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Parish Plans Biodiversity Project

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# Bickington

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Report by the  
Devon Biodiversity Records Centre  
and  
Devon County Council

*Devon  
Biodiversity  
Records  
Centre*

Devon Biodiversity Records Centre is operated by the Devon Wildlife Trust and supported by a partnership of Local Authorities, statutory and non-statutory nature conservation organisations



DEVON COUNTY COUNCIL

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# **Bickington - Parish Plan Biodiversity Project**

## **Introduction**

Bickington is located in Teignbridge District, a district generally thought to be rich in wildlife habitats, and of particular interest for areas of lowland heath and unimproved grassland. It is therefore surprising that such little information exists about the wildlife interest of Bickington, compared to other parishes such as Kingsteignton and Bovey Tracey.

Bickington is probably a parish rich in wildlife. Much of the parish is made up of rolling mixed farmland. It is dissected by the A38 to the north, which roughly marks the edge of Dartmoor National Park. The underlying geology of the parish is varied and interesting, and should give rise to a variety of wildlife habitats.

Through much of the parish the geology is Grey shales and Sandstones with a narrow band of Alluvium following the river Lemon. To the north of the parish is Ramshorn Down, an area of heathland on a high ridge overlooking the surrounding area. The underlying geology here is Cherts and Shales. This gives rise to acidic, nutrient poor soils on which dry heath has developed.

A wide band of Limestone roughly follows the A38 across Bickington, and provides conditions for a range of limestone-loving plant communities. This can be seen around Bickington quarry, where limestone-type flora has developed along the hedgerows. There are also probably areas of unimproved Limestone grassland along the verges of the A38. Finally there is a large area to the south and south-west of the parish where the underlying geology is that of Gurrington slate. The SSSI Chipley quarries in this area are of importance for their geological features.

There are a range of interesting wildlife features within Bickington parish, including many areas of semi-improved and unimproved neutral grassland, lowland heathland and species-rich hedges. Many of the areas of grassland have retained their wildlife interest as they lie on the steepest slopes where it has proved impractical to cultivate. There are many other steep fields within the parish which with further survey, may prove to be of considerable wildlife interest.

## Designated Sites

### Chibley Quarries Site of Special Scientific Interest:

Chibley Quarries are a geological Site of Special Scientific Interest (gSSSI), identified because the quarries show a classic area of Upper Devonian submarine basaltic volcanism with pillow lavas developed on the north-east margin of the Trevone Trough. The exposures show good pillow features and are readily dated by the fauna of the adjacent slates. The lavas are formed from Basalt, can be traced out into the adjoining sedimentary rocks – the grey Gurrington Slate Formation – which were deposited as mud on the seabed.

### **Types of geological SSSI**

**English Nature** uses a classification based on the type of site as a basic categorisation for the purpose of site management. The classification allows generic threats and conservation strategies to be defined for the different site types. A fundamental distinction is that between **exposure** and **integrity** sites.

**Exposure sites** exhibit geological features which are relatively extensive underground. Removal of material should uncover more material of the same type. Examples include active quarries, disused quarries and cuttings, coastal cliffs, foreshore exposures, natural inland outcrops and stream sections, and mines. Conservation of exposure sites focuses on maintaining representative exposures of the features of interest. Threats to conservation of exposure sites include coastal defences which conceal outcrops in cliffs or foreshore, landfill in disused quarries and afforestation of natural outcrops, commonly in upland areas.

**Integrity sites** exhibit features which are finite and irreplaceable if destroyed. Examples include many in situ mineral and some fossil deposits which may occur in any of the site types above, mine dumps, karst, caves and geomorphological sites, both static and active. Conservation of integrity sites focuses on preservation, with restrictions against man-made changes which are likely to damage the interest. Threats to conservation of integrity sites include irresponsible specimen collection from certain mineral or fossil sites and the direct or indirect effects of human developments on active geomorphological sites. The importance of distinguishing between these two groups is that their successful management usually requires a quite different approach. As a rule, exposure sites are more robust than integrity sites and can often tolerate the effects of human activities to a greater degree. The site categories are not mutually exclusive and there are numerous examples where part of a site is classified as exposure and another part is classified as integrity. For example, a stratigraphic sequence in a cliff or quarry would have an exposure classification, as removal of rock would generally produce further exposure of the same material. However, mineral veins within the same sequence would often have an integrity classification as removal of vein

material would not produce fresh exposure but would result in loss of the interest.

**Sites of Special Scientific Interest (SSSI)** are notified by English Nature because of their plants, animals or geological features (the latter are geological SSSIs or gSSSI). English Nature needs to be consulted before any operations likely to damage the special interest are undertaken. SSSI is a statutory designation with legal implications.

### **Longstone Bridge Local Wildlife Site**

Longstone Bridge is an area of semi-improved neutral grassland, rush pasture, wet short herb vegetation, broadleaved woodland & gorse. Some areas of the dry grassland are locally species-rich with yarrow, autumn hawkbit, red clover, meadow buttercup and selfheal. There are also some more uncommon species present such as welled thistle, musk thistle and pale flax. The wet grassland areas support damp-loving species such as fleabane, meadowsweet, angelica and fool's water-cress.

There is also an abandoned orchard to the south-east of the site. Traditional orchards have great cultural and landscape importance and can be really valuable habitats for a wide range of species from fungi and lichens, through insects and other invertebrates, to birds and mammals. As there is no herbicide use in most old orchards, the range of species will be even greater.

The trees themselves play host to a variety of mosses, lichens and often mistletoe. The old trees can be fantastic for hole-nesting birds. The large amount of deadwood in the trees provides an important habitat for insects and fungi including some very rare ones. For example, the Noble Chafer, *Gnorimus nobilis*, is a **UK Biodiversity Action Plan** priority beetle associated with old orchards.

With such a wealth of fruit and insects available in old orchards, it is only to be expected that there is a wide range of feeding opportunities for birds and mammals. Birds such as woodpeckers (green and great-spotted), nuthatches, treecreepers and tits may be seen on tree trunks and hollow branches. Fieldfares, starlings, redwings, thrushes, blackbirds and jays will be feeding on the fruit (on or off the tree). Orchards are also home to a number of declining bird species, including tree sparrow and spotted flycatcher.

If it has escaped sprays and fertilisers, and particularly if traditional management such as a hay cut or grazing has been kept up, the ground beneath can be covered with wild flowers such as cowslips, daisies, knapweed and trefoils.

Losses of traditional orchards have been severe in recent decades, with estimates ranging from 40 per cent to 95 per cent loss. Orchards have been grubbed up to make way for other crops or for urban development.

## **Rentor Local Wildlife Site**

Rentor is an area of unimproved neutral grassland, which is moderately species rich. Species recorded include yarrow, common knapweed, rough hawkbit, heath bedstraw, ribwort plantain and burnet saxifrage.

