

## BIODIVERSITY AT PARISH LEVEL

### The example of Winsley

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*Cephalanthera damasonium* (White Helleborine):  
Winsley's only UK Biodiversity Action Plan  
Priority Species



### What is biodiversity?

Biodiversity is a term for the variety of wildlife which we ought to be maintaining and enhancing. It refers to the existence of a large number of species, and variations within species, of living things (eg Pyramidal Orchid, the Marbled White butterfly), of the different communities of which they form a part (eg species-rich limestone grassland), and of the environments which these species and communities require (eg limestone grassland which has not been agriculturally improved by fertilisers, herbicides, etc). It is perhaps a fuller definition of “nature”, but with value judgements implied.

The term “biodiversity” appears to have become more prominent than the formerly popular term “nature conservation”. Perhaps this is because “nature conservation” had become too associated in the public mind with maintaining rare species rather than a wide variety of species and a variety of entire communities. Biodiversity encompasses both. Further, nature conservation may have implied that we only keep what we have, whereas biodiversity thinking includes enhancement of existing communities and creation of new ones to increase the number and variety of organisms and link them up into networks through which species can more easily move and establish themselves more widely. However, “biodiversity” is not an activity - it needs a word added to say what we need to do. Perhaps we should speak of “biodiversity promotion”, since more than conservation is required. The Lawton Review (2010) has recently reported to the Government on how to take biodiversity further, taking the stance that we need to advance beyond trying to hang on to what we have to “large-scale habitat restoration and recreation”. A major aim, they argue, should be to enlarge and improve current wildlife sites, add new ones and find means of joining them up. Wildlife sites should be “more, bigger, better and joined”.

“Biodiversity” became a focus of activity in the 1990s, with a kick-start from the Convention on Biological Diversity (the 'Rio Convention'). This was signed by a large number of countries in 1992, including the UK. The United Kingdom Biodiversity Action Plan (UK BAP) (Government 1994) was the UK Government's response. It describes the UK's biological resources and provides a detailed plan for the protection of these resources. It initiated the compilation of a national list of 1150 Priority Species and 65 Priority Habitats (Government 2008). My most recent information is that it had developed 943 Species Action Plans, 56 Habitat Action Plans and 162 Local Biodiversity Action Plans with targeted actions, but these are increasing all the time. The Lawton Review makes many specific recommendations for legislation to strengthen the process. The new coalition government has committed itself to a White Paper for the Natural Environment.

### **What must public authorities do about biodiversity?**

Section 40 of the UK *Natural Environment and Rural Communities Act (The NERC Act) 2006* states that all public authorities must have regard to conserving biodiversity in all of their activities. This is part of a wider commitment by the European Union to halt biodiversity loss by 2010 (*Countdown 2010*). The duty means that all public authorities and their statutory undertakers must make efforts to conserve biodiversity and therefore have a plan for doing so. The local authority duties in relation to biodiversity must extend across their entire range of activities, such as Land Use Planning, Highways and Transportation, Public Open Space, Leisure and Tourism, Land Drainage and Flood Defence, Regeneration Schemes, and so on.

The UK BAP Plan is a comprehensive guide to such enterprises, providing a model on which local plans are being based. Each major Local Authority plan attempts to describe the biodiversity resources within its area, audit the activities currently promoting biodiversity, and set out targets for key habitats and species and methods of monitoring progress towards them. Some town and parish councils are considering following suit.

The actual activities required are manifold. The Authority has to audit its biodiversity resources and set targets. Planning applications for development must be scrutinised carefully to maximise their contribution to biodiversity. There must be consultation with local people and bodies, particularly landowners. All staff and volunteers must be trained to act in accordance with biodiversity principles. Much education of the public is needed - in schools and after. All these things must be done in consultation with any other bodies involved and particularly with other layers in central and local government.

How does this apply to small country parishes, my own village of Winsley, for instance? Below, I try to put more flesh on the bones of this concept. The remit is plainly very wide, and this article does not attempt to tackle it in its entirety. It concentrates on the botanical aspects, though this cannot be done in total isolation and there is also some discussion of animal life. The terms "botany", "flora" and "plants" are used in a broad sense, including fungi and lichens, which are not now normally regarded as plants, but rather as belonging to kingdoms different from either animals or plants.

### **What should a parish do?**

Firstly, the Parish biodiversity plan should be seen as part of the county plan. The Wiltshire Biodiversity Action Plan (BAP) was published in 2002, then

revised in 2008. This revised plan contains Habitat Action Plans for Woodland; Wood-pasture, Parkland and Ancient Trees; Hedgerows; Calcareous Grassland; Neutral Grassland; Traditional Orchards; Farmland Habitats; Built Environment; Standing Open Water; and Rivers, Streams and associated habitats. These are the most significant of the UK priority habitats within the county. Individual actions for some species are included under the Habitat Action Plans, and a full list of Wiltshire BAP Priority Species is included in Section 3 of the overall Plan. However, the only action plan specifically for them is a Bats Species Action Plan because they utilise a wide range of habitats. Finally activities supporting a broad range of habitats and species have been grouped under a Generic Action Plan. Each of the Habitat and Species Action Plans contains objectives, targets and actions that are easily measurable so that progress can be meaningfully and accurately determined. The Wiltshire Biodiversity Partnership has a new website at [www.biodiversitywiltshire.org.uk](http://www.biodiversitywiltshire.org.uk), where the latest information about progress and working group meetings and events can be found. However, it is difficult to decide what sequence of activities should be followed at parish level in order to arrive at a plan. In the sections that follow, I consider possible routes through the maze.

