common
<i>Syrphus ribesii</i>	a hoverfly	Common
<i>Rhingia campestris</i>	a hoverfly	Common
<i>Neoascia meticulosa</i>	a hoverfly	Local
<i>Eristalis pertinax</i>	a hoverfly	Common
<i>Eristalis tenax</i>	a hoverfly	Common
<i>Helophilus pendulus</i>	a hoverfly	Common
<i>Phytomyza ilicis</i>	Holly Leaf Gall Fly	Common
<i>Pierretia nigriventris</i>	a flesh fly	Common
<i>Aglaostigma fulvipes</i>	a sawfly	Common
<i>Neuroterus quercusbaccarum</i>	Common Spangle Gall	Unknown
<i>Hylaeus communis</i>	Common Yellow Face Bee	Local
<i>Andrena haemorrhoa</i>	Early Mining Bee	Common
<i>Nomada marshamella</i>	Marsham's Nomad Bee	Common
<i>Nomada ruficornis</i>	Red-horned Nomad Bee	Local
<i>Anthophora plumipes</i>	Hairy Footed Flower Bee	Common
<i>Bombus pascuorum</i>	Common Carder Bee	Common
<i>Androniscus dentiger</i>	a woodlouse	Common
<i>Haplophthalmus danicus</i>	a woodlouse	Local
<i>Haplophthalmus mengei</i> s.l.	a woodlouse	Local
<i>Trichoniscus pusillus</i>	a woodlouse	Common
<i>Trichoniscus pygmaeus</i>	a woodlouse	Common
<i>Oniscus asellus</i>	a woodlouse	Common
<i>Philosciamuscorum</i>	a woodlouse	Common

<i>Platyarthrus hoffmannseggi</i>	a woodlouse	Common
<i>Armadillidium vulgare</i>	Common Pill Woodlouse	Common
<i>Porcellio scaber</i>	a woodlouse	Common
<i>Porcellio spinicornis</i>	a woodlouse	Local
<i>Porcellionides pruinosus</i>	a woodlouse	Synanthropic
<i>Nemastoma bimaculatum</i>	a harvestman	Common
<i>Oligolophus tridens</i>	a harvestman	Common
<i>Oligolophus hansenii</i>	a harvestman	Local
<i>Paroligolophus agrestis</i>	a harvestman	Common
<i>Odiellus spinosus</i>	a harvestman	Local
<i>Dictyna uncinata</i>	a mesh webbed spider	Common
<i>Harpactea hombergi</i>	a woodlouse spider	Local
<i>Clubiona comta</i>	a foliage spider	Common
<i>Anyphaena accentuata</i>	a buzzing spider	Common
<i>Pardosa prativaga</i>	a wolf spider	Common
<i>Pardosa amentata</i>	a wolf spider	Common
<i>Trochosa terricola</i>	a wolf spider	Common
<i>Pisaura mirabilis</i>	Tent Spider	Common
<i>Textrix denticulata</i>	a cobweb spider	Common
<i>Theridion pallens</i>	a comb-footed spider	Common
<i>Theridion bimaculatum</i>	a comb-footed spider	Common
<i>Enoplognatha ovata</i>	a comb-footed spider	Common
<i>Tetragnatha montana</i>	a long-jawed spider	Local
<i>Pachygnatha clercki</i>	a long-jawed spider	Common
<i>Pachygnatha degeeri</i>	a long-jawed spider	Common
<i>Metellina segmentata s.s.</i>	an orb-weaver spider	Common
<i>Metellina mengei</i>	an orb-weaver spider	Common
<i>Araneus diadematus</i>	Garden Orb-web Spider	Common
<i>Cyclosa conica</i>	an orb-weaver spider	Local
<i>Walckenaeria acuminata</i>	a money spider	Common
<i>Walckenaeria unicornis</i>	a money spider	Common
<i>Maso sundevalli</i>	a money spider	Common
<i>Micrargus herbigradus</i>	a money spider	Common
<i>Erigone atra</i>	a money spider	Common
<i>Meioneta rurestris</i>	a money spider	Common
<i>Centromerus sylvaticus</i>	a money spider	Common
<i>Centromerita bicolor</i>	a money spider	Common
<i>Bathyphantes gracilis</i>	a money spider	Common
<i>Bathyphantes parvulus</i>	a money spider	Common
<i>Diplostyla concolor</i>	a money spider	Common
<i>Lepthyphantes tenuis</i>	a money spider	Common
<i>Lepthyphantes ericaeus</i>	a money spider	Common
<i>Lepthyphantes pallidus</i>	a money spider	Local
<i>Lepthyphantes insignis</i>	a money spider	Notable/Nb
<i>Linyphia triangularis</i>	a money spider	Common
<i>Linyphia (Neriene) clathrata</i>	a money spider	Common
<i>Salmo trutta</i>	Sea Trout	Unknown
<i>Barbus barbus</i>	Barbel	Unknown
<i>Gobio gobio</i>	Gudgeon	Unknown
<i>Phoxinus phoxinus</i>	Minnow	Unknown
<i>Rutilus rutilus</i>	Roach	Unknown
<i>Leuciscus cephalus</i>	Chub	Unknown
<i>Leuciscus leuciscus</i>	Dace	Unknown
<i>Noemacheilus barbatulus</i>	Stone Loach	Unknown
<i>Cottus gobio</i>	Bullhead	Unknown
<i>Gasterosteus aculeatus</i>	Three-spined Stickleback	Unknown
<i>Triturus vulgaris</i>	Smooth Newt	Unknown
<i>Bufo bufo</i>	Common Toad	Unknown
<i>Rana temporaria</i>	Common Frog	Unknown
<i>Lacerta vivipara</i>	Viviparous Lizard	Unknown
<i>Anguis fragilis</i>	Slow-worm	Unknown

Natrix natrix	Grass Snake	Unknown
Tachybaptus ruficollis	Little Grebe	Unknown
Ardea cinerea	Grey Heron	Unknown
Cygnus olor	Mute Swan	Unknown
Branta canadensis	Canada Goose	Naturalised
Anas crecca	Teal	Unknown
Anas platyrhynchos	Mallard	Unknown
Accipiter nisus	Sparrowhawk	Unknown
Falco tinnunculus	Kestrel	Unknown
Alectoris rufa	Red-legged Partridge	Unknown
Perdix perdix	Grey Partridge	Unknown
Phasianus colchicus	Pheasant	Unknown
Gallinula chloropus	Moorhen	Unknown
Vanellus vanellus	Lapwing	Unknown
Actitis hypoleucos	Common Sandpiper	Unknown
Larus ridibundus	Black-headed Gull	Unknown
Larus fuscus	Lesser Black-backed Gull	Unknown
Columba oenas	Stock Dove	Unknown
Columba palumbus	Woodpigeon	Unknown
Streptopelia decaocto	Collared Dove	Unknown
Streptopelia turtur	Turtle Dove	Unknown
Cuculus canorus	Cuckoo	Unknown
Apus apus	Swift	Unknown
Alcedo atthis	Kingfisher	Unknown
Picus viridis	Green Woodpecker	Unknown
Dendrocopos major	Great Spotted Woodpecker	Unknown
Dendrocopos minor	Lesser Spotted Woodpecker	Unknown
Alauda arvensis	Skylark	Unknown
Riparia riparia	Sand Martin	Unknown
Hirundo rustica	Swallow	Unknown
Delichon urbica	House Martin	Unknown
Anthus pratensis	Meadow Pipit	Unknown
Motacilla cinerea	Grey Wagtail	Unknown
Motacilla alba	White/Pied Wagtail	Unknown
Motacilla alba yarrellii	Pied Wagtail	Unknown
Troglodytes troglodytes	Wren	Unknown
Prunella modularis	Dunnock	Unknown
Erithacus rubecula	Robin	Unknown
Saxicola rubetra	Whinchat	Unknown
Turdus merula	Blackbird	Unknown
Turdus pilaris	Fieldfare	Unknown
Turdus philomelos	Song Thrush	Unknown
Turdus iliacus	Redwing	Unknown
Turdus viscivorus	Mistle Thrush	Unknown
Acrocephalus schoenobaenus	Sedge Warbler	Unknown
Acrocephalus scirpaceus	Reed Warbler	Unknown
Sylvia curruca	Lesser Whitethroat	Unknown
Sylvia communis	Whitethroat	Unknown
Sylvia borin	Garden Warbler	Unknown
Sylvia atricapilla	Blackcap	Unknown
Phylloscopus collybita	Chiffchaff	Unknown
Phylloscopus trochilus	Willow Warbler	Unknown
Regulus regulus	Goldcrest	Unknown
Muscicapa striata	Spotted Flycatcher	Unknown
Aegithalos caudatus	Long-tailed Tit	Unknown
Parus palustris	Marsh Tit	Unknown
Parus caeruleus	Blue Tit	Unknown
Parus major	Great Tit	Unknown
Certhia familiaris	Treecreeper	Unknown
Garrulus glandarius	Jay	Unknown
Pica pica	Magpie	Unknown

Corvus monedula	Jackdaw	Unknown
Corvus frugilegus	Rook	Unknown
Corvus corone agg.	Carrion Crow	Unknown
Corvus corone corone	Carrion crow	Unknown
Sturnus vulgaris	Starling	Unknown
Passer domesticus	House Sparrow	Unknown
Passer montanus	Tree Sparrow	Unknown
Fringilla coelebs	Chaffinch	Unknown
Carduelis chloris	Greenfinch	Unknown
Carduelis carduelis	Goldfinch	Unknown
Carduelis cannabina	Linnet	Unknown
Pyrrhula pyrrhula	Bullfinch	Unknown
Emberiza citrinella	Yellowhammer	Unknown
Emberiza schoeniclus	Reed Bunting	Unknown
Erinaceus europaeus	Hedgehog	National Biodive
Talpa europaea	Mole	Common
Sorex araneus	Common Shrew	Common
Sorex minutus	Pygmy Shrew	Common
Plecotus auritus	Brown Long-eared Bat	Common
Sciurus carolinensis	Grey Squirrel	Naturalised
Clethrionomys glareolus	Bank Vole	Common
Microtus agrestis	Field Vole	Common
Arvicola terrestris	Water Vole	Common
Apodemus sylvaticus	Wood Mouse	Common
Micromys minutus	Harvest Mouse	Local
Rattus norvegicus	Brown Rat	Common
Mus musculus	House Mouse	Common
Vulpes vulpes	Fox	Common
Mustela nivalis	Weasel	Common

Species list for THE MOORS GRAVEL PIT

<i>Equisetum arvense</i>	Field Horsetail	Unknown
<i>Equisetum telmateia</i>	Great Horsetail	Unknown
<i>Ranunculus acris</i>	Meadow Buttercup	Unknown
<i>Ranunculus repens</i>	Creeping Buttercup	Unknown
<i>Papaver rhoeas</i>	Common Poppy	Unknown
<i>Urtica dioica</i>	Common Nettle	Unknown
<i>Alnus glutinosa</i>	Alder	Hedgerow Bill Sc
<i>Atriplex prostrata sens.str.</i>	Spear-leaved Orache	Unknown
<i>Stellaria media</i>	Common Chickweed	Unknown
<i>Silene latifolia</i>	White Campion	Unknown
<i>Persicaria amphibia</i>	Amphibious Bistort	Unknown
<i>Polygonum aviculare agg.</i>	Knotgrass [agg.]	Unknown
<i>Polygonum aviculare sens.str.</i>	Knotgrass	Unknown
<i>Rumex crispus</i>	Curled Dock	Unknown
<i>Rumex conglomeratus</i>	Clustered Dock	Unknown
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Unknown
<i>Hypericum maculatum</i>	Imperforate St. John's-w	Unknown
<i>Helianthemum nummularium</i>	Common Rock-rose	Unknown
<i>Salix alba</i>	White Willow	Hedgerow Bill Sc
<i>Salix viminalis</i>	Osier	Hedgerow Bill Sc
<i>Salix cinerea</i>	Grey Willow	Hedgerow Bill Sc
<i>Sisymbrium officinale</i>	Hedge Mustard	Unknown
<i>Barbarea vulgaris</i>	Winter-cress	Unknown
<i>Armoracia rusticana</i>	Horse-radish	Unknown
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	Unknown
<i>Filipendula ulmaria</i>	Meadowsweet	Unknown
<i>Rubus fruticosus agg.</i>	Bramble	Unknown
<i>Potentilla anserina</i>	Silverweed	Unknown
<i>Potentilla argentea</i>	Hoary Cinquefoil	Unknown
<i>Potentilla reptans</i>	Creeping Cinquefoil	Unknown
<i>Rosa canina agg.</i>	Dog Rose	Hedgerow Bill Sc
<i>Rosa canina sens.str.</i>	Dog Rose	Hedgerow Bill Sc
<i>Malus sylvestris sens. lat.</i>	Apple	Unknown
<i>Crataegus monogyna</i>	Hawthorn	Hedgerow Bill Sc
<i>Onobrychis viciifolia</i>	Sainfoin	Unknown
<i>Lotus corniculatus</i>	Common Bird's-foot-trefo	Unknown
<i>Vicia cracca</i>	Tufted Vetch	Unknown
<i>Lathyrus pratensis</i>	Meadow Vetchling	Unknown
<i>Medicago lupulina</i>	Black Medick	Unknown
<i>Medicago sativa ssp. sativa</i>	Lucerne	Unknown
<i>Trifolium repens</i>	White Clover	Unknown
<i>Trifolium arvense</i>	Hare's-foot Clover	Unknown
<i>Lythrum salicaria</i>	Purple-loosestrife	Unknown
<i>Epilobium hirsutum</i>	Great Willowherb	Unknown
<i>Chamerion angustifolium</i>	Rosebay Willowherb	Unknown
<i>Acer pseudoplatanus</i>	Sycamore	Unknown
<i>Hedera helix</i>	Ivy	Unknown
<i>Anthriscus sylvestris</i>	Cow Parsley	Unknown
<i>Conium maculatum</i>	Hemlock	Unknown
<i>Apium nodiflorum</i>	Fool's Water-cress	Unknown
<i>Angelica sylvestris</i>	Wild Angelica	Unknown
<i>Heracleum sphondylium</i>	Hogweed	Unknown
<i>Solanum dulcamara</i>	Bittersweet	Unknown
<i>Convolvulus arvensis</i>	Field Bindweed	Unknown
<i>Calystegia sepium</i>	Hedge Bindweed	Unknown
<i>Nymphoides peltata</i>	Fringed Water-lily	Nationally Scarc
<i>Symphytum officinale</i>	Common Comfrey	Unknown
<i>Stachys sylvatica</i>	Hedge Woundwort	Unknown
<i>Stachys palustris</i>	Marsh Woundwort	Unknown
<i>Ajuga reptans</i>	Bugle	Hedgerow Bill Sc