Flower-rich meadows and pastures are a habitat of conservation concern in Devon and are listed on the **Devon Biodiversity Action Plan** as well as the **UK Biodiversity Action Plan**. Unimproved neutral grassland habitat has undergone a huge decline in the 20th century, almost entirely due to changing agricultural practice. It is estimated that by 1984 in lowland England and Wales, semi-natural grassland had declined by 97% over the previous 50 years to approximately 0.2million ha.

Unimproved grassland is often very flower-rich and as a result of this attracts an abundance of butterflies and other invertebrates. The rich insect life in turn attracts bats such as the greater horseshoe bat and birds such as the green woodpecker and ciril bunting.

## **Middle Copse Local Wildlife Site**

Middle Copse comprises areas of broadleaved woodland & semi-improved neutral grassland. The woodland areas consist mainly of oak, ash and sycamore and have a moderately species-rich ground flora, with several ancient woodland indicator species present such as moschatel, ramsons, sanicle, early purple orchid, three-nerved sandwort, primrose, bluebell, wood spurge and pignut.

The grassland areas are moderately species-poor with species recorded including field wood-rush, yarrow, cat's-ear, common bird's-foot trefoil, ribwort plantain, meadow buttercup and germander speedwell.

**Local Wildlife Sites (LWS)** are sites of significant wildlife interest within a local context that do not reach the criteria for County Wildlife Sites. They are not covered by PPG9, but may be included in Local Plans.

Please note, PPG9 (Planning Policy Guidance: Nature Conservation) was published by the Department of the Environment in 1994. It sets out the Government's policies on aspects of planning in relation to nature conservation. It includes guidance for Local Plans (i.e. District planning frameworks) to have planning policies for nature conservation sites, including County Wildlife Sites (though the weight attached to these in planning matters will be less than that for sites with international and national designations).

The Office of the Deputy Prime Minister is currently consulting on PPG9's replacement, a Planning Policy Statement (PPS9) on Biodiversity and Geological Conservation.

## **Other habitats (identified from field survey):**

### **Species-rich hedges**

Hedgerows tend to be taken for granted as they always seem to be there, providing such a constant in a familiar landscape. However, they do require regular attention to keep them in good condition. That so many are still in good condition is a testament to the skill and hard work of generations of farmers. But there are changes even in the oldest hedgelines as the way the majority are managed has altered with less farm labour available and more reliance on mechanical cutting. Even the mechanical cutting has changed as reciprocating cutters that could cut shrub stems cleanly have given way to tractor-mounted flails which can tackle slightly older growth but at the expense of every stem being shattered, leaving them much more susceptible to infection. As individual hedge plants die, they leave gaps which render the hedge less effective and which would in the past have been filled when the hedge was next layed.

With the advent of mechanical hedge-trimming has come another change - that it now becomes possible to trim all the hedges on a farm in one year. It is this that perhaps has the most impact on the vertebrate wildlife as the fruiting and seeding species are very much less productive and there is a different and less varied structure. Shrubs that do produce a good berry crop may be cut in the early autumn before the birds, particularly the migrants, can gain any advantage. A couple of generations ago, many hedges on a farm might have been cut only once in five or even seven years, allowing them to be much more productive in the meantime.

Recognising these changes does allow choices in the way hedges are managed in the future with perhaps only one or two of the three 'faces': the top and the two sides being cut in any one year. This wouldn't stop road or drive side hedges being cut from both the safety and visual aspects but for the majority of hedges it would have two major benefits, it would take less time and hence cost and it would benefit wildlife!

Once it was realised nationally that many thousands of kilometres of hedgerow were being lost annually and that something ought to be done about it, the Hedgerow Regulations (made under Section 97 of the Environment Act 1995) were introduced in England and Wales in 1997 to protect them. The Regulations are intended to prevent the removal of most countryside hedgerows without first submitting a hedgerow removal notice to the local planning authority. The local planning authorities are only able to require the retention of 'important' hedgerows. The Regulations then set out criteria to be used by the local authority in determining which hedgerows are important. (Bickmore, 2002)

In such a clearly agricultural landscape, the hedgerows and hedgebanks represent continuity as features in the landscape and provide a significant wildlife resource at a time when the fields themselves are being more

intensively used. The UK Biodiversity Action Plan (UK Steering Group, 1995) lists ancient and or species-rich hedgerows as one of its priority habitats.

Various definitions of species-rich hedges have been used in different parts of the country but it would not be unreasonable to treat a hedge that has five or more woody species in a 30 metre length as a 'species-rich' one.

Hedgerows are often an essential corridor for the movement of wildlife and may support many animals and plants. The hedgerows along Old Hill Lane, Lemonford Lane, the bridlepath near Yeo Farm and the hedges adjacent to Bickington Barton quarry are all species-rich with between 6 and 7 woody species recorded in a 30 metre length. This suggests that these hedgerows could be up to 700 years old. Species include: hazel, sycamore, blackthorn, ash, pedunculate oak, holly and hawthorn. Some less common species such as wych elm, field maple, spindle, dogwood and wild privet were also recorded from the hedgerows around the village. These species are often found growing on chalky soils which are characteristic of this area.

**Dogwood** rarely grows taller than three metres and is most commonly found on chalky soil. The prefix 'dog' is often given to species considered to be of little value, and the fruits of *Cornus sanguinea* are bitter and inedible (although oil from the berries was used to fuel lamps). Another explanation for the common name for this species comes from one use of its coppiced shoots; they were sharpened and used by farmers as animal prods or 'dags' when herding stock. The flowers, which are white and have four pointed petals, appear in June and July and the berries ripen from August to October. Dogwood is the main foodplant for the green hairstreak butterfly, which has been recorded from the parish.

**Spindle** is native to most of Europe, but not the extreme south or north. It generally is found in woodland, hedgerows and scrub and likes chalk and lime soils. Wood from this tree was used to make spindles. Local names include skewerwood and pegwood in Devon. It is said that spindle will only establish in a hedge which has six other shrub species present, which suggests that the hedge must be at least 600 years old before spindle will settle in.

**Wild Privet** is a straggling shrub growing up to 5 m. It is evergreen, but some leaves fall in cold weather. The branches are long, arching over and rooting where they make contact with soil, making thickets. Privet is widespread throughout Europe and widely used as a hedging shrub, it prefers lime and chalk soils.

Many of the hedges have a species-rich bank flora, especially the hedgerow adjacent to Bickington Barton quarry. Species recorded from here include wild basil, hop trefoil, hedge bedstraw, crosswort, wild madder, yarrow, meadow vetchling and common polypody. Some of these species are characteristic of limestone grassland.

Species rich hedges are listed on the **Devon Biodiversity Action Plan** as a habitat of conservation concern in Devon. Most of the hedges along the lanes

of Bickington could be classified as species-rich, with an average of 6 woody species in a 30 metre length.

## **Churchyard**

A small area of moderately species-rich grassland is found in the churchyard of the parish church of St. Mary the Virgin.

Species recorded from this area include ribwort plantain, white clover, hedge bedstraw, ox-eye daisy, selfheal, common knapweed and smooth hawk's-beard.

