

Parish Biodiversity Audit
for
Chardstock



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2014

Version 1

Written with the help of Devon Biodiversity Records Centre, county recorders and Chardstock parishioners.

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Summary

Chardstock parish is special in an East Devon context for a number of reasons. While it has no outstanding sites, and is barely touched by the Rive Axe SSSI and SAC, it has ten County Wildlife Sites covering a range of habitats, outstandingly clean water in the network of streams and seepages, relatively a large amount of wet alder and willow carr woodland, varied underlying geology giving rise to vegetation and insects assemblages that reflect the range from base-rich to acidic conditions, a dense network of hedgerows and relatively benign farming practices dominated by beef and dairy farms.

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Introduction

Devon County Council has been encouraging local communities to write biodiversity audits for their areas. This one has been produced with guidance from DCC and following examples already available. It has three uses: supporting evidence for the parish's neighbourhood plan, action for wildlife and simple old-fashioned documentation.

With the recent relaxation in planning regulation and presumption in favour of development, there is a need to have a clear basis for recognising areas of intrinsic wildlife interest, as this aspect of the natural environment is a planning consideration. Section 40 of the Natural Environment and Rural Communities Act 2006 places the following biodiversity duty on all public bodies:

‘Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity’

The duty applies to all local authorities, including parish and town councils. Its purpose is to raise the profile of biodiversity and make it a ‘natural and integral’ part of policy and decision making.

The National Planning Policy Framework provides a broad outline of what planners and developers need to consider for wildlife in section 11 (Conserving and enhancing the natural environment). By December 2014 there was no updated guidance on interpreting the NPPF for local wildlife sites, which are important wildlife sites within Chardstock parish, and older guidance that specifically discussed local wildlife sites is presumably no longer valid for planning purposes.

By bringing together knowledge of the natural assets of the parish, this audit may go some way to contributing to and stimulating ideas for local action. There is a surprising wealth of interest in the parish – it would be a shame if some of it cannot be kept for future years. Action can be taken at many levels, from larger land-owners down to community groups working on small patches of land. A few ideas are presented at the end of the document.

Chardstock has a good record of documenting its history and people, for example, Wood & Carter's (1999) *A history of the parish of Chardstock*, and Chardstock Historical Record Group's (2005) *Voices of Chardstock*. Such records are invaluable for helping us understand where we live; the present audit is written with similar intention. As with people and their livelihoods, wildlife can alter imperceptibly, so a record of conditions in 2014 provides a baseline against which to measure future changes.

This is the first draft. It does not represent a comprehensive account of the parish and is based largely on existing records held by the Devon Biodiversity Records Centre (DBRC) and recently gathered records. There are glaring gaps in species records, notably birds, fungi and mammals, but a wealth of local knowledge can be used to build upon and improve this report. It is important that it is seen as a ‘living document’ that belongs to the parish, to be added to and refined by the people of Chardstock parish.

Location and occupants

The civil parish of Chardstock is a rural parish in East Devon lying mostly within the Blackdown Hills Area of Outstanding Natural Beauty (AONB). Except for a short length along the River Axe, none of the boundaries follows distinctive features. The northern and western boundaries adjoin the Somerset civil parishes of Wambrook and Chard; to the west is Membury and to the south is All Saints, which was part of Chardstock parish until 1996. The parish covers 1466 ha and includes the villages of Chardstock and Tytherleigh, several

hamlets and many farmsteads. The parish plan of 2011 gives figures of about 370 properties within Chardstock parish in 2008, and about 830 people in 2009.

Geology

The topography of the parish centres on the valley of the River Kit but a small part lies to the west of Bewley Down on a headwater tributary of the River Yarty. The hills encircling the parish rise to 168m at Storridge Hill in the east, 187m at the northern edge at Huntley Lane, and 243m at Bewley Down to the west. The lowest point is the River Axe at about 40m. Much of the landscape is therefore hilly with incised valleys. Chardstock's underlying rocks are late Jurassic to early Cretaceous. Charmouth Mudstone lies on the lower slopes of the River Kit from Farway to Fordwater, and rarely in pockets further north. Cretaceous Upper Greensand underlies much of the rest of the parish and is exposed or close to the surface on steeper slopes. Remnants of Chalk outcrop in the highest parts of the parish along its northern and western boundaries, and one near Holy City. Capping the hilltops is Quaternary Head or Colluvium consisting of gravelly and clayey sands usually mixed with flint or chert. There is a strip of Alluvium along the narrow floodplain of the River Kit. Springs and seepages emerge along the valley sides where porous sandstone overlies impervious mudstone or clay lenses within the Greensand. Most valley bottoms are damp or saturated where the water table reaches ground level. Most of the soils are neutral but strongly acid soils occur on the eastern flank of Bewley Down and locally base-rich influence is evident in the vegetation at scattered points in the northern half of the parish.