### **Auditing key species and habitats**

I have taken the view that sensible planning cannot be achieved if you don't know what you've got. So I propose that a parish needs first to list, in the light of the county plan, the special species and habitats within its boundaries and how they are currently protected and managed. In practice, land ownership does not precisely reflect habitats. The audit will therefore, focus on sites, and on describing the special habitats within them. This section describes the types of species and sites to be looked at, and is followed by a description of the parish of Winsley and a description of its key species, sites and habitats.

Legal protection for wild plants is very limited - animals do better. All wild plants are protected under the Wildlife and Countryside Act 1981 (amended in 1985), in that no person may uproot any wild plant without the owner's consent. There are also a very small number of species with a greater degree of protection listed in Schedule 8 of the Act. It is normally an offence to pick, uproot, sell or destroy any of these plants, unless authorised. In some cases, this applies only when the intention is to sell the plant - as for Bluebell. The UK BAP list of Priority Species provides further protection but the Act it stems from says little about what should actually be done. There are two other main categories of plant which need to be taken into account:

**Species listed in the *Wiltshire Rare Plant Register (Pilkington 2007)*.** About 275 plant species are in-

cluded. A species has to be native to the county and be rare internationally, nationally or in one of the two vice-counties (North and South Wiltshire), or have its survival so threatened as to be included in the International Union for Conservation of Nature (IUCN) list of plants threatened on a worldwide basis (<http://www.iucnredlist.org/news/iucn-red-list-site-made-easy-guide>), Schedule B of the Wildlife and Countryside Act 1981 (as amended in 1985) or be a UK BAP Priority species. Inclusion therefore implies that protection, or at least watchfulness, is desirable, but there is no clear legal backing.

**Axiophytes.** These are species which are important because they are characteristic of important habitats. These have commonly been referred to as “indicator species” because they are so characteristic of the habitat types to which they belong that they can be used to help identify them. Thus, there are indicators of calcareous grassland, indicators of ancient woodland, indicators of unspoiled wetland, and indicators of arable land where “weeds” have not been eradicated by herbicides. About 40% or so of species in Britain fall into this category. So lists of them provide a powerful technique for determining conservation priorities. Sites with many axiophytes are usually of greater importance than those with fewer; and changes in their number on a site over time can be used for monitoring the management practices. A list of axiophytes is available at [www.bsbi.org.uk/axiophytes.html](http://www.bsbi.org.uk/axiophytes.html).

The categories of site that need to be brought into the plan are as follows:

**Sites of Special Scientific Interest (SSSIs).** SSSIs are areas which are specially protected because they are the country's very best wildlife and geological sites. The owner or occupier has to give notice of any proposals to carry out any of a set of listed operations thought to put the flora or fauna or overall habitat at risk. They cannot carry out the operation without the agreement of the Government body Natural England, who administer the system. Local Authorities have a statutory duty to further the conservation and enhancement of SSSIs in carrying out their operations and making planning and other decisions. However the detail is very much a matter for local decision.

**Wiltshire Wildlife Trust (WWT) nature reserves.** These are areas of particular biodiversity interest, some owned and managed by the Trust, some managed by the Trust but owned by someone else, and some with just access agreements. Plainly, ownership gives the Trust considerable power to maintain and enhance the biodiversity of the site, while management and access also offer opportunities of this kind.

**County Wildlife Sites (CWSs).** These are areas of land of recognised importance for biodiversity, which fall outside the SSSI system and therefore have no specific legal protection. The scheme is managed by a partnership of WWT, the local authorities, Natural

England and other bodies, but the Wildlife Sites themselves are mostly privately owned and are managed (or not) under their owners' various private arrangements. The designation does not impose any requirement for particular forms of management. The role of the project is to monitor the sites and to guide and facilitate their appropriate management for biodiversity by advising owners and planning bodies.

**Protected verges.** This scheme was set up in the 1970s and is managed in partnership between Wiltshire Council and the Wiltshire and Swindon Biological records Centre. A special management regime is implemented and signs are erected to indicate its existence. They are regularly monitored with the same aims as for County Wildlife Sites.

**Land owned by other public bodies who have a duty to promote biodiversity.** Such bodies include Water Boards who own small areas of land for reservoirs, etc; British Waterways, who manage canals; and the Environment Agency, who oversee management of rivers, lakes and some ponds. All of these organisations include conserving biodiversity in their management objectives and planning.