<i>Clinopodium vulgare</i>	Wild Basil	Unknown
<i>Lycopus europaeus</i>	Gipsywort	Unknown
<i>Callitriche stagnalis sens.str.</i>	Common Water-starwort	Unknown
<i>Plantago major</i>	Greater Plantain	Unknown
<i>Plantago lanceolata</i>	Ribwort Plantain	Unknown
<i>Fraxinus excelsior</i>	Ash	Hedgerow Bill Sc
<i>Linaria vulgaris</i>	Common Toadflax	Unknown
<i>Veronica anagallis-aquatica</i>	Blue Water-speedwell	Unknown
<i>Odontites vernus</i>	Red Bartsia	Unknown
<i>Galium aparine</i>	Cleavers	Unknown
<i>Carduus crispus</i>	Wetted Thistle	Unknown
<i>Cirsium vulgare</i>	Spear Thistle	Unknown
<i>Cirsium arvense</i>	Creeping Thistle	Unknown
<i>Cichorium intybus</i>	Chicory	Unknown
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	Unknown
<i>Sonchus asper</i>	Prickly Sow-thistle	Unknown
<i>Lactuca serriola</i>	Prickly Lettuce	Unknown
<i>Taraxacum officinale agg.</i>	Dandelion	Unknown
<i>Crepis capillaris</i>	Smooth Hawk's-beard	Unknown
<i>Artemisia vulgaris</i>	Mugwort	Unknown
<i>Achillea millefolium</i>	Yarrow	Unknown
<i>Matricaria discoidea</i>	Pineapple Weed	Unknown
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	Unknown
<i>Senecio jacobaea</i>	Common Ragwort	Unknown
<i>Tussilago farfara</i>	Colt's-foot	Unknown
<i>Sagittaria sagittifolia</i>	Arrowhead	Unknown
<i>Alisma plantago-aquatica</i>	Water-plantain	Unknown
<i>Elodea canadensis</i>	Canadian Waterweed	Unknown
<i>Potamogeton perfoliatus</i>	Perfoliate Pondweed	Unknown
<i>Potamogeton berchtoldii</i>	Small Pondweed	Unknown
<i>Juncus subnodulosus</i>	Blunt-flowered Rush	Unknown
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	Unknown
<i>Juncus inflexus</i>	Hard Rush	Unknown
<i>Juncus effusus</i>	Soft Rush	Unknown
<i>Schoenoplectus lacustris</i>	Common Club-rush	Unknown
<i>Carex hirta</i>	Hairy Sedge	Unknown
<i>Carex riparia</i>	Great Pond-sedge	Unknown
<i>Carex rostrata</i>	Bottle Sedge	Unknown
<i>Lolium perenne</i>	Perennial Rye-grass	Unknown
<i>Poa pratensis sens.lat.</i>	Smooth Meadow-grass	Unknown
<i>Dactylis glomerata</i>	Cock's-foot	Unknown
<i>Glyceria fluitans</i>	Floating Sweet-grass	Unknown
<i>Arrhenatherum elatius</i>	False Oat-grass	Unknown
<i>Deschampsia caespitosa</i>	Tufted Hair-grass	Unknown
<i>Holcus lanatus</i>	Yorkshire-fog	Unknown
<i>Phleum pratense sens.str.</i>	Timothy	Unknown
<i>Anisantha sterilis</i>	Barren Brome	Unknown
<i>Elytrigia repens</i>	Common Couch	Unknown
<i>Hordeum secalinum</i>	Meadow Barley	Unknown
<i>Typha latifolia</i>	Bulrush	Unknown
<i>Iris pseudacorus</i>	Yellow Iris	Unknown
<i>Chorthippus parallelus</i>	Meadow Grasshopper	Common
<i>Forficula auricularia</i>	Common Earwig	Common
<i>Heterogaster urticae</i>	Nettle Groundbug	Common
<i>Liocoris tripustulatus</i>	a plantbug or grassbug	Common
<i>Adalia bipunctata</i>	Two-spot Ladybird	Common
<i>Propylea quattuordecimpunctata</i>	14-spot Ladybird	Common
<i>Urophora cardui</i>	a gall fly	Common
<i>Podiceps cristatus</i>	Great Crested Grebe	Unknown
<i>Cygnus olor</i>	Mute Swan	Unknown
<i>Anas platyrhynchos</i>	Mallard	Unknown

Aythya ferina	Pochard	Unknown
Aythya fuligula	Tufted Duck	Unknown
Falco tinnunculus	Kestrel	Unknown
Fulica atra	Coot	Unknown
Larus ridibundus	Black-headed Gull	Unknown
Larus fuscus	Lesser Black-backed Gull	Unknown
Columba palumbus	Woodpigeon	Unknown
Troglodytes troglodytes	Wren	Unknown
Erithacus rubecula	Robin	Unknown
Turdus merula	Blackbird	Unknown
Turdus pilaris	Fieldfare	Unknown
Turdus philomelos	Song Thrush	Unknown
Turdus iliacus	Redwing	Unknown
Turdus viscivorus	Mistle Thrush	Unknown
Regulus regulus	Goldcrest	Unknown
Parus caeruleus	Blue Tit	Unknown
Parus major	Great Tit	Unknown
Pica pica	Magpie	Unknown
Corvus frugilegus	Rook	Unknown
Corvus corone agg.	Carrion Crow	Unknown
Sturnus vulgaris	Starling	Unknown
Carduelis carduelis	Goldfinch	Unknown
Pyrrhula pyrrhula	Bullfinch	Unknown
Talpa europaea	Mole	Common

Species list for R.Windrush E tetrad 3608

Ranunculus acris	Meadow Buttercup	Unknown
Ranunculus repens	Creeping Buttercup	Unknown
Ranunculus fluitans	River Water-crowfoot	Unknown
Ulmus procera	English Elm	Hedgerow Bill Sc
Urtica dioica	Common Nettle	Unknown
Alnus glutinosa	Alder	Hedgerow Bill Sc
Corylus avellana	Hazel	Hedgerow Bill Sc
Cerastium fontanum	Common Mouse-ear	Unknown
Rumex acetosa	Common Sorrel	Unknown
Rumex hydrolapathum	Water Dock	Unknown
Rumex crispus	Curled Dock	Unknown
Rumex conglomeratus	Clustered Dock	Unknown
Rumex obtusifolius	Broad-leaved Dock	Unknown
Hypericum tetrapterum	Square-stalked St. John'	Unknown
Populus x canadensis (P. deltoid	Hybrid Black Poplar	Unknown
Salix fragilis	Crack Willow	Hedgerow Bill Sc
Salix cinerea	Grey Willow	Hedgerow Bill Sc
Alliaria petiolata	Garlic Mustard	Unknown
Rorippa amphibia	Greater Yellow-cress	Unknown
Filipendula ulmaria	Meadowsweet	Unknown
Rubus fruticosus agg.	Bramble	Unknown
Rubus caesius	Dewberry	Unknown
Potentilla reptans	Creeping Cinquefoil	Unknown
Rosa canina sens.str.	Dog Rose	Hedgerow Bill Sc
Prunus spinosa	Blackthorn	Hedgerow Bill Sc
Crataegus monogyna	Hawthorn	Hedgerow Bill Sc
Lathyrus pratensis	Meadow Vetchling	Unknown
Medicago lupulina	Black Medick	Unknown
Trifolium pratense	Red Clover	Unknown
Lythrum salicaria	Purple-loosestrife	Unknown
Epilobium hirsutum	Great Willowherb	Unknown
Acer campestre	Field Maple	
Acer pseudoplatanus	Sycamore	Unknown
Hedera helix	Ivy	Unknown
Anthriscus sylvestris	Cow Parsley	Unknown
Conium maculatum	Hemlock	Unknown
Apium nodiflorum	Fool's Water-cress	Unknown
Angelica sylvestris	Wild Angelica	Unknown
Torilis japonica	Upright Hedge-parsley	Unknown
Solanum dulcamara	Bittersweet	Unknown
Symphytum officinale	Common Comfrey	Unknown
Myosotis scorpioides	Water Forget-me-not	Unknown
Stachys sylvatica	Hedge Woundwort	Unknown
Lamium album	White Dead-nettle	Unknown
Scutellaria galericulata	Skullcap	Unknown
Glechoma hederacea	Ground-ivy	Unknown
Prunella vulgaris	Selfheal	Unknown
Lycopus europaeus	Gipsywort	Unknown
Mentha arvensis	Corn Mint	Unknown
Plantago lanceolata	Ribwort Plantain	Unknown
Fraxinus excelsior	Ash	Hedgerow Bill Sc
Scrophularia auriculata	Water Figwort	Unknown
Veronica chamaedrys	Germander Speedwell	Unknown
Galium aparine	Cleavers	Unknown
Sambucus nigra	Elder	Hedgerow Bill Sc
Dipsacus fullonum sens. lat.	Wild Teasel	Unknown
Cirsium vulgare	Spear Thistle	Unknown
Cirsium arvense	Creeping Thistle	Unknown
Centaurea nigra	Common Knapweed	Unknown
Tragopogon pratensis	Goat's-beard	Unknown