## **Stone walls**

The walls around Bickington village support an interesting and rich flora with lichens and mosses, a number of ferns and several attractive flowering plants. The flowers provide a colourful display with ivy-leaved toadflax, wall pennywort, pellitory-of-the-wall and red valerian present. The ferns include wall rue, black spleenwort, polypody, hart's-tongue and maidenhair spleenwort.

## **Recreation areas and public open space**

There are very few of areas of amenity grassland and open space in Bickington, but there is a good network of public footpaths around the village. An interpretation panel with information about the walks is found near to the old vicarage. Path one runs from the Dove Cote and Church House towards the river Lemon. This path can be joined by path two, which continues along the river Lemon towards Lemonford Bridge. Path four goes across fields from Newhouse Brige to Chipley Quarries, path five across the steep fields at Middle Copse and path six follows the bridlepath near Yeo Farm, through woodland along the river Lemon and up to Ramshorn Down. This bridlepath has species-rich hedges with a species-rich bank flora. Plants recorded include common dog violet, barren strawberry, polypody, herb Robert, honeysuckle and wood spurge.

A further footpath runs over Ramshorn Down and joins to Rora Down and Rora Wood.

## **Gardens**

Gardens are a haven for wildlife and can provide links to other areas of wildlife habitat. Unfortunately very little information is held on species recorded from gardens in Bickington.

## **Species-rich grassland**

There are many areas of species-rich grassland within the parish; most of these have been identified as Local Wildlife Sites. Roadside verges often support flower-rich grassland, as well as a variety of semi-natural habitats including calcareous grassland, neutral grassland, acid grassland, heathland, open water (ditches), broadleaved woodland, scrub, hedgerows and walls. They may also support populations of scarce or declining species of flora and/or fauna, some of which enjoy statutory protection. Linear grassland habitats provide a valuable wildlife resource. Verges provide shelter and food for a variety of species from small mammals, to birds of prey and insects.

Devon has a very substantial resource of roadside verges; approximately 14,000 km of roads, corresponding to about 2,000 ha of roadside verge. However, of this very large resource, the area which is species-rich is relatively small and localised in distribution.

Devon County Council and Highways Agency manage roadside verges to incorporate prescriptions to maintain or enhance wildlife interests. DCC operate a **Special Verge Scheme** to manage areas of particular wildlife or amenity value. These verges are protected from damaging activities, and grass cutting is limited to specific periods to avoid the destruction of attractive stands of wildflowers.

There are no **Special Verge Sites** in Bickington parish, but the road verges along the A38 at Bickington have been identified as a potential County Wildlife Site on account of the presence of unimproved limestone grassland, and may be of considerable wildlife interest.

The great green bush-cricket has been recorded from the road verges along the A38 at Bickington. It is listed on the **Devon Biodiversity Action Plan** as nationally it has experienced a decline in range over the past 50 years. The great green bush-cricket is not rare in Devon, but is under threat from habitat loss. Its preferred habitat is rough herbage with an abundance of brambles, thistles and bracken. In Devon the great green bush-cricket is found primarily along road verges and on the coast. Gardens can also provide valuable habitat, providing there are suitable 'untidy' areas with rank vegetation or scrub and hedges.

Further areas of unimproved species-rich grassland are found to the east of Lurcombe and Lee farms. These areas of grassland were surveyed by Dartmoor National Park staff in 2003 and found to be of interest. The grassland type is classified as MG5 *Cynosurus cristatus-Centaurea nigra* grassland under the National Vegetation Classification system. Species recorded from this area include yarrow, agrimony, common knapweed, sweet vernal-grass, common centaury, spring sedge, field scabious and wild carrot.

Please note, the National Vegetation Classification (NVC) is a means of classifying habitats which enables different sites across the UK to be consistently described.

## **Lowland heathland**

Ramshorn Down is an area of young woodland, bracken and gorse and lowland heathland. The young woodland is predominantly oak in the canopy with an understory of hazel with occasional blackthorn and holly. The lower slopes of the down are dominated by dense bracken and gorse, and towards the top of the slope there is a large area of open heath. The heathland is characterised by the presence of bell heather, heath bedstraw, tormentil, bristle bent, heather and Western gorse, and fits to the National Vegetation Classification community H4 *Ulex gallii* – *Agrostis curtisii* heathland.

Lowland heathland is characterised by the presence of plants such as heather, dwarf gorses, and cross-leaved heath and is generally found below 300 metres in altitude. Areas of good quality heathland should consist of an ericaceous layer of varying heights and structures, some areas of scattered trees and scrub, areas of bare ground, gorse, wet heaths, bogs and open water. The presence and numbers of characteristic birds, reptiles, invertebrates, vascular plants, bryophytes and lichens are important indicators of habitat quality.

There are very few areas of lowland heath left in the UK: over 90% of heaths have been lost, mostly in the last 50 years. Devon has lost some 70% of its heaths. Only a few areas remain such as the pebblebed heaths in the east of the county, coastal heaths, and heathland fragments in the Bovey Basin. Lowland heath is listed on the **UK Biodiversity Action Plan** and the **Devon Biodiversity Action Plan** as a habitat of conservation concern. Lowland heathland is a priority for nature conservation because it is a rare and threatened habitat.

## **Potential County Wildlife Sites**

There are four potential County Wildlife Sites in Bickington parish. These are sites identified as having possible interest but not fully surveyed. Some of these sites will be areas of significant wildlife interest.

**Parlands** is an area of semi-improved neutral grassland and scrub on a steep slope to the west of the parish.

**Bickington Quarry** is a disused quarry with semi-improved neutral grassland and broadleaved woodland. The hedges and road verge alongside this site were species rich, and contained some species characteristic of limestone grassland, so potentially the grassland could be very interesting.

**A38 Bickington Road Verge** is a linear area of unimproved grassland on limestone, and could potentially be of great wildlife interest.

Limestone grassland communities have a very restricted distribution in Devon, and Teignbridge is fortunate in having many of the remaining sites. Limestone grasslands are the rarest habitats in Teignbridge and the grasslands support

a range of plant species that are locally distributed both in Devon and nationally. These include quaking grass, tor grass, common rock-rose, yellow-wort, hound's-tongue and hoary plantain. Unimproved calcareous grassland is listed on the **UK Biodiversity Action Plan** as it is a rare habitat.

**Herebere Copse** comprises ancient woodland & plantation on ancient woodland site.

Ancient Woodland is a term applied to woodlands which have existed from at least Medieval times to the present day without ever having been cleared for uses other than wood or timber production. A convenient date used to separate ancient and secondary woodland is about the year 1600. In special circumstances semi-natural woods of post-1600 but pre-1900 origin are also included. Henbere Copse is listed in the **Ancient Woodland Inventory**, which was prepared in 1986 by the Nature Conservancy Council.

## **Species**

### **Protected Species**

A report from the DBRC database showing what legally protected, locally notable or noteworthy (eg Japanese Knotweed) species are known to have been present in and around Bickington has been prepared and is presented separately (Appendix 1).

### **Birds**

Several species of birds were recorded during the survey including buzzard, raven, rook, jackdaw, jay, swallow, house sparrow, green woodpecker and blackbird.