**Sites managed for biodiversity by voluntary organisations such as the RSPB and the Woodland trust or privately.**

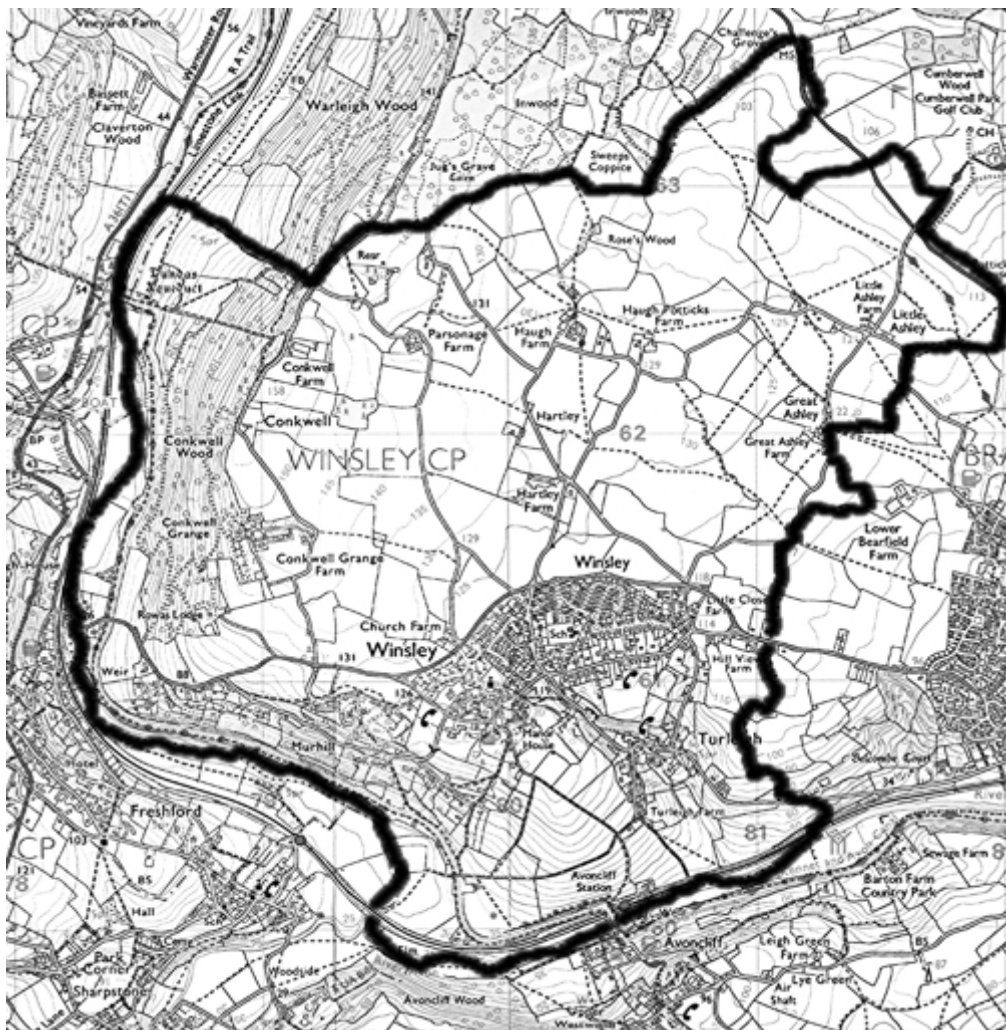
**Other sites of biodiversity interest or potential.** Areas not easily identified as types of site may contain important habitats.

### The Parish of Winsley

The Parish of Winsley, shown in the map opposite, comprises two village and 5 hamlets. The River Avon marks its southern and western boundaries, and the remaining boundaries are in an agricultural area. The Kennet and Avon Canal follows the bottom of the valley of the Bristol Avon. The agricultural area is a plateau representing the highest part of the parish varying from about 120 to about 150 metres above sea level. To the south of it is the village of Winsley and from there the ground dips sharply southward and westward to the canal. This sloping part is predominantly woodland to the west and a mixture of residential, agricultural and woodland to the south. Road and field boundaries were originally mostly dry stone walls made of the limestone which lies beneath, but these have been removed in many places and then consist either of herbage and scrub at various levels or of hedgerows. The river is the Parish border, but both sides of the river are included here, since records do not always distinguish between them.

Below, I describe species in the parish where special protection may be needed and sites and habitats where nature is protected or needs to be protected in one way or another and could be a foundation of an overall plan and policy. The parish of Winsley has a variety of important plant species and habitats, but not more so than many other parishes, so is an example of what can be done. I'll concentrate mainly

Map of Winsley parish



on native flora, largely to save time, but Winsley has lots of introductions which add attractiveness and increase biodiversity. Treatment here will extend beyond the UK BAP Priority Species and Habitats, since I believe there is no intention to exclude any not on the lists.

**Plant species**

The only Winsley plant in the protected list in list in the Wildlife and Countryside Act 1981 (amended in 1985) is Bluebell, but only to prevent its sale. Picking or uprooting it for that purpose is a legal offence.

The Parish hosts only one of the plants listed as Priority Species under the UK BAP, and it is not subject to any active legal protection locally. This is *Cephalanthera damasonium* (White Helleborine). This has occurred in small numbers on an area of limestone grassland now discontinued as a WWT nature reserve, but more regularly under trees in the garden which houses the grassland. A more substantial but still small colony exists in a small wood within another garden, and I have seen it at two other wood edges in the past. Two others were

considered for inclusion though not in the final list. One is *Cuscuta europaea* (Greater Dodder), which twines up the stems of Stinging Nettle as a parasite, and occurs along the River Avon from Staverton to Limpley Stoke, including sites in Winsley Parish. The other is *Neottia nidus-avis* (Bird's-nest Orchid). This is a saprophyte, that is, it obtains it's nourishment from dead organic material in the soil rather than manufacturing some from carbon dioxide in the air. It has been found in two woods.