<i>Taraxacum officinale</i> agg.	Dandelion	Unknown
<i>Bellis perennis</i>	Daisy	Unknown
<i>Achillea millefolium</i>	Yarrow	Unknown
<i>Leucanthemum vulgare</i>	Oxeye Daisy	Unknown
<i>Senecio vulgaris</i>	Groundsel	Unknown
<i>Alisma plantago-aquatica</i>	Water-plantain	Unknown
<i>Sparganium erectum</i>	Branched Bur-reed	Unknown
<i>Typha latifolia</i>	Bulrush	Unknown
<i>Iris pseudacorus</i>	Yellow Iris	Unknown
<i>Theodoxus fluviatilis</i>	River Nerit	Local
<i>Valvata piscinalis</i>	Valve Snail	Local
<i>Potamopyrgus jenkinsi</i>	Jenkins' Spire Snail	Naturalised
<i>Bithynia tentaculata</i>	a spire snail	Common
<i>Bithynia leachii</i>	a spire snail	Local
<i>Lymnaea peregra</i>	Wandering Snail	Common
<i>Sphaerium corneum</i>	an orb mussel	Common
<i>Calopteryx splendens</i>	Banded Demoiselle	Local
<i>Tetrix undulata</i>	Common Ground Hopper	Common
<i>Liocoris tripustulatus</i>	a plantbug or grassbug	Common
<i>Cercopis vulnerata</i>	a froghopper	Common
<i>Philaenus spumarius</i>	Cuckoo-spit Insect	Common
<i>Tytthaspis sedecimpunctata</i>	16-spot Ladybird	Local
<i>Coccinella septempunctata</i>	Seven-spot Ladybird	Common
<i>Propylea quattuordecimpunctata</i>	14-spot Ladybird	Common
<i>Pyrochroa coccinea</i>	Black-headed Cardinal	Be Notable/Nb
<i>Chrysolina menthastri</i>	Mint Leaf Beetle	Local
<i>Plagioderma versicolora</i>	a leaf beetle	Local
<i>Altica lythri</i>	a leaf beetle	Common
<i>Cassida viridis</i>	Green Tortoise Beetle	Common
<i>Gonepteryx rhamni</i>	Brimstone	Common
<i>Pieris brassicae</i>	Large White	Common
<i>Pieris rapae</i>	Small White	Common
<i>Lycaena phlaeas</i>	Small Copper	Common
<i>Aglais urticae</i>	Small Tortoiseshell	Common
<i>Syricta pipiens</i>	a hoverfly	Common
<i>Selandria serva</i>	a sawfly	Common
<i>Salmo trutta</i>	Sea Trout	Unknown
<i>Salmo gairdneri</i>	Rainbow Trout	Unknown
<i>Thymallus thymallus</i>	Grayling (fish)	Unknown
<i>Esox lucius</i>	Pike	Unknown
<i>Gobio gobio</i>	Gudgeon	Unknown
<i>Tinca tinca</i>	Tench	Unknown
<i>Phoxinus phoxinus</i>	Minnow	Unknown
<i>Rutilus rutilus</i>	Roach	Unknown
<i>Leuciscus cephalus</i>	Chub	Unknown
<i>Leuciscus leuciscus</i>	Dace	Unknown
<i>Noemacheilus barbatulus</i>	Stone Loach	Unknown
<i>Anguilla anguilla</i>	Eel	Unknown
<i>Perca fluviatilis</i>	Perch	Unknown
<i>Cottus gobio</i>	Bullhead	Unknown
<i>Gasterosteus aculeatus</i>	Three-spined Stickleback	Unknown
<i>Cygnus olor</i>	Mute Swan	Unknown
<i>Anas platyrhynchos</i>	Mallard	Unknown
<i>Alectoris rufa</i>	Red-legged Partridge	Unknown
<i>Gallinula chloropus</i>	Moorhen	Unknown
<i>Apus apus</i>	Swift	Unknown
<i>Alauda arvensis</i>	Skylark	Unknown
<i>Riparia riparia</i>	Sand Martin	Unknown
<i>Hirundo rustica</i>	Swallow	Unknown
<i>Delichon urbica</i>	House Martin	Unknown
<i>Motacilla flava</i>	Yellow Wagtail	Unknown

Troglodytes troglodytes	Wren	Unknown
Erithacus rubecula	Robin	Unknown
Turdus philomelos	Song Thrush	Unknown
Acrocephalus schoenobaenus	Sedge Warbler	Unknown
Muscicapa striata	Spotted Flycatcher	Unknown
Parus major	Great Tit	Unknown
Pica pica	Magpie	Unknown
Sturnus vulgaris	Starling	Unknown
Passer domesticus	House Sparrow	Unknown
Fringilla coelebs	Chaffinch	Unknown
Emberiza schoeniclus	Reed Bunting	Unknown
Talpa europaea	Mole	Common

Species list for Windrush Pasture Witney

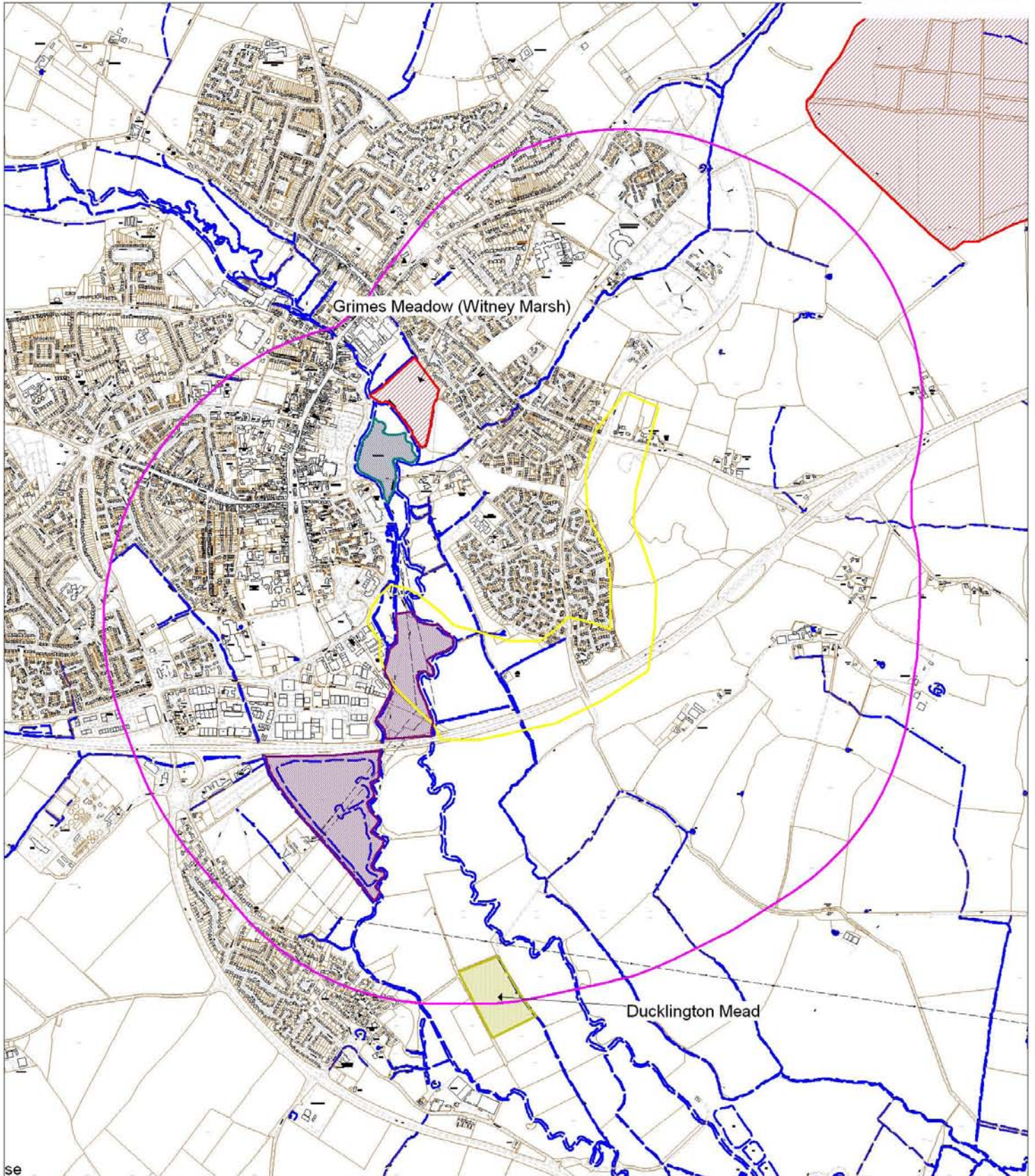
<i>Equisetum palustre</i>	Marsh Horsetail	Unknown
<i>Caltha palustris</i>	Marsh Marigold	Unknown
<i>Ranunculus acris</i>	Meadow Buttercup	Unknown
<i>Ranunculus repens</i>	Creeping Buttercup	Unknown
<i>Cerastium fontanum</i>	Common Mouse-ear	Unknown
<i>Lychnis flos-cuculi</i>	Ragged Robin	Unknown
<i>Persicaria amphibia</i>	Amphibious Bistort	Unknown
<i>Persicaria maculosa</i>	Redshank	Unknown
<i>Rumex acetosa</i>	Common Sorrel	Unknown
<i>Rumex crispus</i>	Curled Dock	Unknown
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Unknown
<i>Cardamine pratensis</i>	Cuckoo-flower	Unknown
<i>Filipendula ulmaria</i>	Meadowsweet	Unknown
<i>Potentilla anserina</i>	Silverweed	Unknown
<i>Lotus corniculatus</i>	Common Bird's-foot-trefo	Unknown
<i>Lathyrus pratensis</i>	Meadow Vetchling	Unknown
<i>Trifolium repens</i>	White Clover	Unknown
<i>Trifolium pratense</i>	Red Clover	Unknown
<i>Myosotis scorpioides</i>	Water Forget-me-not	Unknown
<i>Prunella vulgaris</i>	Selfheal	Unknown
<i>Mentha aquatica</i>	Water Mint	Unknown
<i>Plantago major</i>	Greater Plantain	Unknown
<i>Plantago lanceolata</i>	Ribwort Plantain	Unknown
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	Unknown
<i>Cirsium vulgare</i>	Spear Thistle	Unknown
<i>Cirsium palustre</i>	Marsh Thistle	Unknown
<i>Cirsium arvense</i>	Creeping Thistle	Unknown
<i>Leontodon autumnalis</i>	Autumnal Hawkbit	Unknown
<i>Taraxacum officinale</i> agg.	Dandelion	Unknown
<i>Bellis perennis</i>	Daisy	Unknown
<i>Juncus inflexus</i>	Hard Rush	Unknown
<i>Eleocharis palustris</i>	Common Spike-rush	Unknown
<i>Carex disticha</i>	Brown Sedge	Unknown
<i>Carex hirta</i>	Hairy Sedge	Unknown
<i>Carex riparia</i>	Great Pond-sedge	Unknown
<i>Carex flacca</i>	Glaucous Sedge	Unknown
<i>Festuca pratensis</i>	Meadow Fescue	Unknown
<i>Festuca arundinacea</i>	Tall Fescue	Unknown
<i>Festuca rubra</i> sens.str.	Red Fescue	Unknown
<i>Lolium perenne</i>	Perennial Rye-grass	Unknown
<i>Cynosurus cristatus</i>	Crested Dog's-tail	Unknown
<i>Poa trivialis</i>	Rough Meadow-grass	Unknown
<i>Dactylis glomerata</i>	Cock's-foot	Unknown
<i>Deschampsia caespitosa</i>	Tufted Hair-grass	Unknown
<i>Holcus lanatus</i>	Yorkshire-fog	Unknown
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	Unknown
<i>Agrostis stolonifera</i>	Creeping Bent	Unknown
<i>Alopecurus geniculatus</i>	Marsh Foxtail	Unknown
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid	Unknown

Bat Species Records

Cogges Link Road 5km Search Area

Common Name	Scientific Name	Sex/stage	Date	Grid ref.	Site	Sub-site/Locality	UK Legislation	European Legislation	UK BAP Status
Natterer's Bat	Myotis nattereri		03-Apr-05	SP352131	Wood Lane, Delly End, Hailey.		Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Pipistrelle	Pipistrellus pipistrellus		02-Jun-93	SP354079	Oxon tetrad 3406	Ducklington	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	Priority Sp.
Pipistrelle	Pipistrellus pipistrellus		07-Jul-92	SP360108	Oxon tetrad 3610	Witney	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	Priority Sp.
Pipistrelle	Pipistrellus pipistrellus		07-Jul-92	SP360108	Oxon tetrad 3610	Witney	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	Priority Sp.
Brown Long-eared Bat	Plecotus auritus		27-Oct-93	SP345139	Oxon tetrad 3412	Witney	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Brown Long-eared Bat	Plecotus auritus		24-Aug-94	SP362095	Cogges Manor Farm		Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Brown Long-eared Bat	Plecotus auritus	adult	28-Sep-97	SP362095	Cogges Manor Farm		Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Brown Long-eared Bat	Plecotus auritus		02-Nov-91	SP374130	Oxon tetrad 3612	Witney	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Brown Long-eared Bat	Plecotus auritus		17-Nov-88	SP385125	Oxon tetrad 3812	private house	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	
Brown Long-eared Bat	Plecotus auritus		27-Sep-94	SP401080	Oxon tetrad 4008	South Leigh	Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994	