There is only one bird record held on the DBRC database for Bickington parish, a barn owl seen flying over a field near the centre of the village.

The **barn owl** is listed on the **Devon Biodiversity Action Plan** as species of conservation concern.

The barn owl has undergone a major decline in the last century due to changes in agricultural practice, as well as loss of nesting sites such as old barns and hollow trees. It is estimated that there are now about 350-470 pairs in the County.

The barn owl requires areas of open, rough grassland where its preferred food of mice and voles are found. It is largely nocturnal and feeds almost exclusively on small mammals, particularly voles, but also takes shrews, mice, rats and very occasionally, birds.

## Plants

Plant species noted on a visit on the 1 September 2004 are listed in Appendix 2.

The DBRC database lists no rare plants recorded from Bickington parish, but several plants with a localised distribution in Devon were recorded during the survey.

The hedgerow species spindle, wild privet, dogwood and wych elm were recorded from several hedges in the parish. These species are largely confined to areas with a chalky soil, which is rather uncommon in Devon. Other species generally confined to limestone areas were also recorded during the survey including wild basil, hop trefoil and wild madder.

Western gorse and bristle bent were recorded from the heathland at Ramshorn Down. Both species are relatively common but confined to acid soils. These two species are the main components of the H4 *Ulex gallii* – *Agrostis curtisii* heathland, which is confined to south-west Britain. Further north, Western gorse is replaced by dwarf gorse *Ulex minor* which is not present south of Dorset. Bristle bent is a south-west speciality, only occurring from west Surrey and Sussex to Cornwall, Devon and South Wales.

## Mammals

Several mammal species have been recorded from Bickington parish. These include otter, badger, brown hare, brown long-eared bat, whiskered bat and pipistrelle.

Otters have been recorded from three locations in Bickington from the river Lemon, and the brown hare has also been recorded in the area. The otter and brown hare are listed on the **Devon Biodiversity Action Plan** as species of conservation concern in Devon.

Badgers are frequently recorded from the area, but sadly most badger records are from road casualties from the A38 rather than live sightings.

Several species of bat have been recorded from a property in Bickington. All species of British bat are protected under UK law and International law. This makes it illegal to intentionally kill, injure or take a bat, or to damage, obstruct or destroy any place that a bat uses for shelter or protection.

The pipistrelle is Britain's smallest and most common bat. They vary in colour, but are usually medium to dark brown on the back and only slightly paler underneath. They are the most common species in towns. Only very recently have scientists recognised that two separate species have been confused under the name *P. pipistrellus*. Their flight appears fast and jerky as they dodge about pursuing small insects, which are caught and eaten in flight. A single pipistrelle may consume up to 3000 insects in a night.

Buildings are the most favoured roost sites and more than half of known roosts are in buildings less than 30 years old. Pipistrelles prefer to roost in very confined spaces around the outside of the building, typical sites being behind hanging tiles, weather boarding, soffit and barge or eaves boarding, between roofing felt and roof tiles or in cavity walls. Pipistrelles rarely enter roof spaces except in the more stable, well-established large colonies found particularly in older buildings.

## **Invertebrates**

Ramshorn Down supports many uncommon butterfly species including the pearl-bordered fritillary, white admiral, silver-washed fritillary, small pearl-bordered fritillary, brown hairstreak, green hairstreak and dark green fritillary.

The pearl-bordered fritillary is listed on the **Devon Biodiversity Action Plan** as a species of conservation concern in Devon; it is also a **UK Biodiversity Action Plan** priority species. The small pearl-bordered fritillary and brown hairstreak are also listed on the **UK Biodiversity Action Plan**.

The pearl-bordered fritillary is a butterfly of woodland clearings, usually in recently coppiced or clear-felled woodland and well-drained habitats with mosaics of grass, dense bracken, and light scrub. In all habitats it requires abundant foodplants growing in short, sparse vegetation, where there is abundant leaf litter. The most widely used foodplant is Common Dog-violet (*Viola riviniana*) although it can use other violets such as Heath Dog-violet (*V. canina*) and Marsh Violet (*V. palustris*).

The pearl-bordered fritillary has declined rapidly in recent decades, and Devon is now considered a national stronghold for the species.

Other uncommon butterfly species such as the dingy skipper, brown argus, grizzled skipper and purple hairstreak have been recorded from Bickington.

## **Reptiles and Amphibians**

Little information is held on reptiles and amphibians in Bickington parish. It is believed that the heathland slopes around Ramshorn Down are of importance for reptiles such as adders and common lizards. Common frogs and toads are probably found in garden ponds in the village, and slow-worms may be found in garden ponds and compost heaps.

## **The Devon Biodiversity Action Plan (BAP).**

The Devon Biodiversity Action Plan (BAP) describes the key actions needed to look after 37 of Devon's most important habitats and species. It does not stand alone, but is part of a much wider process aimed at conserving our biodiversity.

The Devon BAP is a direct descendent of a process started at the famous 'Earth Summit' held in Rio de Janeiro in 1992. At this summit, world leaders pledged to halt and reverse the loss of the planet's biodiversity. For its part, the UK government produced a series of Action Plans for a great many threatened habitats and species. These national plans have been joined by a series of regional Action Plans aimed at providing a more local perspective.

The Devon BAP builds on this endeavour, identifying local priorities and providing targets and plans of action for the County.

All of this work has one aim: to encourage practical action on the ground. Its success depends upon us all.

### **Biodiversity links:**

- The Devon BAP can be viewed at [www.devon.gov.uk/biodiversity](http://www.devon.gov.uk/biodiversity). This site also contains links to other nature conservation issues relevant to Devon, such as information on hedges. If you do not have access to the internet and require paper copies of relevant sections of the Devon BAP please contact Devon County Council's Biodiversity Officer on 01392 382804.
- Details of biodiversity planning in the South West region can be viewed at [www.swbiodiversity.org.uk](http://www.swbiodiversity.org.uk).
- National Action Plans can be viewed at [www.ukbap.org.uk](http://www.ukbap.org.uk). This site also contains useful background information on UK biodiversity action planning.

## Links between the wildlife of Bickington and the Devon BAP:

Bickington wildlife feature	Brief description of feature	Link with the Devon Biodiversity Action Plan (BAP)
Ramshorn Down	An area of young woodland, bracken and gorse and open heathland.	<ul style="list-style-type: none"> <li>• Lowland Heathland Habitat Action Plan</li> <li>• Pearl-bordered fritillary Species Action Plan</li> </ul>
Species-rich Hedges	Important – often ancient – wildlife habitats that can also form an important network of corridors along which wildlife can move and disperse.	<ul style="list-style-type: none"> <li>• Species-rich Hedges Habitat Action Plan</li> <li>• Dormouse Species Action Plan</li> <li>• Great green bush-cricket Species Action Plan</li> </ul>
Churchyard, road verges & other areas of species-rich grassland, eg. Rentor	These features support species-rich grassland, which has been protected from agricultural improvement.	<ul style="list-style-type: none"> <li>• Flower-rich Meadows and Pastures Habitat Action Plan</li> <li>• Great green bush-cricket Species Action Plan</li> <li>• Barn owl Species Action Plan</li> </ul>
Chipleigh quarries, Bickington quarry and Bickington Barton quarry	Unique inland exposures of geology which provide important habitat for a number of plants and animals.	<ul style="list-style-type: none"> <li>• Pits, quarries and cuttings Habitat Action Plan</li> </ul>
River Lemon		<ul style="list-style-type: none"> <li>• Otter Species Action Plan</li> </ul>

View the Devon Biodiversity Action Plan at [www.devon.gov.uk/biodiversity](http://www.devon.gov.uk/biodiversity).