There is a considerably larger number of Winsley Parish plants in the *Wiltshire Rare Plant Register*. In limestone grassland, *Onobrychis viciifolia* (Sainfoin) and *Orchis morio* (Green-winged Orchid) occur, both on sites managed for conservation. In woods, *Platanthera chlorantha* (Greater Butterfly Orchid), *Vicia sylvatica* (Wood Vetch) and *Neottia nidus-avis* (Bird's-nest Orchid) have been recorded and *Ornithogalum pyrenaicum* (Spiked Star-of-Bethlehem), a plant little known outside the Bath area, is common. Agricultural land hosts *Euphorbia platyphyllos* (Broad-leaved Spurge) and *Euphorbia exigua* (Dwarf Spurge), while *Chenopodium bonus-henricus* (Good King Henry) occurred many years ago. The River

Avon has *Potamogeton nodosus* (Loddon Pondweed) which in Wiltshire occurs only along the River Avon from Staverton to Freshford, *Ranunculus fluitans* (River Water-crowfoot) in its only North Wiltshire site, and *Rorippa amphibia* (Greater Yellow Cress) and local ponds have *Rorippa microphylla* (Narrow-fruited Water-cress) and *Veronica catenata* (Pink Water-speedwell). Roadsides and footpaths have yielded finds of *Astragalus glycyphylus* (Wild Liquorice), *Atropa belladonna* (Deadly Nightshade), *Foeniculum vulgare* (Fennel) though probably a garden escape, *Hyoscyamus niger* (Henbane) in several places for one year only in each, *Medicago*

**Henbane (*Hyoscyamus niger*): A Wiltshire Rare Plants Register plant found in Winsley**



*arabica* (Spotted Medick), *Rumex pulcher* (Fiddle Dock), rare in Wiltshire but recorded in a number of places around Bradford-on-Avon, including Winsley, *Stellaria neglecta* (Greater Chick-weed), *Petroselinum segetum* (Corn Parsley), abundant *Valerianella carinata* (Keel-fruited Cornsalad) also on walls and extremely abundant *Ornithogalum pyre-aicum* (Spiked Star-of-Bethlehem). *Papaver dubium* ssp. *lecoqui* (Yellow-juiced Poppy) and *Petroselinum segetum* (Corn Parsley) have occurred as garden weeds. *Spiranthes spiralis* (Autumn Ladies-tresses) has been seen once on a garden lawn, and *Ruscus aculeatus* (Butcher's Broom) is in a garden hedge though possibly planted. *Smyrniolum olusatrum* (Alexanders) recently appeared in some quantity beside the canal towpath. *Fritillaria meleagris* (Fritillary) was seen unexplained once in a garden but probably derived from a specimen originally planted, and *Apium inundatum* (Marshwort) appeared once in my garden pond, but was probably introduced with oxygenating plants. Several other plants have

occurred too near the boundary for me to be sure if they were in Winsley or not - *Carex viridula* ssp. *brachyrrhyncha* (Long-stalked Yellow-sedge), and *Gagea lutea* (Yellow Star-of-Bethlehem). It should be noted that not all the plants included are rare or threatened in Winsley, but we need to be thinking on a broader scale.

Bearing in mind that biodiversity is supposed to encompass variation within species as well as the species themselves, it is worth mentioning *Ophrys apifera* var. *belgarum*, an unusual variant of Bee Orchid which occurred on a garden lawn, though it is not included in any of the relevant lists for protection. The basal shield-like pattern on the normal Bee Orchid lip is missing, and replaced by a long triangular red-brown area, bordered by distinctive harness-shaped patterns. There is a yellow band across the middle of the lip.

**Bee Orchid (*Ophrys apifera*): normal form left, var. *belgarum* right**



Axiophytes are considered under habitats and sites.

**Habitats and sites**

Winsley Parish also has habitats which are listed as Priority Habitats under the UKBAP - arable field margins, hedgerows, lowland calcareous grassland, lowland mixed woodland, ponds and rivers. The Wiltshire BAP includes these, sometimes under different labels, and adds the built environment, which includes the rich dry stone walls of Winsley. Winsley Parish also has an SSSI, a number of County Wildlife Sites and a protected verge. Additional sites of importance are not covered by any county scheme.

**Winsley Mines - an SSSI**

Winsley Mines, the only SSSI in Winsley Parish, comprises extensive networks of man-made tunnels which are used by bats for hibernation, mating and as a staging post prior to dispersal. It also includes areas of woodland which are used as a feeding and commuting habitat by the bats. These disused stone mines, together with similar ones nearby at Box, are of key importance to Greater Horseshoe bats (holding 15% of the UK Greater Horseshoe bat population in

winter), Lesser Horseshoe bats and Bechstein's bat, as well as a mixed assemblage of several other bat species. Grilles have been installed over the most vulnerable mine entrances to prevent disturbance. Though this specific site is not mentioned in the Wiltshire BAP, it is clear that it covers it. Though the primary interest is not botanical, there are plants of interest and the habitat is an example of lowland mixed deciduous woodland. Eighteen indicator plants for ancient woodland have been recorded.

#### **Stillmeadow (CWS)**

This is a small limestone meadow (0.25ha) within a large privately owned garden. It was, until a few years ago, a Wiltshire Wildlife Trust Nature Reserve, and the Trust had an agreement with the owner to safeguard the site and the flora and mowed the meadow and removed the cut grass each August or September. However, for unclear reasons probably associated with changing priorities, the arrangement was discontinued, along with the mowing. It is still a County Wildlife Site, and is listed in West Wiltshire Development Plan as a conservation site. White Helleborine, which is a UK Biodiversity Action Plan Priority Species, occurs regularly under trees and bushes in the garden, and was observed one year on the meadow itself. This species is also in the Wiltshire Rare Plants Register, as is Autumn Lady's Tresses (*Spiranthes spiralis*), which was recorded on the house lawn in one year only. Additionally, seventeen calcareous grassland indicators have been recorded, including Large Thyme (*Thymus pulegioides*), Pyramidal Orchid (*Anacamptis pyramidalis*) and Bee Orchid (*Ophrys apifera*), Common Milkwort (*Polygala vulgaris*), Fairy Flax (*Linum catharticum*) and Wild Basil (*Clinopodium vulgare*). Six further species have been recorded which are indicators of unimproved grassland generally, such as abundant Yellow Rattle (*Rhinanthus minor*), Common Spotted Orchid (*Dactylorhiza fuchsii*) and the parasitic Common Broomrape (*Orobancha minor*). A rare subspecies of Bee Orchid (*Ophrys apifera* var. *belgarum*) has also occurred on the lawn.