Data Search Witney Cogges Link Road. Designated Sites



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Scale 1:20000

Legally Protected & Notable/Rare Species Records

Cogges 1km Search Area

Common Name	Scientific Name	Abundance	Sex/stage	Date	Grid ref.	Site	Sub-site/Locality	IUCN Red List Status	UK Legislation	European Legislation	UK BAP Status	Notable Invertebrates	BOCC Status	Nat. Rare/Scarce Plants	UK Red List (Vascular Plants)
a lichen	Acarospora glaucocarpa			07-Sep-78	SP362096	Cogges Manor Farm	BUILDINGS AND WALLS							Scarce (Lic)	
Fritillary	Fritillaria meleagris			24-May-90	SP361093	Cogges Manor Farm	MEADOW ENCLOSURES							Scarce (VP)	VU
Fritillary	Fritillaria meleagris			14-Jun-93	SP361093	Cogges Manor Farm	MEADOW ENCLOSURES							Scarce (VP)	VU
Bluebell	Hyacinthoides non-scripta			25-May-90	SP361095	Cogges Manor Farm	MOATED SITE			W&C Act 1981, Schedule 8, Section 13 Part 2					
Bluebell	Hyacinthoides non-scripta			08-Oct-92	SP361095	Cogges Manor Farm	MOATED SITE			W&C Act 1981, Schedule 8, Section 13 Part 2					
Rough Marsh-mallow	Althaea hirsuta			08-Oct-92	SP362096	Cogges Manor Farm	ORCHARD	IUCN (1994) - Endangered		Schedule 8 (W&C Act 1981)					
Water Vole	Arvicola terrestris			1975	SP362095	Cogges Manor Farm				Schedule 5, parts 4(a) and (b) (W&C Act 1981)	Priority Sp.				
Bluebell	Hyacinthoides non-scripta			1978	SP362095	Cogges Manor Farm				W&C Act 1981, Schedule 8, Section 13 Part 2					
Water Vole	Arvicola terrestris			08-Jan-75	SP362095	Cogges Manor Farm				Schedule 5, parts 4(a) and (b) (W&C Act 1981)	Priority Sp.				
a ramshorn snail	Gyraulus acronicus			17-Mar-78	SP362095	Cogges Manor Farm		IUCN (pre 1994) - Vulnerable							
Grass Snake	Natrix natrix			05-Sep-78	SP362095	Cogges Manor Farm				Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)					
a lichen	Acarospora glaucocarpa			07-Sep-78	SP362095	Cogges Manor Farm								Scarce (Lic)	
Orange-fruited Elm-lichen	Caloplaca luteoalba			07-Sep-78	SP362095	Cogges Manor Farm		IUCN (1994) - Vulnerable		Schedule 8 (W&C Act 1981)	Priority Sp.				
Teal	Anas crecca	33	adult	12-Dec-80	SP362095	Cogges Manor Farm							Amber List		
Common Frog	Rana temporaria			05-Apr-81	SP362095	Cogges Manor Farm				Schedule 5, parts 5(a) and (b) (W&C Act 1981)					
Large Tortoiseshell	Nymphalis polychloros			02-Sep-81	SP362095	Cogges Manor Farm		IUCN (pre 1994) - Endangered		Schedule 5, parts 5(a) and (b) (W&C Act 1981)					
Large Heath	Coenonympha tullia			02-Sep-81	SP362095	Cogges Manor Farm				Schedule 5, parts 5(a) and (b) (W&C Act 1981)					
a leaf beetle	Longitarsus ganglbaueri			13-May-82	SP362095	Cogges Manor Farm						Na			
Argent and Sable	Rheumaptera hastata			02-Jul-82	SP362095	Cogges Manor Farm						Nb			
Bordered Gothic	Heliophobus reticulata			02-Jul-82	SP362095	Cogges Manor Farm					Priority Sp.	Nb			
Bordered Gothic	Heliophobus reticulata			02-Jul-82	SP362095	Cogges Manor Farm					Priority Sp.	Nb			
Purple-bordered Gold	Idaea muricata			10-Sep-82	SP362095	Cogges Manor Farm						Na			
Common Lizard	Lacerta vivipara			10-Jun-83	SP362095	Cogges Manor Farm				Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)					
Grass Snake	Natrix natrix			25-Jun-84	SP362095	Cogges Manor Farm				Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)					
Dotted Rustic	Rhyacia simulans		adult	11-Jul-85	SP362095	Cogges Manor Farm						Nb			
Lunar Yellow Underwing	Noctua orbona		adult	25-Jul-85	SP362095	Cogges Manor Farm					Priority Sp.	Nb			
Marbled Green	Cryphia muralis		adult	08-Aug-85	SP362095	Cogges Manor Farm						Nb			
a micro-moth	Bryotropha basaltinella			30-Jun-88	SP362095	Cogges Manor Farm						Notable			
Slow-worm	Anguis fragilis			16-May-89	SP362095	Cogges Manor Farm				Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)					
Smooth Newt	Triturus vulgaris			03-May-90	SP362095	Cogges Manor Farm				Schedule 5, parts 5(a) and (b) (W&C Act 1981)					
Mute Swan	Cygnus olor			21-May-90	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			21-May-90	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			21-May-90	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			21-May-90	SP362095	Cogges Manor Farm							Amber List		
Song Thrush	Turdus philomelos			21-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Starling	Sturnus vulgaris			21-May-90	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			21-May-90	SP362095	Cogges Manor Farm							Red List		
Mute Swan	Cygnus olor			22-May-90	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			22-May-90	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			22-May-90	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			22-May-90	SP362095	Cogges Manor Farm							Amber List		
Starling	Sturnus vulgaris			22-May-90	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			22-May-90	SP362095	Cogges Manor Farm							Red List		
Bullfinch	Pyrrhula pyrrhula			22-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Mute Swan	Cygnus olor			23-May-90	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			23-May-90	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			23-May-90	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			23-May-90	SP362095	Cogges Manor Farm							Amber List		
Song Thrush	Turdus philomelos			23-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Spotted Flycatcher	Muscicapa striata			23-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Starling	Sturnus vulgaris			23-May-90	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			23-May-90	SP362095	Cogges Manor Farm							Red List		

Legally Protected & Notable/Rare Species Records

Cogges 1km Search Area

Common Name	Scientific Name	Abundance	Sex/stage	Date	Grid ref.	Site	Sub-site/Locality	IUCN Red List Status	UK Legislation	European Legislation	UK BAP Status	Notable Invertebrates	BOCC Status	Nat. Rare/Scarce Plants	UK Red List (Vascular Plants)
Bullfinch	Pyrrhula pyrrhula			23-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Mute Swan	Cygnus olor			24-May-90	SP362095	Cogges Manor Farm							Amber List		
Cuckoo	Cuculus canorus			24-May-90	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			24-May-90	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			24-May-90	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			24-May-90	SP362095	Cogges Manor Farm							Amber List		
Song Thrush	Turdus philomelos			24-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Willow Warbler	Phylloscopus trochilus			24-May-90	SP362095	Cogges Manor Farm							Amber List		
Spotted Flycatcher	Muscicapa striata			24-May-90	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Starling	Sturnus vulgaris			24-May-90	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			24-May-90	SP362095	Cogges Manor Farm							Red List		
Yellowhammer	Emberiza citrinella			24-May-90	SP362095	Cogges Manor Farm							Red List		
Mute Swan	Cygnus olor			25-May-90	SP362095	Cogges Manor Farm							Amber List		
Lapwing	Vanellus vanellus			25-May-90	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			25-May-90	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			25-May-90	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			25-May-90	SP362095	Cogges Manor Farm							Amber List		
Starling	Sturnus vulgaris			25-May-90	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			25-May-90	SP362095	Cogges Manor Farm							Red List		
Dotted Rustic	Rhyacia simulans			30-Jul-91	SP362095	Cogges Manor Farm						Nb			
Marbled Green	Cryphia muralis			30-Jul-91	SP362095	Cogges Manor Farm						Nb			
a thick-legged flower beetle	Ischnomera cyanea			19-May-92	SP362095	Cogges Manor Farm						Nb			
a thick-legged flower beetle	Ischnomera cyanea			19-May-92	SP362095	Cogges Manor Farm						Nb			
Sloe Pug	Chloroclystis chloerata			09-Jun-92	SP362095	Cogges Manor Farm						Na			
a ground beetle	Harpalus ardosiacus			30-Jun-92	SP362095	Cogges Manor Farm						Nb			
Pale Shining Brown	Polia bombycina			30-Jun-92	SP362095	Cogges Manor Farm					Priority Sp.				
Bluebell	Hyacinthoides non-scripta			08-Oct-92	SP362095	Cogges Manor Farm			W&C Act 1981, Schedule 8, Section 13 Part 2						
Harvest Mouse	Micromys minutus		nest	05-Jul-93	SP362095	Cogges Manor Farm		IUCN (1994) - Lower risk - least concern							
Brown Long-eared Bat	Plecotus auritus			24-Aug-94	SP362095	Cogges Manor Farm			Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994					
Common Toad	Bufo bufo			25-Apr-95	SP362095	Cogges Manor Farm			Schedule 5, parts 5(a) and (b) (W&C Act 1981)						
Brown Long-eared Bat	Plecotus auritus	1	adult	28-Sep-97	SP362095	Cogges Manor Farm			Schedule 5 - all parts (W&C Act 1981)	Conservation Regulations 1994					
Fritillary	Fritillaria meleagris	2		27-Apr-98	SP362095	Cogges Manor Farm								Scarce (VP)	VU
a ground beetle	Badister unipustulatus			18-May-98	SP362095	Cogges Manor Farm						Nb			
Flax Flea Beetle	Longitarsus parvulus	3	adult	17-Aug-98	SP362095	Cogges Manor Farm						Na			
Common Frog	Rana temporaria		adult	17-Aug-98	SP362095	Cogges Manor Farm			Schedule 5, parts 5(a) and (b) (W&C Act 1981)						
a ground beetle	Bembidion gilvipes			24-May-99	SP362095	Cogges Manor Farm						Nb			
a thick-legged flower beetle	Ischnomera cyanea			24-May-99	SP362095	Cogges Manor Farm						Nb			
a money spider	Lepthyphantes insignis	1	male	01 OCT 1990	SP362095	Cogges Manor Farm						Nb			
a money spider	Lepthyphantes insignis	1	female	01 OCT 1990	SP362095	Cogges Manor Farm						Nb			
Mute Swan	Cygnus olor			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Kestrel	Falco tinnunculus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Grey Partridge	Perdix perdix			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Lapwing	Vanellus vanellus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Black-headed Gull	Larus ridibundus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Lesser Black-backed Gull	Larus fuscus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Stock Dove	Columba oenas			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Turtle Dove	Streptopelia turtur			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Cuckoo	Cuculus canorus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Kingfisher	Alcedo atthis			1974 - 1992	SP362095	Cogges Manor Farm			Schedule 1 (W&C Act 1981)				Amber List		
Green Woodpecker	Picus viridis			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Lesser Spotted Woodpecker	Dendrocopos minor			1974 - 1992	SP362095	Cogges Manor Farm							Red List		
Skylark	Alauda arvensis			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Sand Martin	Riparia riparia			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Swallow	Hirundo rustica			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
House Martin	Delichon urbica			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Meadow Pipit	Anthus pratensis			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Grey Wagtail	Motacilla cinerea			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Dunnock	Prunella modularis			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Fieldfare	Turdus pilaris			1974 - 1992	SP362095	Cogges Manor Farm			Schedule 1 (W&C Act 1981)				Amber List		
Song Thrush	Turdus philomelos			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		