## Some Ideas for Local Action...

This section of the report is provided by Devon County Council (contact: nature@devon.gov.uk).

A major step to knowing what you can do for your local wildlife and geology is to know what you have already got. This report will help you in this, but it is just a start.

Ultimately, the protection and enhancement of the local natural environment requires the interest and enthusiasm of the local community.

There follow some initial ideas for local nature conservation action. Many of them will directly help to achieve the objectives of the habitat and species action plans contained in the **Devon Biodiversity Action Plan**.

It is by no means an exhaustive list. As a community, you may have many more ideas for action that you would like to take forward in the coming years.

### 1 Further survey:

This report is just a beginning. Carrying out further survey within your area will help build a better picture of the wildlife present, and of the opportunities for enhancement. Gaining a better understanding of the resource is usually a key objective of the Devon BAP's habitat and species action plans.

Specific features to survey in Bickington might include otter signs and lowland heathland. The last two actions would directly contribute to the **Otter Action Plan** and the **Lowland heathland Action Plan**.

One example of survey work that might usefully be undertaken would be to produce a hedgerow appraisal for your local area. Comparing the current distribution of hedges against boundary lines shown on old maps will give a clue as to how this important resource has changed over recent years. It may also highlight opportunities for restoring hedges in your area. It might also be possible to assess the condition of hedges and this may, in turn, give some ideas about improving their future management to benefit wildlife.

Survey work could be undertaken as a community group or in liaison with conservation groups active in the area. For example, the Devon Wildlife Trust is active nearby in Bovey Tracey and manages a nature reserve nearby at Ilsington.

Help to build up a picture of the state of Devon's environment by sending your records to the Devon Biodiversity Records Centre where they can be properly collated.

## **2 Influence the management of Public Open Space:**

Creating areas of more species-rich grassland will help to reduce the isolation of the remaining fragments of traditionally managed agricultural land, contributing to the **Flower-rich Meadows and Pastures Action Plan**. Churchyards have often received less intensive management than the surrounding land and can provide good opportunities for wildlife.

## **3 Build relationships with local landowners:**

Encourage the adoption of more wildlife-friendly land management. For example, hedges which are trimmed only every second or third year will provide an autumn and winter source of nuts and berries for birds and small mammals (and can save the landowner money in management costs). The improved management of hedgerows is a key objective of the **Species-rich Hedges Action Plan**. If the owner is willing, why not get involved with practical management, such as traditional hedge laying or pond restoration?

## **4 Adopt a road verge:**

Many verges can have a significant value for wildlife because they have escaped the intensive management of the surrounding farmland. Ensuring such verges are managed for their wildlife is a very positive step, again contributing to the **Flower-rich Meadows and Pastures Action Plan**.

There are, of course, obvious health and safety implications to roadside management. It is an action that would need to be undertaken in close liaison with the relevant highways authority (generally, this is the Highways Agency for motorways and trunk roads, and Devon County Council for all other roads).

## **5 Wildlife gardening:**

Green up your garden! Collectively the gardens of Bickington represent a significant area that could be used to benefit wildlife. Large or small, you can turn your garden (or a part of it!) into a haven for wildlife. A very good source of information on wildlife gardening is the English Nature web site:

[www.english-nature.org.uk/Nature\\_In\\_The\\_Garden](http://www.english-nature.org.uk/Nature_In_The_Garden)

English Nature is the Government's adviser on nature conservation. Its web site also contains links to a number of other very useful sources of information.

## 6 Join local conservation organisations:

One example of a prominent local conservation organisation is the Devon Wildlife Trust. This trust has a number of Local Groups which, amongst other things, get involved in practical management work.

## 7 Japanese Knotweed:

Not something to cherish, but it can't be ignored! Unfortunately, Japanese Knotweed is present at a few locations in Bickington Parish. Introduced into Britain by the Victorians, Japanese Knotweed is a native of Japan, north China, Korea and Taiwan. It flourishes in Britain's mild and fertile environment and has no natural biological enemies here. Consequently, it is very invasive and can overrun large areas, replacing our native flora. It is a serious pest which can be so vigorous as to cause significant damage to buildings and roads. It is also a difficult plant to eradicate.

For these reasons Japanese Knotweed is listed under the Wildlife and Countryside Act 1981 as a plant that is not to be planted or otherwise introduced into the wild. In addition, all parts of the plant are considered as controlled waste under the Waste Regulations.

What can you do?

- Firstly, it is important to build up a picture of where Japanese Knotweed is present. This will give an idea of the scale of the problem and will help to prevent it being accidentally spread during any ditch clearance, highway work and so on. To help develop an understanding of the problem in Devon, records should also be sent to the Devon Biodiversity Records Centre<sup>1</sup>. Ideally, records should include when you first saw it and confirmation of when it was seen most recently; its precise location (notes or a sketch map are helpful, as is a grid reference if you have one); the kind of habitat it is in (e.g. next to running water, on a road verge), and a rough indication of how abundant it is.
- Secondly, be careful not to spread the plant further! This is all too easily done as it can regenerate from even the smallest fragment and is easy to spread unknowingly. It is important not to flail it or to try and dig it up. Often, it is best not to cut Japanese Knotweed at all, but if it is it should be very carefully disposed of on site when dead or removed as Controlled Waste. Any tools used should be properly cleaned.
- Finally, if Japanese Knotweed is on your land, the best way to prevent its spread is to control or eradicate it as soon as possible. Regular cutting can weaken and eventually kill the plant but it is a time-consuming job and proper disposal of the cut material can be a problem. Usually, the most

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<sup>1</sup> DBRC, Shirehampton House, 35-37 St David's Hill, Exeter, Devon, EX4 4DA. Phone: 01392 273244; Fax: 01392 433221; E-mail: [dbrc@devonwt.cix.co.uk](mailto:dbrc@devonwt.cix.co.uk)

effective method of control is to treat the plant with herbicide. This can take a number of years to be successful but if the plant is left untreated it will inevitably spread. A number of issues should be taken into account in deciding which herbicide to use, particularly the presence of water (where special care needs to be taken and the advice of the Environment Agency must be sought).

Fortunately, a great deal of advice (including an Environment Agency Code of Practice) is available on the Devon Knotweed Forum's web pages. You are recommended to view these at:

[www.devon.gov.uk/biodiversity/japanese\\_knotweed](http://www.devon.gov.uk/biodiversity/japanese_knotweed).