#### **Murhill Bank (CWS and Parish nature reserve)**

This is a steep, south-facing site with unimproved calcareous grassland, scrub and lowland mixed deciduous woodland, owned by the Parish Council and managed as a nature reserve. The only rare/threatened species are Sainfoin (*Onobrychis viciifolia*) and Bath Asparagus (*Ornithogalum pyrenaicum*). Thirty-two indicators of calcareous grassland have been recorded, including Yellow-wort (*Blackstonia perfoliata*) Ploughman's Spikenard (*Inula conyzae*) Pyramidal Orchid (*Anacamptis pyramidalis*) Bee orchid (*Ophrys apifera*), Rockrose (*Helianthemum nummularia*), Horseshoe Vetch (*Hippocrepis comosa*) and Woolly Thistle (*Cirsium eriophorum*). Ten further species have been recorded

which are indicators of unimproved grassland generally, such as Common Valerian (*Valeriana officinalis*), Yellow Rattle (*Rhinanthus minor*), Bladder Campion (*Silene vulgaris*) and Restharrow (*Ononis repens*). There have been 31 indicators of ancient woodland recorded, in the woodland and hedgerow, including Stinking Iris (*Iris foetidissima*), Spurge Laurel (*Daphne laureola*), Common Tway-blade (*Listera ovata*), Nettle-leaved Bellflower (*Campanula trachelium*), Enchanter's Nightshade (*Circaea lutetiana*), Common Gromwell (*Lithospermum officinale*), Wild Cherry (*Prunus avium*) and Wood Sanicle (*Sanicula europaea*). One of the two woods is of Wych Elm (*Ulmus glabra*), not a common occurrence these days. Mistletoe (*Viscum album*) adorns an old apple tree. Various fungi, mostly in the woodlands and mostly on dead stumps, fallen trunks or dead branches have also been observed, such as Yellow Brain Fungus (*Tremella mesenterica*), *Bisporella citrina*, Winter Fungus/Velvet Shank (*Flammulina velutipes*) (an Elm specialist), Wrinkled Peach (*Rhodotus palmatus*), uncommon in Wiltshire because it grows on the no longer common Elm, and *Psathyrella atrolaminata*. A variety of animals has also been recorded, including such butterflies as Marbled White, Brown Argus, Common Blue, Silver-washed Fritillary and Speckled Wood, the Five-spot Burnet Moth, a range of birds, deer, badgers, rabbits, lizards, bees, etc. The habitats are maintained by sheep grazing to remove the remains of each year's growth, removal of invading shrubs, tree saplings and, selectively, over-dominant herbaceous plants like Hemp Agrimony and thinning of trees in the woods.

#### **Little Ashley Ponds (CWS and Parish nature reserve)**

This is a relatively recent development, established as a parish nature reserve in 2005. It consists of two small roadside ponds. Its priority habitat is nutrient-rich standing water. It has two rare or threatened species in the WRPR - Narrow-fruited Water-cress (*Rorippa microphylla*) and Pink Water-speedwell (*Veronica catenata*). An additional 17 species are indicators of high-quality aquatic or wetland habitats including Branched Bur-reed (*Sparganium erectum*), Common Water-crowfoot (*Ranunculus aquatilis*), Water Mint (*Mentha aquatica*) and Lesser Duckweed (*Lemna minuta*). Great Crested Newts have been seen. Mallards visit and a moorhen has nested and produced young. The UK BAP aims to preserve and enhance all remaining examples of this type of habitat, and the voluntary organization One Million Ponds provides advice.

#### **Flowery Meadow (CWS)**

This is a steep limestone meadow with 17 indicators of calcareous grassland recorded, and six other grassland indicators. There are particularly fine



displays of Lesser Knapweed (*Centaurea nigra*) and Field Scabious (*Knautia arvensis*), and Primrose (*Primula vulgaris*) and Cowslip (*Primula veris*) grow close to each other and hybridise to form the False Oxlip. It is grazed lightly by sheep all the year round.

#### **Conkwell Wood (CWS)**

This is a large area of lowland mixed deciduous woodland. Wood Vetch (*Vicia sylvatica*) and Bath Asparagus/Spiked Star-of-Bethlehem (*Ornithogalum pyrenaicum*) from the WRPR have been recorded and 58 other indicators of ancient woodland have been seen at some time, including, including 5 ferns, 3 sedges, Stinking Iris (*Iris foetidissima*), good colonies of Bluebell (*Hyacinthoides non-scripta*), Herb-paris (*Paris quadrifolia*), Bird's-nest Orchid (*Neottia nidus-avis*), Guelder-rose (*Viburnum opulus*), and Toothwort (*Lathraea squamaria*), parasitic on Hazel. Almost a hundred fungi have been recorded including the uncommon Wrinkled Peach (*Rhodotus palmatus*).

#### **Rose's Wood (CWS)**

This has Bath Asparagus (*Ornithogalum pyrenaicum*) from the WRPR and 18 indicator species, including superabundant Wood Anemone (*Anemone nemorosa*), Early-purple Orchid (*Orchis mascula*), Wood Spurge (*Euphorbia amygdaloides*) and Tufted Hair-grass (*Deschampsia cespitosa*).