Legally Protected & Notable/Rare Species Records

Cogges 1km Search Area

Common Name	Scientific Name	Abundance	Sex/stage	Date	Grid ref.	Site	Sub-site/Locality	IUCN Red List Status	UK Legislation	European Legislation	UK BAP Status	Notable Invertebrates	BOCC Status	Nat. Rare/Scarce Plants	UK Red List (Vascular Plants)
Redwing	Turdus iliacus			1974 - 1992	SP362095	Cogges Manor Farm			Schedule 1 (W&C Act 1981)				Amber List		
Mistle Thrush	Turdus viscivorus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Willow Warbler	Phylloscopus trochilus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Goldcrest	Regulus regulus			1974 - 1992	SP362095	Cogges Manor Farm							Amber List		
Spotted Flycatcher	Muscicapa striata			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Marsh Tit	Parus palustris			1974 - 1992	SP362095	Cogges Manor Farm							Red List		
Starling	Sturnus vulgaris			1974 - 1992	SP362095	Cogges Manor Farm							Red List		
House Sparrow	Passer domesticus			1974 - 1992	SP362095	Cogges Manor Farm							Red List		
Tree Sparrow	Passer montanus			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Linnet	Carduelis cannabina			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Bullfinch	Pyrrhula pyrrhula			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Yellowhammer	Emberiza citrinella			1974 - 1992	SP362095	Cogges Manor Farm							Red List		
Reed Bunting	Emberiza schoeniclus			1974 - 1992	SP362095	Cogges Manor Farm					Priority Sp.		Red List		
Round-fruited Rush	Juncus compressus			2001	SP360099	Cogges Meadow									NT
Fritillary	Fritillaria meleagris			11-May-81	SP364076	Ducklington Mead SSSI								Scarce (VP)	VU
Opposite-leaved Pondweed	Groenlandia densa			03-Sep-96	SP36550768	Ducklington Meadows Ditches									VU
Grass Snake	Natrix natrix			03-Sep-96	SP36550768	Ducklington Meadows Ditches			Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)						
Fringed Water-lily	Nymphaeoides peltata			19-Aug-96	SP35910805	Emma's Dyke								Scarce (VP)	
Kingfisher	Alcedo atthis			19-Aug-96	SP35380890	Emma's Dyke			Schedule 1 (W&C Act 1981)				Amber List		
Badger	Meles meles			24-Jan-04	SP350087	Oxon tetrad 3408	A40, OXON TETRAD 3408		Badger Act 1992						
Badger	Meles meles			20-Apr-06	SP350087	OXON TETRAD 3408	A40, OXON TETRAD 3408	dead on road	Badger Act 1992						
Barn Owl	Tyto alba		adult	26-Feb-04	SP352082	Oxon tetrad 3408	Ducklington by pass, OXON TETRAD 3408		Schedule 1 (W&C Act 1981)				Amber List		
Brown Hare	Lepus capensis			20-Sep-05	SP351084	Oxon tetrad 3408					Priority Sp.				
Swallow	Hirundo rustica			06-Jun-84	SP359099	River Windrush	R.Windrush E tetrad 3408						Amber List		
Starling	Sturnus vulgaris			06-Jun-84	SP359099	River Windrush	R.Windrush E tetrad 3408						Red List		
House Sparrow	Passer domesticus			06-Jun-84	SP359099	River Windrush	R.Windrush E tetrad 3408						Red List		
Mute Swan	Cygnus olor			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Amber List		
Skylark	Alauda arvensis			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608				Priority Sp.		Red List		
Sand Martin	Riparia riparia			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Amber List		
Swallow	Hirundo rustica			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Amber List		
House Martin	Delichon urbica			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Amber List		
Yellow Wagtail	Motacilla flava			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Amber List		
Song Thrush	Turdus philomelos			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608				Priority Sp.		Red List		
Spotted Flycatcher	Muscicapa striata			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608				Priority Sp.		Red List		
Starling	Sturnus vulgaris			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Red List		
House Sparrow	Passer domesticus			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608						Red List		
Reed Bunting	Emberiza schoeniclus			04-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608				Priority Sp.		Red List		
Black-headed Cardinal Beetle	Pyrochroa coccinea			07-Jun-84	SP362090	River Windrush	R.Windrush E tetrad 3608					Nb			
Mute Swan	Cygnus olor			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406						Amber List		
Skylark	Alauda arvensis			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406				Priority Sp.		Red List		
Swallow	Hirundo rustica			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406						Amber List		
House Martin	Delichon urbica			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406						Amber List		
Starling	Sturnus vulgaris			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406						Red List		
Water Vole	Arvicola terrestris			04-Jun-84	SP358079	River Windrush	R.Windrush W tetrad3406		Schedule 5, parts 4(a) and (b) (W&C Act 1981)		Priority Sp.				
Freshwater Crayfish	Austropotamobius pallipes	2		26-Sep-98	SP358102	River Windrush	Witney Bridge, R.Windrush tetrad 3410	IUCN (1994) - Vulnerable	Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)		Priority Sp.				
Freshwater Crayfish	Austropotamobius pallipes	1		20-Oct-98	SP358102	River Windrush	Witney Bridge, R.Windrush tetrad 3410	IUCN (1994) - Vulnerable	Schedule 5, parts 1, 5(a) and (b) (W&C Act 1981)		Priority Sp.				
Mute Swan	Cygnus olor			03-Sep-96	SP36610790	River Windrush							Amber List		
Mute Swan	Cygnus olor			20-Sep-96	SP36060973	River Windrush							Amber List		
Mute Swan	Cygnus olor			20-Sep-96	SP36130873	River Windrush							Amber List		
Kingfisher	Alcedo atthis			20-Sep-96	SP36060973	River Windrush			Schedule 1 (W&C Act 1981)				Amber List		
Kingfisher	Alcedo atthis			20-Sep-96	SP36090932	River Windrush			Schedule 1 (W&C Act 1981)				Amber List		
Song Thrush	Turdus philomelos			20-Sep-96	SP36130873	River Windrush					Priority Sp.		Red List		
Sainfoin	Onobrychis vicifolia			19-Aug-96	SP35900833	River Windrush (West Branch)									NT
Kingfisher	Alcedo atthis			19-Sep-96	SP35920965	River Windrush (West Branch)			Schedule 1 (W&C Act 1981)				Amber List		
Kingfisher	Alcedo atthis			19-Sep-96	SP35930863	River Windrush (West Branch)			Schedule 1 (W&C Act 1981)				Amber List		
Hoary Cinquefoil	Potentilla argentea			01-Jul-86	SP358083	The Moors Gravel Pit									NT
Sainfoin	Onobrychis vicifolia			01-Jul-86	SP358083	The Moors Gravel Pit									NT

Legally Protected & Notable/Rare Species Records

Cogges 1km Search Area

Common Name	Scientific Name	Abundance	Sex/stage	Date	Grid ref.	Site	Sub-site/Locality	IUCN Red List Status	UK Legislation	European Legislation	UK BAP Status	Notable Invertebrates	BOCC Status	Nat. Rare/Scarce Plants	UK Red List (Vascular Plants)
Fringed Water-lily	Nymphoides peltata			01-Jul-86	SP358083	The Moors Gravel Pit								Scarce (VP)	
Mute Swan	Cygnus olor	4		06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Pochard	Aythya ferina	6		06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Kestrel	Falco tinnunculus			06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Black-headed Gull	Larus ridibundus			06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Lesser Black-backed Gull	Larus fuscus			06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Fieldfare	Turdus pilaris			06-Feb-91	SP358083	The Moors Gravel Pit			Schedule 1 (W&C Act 1981)				Amber List		
Song Thrush	Turdus philomelos			06-Feb-91	SP358083	The Moors Gravel Pit					Priority Sp.		Red List		
Redwing	Turdus iliacus			06-Feb-91	SP358083	The Moors Gravel Pit			Schedule 1 (W&C Act 1981)				Amber List		
Mistle Thrush	Turdus viscivorus			06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Goldcrest	Regulus regulus			06-Feb-91	SP358083	The Moors Gravel Pit							Amber List		
Starling	Sturnus vulgaris			06-Feb-91	SP358083	The Moors Gravel Pit							Red List		
Bullfinch	Pyrrhula pyrrhula			06-Feb-91	SP358083	The Moors Gravel Pit					Priority Sp.		Red List		
Kestrel	Falco tinnunculus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Water Rail	Rallus aquaticus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Snipe	Gallinago gallinago			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Redshank	Tringa totanus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Cuckoo	Cuculus canorus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Kingfisher	Alcedo atthis			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North		Schedule 1 (W&C Act 1981)				Amber List		
Yellow Wagtail	Motacilla flava			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Grey Wagtail	Motacilla cinerea			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Willow Warbler	Phylloscopus trochilus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Goldcrest	Regulus regulus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North						Amber List		
Reed Bunting	Emberiza schoeniclus			Pre 1982	SP360091	Windrush Birds, North	Windrush Birds, North				Priority Sp.		Red List		
Water Vole	Arvicola terrestris			Pre 1982	SP360091	Windrush Birds, North			Schedule 5, parts 4(a) and (b) (W&C Act 1981)		Priority Sp.				
Badger	Meles meles			06-May-00	SP377097	Witney By Pass			Badger Act 1992						
Badger	Meles meles			07-Feb-02	SP372092	Witney By Pass			Badger Act 1992						
Barn Owl	Tyto alba	1	adult	15-Jun-99	SP360085	Witney Swamp			Schedule 1 (W&C Act 1981)				Amber List		
Water Rail	Rallus aquaticus			Pre 1982	SP360085	Witney Swamp							Amber List		
Curlew	Numenius arquata			Pre 1982	SP360085	Witney Swamp							Amber List		
Redshank	Tringa totanus			Pre 1982	SP360085	Witney Swamp							Amber List		
Kingfisher	Alcedo atthis			Pre 1982	SP360085	Witney Swamp			Schedule 1 (W&C Act 1981)				Amber List		
Yellow Wagtail	Motacilla flava			Pre 1982	SP360085	Witney Swamp							Amber List		
Grey Wagtail	Motacilla cinerea			Pre 1982	SP360085	Witney Swamp							Amber List		
Stonechat	Saxicola torquata			Pre 1982	SP360085	Witney Swamp							Amber List		
Reed Bunting	Emberiza schoeniclus			Pre 1982	SP360085	Witney Swamp					Priority Sp.		Red List		
Water Vole	Arvicola terrestris			Pre 1982	SP360085	Witney Swamp			Schedule 5, parts 4(a) and (b) (W&C Act 1981)		Priority Sp.				

Oxfordshire Wildlife Sites Project Citation

SITE NAME: Witney Marsh (Grimes Meadow)

SITE CODE: 30U01

AREA (ha): 5.7 ha

GRID REF: SP360099

DISTRICT: West Oxfordshire

EN NATURAL AREA: Thames & Avon Vales

LAST SURVEY: 2001

SITE DESCRIPTION:

This field beside the River Windrush in Witney is an area of unimproved marshy grassland with sedge-dominated swamp communities. The rare slender spike-rush (*Eleocharis uniglumis*), which is known from only 8 tetrads in Oxfordshire, is found in marshy areas of the field, together with the uncommon marsh arrowgrass (*Triglochin palustre*) and round-fruited rush (*Juncus compressus*). Glaucous sedge and brown sedge are abundant, and greater and lesser pond sedge dominate parts of the field.

Southern marsh orchid was found here in 1978 but was not seen in 2001. There is a good diversity of typical wetland plants including ragged robin, fen bedstraw, marsh bedstraw, greater bird's-foot trefoil, meadowsweet, water figwort, common fleabane, and marsh marigold.

Lowland meadows and sedge swamps are rare habitats in Britain and a priority for conservation in the UK Biodiversity Action Plan. Witney Marsh is one of only two grazed marshes along the Windrush in Oxfordshire, and one of only four extensive grazed marshes in the county. The habitat and botanical interest puts the site within the top six sites within the Windrush Valley.

UK PRIORITY BAP HABITATS: **Lowland meadow, Fen (sedge swamp)**

UK PRIORITY BAP SPECIES: none recorded

RED DATA BOOK SPECIES: none recorded

NATIONALLY SCARCE SPECIES: none recorded

BIRDS OF CONSERVATION CONCERN:

Red list:

Amber list: **Kingfisher**

TYPICAL NEUTRAL GRASSLAND/WETLAND SPECIES:

Meadow foxtail, sweet vernal grass, crested dog's-tail, meadow fescue, reed canary-grass, floating sweet-grass, lesser pond sedge, brown sedge, glaucous sedge, common sedge, false fox sedge, greater pond sedge, slender spike-rush, common spike-rush, jointed rush, round-fruited rush, soft rush, hard rush, wild angelica, marsh marigold, great willowherb, hoary willowherb, marsh horsetail, meadowsweet, marsh bedstraw, fen bedstraw, lady's bedstraw, yellow flag iris, meadow vetchling, autumnal hawkbit, common bird's-foot trefoil, greater bird's-foot trefoil, ragged robin, creeping jenny, water mint, water forget-me-not, red bartsia, amphibious bistort, redshank, silverweed, common fleabane, water figwort, hoary ragwort, common comfrey, marsh arrowgrass, brooklime.

Status Key

Legislation W & C Act 1981 - Wildlife and Countryside Act 1981

- Schedule 5 Animals
- Schedule 8 Plants
- Schedule 1 Breeding Birds (Please note that some schedule 1 bird records will refer to species that do not breed in the county, e.g. over-wintering birds such as Redwing or Fieldfare. Although we include them in the annotated records, only they and their nests, eggs and dependent young enjoy extra protection under the W&C 1981 act. If you are in any doubt about the breeding status of a bird please contact us at TVERC)

European Legislation

- These species are protected under Schedule 2 and Schedule 4 of the Conservation (Natural Habitats & c.) Regulations 1994.

IUCN Red List Categories

- IUCN (1994) – Extinct (EX) A taxon is Extinct when there is no reasonable doubt that the last individual has died.
- IUCN (1994) – Extinct in the Wild (EW) A taxon is Extinct in the Wild when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range.
- IUCN (1994) – Critically Endangered (CR) A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
- IUCN (1994) – Endangered: A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.
- IUCN (1994) – Vulnerable: A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future
- IUCN (1994) – Lower risk: A taxon is Lower Risk when it has been evaluated, but does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable.

Old Red Data Book categories included if up to date information is incomplete.

- IUCN (pre 1994) – Endangered (RDB1) - Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating.
- IUCN (pre 1994) – Vulnerable (RDB2) - Taxa believed likely to move into the 'Endangered' category in the near future if the causal factors continue operating
- IUCN (pre 1994) – Rare (RDB3) Species estimated to exist in only <15 10km sq.