## Useful sources of further information:

- Devon Wildlife Trust: [www.devonwildlifetrust.org](http://www.devonwildlifetrust.org)
- Devon Birdwatching and Preservation Society: Secretary tel: 01837 53360
- English Nature: [www.english-nature.org.uk](http://www.english-nature.org.uk)
- Plantlife: [www.plantlife.org.uk](http://www.plantlife.org.uk)
- RSPB: [www.rspb.org.uk](http://www.rspb.org.uk)
- The Woodland Trust: [www.woodland-trust.org.uk](http://www.woodland-trust.org.uk)
- The Living Churchyards & Cemeteries Project, Arthur Rank Centre, National Agricultural Society, Stoneleigh Park, Warwickshire, CV8 2LZ  
Tel: 01203 696969 ext. 364/339.

## Possible sources of funding:

A number of potential sources of funding are available for local biodiversity projects. Each has its own rules, criteria and objectives but the following sites may be worth checking for suitability:

Awards for All: [www.awardsforall.org.uk](http://www.awardsforall.org.uk)

Countryside Trust Awards: 01242 521382 or [www.countryside-trust.org](http://www.countryside-trust.org)

Living Spaces: 0845 600 3190 or [www.living-spaces.org.uk](http://www.living-spaces.org.uk)

Local Heritage Initiative: 01226 719019 or [www.lhi.org.uk](http://www.lhi.org.uk)

## Bibliography

Bickmore CJ (2002) *Hedgerow Survey Handbook* Countryside Council for Wales

DCC & Devon Hedge Group (1997) *Devon's Hedges* Devon County Council and Devon Hedge Group

Devon Biodiversity Partnership (1998) *The Nature of Devon: A Biodiversity Action Plan*

Farrell I and Reay P (Eds) *Devon Bird Report 2002* (2003) No 75 Devon Bird Watching and Preservation Society Okehampton

Hubbard CE (1984) *Grasses* Penguin Group London

Ramsden DJ & Howells JA (2004) *2003 Devon Barn Owl Survey Report* The Barn Owl Trust

Rose F (1981) *The Wild Flower Key* Penguin Group London

UK Steering Group (1995) *Biodiversity: The UK Steering Group Report Vol 1 Meeting the Rio Challenge* HMSO London

UK Steering Group (1995) *Biodiversity: The UK Steering Group Report Vol 2 Action Plans* HMSO London



## Appendix 1

File Code	Site Name	Grid Ref.	Area (ha)	Description	Status
SX77/004	Longstone Bridge	SX793712 & SX797712	9.2	Semi-improved neutral grassland, rush pasture, wet short herb vegetation, broadleaved woodland & gorse	LWS
SX87/106	Middle Copse	SX806717	3.9	Broadleaved woodland & semi-improved neutral grassland	LWS
SX87/104	Rentor	SX801723	1.4	Unimproved neutral grassland	LWS
SX87/186	Chipley Quarries	SX808721	1.0	Upper Devonian submarine basaltic volcanism with pillow lavas.	gSSSI
SX77/002	Bickington Quarry	SX798724	3.4	Semi-improved neutral grassland and broadleaved woodland	pCWS
SX77/003	Parlands	SX793718	25.0	Semi-improved neutral grassland and scrub	pCWS
SX87/107	Herebere Copse	SX809717	3.2	Ancient woodland & plantation on ancient woodland site	pCWS
SX77/026	A38 Bickington Road Verge	SX802728	0.9	Unimproved grassland on limestone	pCWS

**Sites of Special Scientific Interest (SSSI):** these are notified by English Nature because of their plants, animals or geological features (the latter are geological SSSIs or gSSSI). English Nature needs to be consulted before any operations likely to damage the special interest are undertaken. SSSI is a statutory designation with legal implications.

**Local Wildlife Sites (LWS):** these are sites of significant wildlife interest within a local context that do not reach the criteria for County Wildlife Sites. They are not covered by PPG9, but may be included in Local Plans.

**Potential County Wildlife Sites / Unconfirmed County Wildlife Sites (pCWS or Unc):** these are sites identified as having possible interest but not fully surveyed. Some of these sites will be areas of significant wildlife interest.

No.	Name	Latin Name	Location	Date	UK Protection	International Protection	Status
1	Otter	Lutra lutra	Bickington	1999	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
2	Badger	Meles meles	Nr. Drumbridges on A38	2000	WCA 6, BA	Bern III	
3	Barn Owl	Tyto alba	Field in front of Lionkins, Bickington	2000	WCA 1, 9		DBAP; Amber
4	Great Green Bush Cricket	Tettigonia viridissima	Bickington.	2001			DBAP
5	Great Green Bush	Tettigonia viridissima	Nr. Bickington	2000			DBAP

	Cricket						
6	Otter	<i>Lutra lutra</i>	R Teign	1978	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
7	Otter	<i>Lutra lutra</i>	Bickington Quarry	1997	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
8	a bat	bat sp.	East Burne Farm, Bickington, Newton Abbot.	1997	WCA 5, 6	EC IVa; Bonn II	
9	Brown Long-eared Bat	<i>Plecotus auritus</i>	East Burne Farm, Bickington, Newton Abbot.	1997	WCA 5, 6	EC IVa; Bern II; Bonn II	
10	Pipistrelle	<i>Pipistrellus pipistrellus</i>	East Burne Farm, Bickington, Newton Abbot.	1997	WCA 5, 6	EC IVa; Bern III, Bonn II	UKBAP(P)
11	Whiskered Bat	<i>Myotis mystacinus</i>	East Burne Farm, Bickington, Newton Abbot.	1997	WCA 5, 6	EC IVa; Bern II; Bonn II	
12	Badger	<i>Meles meles</i>	A38 one mile east of Linhay junction (near Ashburton).	2000	WCA 6, BA	Bern III	
13	Badger	<i>Meles meles</i>	A38 0.5mile from Caton	1999	WCA 6, BA	Bern III	
14	Badger	<i>Meles meles</i>	A38 1.5 miles from Catton turning travelling to Ashburton	1999	WCA 6, BA	Bern III	
15	Badger	<i>Meles meles</i>	A38	2000	WCA 6, BA	Bern III	
16	Japanese Knotweed	<i>Fallopia japonica</i>	Road verge of A383 Newton Abbot to A38 Plymouth road.	2002	WCA 9		
17	Bluebell	<i>Hyacinthoides non-scripta</i>	Middle Copse	1994	WCA 8 (S)		
18	Brown Hare	<i>Lepus europaeus</i>	On the outskirts of Newton Abbot, near the Half Mile Inn	2000			UKBAP(P); DBAP
19	Great Green Bush Cricket	<i>Tettigonia viridissima</i>	Nr. Bickington	2000			DBAP
20	Great Green Bush	<i>Tettigonia viridissima</i>	Bickington.	2001			DBAP