#### **Winsley Hill bank and verge (Protected Verge)**

The north side of Winsley Hill has been a protected verge for many years, and has been monitored by our members - Lady Jean Maitland, Jean Wall and John Presland. It has a good calcareous grassland flora, including 22 limestone grassland indicators, including Pyramidal Orchid (*Anacamptis pyramidalis*) Yellow-wort (*Blackstonia perfoliata*) and Autumn Gentian (*Gentianella amarella*), and seven other grassland indicators, including Spotted Hawkweed (*Hieracium maculatum* probably), Common Spotted Orchid (*Dactylorhiza fuchsii*), Common Centaury (*Centaureum erythraea*) and the hemiparasitic Eyebright (*Euphrasia* sp). Dwarf Thistle (*Cirsium acaule* forma '*caulescens*') illustrates biodiversity within a species - it's not genetically different but is a form which develops in long grass. The normal form has no or very little stem, but this has a distinct one, presumably because it needs to compete with the taller vegetation. Giant Horsetail (*Equisetum telmateia*) occurs at one spot where one must assume an underground watercourse. There is a management plan which requires the local authority to cut no more than a single swathe at the foot of the bank except in October, when the entire verge should be cut. Bracken and scrub need to be controlled.

#### **Wessex Water Reservoir**

This is managed by Wessex Water, based in Bath, under a site management plan, which takes account of biodiversity and has to be consulted before any work is undertaken there. It includes a grasscutting regime to allow plants to flower and seed, by having one cut a year in late August or September, with removal of the cuttings. The site is monitored for biodiversity annually. Its most important part is a layer of limestone grassland on top of two underground reservoirs. This has Green-winged Orchid (*Orchis morio*) from the WRPR, eight other limestone grassland indicators and four other grassland indicators. When the reservoirs were repaired in 1993-4, the turf was removed to a depth of about 15cm and then replaced after completion of the job, which successfully maintained the flora.

#### **River Avon**

The Environment Agency oversees the management of the river, but responsibility lies with the owners of the adjoining land, often farmers but sometimes the Environment Agency itself, and often different for opposite banks. Owners need permission from the Agency to carry our work and can be instructed to do specific things by it. Oversight of management follows a Bristol Avon plan which takes account of biodiversity. The principal managers are based in Bridgwater, but work with a local committee involving other interested bodies - the Wiltshire Wildlife Trust and Wiltshire Council for instance. There are three WRPP species recorded there - Greater Dodder (*Cuscuta europaea*), River Water-crowfoot (*Ranunculus fluitans*) and Loddon Pondweed (*Potamogeton nodosus*). A recent survey found 17 wetland indicators, including Water-plantain (*Alisma plantago-aquatica*), Trifid Bur-marigold (*Bidens tripartita*), Small Teasel (*Dipsacus pilosus*), Gypsywort (*Lycopus europaeus*), Yellow Water-lily (*Nuphar lutea*), White Water-lily (*Nymph-aea alba*), Arrowhead (*Sagittaria sagittifolia*), Water Figwort (*Scrophularia auriculata*), and Branched Bur-reed (*Sparganium erectum*).

#### **Kennet and Avon Canal**

British Waterways is responsible for maintaining the canal. Management is largely centralized, but there is a local office in Devizes, and they and the Kennet and Avon Canal Trust, also in Devizes, work together to advise on local needs, including biodiversity, and put together a plan for meeting them. From memory and rough records, at least 27 wetland indicators have occurred. Alexanders (*Smyrnium olusatrum*) is a WRPR species which has recently appeared in some numbers beside the towpath.

### Sites managed for biodiversity privately

The Bradford-on-Avon Rugby Club and Bradford and Winsley Community and Sports Association together own a stretch of former farmland which they manage for leisure and biodiversity. They have planted a lot of hedges with native shrubs, are putting up bird and bat boxes, and have planted some spare corners with woodland. They allow and encourage interesting plants such as Yellow-wort and Common Centaury in their hedgerows, and areas of barish soil at the edges of the playing fields provide continued opportunities for Lesser Centaury (*Centaureum pulchellum*) and the WRPR agricultural weed Broad-leaved Spurge (*Euphorbia platyphyllos*). Narrow-fruited Watercress (*Rorippa microphylla*), also in the WRPR, formerly occupied a pond which was filled in, and there is a possibility that it might be restored. Common Star-of-Bethlehem (*Ornithogalum umbellatum*) may still be under a mass of vegetation on a roadside verge on their boundary. A vineyard is run with biodiversity in mind and has a record of Bath Asparagus (*Ornithogalum pyrenaicum*). A privately owned field is cut and raked regularly to promote wild plants and has some indicator species, and some private gardens also have habitats or plants of interest which the owners protect. My own garden has a variety of agricultural weeds which must have grown from seed buried under the soil during former agricultural use, which I allow to continue. One of these, Dwarf Spurge (*Euphorbia exigua*), is in the WRPR, as is Corn Parsley (*Petroselinum segetum*), which occurred only once, and 6 other agricultural indicator species have been noted. A number of animals have been identified - Mullein Moth caterpillar, Scarlet Tiger Moth caterpillar and adult, Ramshorn Snail in the pond, a range of birds including Heron, Kingfisher and Green and Spotted Woodpeckers and a nesting pheasant, Grass Snake, frogs and toads, three species of newt, several dragonflies and damselflies, Cockchafer, Herald and Lappet moths, various butterflies including Painted Lady, and Garden/Diadem/ Cross Spider (*Araneus diademus*). Local farmers have planted tree, shrubs and hedges and the Cotswold Wardens have repaired and rebuilt dry stone walls. A local school has a wildlife garden.