United Kingdom Biodiversity Action Plan (UKBAP) Priority Species:

They are species which are (a) globally threatened and (b) rapidly declining in the UK (i.e. by an estimated >50% in the last 25 years)

BOCC Lists - Birds of Conservation Concern Lists

These lists were drawn up by the RSPB

Red List - species are those that are globally threatened, whose population or range has declined rapidly in recent years (ie by more than 50% in 25 years), or which have declined historically and not recovered.

Amber List - Amber list species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare breeders (fewer than 300 pairs), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe.

Notable Invertebrates

Na - Nationally Scarce (Notable) A: Taxa which don't fall within IUCN categories but are uncommon in Britain and occur in <30 10 km sq/ or for less well recorded groups within <7 vice counties

Nb - Nationally Scarce (Notable) B: Taxa which don't fall within IUCN categories but are uncommon in Britain and occur in 31-100 10 km sq/ or for less

well recorded groups between 8 and 20 vice counties

N – Notable: Taxa which are known to be scarce(occurring in between 16 and 100 10km squares). Often there is insufficient information to assign them to Na or Nb categories.

Designation comes from the NBN species dictionary.

National Plant Lists

UK Red List (Vascular Plants): This list was compiled by JNCC in 2005. It assesses the threat to species using IUCN (International Union for the Conservation of Nature) definitions. Broadly three criteria are used – the decline which a species has suffered over the last ten years, the combination of rarity and decline, and the absolute rarity of the species. If a species meets any of these criteria at a particular level it is considered to have that degree of threat. To be designated at the most threatened level, Critical, a species has to have either a decline of more than 90%, or a combination of a single locality with continued decline, or an absolute rarity of fewer than 50 individuals. To reach the next level, Endangered, a species has to have more than 70% decline, or a combination of fewer than 5 locations and continued decline, or fewer than 250 individuals. To reach Vulnerable a species has to have had more than 50% decline, or fewer than 10 locations and continued decline, or fewer than 1000 individuals. Near Threatened species are those with more than 20% decline, or fewer than 30 localities and continuing decline or fewer than 10,000 individuals.

Nat. Rare/Scarce Plants: This list applies to both lower and higher plants. The abbreviations used in the species lists are: Lic = Lichen, Liv = Liverwort, Mo = Moss, St = Stonewort and VP = Vascular Plant. The definition of nationally scarce and rare is as follows:

Rare = occurring in 15 or fewer hectads (10 km squares) in the UK

Scarce = occurring in 16 – 100 hectads in the UK

The vascular plant list was last updated in 2004

Witney Cogges Link
Phase 1 Report

Witney Cogges Link Phase 1 & 2

Phase 1 Habitat Survey



Witney Cogges Link
Phase 1 Report

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APPENDIX 2 - SPECIES LIST

1. Background

This Phase 1 survey is confined to a corridor extending approximately 100m either side of the footprint of the road.

2. Survey Methodology

A range of locally based conservation bodies were contacted to obtain any existing ecological data within a 500 meters radius of the road footprint.

The site was visited on 22nd, 23rd May and 12th June 2002. This is within the appropriate time of year for carrying out this survey. The Phase 1 survey methodology of the former Nature Conservancy Council (NCC 1990) was used.

Phase 1 survey is a nationally accepted standard method for the rapid survey and appraisal of ecological habitats. The study area was surveyed on foot, with areas of habitat mapped and coloured according to type. Dominant and conspicuous flora species are recorded and 'target notes' are prepared for any features of particular interest.

Signs of protected species, e.g. badger, bats, and water vole, were noted if present, including tracks, droppings, latrine sites, roosting sites and dwellings. Trees were visually assessed with binoculars for possible usage as roosts by bats. Habitats were assessed for their potential to harbour protected species, or species which are not specially protected, but are found within national and/or local Biodiversity Action Plans. Casual records were made of any other faunal species, in particular birds and mammals.

3. Results

3.1 Survey Results

Brief descriptions of the habitats of the survey corridor are set out below, and the habitats are shown on map 1. Numbered features which are referred to in the text are also shown on this map. Sites are numbered in sequence from west (Witan Way) to east (Oxford Hill).

3.1.1 Habitats

The survey area consists of twelve fields; three used as pasture, seven used as arable, one as amenity grassland and one has reverted to secondary coarse grassland. These fields are separated and surrounded by hedgerows, which are generally species poor, though do contain a few mature trees. 10 areas of broad leaved woodland were encountered within the survey boundary.

Grassland

CG1 - The roadside verge adjacent to Witan Way contains areas of coarse secondary grassland. The sward is rank in places co-dominated by false-oat grass (*Arrhenatherum elatius*), cow parsley (*Anthriscus sylvestris*) and perennial rye-grass (*Lolium perenne*). Herb species include common poppy (*Papaver rhoeas*), opium poppy (*Papaver somniferum*), common fumitory (*Fumaria officinalis*), field speedwell (*Veronica agrestis*) and dove's-foot crane's-bill (*Geranium molle*),

CG2 – A small area of coarse grassland. The sward is rank and appears species-rich with a high composition of herbaceous plants. Grasses such as cock's foot (*Dactylis glomerata*), false-oat grass and rough meadow grass (*Poa trivialis*) are dominant. Nettle (*Urtica dioica*), and bramble (*Rubus fruticosus*) are abundant throughout. Other herb species include common comfrey (*Symphytum officinale*), hogweed (*Heracleum sphondylium*), red hemp-nettle (*Galeopsis angustifolia*) and common vetch (*Vicia sativa*).

CG3 – Similar in species composition to CG2 but with a shorter sward length and a higher grass to forb ratio with frequent stands of great willowherb (*Epilobium hirsutum*). A common blue damselfly (*Enallagma cyathigerum*) was seen resting on the grass near the river.

CG4 – A coarse grassland verge similar to CG1 but with frequent meadowsweet (*Filipendula ulmaria*).

CG5 – This coarse grassland border is dominated by meadow foxtail (*Alopecurus pratensis*), false oat-grass, cock's-foot and soft brome (*Bromus hordeaceus*) with the occasional cut-leaved crane's-bill (*Geranium dissectum*) and white campion (*Silene latifolia*).

SI – A field of species poor semi-improved grassland, which at the time of survey was grazed by 3 bullocks. The length of the sward varied from rank in places to cropped around the field edge. A swathe of improved grassland follows the footpath through the field. Species mainly consisted of false-oat grass, perennial rye-grass, lesser trefoil (*Trifolium dubium*) and white and red clovers (*Trifolium repens*, *T. pratense*). Small associations of meadow foxtail (*Alopecurus pratensis*), cut leaved cranes bill (*Geranium dissectum*), creeping buttercup (*Ranunculus repens*), meadow vetchling (*Lathyrus pratensis*) and meadow barley (*Hordeum jubatum*) are occasionally found throughout the field. The grassland shows signs of localised enrichment with increased amounts of creeping thistle and broad-leaved dock (*Rumex obtusifolius*) in areas.

Scrub

Sc1 – An area of bramble scrub with stands of great willowherb towards the northern edge.

Tall Ruderal

TR1 – This area consists of a mono-culture of dense nettles.

TR2 – A mosaic of nettles and great willowherb.

Swamp

SW1 – This is an enclosed area of swamp, co-dominated by greater reedmace (*Typha latifolia*) and great willowherb with the occasional creeping thistle.

Woodland

W1 - An area of tall mature crack willow (*Salix fragilis*) with frequent field maple (*Acer campestre*) and hazel (*Corylus avellana*). The understorey is mainly hawthorn (*Crataegus laevigata*) and elder (*Sambucus nigra*). The ground flora is dominated almost exclusively by nettles with the occasional stand of bramble.

W2 – This area is an even aged stand of planted woodland, which is dominated by English elm (*Ulmus procera*), with frequent hawthorn and the occasional beech, field maple and pedunculate oak. The ground flora was a mono-culture of nettles.

W3 – This strip of woodland appears to be planted along the bank of the road for landscaping reasons. All the trees are even aged, semi-mature mosaics of ash (*Fraxinus excelsior*), alder and sycamore (*Acer pseudoplatanus*). The understorey consists of bramble and conifer saplings.

W4 – A small woodland dominated by semi-mature English elm. The woodland thins towards the north, terminating with a line of mature pedunculate oaks which all contain a large amount of cracks which are suitable for roosting bats (for further information see the bats in trees section of this report).

W5 – This woodland was similar in age to W2. It was dominated by both poplar (*Populus canescens*) and eucalyptus (*Eucalyptus* spp). Alder (*Alnus glutinosa*), beech (*Fagus sylvatica*) and crack willow are frequent throughout the woodland. The ground flora consists of creeping bent (*Agrostis stolonifera*), false oat-grass (*Arrhenatherum elatius*), soft rush (*Juncus effusus*) and nettles.

Hedgerows

For ecological information about the hedgerows within the survey boundary refer to the hedgerow chapter of this report.

Rivers

For ecological information about the rivers within the survey boundary refer to the river corridor chapter of this report.

3.1.2 Fauna

Mammals

Otter (*Lutra lutra*) is a rare species which is fully protected under the Wildlife and Countryside Act 1981 (as amended). It is afforded protection under the EC Directive on the Conservation of Natural Habitats of Wild Flora and Fauna 1992 (The 'EC Habitats Directive'), implemented in the UK through the Conservation (Natural Habitats, & c.) Regulations 1994.

The data search yielded no records of otters on the rivers within the survey corridor.

PS1 – A possible otter footprint was found on the west bank of the River Windrush. A recent sighting was made by a local on the same river.

A preliminary otter survey was carried out between the 5th and the 7th June 2002, for the results refer to the otter chapter within this report.

Water vole is a declining species in Britain afforded partial protection under the Wildlife & Countryside Act 1981 (as amended) and listed as a species of conservation concern under the EC Habitats Directive 1992.

The data search found that water voles were present at Manor Farm (Grid Reference: SP4320) adjacent to the River Windrush (date of survey unknown).

A water vole survey was carried out between the 5th and the 7th June 2002, for the results of this refer to the water vole chapter in this report.

Bats

All species of bats are fully protected under both the Wildlife & Countryside Act 1981 (as amended) and the EC Habitats Directive 1992.

The data-search showed that a brown long-eared roost (*Plecotus auritus*) was present at Manor Farm.

A survey of the features potentially suitable for roosting bats was undertaken on 22nd, 23rd May and 12th June 2002, for the results refer to the bats in trees chapter of this report.

Dormouse (*Muscardinus avellanarius*) is a rare species in Britain afforded full protection under both the Wildlife and Countryside Act 1981 (as amended) and the EC Habitat Directive 1992.

The data search yielded no records of dormice. No signs of dormice were found during the Phase 1 survey. Hazel is the principal food source of dormouse. The Phase 1 habitat survey found that this tree was limited to 2 hedgerows within the survey boundary (see the hedgerow report for the whereabouts of these hedges). Oak, bramble and sycamore are also an important food source for dormice, these plants were recorded throughout the survey area.

Badger trails occur in the survey corridor. This species is not especially rare, but is afforded full protection under the Protection of Badgers Act 1992, primarily for animal welfare reasons.

No badger setts were noted by the data-search.

PS2 – Several badger trails and snuffle pits were found. No setts were seen, however, due to the high amount of badger activity it is likely that there is a sett nearby.

Evidence of common mammals was also found including fox, rabbit and grey squirrel.

Birds

Almost all British birds are afforded protection under the Wildlife & Countryside Act 1981 (as amended). Many species, including all the rarer ones, are also protected under the EC Council Directive on the Conservation of Wild Birds 1979 (The 'EC Birds Directive').

British birds are now classified according to their 'conservation concern' status, reflecting the fact that many formerly common species appear to have suffered dramatic declines in population numbers in the last decade. Nesting birds are now classified as either 'Red list' (high concern), 'Amber list' (medium concern) or 'Green List' (low concern), according to RSPB (1996).

Red List species occurring in the study area include:

Linnet: Small flock seen flying overhead in the eastern section of the scheme.

Information from the Oxfordshire county recorder showed that 2 Red list species: Song Thrush (*Turdus philomelos*) and Bullfinch (*Pyrrhula pyrrhula*), were previously observed within the data search boundary.

Amber List species occurring in the study area include:

Blackbird: Several individuals seen throughout the hedges and woodlands in the survey area.
Starling: Several individuals seen foraging within the survey boundary.

Blackbird and starling have been recorded in the past along with other Amber list species such as Lesser black-backed gull (*Larus fuscus*), fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*) and goldfinch (*Carduelis carduelis*)

It is considered likely that all of the above species, bar the lesser black-backed gull are breeding in suitable habitats in the survey area.