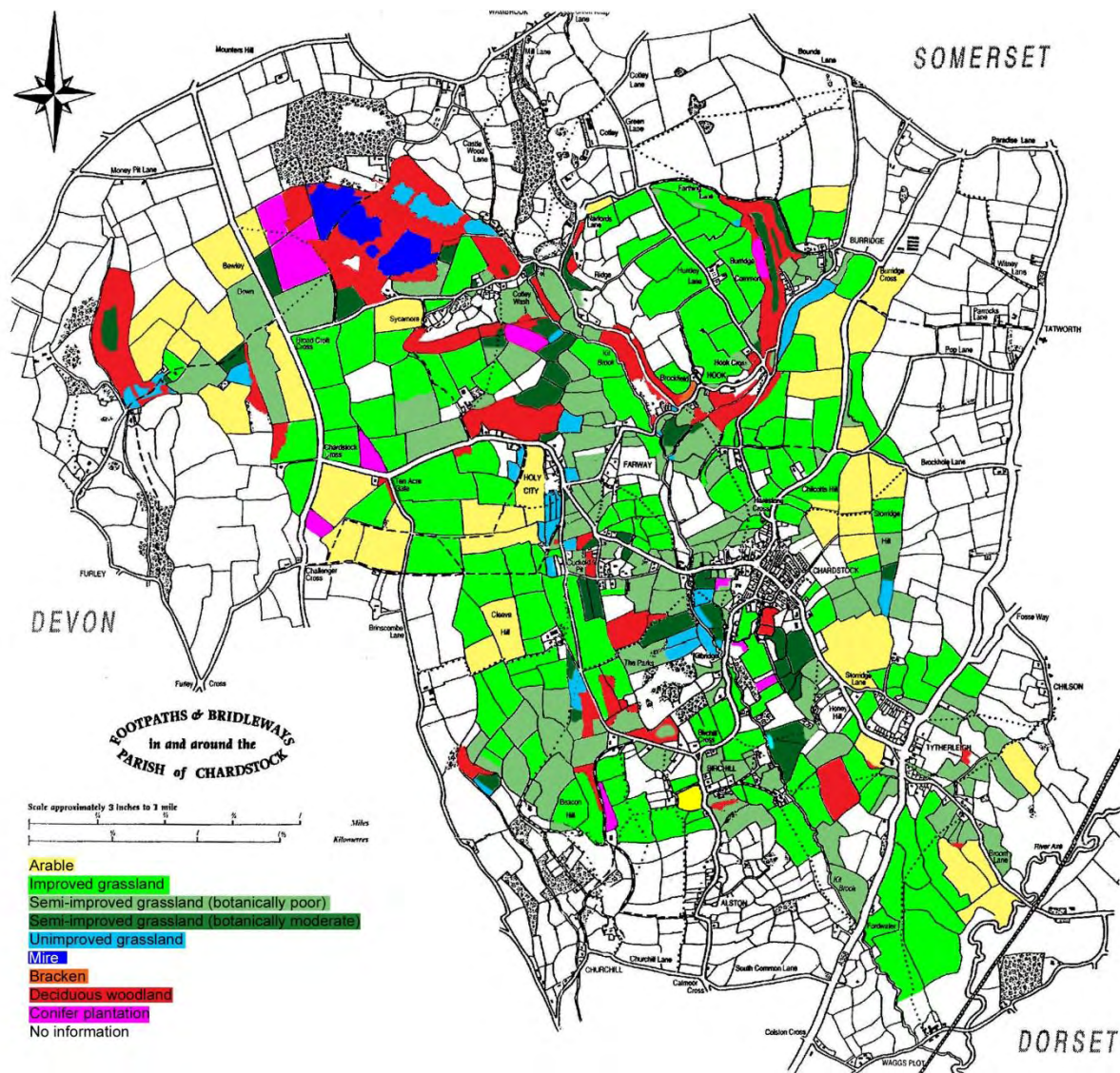
Land-use

The dominant land-use is agriculture, mainly beef, dairy and sheep with associated arable and silage for feedstock, and this occupies mainly Grade 4 agricultural land. Some pasture is horse-grazed, and there is a small alpaca farm at Tytherleigh. Arable farmland occupies small areas of the high ground and low-lying alluvial soils close to the River Axe, where the land is predominantly Grade 3. Woods and copses scattered through the parish are broadleaf, with only a little commercial coniferous woodland. The network of hedgerows has suffered some loss in recent decades but remains an important feature of the parish.