### Other sites of biodiversity interest or potential.

One very good limestone grassland field with 11 limestone grassland indicators and six other grassland indicators is in private hands with no commitment to maintaining its biodiversity. Another has 4 limestone grassland indicators and 7 other grassland indicators. Another has Pyramidal Orchid, and another has the grassland indicators Woolly Thistle (*Cirsium eriophorum*) and Vervain (*Verbena officinalis*). Several more have the odd grassland indicator. A field with a stream running through it has 4 wetland indicators. Privately owned local woods house, between them,

the UK BAP Priority species White Helleborine (*Cepha-anthera damasonium*), the WRPR species Bath Asparagus (*Ornithogalum pyrenaicum*), Bird's-nest Orchid (*Neottia nidus-avis*) and Greater Butterfly Orchid (*Platanthera chlorantha*). Roadsides and pathsides have yielded Deadly Nightshade (*Atropa belladonna*), Henbane (*Hyoscyamus niger*), Fiddle Dock (*Rumex pulcher*), Keeled-fruited Cornsalad (*Valerianella carinata*), Corn Parsley (*Petroselinum segetum*), Wild Liquorice (*Astragalus glycyphyllos*), Good-King-Henry (*Chenopodium bonus-henricus*), Greater Chickweed (*Stellaria neglecta*) and very abundant Bath Asparagus (*Ornithogalum pyrenaicum*). There are particularly good dry stone walls in Winsley Parish, an environment which I have argued bears a unique plant community, though it is not yet recognized as such and therefore has no indicators assigned. It has a distinctive flora with a variety of lichens and mosses and a few flowering plants which are now seen mainly on this or very similar surfaces - Biting Stonecrop (*Sedum acre*), Rue-leaved Saxifrage (*Saxifraga tridactylites*), Common Whitlow-grass (*Erophila verna*) and Wall Pennywort (*Umbilicus rupestris*). Shining Cranesbill (*Geranium lucidum*) also occurs, but also at the base of the walls

### What should a Parish Council do next?

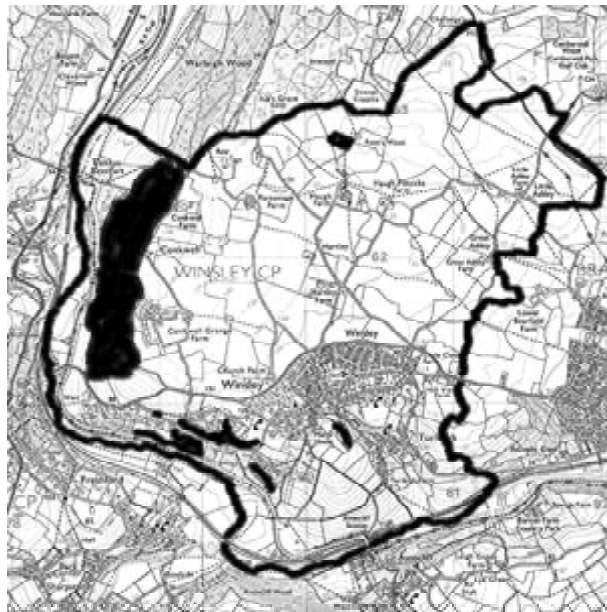
What should a Parish Council do with all this information? Firstly, they should draw up a biodiversity plan. In July 2005, Winsley Parish Council accepted a proposal from one of its members to draw up a biodiversity policy and make plans to implement it. Though this has not yet happened, the issue is still on the table. However, finding the time, expertise and, need it be said, funding are deterrents to effective action.

Ideally, all those who could contribute to the implementation of such a plan should be involved, including local landowners, bodies responsible for the River Avon and Kennet and Avon Canal, national and local conservation bodies, private landowners and home-owners interested in promoting wildlife in their own gardens. The plans should involve maps of areas of current and potential biodiversity interest. On the next page are three maps which might be a starting point, which I drew up based on the audit above. Map 1 shows woodland sites of actual or potential biodiversity value, Map 2 the same for limestone meadows and Map 3 the linear sites (waterways, roadsides, footpaths, etc). The geographical position of some sites has been altered to allow for sensitivities of some landowners, but the general pattern is there.

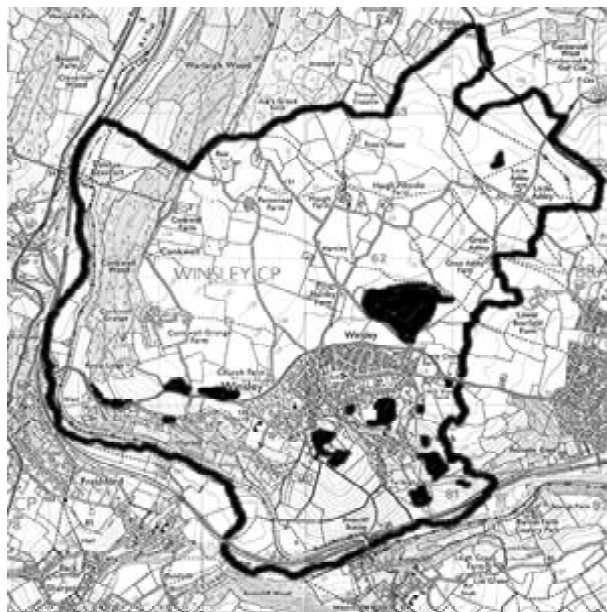
A parish council can do all sorts of things within such a plan. It can manage its own nature reserves, playing fields, footpaths and road verges so that there is no overall loss of biodiversity and that it is enhanced



**Map 1. Winsley woodland corridor**



**Map 2. Winsley limestone grassland corridor**



whenever possible. Hedges and dry stone walls can be put round sites, mowing policies can encourage wild life, and unused areas of grassland could be ploughed and replanted with wild flower seeds. Representations can be made to owners and planning authorities to discourage development which might prejudice biodiversity, taking advantage in some cases of the Green Belt policy - and, indeed, to encourage development which promotes biodiversity. The Parish Council could help people to access grants for projects to foster biodiversity - under such schemes as Natural England's Environmentally Sensitive Areas (mostly for large blocks of land to help maintain traditional farming practices) and Country Stewardship (for farmers to enhance bio-

diversity, e.g. by re-establishing species-rich grassland), Defra's Set-aside scheme (payment to farmers to leave some of their land uncropped), the Charity-based Million Ponds Project and small funds held at particular times by Wiltshire Council and the Wiltshire Wildlife Trust.