A Reed Warbler (*Acrocephalus scirpaceus*) was observed singing in a crack willow adjacent to TR1. This species is of conservation concern within the UK BAP (Biodiversity Action Plan). No reed bed was encountered during the phase 1 habitat survey. It is therefore unlikely that reed warblers are breeding within the survey corridor.

Amphibians,

Great crested newts (*Triturus cristatus*) is fully protected in Britain under the Wildlife & Countryside Act 1981 (as amended) and the EC Habitats Directive 1992. No information is currently available relating to this group.

Reptiles

All species of reptile in Britain are afforded at least partial protection under the Wildlife & Countryside Act 1981 (as amended). Sightings of slow worm (*Anguis fragilis*), common lizard (*Lacerta vivipara*) and grass snake (*Natrix natrix*) were noted by the data search within the grounds of Manor Farm. It is likely that all these species as well as adder (*Vipera berus*) are present within the survey corridor.

Fish

A fish survey is in the process of being commissioned for the watercourses within the survey boundary.

Invertebrates

The data search showed that 10 red data book invertebrates species were previously recorded. The exact location of these species is unknown. The Red Data Book lists species whose survival in Great Britain is considered to be under threat. These were:

Psylliodes luteola – a ground beetle
Badister unipustulatus – a ground beetle
Harpalus argosiacus – a ground beetle
Bembidion gilvipes – a ground beetle
Nymphalis polychloros – a large tortoiseshell butterfly
Rheumaptera hastata – a moth
Heliophobus reticulata - a bordered gothic moth
Cryphia muralis – a marbled green moth
Lepthyphantes insignis - a money spider
Pyrochroa coccinea – a black headed cardinal beetle

4. Assessment of Nature Conservation Interest

4.1 Basis of Assessment of Nature Conservation Interest

For the purpose of this report, each part of the study area has been graded in regard to its nature conservation importance. This grading falls into five main categories based upon botanical diversity, the presence of rare/scarce species, the presence of protected species, and a general assessment of the quality of the site based upon criteria devised by Ratcliffe (Nature Conservation Review, 1977). This takes in account factors such as size, diversity, fragility, rarity and typicalness to determine habitat importance. The system devised by Ratcliffe has been used for the selection of biological Sites of Special Scientific Interest (SSSI). It has also been adjusted as appropriate for application to sites of local importance.

The categories are:

International /National - These are areas which carry statutory designations such as Special Protection Area (SPA), NNR (National Nature Reserve) or SSSIs. They are areas containing one or a range of habitats that are scarce, endangered and/or declining.

Regional - These are areas which carry a regional designation, usually at a county level. They can be designated as either Wildlife Corridors, County Wildlife Sites (CWS) or Sites of Local Conservation Interest (SINC). These sites will be good examples of habitats, which may be regionally scarce. They may contain one or more habitat types and support rare/protected species.

High Local - Undesignated areas that still retain a high degree of biodiversity importance. They will contain features and habitats that are not locally common, and may have scarce/protected species present. These areas are assessed in relation to the quality of surrounding or local habitat.

Local - Areas which have features and habitats which are locally scarce and contain species of local importance.

Low - Areas that have features of low ecological value. They contain botanically poor habitats, and common species.

4.2 Habitats

There are no statutory or designated areas or areas with other nature conservation designations within the survey area.

Areas of high local conservation value

Three hedgerows have 5 species within a 30 meter length. These hedges are considered of high biodiversity interest at a local level and likely to support a good range of flora and fauna.

Areas of local conservation value

Habitats of local importance within the survey corridor are the woodlands (W), the species poor semi-improved grassland (SI), the swamp (SW1), the scrub (SC), the tall ruderal (TR) areas, the coarse grassland (CG), the rivers and the species poor hedgerows. These exhibit lower diversity than those listed above but are still habitats of use to wildlife. Some rare and protected species (such as reptiles, for example) may utilise these habitats for breeding and foraging. Should any protected species be shown to depend on such features in the survey corridor in the future, it may be necessary to re-evaluate them to a higher level.

Areas of low conservation value

The arable, amenity and improved fields contains little biodiversity interest.

5. Recommendations

5.1 Further survey

The following surveys are recommended in order to comply with current legislation and to assist in mitigation proposals.

Survey of bats commuting and foraging corridors

A reptile survey in all suitable habitats within the survey area

A dormice feasibility survey

A great crested newt survey of all suitable ponds within 500 meters of the route corridor

An aquatic and terrestrial invertebrate survey

A badger walkover survey

A breeding bird survey

A fishery survey

5.2 Vegetation clearance with regards to breeding birds

The Wildlife and Countryside Act 1981 (as amended) protect most bird species, their nests, eggs, and young against death, injury and taking. Potential conflict must be avoided by carrying out clearance of hedgerows, scrub, grassland, and trees outside of the nesting season (early March - late August).

If clearance has to be undertaken during the nesting season, then a birds nest survey will need to be made by an Ecologist to determine whether any nesting birds are present.

If nesting birds are found at any time during the survey then vegetation clearance of that particular area must cease, and the nest monitored until fledglings have left the nest. Vegetation clearance can then proceed (unless there is a second brood, when the nest will still be protected).

6. References

- 1) UK Biodiversity Action Plan – www.ukbap.org.uk
- 2) Oxfordshire Biodiversity Action Plan – www.ukbap.org.uk
- 3) Royal Society for the Protection of Birds: Birds of Conservation Concern, 1999 – www.rspb.org.uk
- 4) Institute of Environmental Assessment: "Guidelines for Baseline Assessment", Institute of Environmental Assessment, 1995.
- 5) Nature Conservancy Council: "Guidelines for the Selection of Biological SSSIs", Joint Nature Conservation Committee, Peterborough, 1989.
- 6) Nature Conservancy Council: "Handbook for Phase 1 Habitat Survey", Joint Nature Conservation Committee, Peterborough, 1990.

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APPENDIX 1 – HABITAT SURVEY MAP

Summary of Results

The maps and summary information for each of the survey sections are presented in appendix one. No nationally rare or notable species were observed within any of the survey sections with limited aquatic vegetation present within all three channels.

a) Individual Channel Characteristics

West Channel of the Windrush

The western channel of the windrush is the widest, most open stretch of the survey area which was flowing rapidly at the time of survey. Unconfirmed reports of otters have been observed along this section of the channel.

East Channel of the Windrush

The northern most section of this channel was heavily shaded by willow trees and scrub. Further south, the canopy become more open.

Mill Stream

This channel was very heavily shaded with numerous fallen trees blocking the channel. At the time of the survey, the water was very turbid.

General

Emergent plants typical of the channels included reed canary-grass (*Phalaris arundinacea*), common reedmace (*Typha latifolia*), branched bur reed (*Sparganium erectum*), reed sweet grass (*Glyceria maxima*), sedges (*Carex* sp.). Bankside plants included meadowsweet (*Filipendula ulmaria*), water mint (*Mentha aquatica*), water forget me not (*Myosotis scorpioides*), water figwort (*Scrophularia aquatica [auriculata]*). Aquatic plants were limited with water-crowfoot (*Ranunculus* sp [*fluitans?*]), water starwort (*Callitriche* sp) and lesser water parsnip (*Berula erecta*).

During the course of the surveys, numerous fish were observed within the channel which were not identified as part of the survey.

Discussion:

The three sections of the River Windrush surveyed have a diverse array of species present within them. Channel vegetation was limited to species tolerant of fast flowing rivers. Along the western channel where cattle grazing was taking place at the time of the survey, poached areas, especially along the flatter sections of the river banks are increasing the species richness of these areas with a greater number of aquatic and marginal plants colonising these sections. Continued management in this way should be encouraged.

Recommendations:

- A full otter survey should be carried out during the summer of 2002. Depending upon the time scale of the scheme and the current proximity of otters to the area, if the survey highlights their absence at present, the possibility of them having colonised in the intervening period should be considered. As such, an additional survey prior to starting any works affecting the river channels should be conducted.
- A detailed fishery survey for all three channels should be conducted.
- The Environment Agency should be consulted with regards to the need to conduct a white clawed crayfish survey.
- A detailed aquatic invertebrate survey should be conducted.
- When the actual proposals for the diversion of the channel have been finalised, a detailed Phase 2 botanical survey should be carried out to assess the impact upon the flora of the channel. Consideration should be given to transplanting vegetation into the new channel to establish the vegetation as quickly as possible. The Environment Agency should be fully consulted over this (and all other works affecting the riverine environment).
- All channel diversion works must be undertaken considering the possibility of the protected otter and water voles.

APPENDIX 2 - SPECIES LIST

Plants

(D - Dominant, A - Abundant, F - Frequent, O - Occasional, R - Rare)

Ash (*Fraxinus excelsior*) O
Barren brome (*Bromus sterilis*) R
Beech (*Fagus sylvatica*) O
Blackthorn (*Prunus spinosa*) F
Bracken (*Pteridium aquilinum*) F
Bramble (*Rubus fruticosus*) A
Broad-leaved dock (*Rumex obtusifolius*) F
Cat's-ear (*Hypochaeris radicata*) R
Cleavers (*Galium aparine*) F
Common chickweed (*Stellaria media*) O
Common vetch (*Vicia sativa*) O
Common mouse ear (*Cerastium fontanum*) O
Cow parsley (*Anthriscus sylvatica*) F
Crack willow (*Salix fragilis*) LD
Creeping bent (*Agrostis stolonifera*) O
Creeping buttercup (*Ranunculus repens*) F
Creeping thistle (*Cirsium arvense*) O
Crested Dog's-tail (*Cynosurus cristatus*) O
Cut-leaved crane's-bill (*Geranium dissectum*) R
Dandelion (*Taraxacum officinale agg*) O
Daisy (*Bellis perennis*) F
Dogwood (*Cornus sanguinea*) O
Dog rose (*Rosa canina*) R
Dove's-foot crane's-bill (*Geranium molle*) R
Elder (*Sambucus nigra*) O
English elm (*Ulmus procera*) LF
False oat-grass (*Arrhenatherum elatius*) A
Field forget-me-not (*Myosotis arvensis*) O
Field maple (*Acer campestre*) O
Garlic mustard (*Alliaria petiolata*) O
Great Willowherb (*Epilobium hirsutum*) LA
Greater Bulrush (*Typha latifolia*) LF
Ground ivy (*Glechoma hederacea*) O
Hawthorn (*Crataegus monogyna*) A
Hazel (*Corylus avellana*) O
Hogweed (*Heracleum sphondylium*) F
Holly (*Ilex aquifolium*) O
Honeysuckle (*Lonicera periclymenum*) R
Ivy (*Hedera helix*) A
Nettle (*Urtica dioica*) A
Marsh Thistle (*Cirsium palustre*) O
Meadow Foxtail (*Alopecurus pratensis*) O
Meadow Buttercup (*Ranunculus acris*) F
Oak (*Quercus robur*) LA
Perennial rye-grass (*Lolium perenne*) A
Red campion (*Silene dioica*) O
Ribwort plantain (*Plantago lanceolata*) O
Rough Meadow-grass (*Poa trivialis*) F
Sheep's Sorrel (*Rumex acetosella*) F
Soft brome (*Bromus hordeaceus*) O
Soft rush (*Juncus effusus*) O
Spear thistle (*Cirsium vulgare*) O
Sweet vernal-grass (*Anthoxanthum odoratum*) F
Thyme leaved speedwell (*Veronica serpyllifolia*) R
White and red clovers (*Trifolium repens*, *T. pratense*) A

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White campion (*Silene latifolia*) O
White dead-nettle (*Lamium album*) R
Yorkshire fog (*Holcus lanatus*) F

Animals

Mammals

Badger (*Meles meles*)
Fox (*Vulpes vulpes*)
Rabbit (*Oryctolagus cuniculus*)

Birds

Blackbird (*Turdus merula*)
Blue tit (*Parus caeruleus*)
Carrion crow (*Corvus corone corone*)
Chaffinch (*Fringilla coelebs*)
Great tit (*Parus major*)
Greenfinch (*Carduelis chloris*)
House Martin (*Delichon urbica*)
Robin (*Erithacus rubecula*)
Reed Warbler (*Acrocephalus scirpaceus*)
Starling (*Sturnus vulgaris*)
Swifts (*Apus apus*)
Wood pigeon (*Columba palumbus*)
Wren (*Troglodytes troglodytes*)
Yellowhammer (*Emberiza citrinella*)

Invertebrates

Common blue damselfly (*Enallagma cyathigerum*)

Witney Cogges Link Phase 1 & 2

River Corridor Survey



Introduction:

The proposed Witney Cogges Link Phase 1 and 2 will provide a new link between the residential areas of Witney and Cogges in Oxfordshire. The proposed road runs south eastwards from the roundabout in Witan Way, Witney across the country park and the River Windrush. The link road then runs parallel to the existing A40 south of Cogges and immediately east of Cogges the road runs northwards to link in with Oxford Hill.