A land-use survey was carried out by Martin Drake in spring and summer months of 2011-2013 based approximately on the Nature Conservancy Council Phase 1 methodology (Nature Conservancy Council 1990. *Handbook for Phase 1 habitat survey - a technique for environmental audit*. Nature Conservancy Council, Peterborough). The survey was conducted from public rights of way and from land where access permission had been obtained. Despite this constraint, a large proportion of the parish could be viewed (Map 1). The map is based on the one in the booklet *Footpaths and bridleways in and around the parish of Chardstock* (Chardstock Historical Record Group, 2002). White areas on the map represent land where access permission was not sought or, in one case, was refused, or private gardens, some of which are large.

Division of grassland presented the usual difficulty in distinguishing grades of agricultural improvement without having walked over most fields. Most grassland was improved to some extent as is normal good agricultural practice but, for the purpose of locating pasture of most wildlife potential, only the two categories of 'good semi-improved' and 'unimproved' pasture are relevant. Some fields recently ploughed were classified as arable fields although within a year to two had been sown as ley, even if an arable crop had been planted before. No attempt was made to measure the extent of dry and wet woodland.

Rather than present a breakdown of the results here, land-use is referred to in the relevant section of this document.



Map 1. Land-use in Chardstock parish 2011-2013.

Designated Sites

Sites with several designations are found in Chardstock parish. These include statutory sites, such as the AONB and one SSSI, and non-statutory wildlife sites. The latter are shown on Map 2 which is based on data provided by Devon Biological Records Centre in 2011. Parts of some of these sites, notably 'Unconfirmed Wildlife Sites', are known to be sufficiently agriculturally improved that they would no longer qualify as wildlife sites. An updated map will be provided in future. Some of these areas can be identified by comparison with the land-use map where arable and improved grassland coincide with wildlife sites.

Blackdown Hills Area of Outstanding Natural Beauty

About 80% of the parish of Chardstock lies within the Blackdown Hills Area of Outstanding Natural Beauty. The boundary lies approximately NNE–SSW passing through the east side of Chardstock village. Chardstock's scenery is typical of large parts of the AONB, with its mix of incised valley, small fields, hedgerows and abundance of pasture.

The Blackdown Hills AONB covers 370 square km of land, spanning part of Devon and Somerset counties. It includes upland plateau, wooded ridge, rolling ridgeland, river valleys (the three main rivers are the Otter, Yarty and Culm) and a northern escarpment (www.blackdownhillsaonb.org.uk/landscape). It was designated in 1991 and is one of 12 AONBs in the south-west, and of 40 in England and Wales. AONBs are areas of land of high quality, whose distinctive character and natural beauty are so outstanding that it is in the nation's interest to safeguard them. The flora, fauna, historical and cultural associations as well as scenic views are factors in the designation of an AONB. The purpose of AONB designation is primarily to conserve and enhance the natural beauty of the landscape, and also to meet the need for quiet enjoyment of the countryside, while having regard for the interests of those who live and work there.