**Map 3. The linear sites (waterways, roadsides, footpaths, etc).** (They are shaded in grey and include river and canal, not easy to show without colour)



As far as practicable, a site with a particular plant or animal community should be near enough to similar sites to allow a lost species to be replaced from another site and to promote interbreeding with plants or animals of the same species elsewhere to promote diversity within the species. The latter makes for healthier plants and animals and a better chance of some individuals being able to survive minor changes in the habitat. Wherever possible, there should be "wildlife corridors" (preferably continuous but otherwise with gaps as small as possible) running right through the parish - like the woodlands in Map 1 that run south from the northwest corner to the southwest corner of Winsley Parish and then, after a short gap along both sides of the main lane through Murhill and down to the canal. A wild flower meadow corridor is feasible (Map 2), beginning with the verges on Winsley Hill at the southwest corner and going through Murhill and Turleigh and up to the reservoir at the east end of the Parish. The linear sites are corridors in themselves (Map 3).

Similar considerations apply to individual species. Some species are protected by authorised bodies, others are not. A parish can monitor the state of the protected ones and use such legal provision as is

available to help do this. Other species need more subtle treatment and should form a major part of parish activity in this area, particularly where hardly any are the subject of county action plans, as in Wiltshire.

Another feature of the plan would involve education, advice and awareness - to such bodies as the Winsley Cricket Club, the Bradford-on-Avon Rugby Club and the Bradford and Winsley Community and Sports Association, home-owners, farmers, and other public bodies. Advisory literature would help, like a guide I have written on conserving the flora of limestone dry stone walls (Presland 2007). Getting ideas over to the general public is particularly important, so that grants

to owners are not applied for in case other members of the community complain of favouritism.

A fundamental question is how much rigour should characterize the Parish Council's planning and activity. The Wiltshire Biodiversity Plan attempts to set out specific targets and consequent actions, with methods of measuring how far they have been achieved by a specified date, as shown in the extract from their table of objectives below. Each target and action has a Lead Partner, highlighted in bold, who is responsible for reporting progress towards that target.

### Wiltshire Biodiversity Plan targets

Target	Target measure	Action	Action measure	Partners
CGT1: Maintain current extent of calcareous grassland resource	Measure 1: No loss due to agricultural improvement (ongoing)	CGA1: Improve and update the baseline data to ensure all BAP quality habitat is mapped and available to partners.	Amalgamation of reversion data with data already held by BRC Map produced by Oct 2008	<b>WWT (Wildlife Sites Project)</b> , Landscapes for Wildlife, FWAG, NE, AONBs (CCWWD, NWD, Cotswolds), Wiltshire council

To operate this approach fully, a Parish Council would need to employ staff. Volunteers could alternatively be used, but are often hard to find and can't be held responsible in the same way as paid staff. The most important sites, will, of course, already be included, at least by implication, in the County Plan. The Parish Council might, therefore, see their task as monitoring and acting where they can in coordination with other bodies involved and leaving major planning and monitoring to the County. An important activity will be detecting matters which the County have overlooked and drawing their attention to the problem.

Overall, this is uncharted territory for a Parish Council, and it will be necessary for them to feel their way gradually, taking things a step at a time.

### Government documents

Lawton Review Panel (2010) *Making Space for Nature: a review of England's wildlife sites and ecological network*. Report to Defra.  
*Biodiversity: The UK action plan*. January 1994. Cm 2428 London: HMSO £18.50 net  
*Guidance for Local Authorities on Implementing the Biodiversity Duty*. Department for the Environment, Food and rural Affairs (Defra).  
*UKBAP Priority Species and Habitats -*  
<http://www.ukbap.org.uk/NewPriorityList.aspx> 2008

### Other sources of advice on the planning process

Pilkington S (2007) *Wiltshire Rare Plant Register: The rare and threatened vascular plants of North and South Wiltshire*. Privately published by S L Pilkington, Trowbridge.  
 Presland J (2007) *Conserving the Flora of Limestone Dry Stone Walls*. Wiltshire Natural History Publications Trust.  
*Public Authorities and Biodiversity*. A brief guiding pamphlet available from Wiltshire Wildlife Trust.  
*Wiltshire Biodiversity Action Plan Progress Report 2002-2005*. Wiltshire Biodiversity Forum. Available through Wiltshire Wildlife Trust.  
*Strategy for 2006 and Beyond*. Wiltshire Biodiversity Forum. Available through Wiltshire Wildlife Trust.  
*Wiltshire Biodiversity Action Plan (BAP) 2008*. Wiltshire Wildlife Trust on behalf of the Wiltshire Biodiversity Partnership - [www.biodiversitywiltshire.org.uk](http://www.biodiversitywiltshire.org.uk).

Many thanks to Rob Large for helpful information and comments on a draft.