	Cricket						
21	Japanese Knotweed	Fallopia japonica	A383 road verge towards watercourse, between Lower Herebere (to the south of the road) and Chipley (to the north). Public house about 350m to the west	2000	WCA 9		
22	Badger	Meles meles	Off A383 nr. Bickington	2000	WCA 6, BA	Bern III	
23	Dingy Skipper	Erynnis tages	Bickington	1996			DeclineD
24	Silver-washed Fritillary	Argynnis paphia	Bickington-Ramshorn Down	1995			
25	Green Hairstreak	Callophrys rubi	Ramshorn Down	1996			DeclineD
26	Pearl-bordered Fritillary	Boloria euphrosyne	Ramshorn Down	1996	WCA 5 (S)		UKBAP(P); DBAP; Nb
27	Green Hairstreak	Callophrys rubi	Ramshorn Down	2000			DeclineD
28	Small Pearl-bordered Fritillary	Boloria selene	Ramshorn Down	2000			DeclineD
29	Pearl-bordered Fritillary	Boloria euphrosyne	Ramshorn Down	2000	WCA 5 (S)		UKBAP(P); DBAP; Nb
30	Purple Hairstreak	Quercusia quercus		1990			DeclineD
31	Brown Hairstreak	Thecla betulae	Bickington	1994	WCA 5 (S)		Nb
32	Dark Green Fritillary	Argynnis aglaja	Ramshorn Down	1990			DeclineD
33	Green Hairstreak	Callophrys rubi	Ramshorn Down	1996			DeclineD
34	Small Pearl-bordered Fritillary	Boloria selene	Ramshorn Down	1996			DeclineD
35	Silver-washed Fritillary	Argynnis paphia	Ramshorn Down	1996			
36	Green Hairstreak	Callophrys rubi	Ramshorn Down	1996			DeclineD
37	Pearl-bordered Fritillary	Boloria euphrosyne	Ramshorn Down	1996	WCA 5 (S)		UKBAP(P); DBAP; Nb
38	Purple Hairstreak	Quercusia quercus		1990			DeclineD
39	Brown Hairstreak	Thecla betulae	Bickington	1994	WCA 5 (S)		Nb
40	Pearl-bordered Fritillary	Boloria euphrosyne	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P); DBAP; Nb
41	Pearl-bordered	Boloria euphrosyne	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P);

	Fritillary						DBAP; Nb
42	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1997			DeclineD
43	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1997			DeclineD
44	Silver-washed Fritillary	<i>Argynnis paphia</i>	Ramshorn Down	1997			
45	White Admiral	<i>Ladoga camilla</i>	Ramshorn Down	1997			DeclineD
46	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1999			DeclineD
47	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1999	WCA 5 (S)		UKBAP(P); DBAP; Nb
48	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1999			DeclineD
49	Grizzled Skipper	<i>Pyrgus malvae</i>	Ramshorn Down	1997			DeclineD
50	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1990	WCA 5 (S)		UKBAP(P); DBAP; Nb
51	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1995			DeclineD
52	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1995	WCA 5 (S)		UKBAP(P); DBAP; Nb
53	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1995			DeclineD
54	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1995	WCA 5 (S)		UKBAP(P); DBAP; Nb
55	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1996	WCA 5 (S)		UKBAP(P); DBAP; Nb
56	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1996			DeclineD
57	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P); DBAP; Nb
58	Grizzled Skipper	<i>Pyrgus malvae</i>	Ramshorn Down	1990			DeclineD
59	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1997			DeclineD
60	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1997			DeclineD
61	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P); DBAP; Nb
62	Dark Green Fritillary	<i>Argynnis aglaja</i>	Ramshorn Down	1997			DeclineD
63	Silver-washed Fritillary	<i>Argynnis paphia</i>	Ramshorn Down	1997			
64	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1998			DeclineD
65	Pearl-bordered	<i>Boloria euphrosyne</i>	Ramshorn Down	1998	WCA 5 (S)		UKBAP(P);

	Fritillary						DBAP; Nb
66	Silver-washed Fritillary	<i>Argynnis paphia</i>	Ramshorn Down	1997			
67	Brown Hairstreak	<i>Thecla betulae</i>	Ramshorn Down	1992	WCA 5 (S)		Nb
68	Grizzled Skipper	<i>Pyrgus malvae</i>	Bickington	1995			DeclineD
69	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Bickington	1995	WCA 5 (S)		UKBAP(P); DBAP; Nb
70	Dingy Skipper	<i>Erynnis tages</i>	Bickington	1995			DeclineD
71	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P); DBAP; Nb
72	Green Hairstreak	<i>Callophrys rubi</i>	Ramshorn Down	1997			DeclineD
73	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramshorn Down	1997	WCA 5 (S)		UKBAP(P); DBAP; Nb
74	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1997			DeclineD
75	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1997			DeclineD
76	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Ramshorn Down	1990			DeclineD
77	Dingy Skipper	<i>Erynnis tages</i>	Bickington	1997			DeclineD
78	Grizzled Skipper	<i>Pyrgus malvae</i>	Bickington	1997			DeclineD
79	Dingy Skipper	<i>Erynnis tages</i>	Bickington	1996			DeclineD
80	Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Ramsdown	1999	WCA 5 (S)		UKBAP(P); DBAP; Nb
81	Green Hairstreak	<i>Callophrys rubi</i>	Ramsdown	1999			DeclineD
82	Brown Argus	<i>Aricia agestis</i>	Bickington	1997			DeclineD
83	Brown Argus	<i>Aricia agestis</i>	A38, Near Bickington	1990			DeclineD
84	Dingy Skipper	<i>Erynnis tages</i>	Bickington	1990			DeclineD
85	Dingy Skipper	<i>Erynnis tages</i>	Bickington	1991			DeclineD
86	Grizzled Skipper	<i>Pyrgus malvae</i>	Bickington	1991			DeclineD
87	Dingy Skipper	<i>Erynnis tages</i>	Yeo Farm, Bickington	1995			DeclineD
88	Grizzled Skipper	<i>Pyrgus malvae</i>	Near Bickington	1990			DeclineD
89	Brown Hairstreak	<i>Thecla betulae</i>	Bickington	1997	WCA 5 (S)		Nb
90	Silver-washed Fritillary	<i>Argynnis paphia</i>	Rora Wood	1990			
91	Purple Hairstreak	<i>Quercusia quercus</i>	Rora Wood	1990			DeclineD

92	Dingy Skipper	Erynnis tages	NW Of Telegraph Hill	1990			DeclineD
93	Brown Hairstreak	Thecla betulae	Millcross Bridge	1995	WCA 5 (S)		Nb

- WCA 1**      **Wildlife and Countryside Act (1981) Schedule 1:** birds which are protected by special penalties at all times.
- WCA 5**      **Wildlife and Countryside Act (1981) Schedule 5:** species protected against killing, injury, disturbance and handling.
- WCA 5 (S)**      **Wildlife and Countryside Act (1981) Schedule 5: (sale):** species protected against sale only.
- WCA 6**      **Wildlife and Countryside Act (1981) Schedule 6:** animals (other than birds) which may not be killed or taken by certain methods
- WCA 8 (S)**      **Wildlife and Countryside Act (1981) Schedule 8: (sale):** plants protected against sale only.
- WCA 9**      **Wildlife and Countryside Act (1981) Schedule 9:** animals and plants for which release into the wild is prohibited.
- BA**      **Protection of Badgers Act 1992:** badgers may not be deliberately killed, persecuted or trapped except under licence. Badger setts may not be damaged, destroyed or obstructed.
- Bern III**      **Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix III:** Exploitation of listed animal species to be subject to regulation
- Bern II**      **Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II:** Special protection for listed animal species and their habitats.
- ECIVa, IVb**      **EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IVa:** Exploitation of listed animals and plants to be subject to management if necessary.
- ECIIa, IIb**      **EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IIa and IIb:** Designation of protected areas for animal and plant species listed.
- ECIIIa, IIIb**      **EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IIIa and IIb:** Species used as criteria for designating Special Areas of Conservation (SACs).
- Bonn II**      **Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) Appendix II:** Range states encouraged to conclude international agreements to benefit species listed.