Due to the scheme crossing all three branches of the River Windrush in the Witney area and diverting one of the channels, a river corridor survey was commissioned to provide a general overview of the habitat and species which may be impacted upon by the proposed development.

Methodology:

A river corridor survey was carried out between the 5th and 7th July, 2002 following the guidelines laid down by The National Rivers Authority (1992). In addition to surveying the botanical interest of the channels, signs of riparian mammals were searched for on opportunistic basis along with records for other species of ecological interest. Areas for additional study along with potential enhancements and current threats to the river channel were also noted.

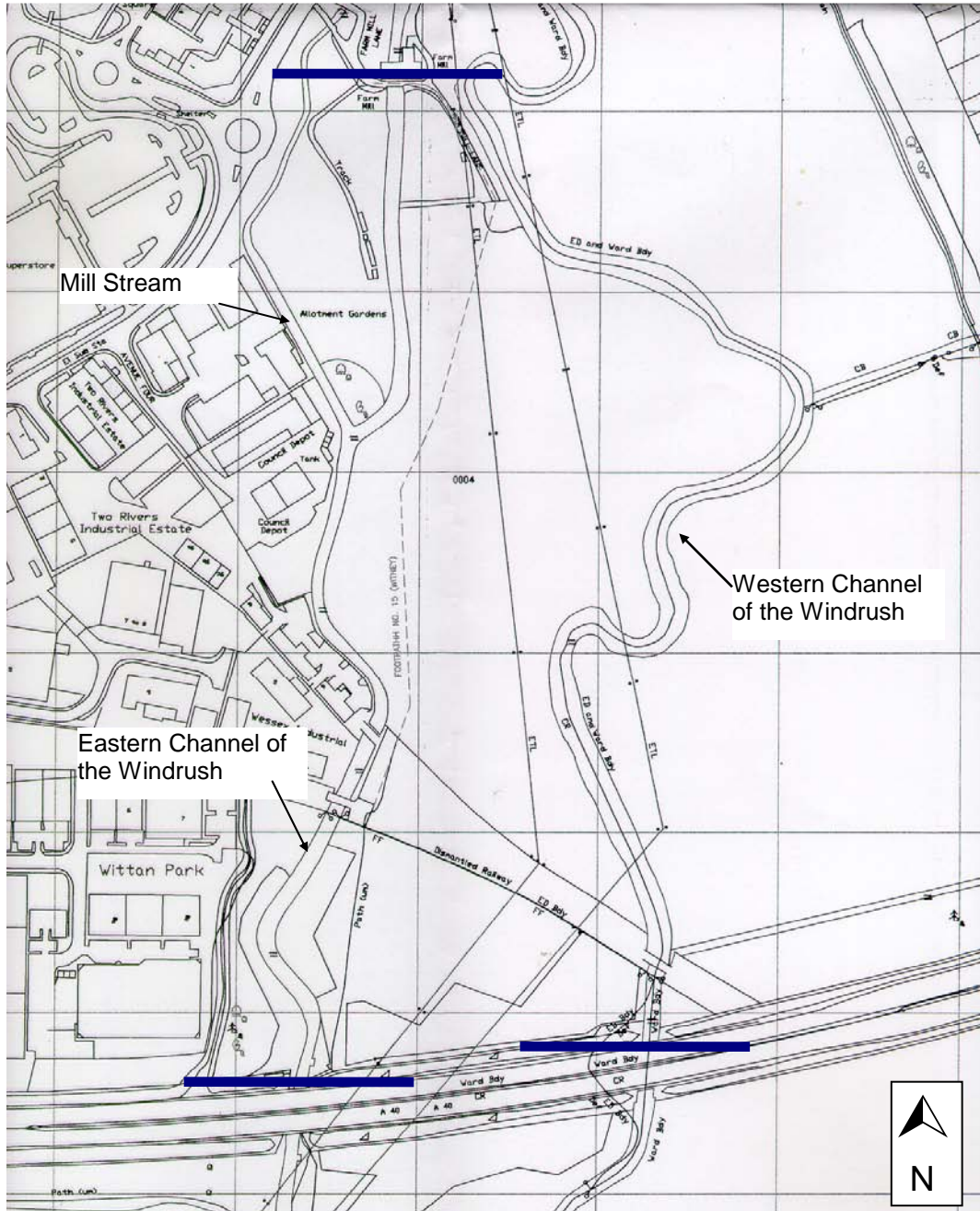
The northern boundary of the survey area was immediately south of the Mill House in Witney (close to Farm Mill Lane off of Witan Way) with the southern boundary delineated by the bridges crossing the A40. For logistical reasons, the three channels of the River Windrush were studied independently, namely the East Windrush, the West Windrush and the Mill Channel (Map One). Due to the short nature of each section studied, the standard methodology of splitting the survey area into 500 metre sections was not followed, each section was surveyed in its entirety.

References

- NRA (1992) *River Corridor Surveys: Methods & Procedures. Conservation Technical Report*
1. National Rivers Authority, Bristol.

**Appendix One:
Survey Maps and Summary Information**

Map One: Survey Sections



 Boundary of Survey

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CONDITIONS

Water at time of survey was high due to recent heavy rainfall. The survey was undertaken from within the river channel due to poor access and lack of visibility from the bank. The survey was conducted travelling downstream. Weather conditions were overcast but dry.

BROAD NATURE

A heavily shaded section of river with a rapid flow rate (possibly resulting from the heavy rainfall in the days prior to the survey). Relatively sparse vegetation present within the river channel

PHYSICAL FEATURES**I. CHANNEL**

The substrate varies from gravel through to deep silt along the section. Depth of the water is variable ranging from 0.2 to 1.0 metres (with an average of 0.5 metres). The width of the channel varies between approximately 4 and 8 metres. At the time of the survey, the flow of the water varied from fast to rapid in stretches with turbid water.

II. BANKS

The profile of the banks was highly variable being very shallow (less than 10°) and at waters level in sections increasing to near vertical faces approximately 1.5 metres above water level in other stretches.

VEGETATION**I. BANK VEGETATION**

The bankside vegetation was very heavily shaded on both sides (particularly towards the north of the area) by trees, primarily willow (*Salix* sp) but also with hawthorn (*Crataegus monogyna*) and ash (*Fraxinus excelsior*). Species common along the banks include wild hop (*Humulus lupulus*), nettle (*Urtica dioica*), bittersweet (*Solanum dulcamara*), bramble (*Rubus fruticosus*), meadowsweet (*Filipendula ulmaria*), reed canary-grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), branched bur reed (*Sparganium erectum*), gipsywort (*Lycopus europaeus*) and common reedmace (*Typha latifolia*)

II CHANNEL VEGETATION

Channel vegetation was limited with most concentrated along shallow berms or in slacker flowing areas. Species present included water mint (*Mentha aquatica*), water dock (*Rumex hydrolapathum*), water starwort (*Callitriche* sp), water crowfoot (*Ranunculus* sp) and water forget me not (*Myosotis scorpioides*)

LAND USE

On the western side, the land is designated as a country park and at the time of the survey was undergoing a grazing management regime. To the east of the channel, in the northern section there is an 'island' of scrub whilst further south the channel is bounded by industrial units.

FAUNA

Mute Swan
Kingfisher

EXISTING MANAGEMENT

None evident

RECREATION

None evident

THREATS

- Overshading may be impacting upon the species diversity within the stream
- Pollution. On the 5th June, an oily film (which smelt of diesel) was observed along most of the section and was entering the stream at the inlet pipe north of the disused railway bridges.

HABITATS TO BE RETAINED

Maintain the diversity of habitats

POTENTIAL ENHANCEMENTS

- Consider opening up sections of the channel through selective coppicing and tree felling to allow more light to enter.
 - Creation of more berms along the channel edge.



East Channel 1



East Channel 2

CONDITIONS

Surveyed from the eastern bank only, travelling upstream from the bridge over the A40. Weather conditions at the time of the survey were dry following heavy rainfall in the previous few days. The water was running relatively rapidly.

BROAD NATURE

A relatively open stretch of fast flowing river with frequent (planted?) willow (*Salix* sp) trees along the bank bordering the country park. Both banks are dominated by grasses and ruderal vegetation.

PHYSICAL FEATURES**I. CHANNEL**

The channel varied in width between 4 and 10 metres with rapid, clear water to an estimated depth of 1-1.5 metres. The substrate varied between gravel and deep silt in the slacker flowing sections.

II. BANKS

Both banks are earth with an slope angle of between 10° and 90 with the height above water level varying between 0.3 and 1.5 metres. A number of earth slips have occurred along with several berms and wide beds of *Phalaris arundinacea* at meanders within the stream.

VEGETATION**I. BANK VEGETATION**

The bankside vegetation along the eastern side (country park) is dominated with species typical of rough grassland including dominated with species typical of rough grassland including creeping buttercup (*Ranunculus repens*), yarrow (*Achillea millefolium*), greater plantain (*Plantago major*) and willowherbs (*Epliohium* sp.). The western bank is dominated by red canary-grass (*Phalaris arundinacea*), bittersweet (*Solanum dulcamara*), nettle (*Urtica dioica*) and bramble (*Rubus fruticosus* agg). Marginal vegetation is dominated by reed canary grass (*Phalaris arundinacea*), reed sweet grass (*Glyceria maxima*) along with scattered sedges (*Carex* sp), branched bur reed (*Sparganium erectum*) and common reedmace (*Typha latifolia*)

II CHANNEL VEGETATION

Channel vegetation was limited to several stands of water crowfoot (*Ranunculus* sp), water dock (*Rumex hydrolapathus*), water mint (*Mentha aquatica*), lesser water parsnip (*Berula erecta*) and water forget me not (*Myosotis scorpioides*). There are several berm areas developing along the eastern banks (possibly aided by the cattle grazing) and within these berms meadowsweet (*Filipendula ulmaria*) and gipsywort (*Lycopus europaeus*) are found.

LAND USE

To the eastern side, the land is currently used as a country park whilst to the west, the land is arable farmland (possibly is set aside).

FAUNA

Moorhen
Otter print?

EXISTING MANAGEMENT

Cattle grazing of the banks leading to poaching and the creation of berms.

RECREATION

Areas of the bank at the waters edge are heavily trampled by dogs and walkers.

THREATS

- Excessive pressure from dogs on the banks

HABITATS TO BE RETAINED

Maintain the diversity of habitats

POTENTIAL ENHANCEMENTS

- Continue to graze the banks allowing the creation of berms which will enhance the botanical diversity of the section.



Western Channel 1



Western Channel 2

CONDITIONS

Water at time of survey was high due to recent heavy rainfall. The survey was undertaken from within the river channel due to poor access and lack of visibility from the bank. Due to access difficulties, not all areas were surveyed. The survey was conducted travelling downstream. Weather conditions were overcast but dry.

BROAD NATURE

A heavily shaded, relatively slow flowing section of stream with many fallen and overhanging trees passing through an area of scrub/woodland.

PHYSICAL FEATURES**I. CHANNEL**

The channel is narrow (less than 2 metres along its length) with comparatively slow flow of very turbid water. Water depth varied between 0.5-1.0 metre passing over a substrate of silt. Two inlet pipes are found along this section.

II. BANKS

Variable but generally 45° and 1 to 1.5 metres above water level. Generally the bank is less tall on the eastern side when compared to the scrub.

VEGETATION**I. BANK VEGETATION**

The bankside vegetation is variable but dominated on both sides by tree and scrub including willow (*Salix* sp.), ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), dogwood (*Cornus sanguinea*) and field maple (*Acer campestre*). Sycamore (*Acer pseudoplatanus*) is invading in places. Marginal plants encountered include gipsywort (*Lycopus europaeus*) and pendulous sedge (*Carex pendula*).

II CHANNEL VEGETATION

Channel vegetation was limited with yellow flag iris (*Iris pseudacorus*), lesser water parsnip (*Berula erecta*), meadowsweet (*Filipendula ulmaria*) and water forget me not (*Myosotis scorpioides*).

LAND USE

Industrial units on the eastern side. Scrub/woodland on the western side between the Mill Stream and the Eastern channel of the Windrush.

FAUNA

None observed

EXISTING MANAGEMENT

None evident

RECREATION

None evident

THREATS

- Overshading may be impacting upon the species diversity within the stream
- High levels of rubbish deposition

HABITATS TO BE RETAINED

Maintain the diversity of habitats

POTENTIAL ENHANCEMENTS

- Consider opening up sections of the channel through selective coppicing and tree felling to allow more light to enter.



Mill Stream 1



Mill Stream 2