- UKBAP(P)** **UK Priority Species (Short and Middle Lists - UK Biodiversity steering Group Report 1995)** i.e. species that are globally threatened and rapidly declining in the UK (by more than 50% in the last 25 years). Has a Species Action Plan.
- DBAP** **Devon Biodiversity Action Plan species:** these have been identified as species of key conservation concern in Devon.
- Decline** Substantial local decline in Devon
- Amber List** Bird species of medium conservation concern, such as those whose population is in moderate decline, rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.
- Nb** **Nationally Notable B:** recorded from 30-100 10km squares in Great Britain since 1980

## **Appendix 2**

Species list for Bickington parish, recorded during the field survey on 1 September 2004.

<b>Scientific name</b>	<b>Common name</b>
<i>Acer campestre</i>	Field Maple
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Aeshna cyanea</i>	Southern Hawker
<i>Agrimonia eupatoria</i>	Agrimony
<i>Agrostis curtisii</i>	Bristle Bent
<i>Alnus glutinosa</i>	Alder
<i>Alnus incana</i>	Grey Alder
<i>Apium nodiflorum</i>	Fool's Water-cress
<i>Arctium minus</i>	Lesser Burdock
<i>Artemisia vulgaris</i>	Mugwort
<i>Arum maculatum</i>	Lords-and-ladies
<i>Asplenium adiantum-nigrum</i>	Black Spleenwort
<i>Asplenium ruta-muraria</i>	Wall-rue
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort
<i>Bellis perennis</i>	Daisy
<i>Brachypodium sylvaticum</i>	False-brome
<i>Buteo buteo</i>	Buzzard
<i>Centaurea nigra</i>	Common Knapweed
<i>Centranthus ruber</i>	Red Valerian
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cirsium palustre</i>	Marsh Thistle
<i>Clinopodium vulgare</i>	Wild Basil
<i>Convolvulus arvensis</i>	Field Bindweed
<i>Cornus sanguinea</i>	Dogwood
<i>Corvus corax</i>	Raven
<i>Corvus frugilegus</i>	Rook
<i>Corvus monedula</i>	Jackdaw
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Cruciata laevipes</i>	Crosswort
<i>Cymbalaria muralis</i>	Ivy-leaved Toadflax
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Dryopteris filix-mas</i> agg.	Male Fern
<i>Erica cinerea</i>	Bell Heather
<i>Euonymus europaeus</i>	Spindle
<i>Euphorbia amygdaloides</i>	Wood Spurge
<i>Euphorbia peplus</i>	Petty Spurge
<i>Fagus sylvatica</i>	Beech
<i>Festuca rubra</i> agg.	Red Fescue
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Fragaria vesca</i>	Wild Strawberry

<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Galium mollugo</i>	Hedge Bedstraw
<i>Galium saxatile</i>	Heath Bedstraw
<i>Garrulus glandarius</i>	Jay
<i>Geranium lucidum</i>	Shining Crane's-bill
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill
<i>Geranium robertianum</i>	Herb-robert
<i>Geum urbanum</i>	Herb Bennet
<i>Glechoma hederacea</i>	Ground-ivy
<i>Hedera helix</i>	Ivy
<i>Hirundo rustica</i>	Swallow
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Ilex aquifolium</i>	Holly
<i>Inachis io</i>	Peacock
<i>Iris foetidissima</i>	Stinking Iris
<i>Lapsana communis</i>	Nipplewort
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Ligustrum vulgare</i>	Wild Privet
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Maniola jurta</i>	Meadow Brown
<i>Medicago lupulina</i>	Black Medick
<i>Mentha aquatica</i>	Water Mint
<i>Mercurialis perennis</i>	Dog's Mercury
<i>Oryctolagus cuniculus</i>	Rabbit
<i>Pararge aegeria</i>	Speckled Wood
<i>Parietaria judaica</i>	Pellitory-of-the-Wall
<i>Parus caeruleus</i>	Blue Tit
<i>Passer domesticus</i>	House Sparrow
<i>Phyllitis scolopendrium</i>	Hart's-tongue
<i>Picus viridis</i>	Green Woodpecker
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Polypodium vulgare</i> agg.	Polypody
<i>Polystichum setiferum</i>	Soft Shield-fern
<i>Potentilla erecta</i>	Tormentil
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Potentilla sterilis</i>	Barren Strawberry
<i>Primula vulgaris</i>	Primrose
<i>Prunella vulgaris</i>	Selfheal
<i>Prunus</i> sp.	a planted cherry
<i>Prunus spinosa</i>	Blackthorn
<i>Pteridium aquilinum</i>	Bracken
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Quercus robur</i>	Pedunculate Oak
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rorippa nasturtium-aquaticum</i>	Water-cress
<i>Rubia peregrina</i>	Wild Madder
<i>Rubus fruticosus</i> agg.	Bramble

<i>Sambucus nigra</i>	Elder
<i>Sciurus carolinensis</i>	Grey Squirrel
<i>Scrophularia nodosa</i>	Common Figwort
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene dioica</i>	Red Campion
<i>Sorbus aucuparia</i>	Rowan
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Stellaria holostea</i>	Greater Stitchwort
<i>Tamus communis</i>	Black Bryony
<i>Taraxacum officinale</i> agg.	Dandelion
<i>Taxus baccata</i>	Yew
<i>Teucrium scorodonia</i>	Wood Sage
<i>Trifolium campestre</i>	Hop Trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Turdus merula</i>	Blackbird
<i>Ulex europaeus</i>	Gorse
<i>Ulex gallii</i>	Western Gorse
<i>Ulmus glabra</i>	Wych Elm
<i>Ulmus procera</i>	English Elm
<i>Umbilicus rupestris</i>	Navelwort
<i>Urtica dioica</i>	Common Nettle
<i>Veronica beccabunga</i>	Brooklime
<i>Veronica persica</i>	Common Field-speedwell
<i>Vicia cracca</i>	Tufted Vetch
<i>Vicia sativa</i>	Common Vetch
<i>Viola riviniana</i>	Common Dog-violet