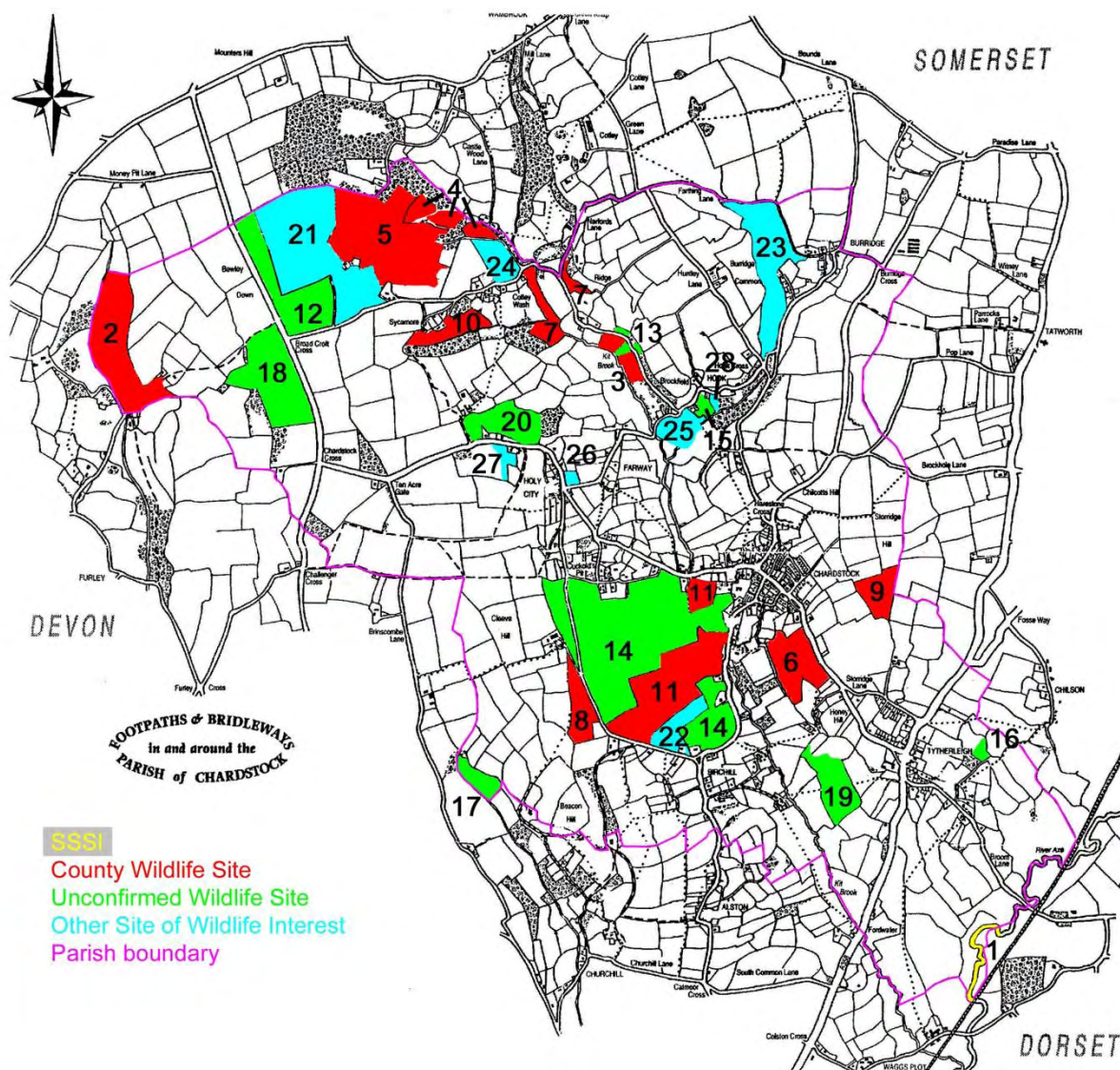
River Axe Site of Special Scientific Interest and Special Area of Conservation

There are several statutory land designations that help to protect wildlife and geological features. Two of them within Chardstock parish are Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC). Natural England, the government's advisory body on the natural environment, is responsible for notifying these designations, and they carry legal implications, including the requirement of consulting Natural England before any operations likely to damage the special interest are undertaken. SSSI are notified because of their plants, animals or geological features that are special in a national (UK) context, whereas SACs contain species or habitats of European importance (listed in the Habitats Directive 1994), and are part of a network of conservation sites set up in Europe known as the Natura 2000 series. SACs on land also have to be notified as SSSI.

In Chardstock, the River Axe is the only designated site and it is both an SAC and SSSI. The SAC / SSSI runs along about 800m of the south-east parish boundary for the length of a single field and about two meanders, and this section is the upstream limit of the SSSI (it ends at the A3052 near Colyford). The SAC / SSSI starts about 150m downstream of the bridge on Broom Lane so, although the river is visible from the bridge, the notified section is not accessible to the public.

The SSSI is notified for its exceptionally diverse aquatic and marginal flora. A variety of plant communities are represented, including in the higher reaches a community type usually confined to sandstone catchments in Scotland. All of the community types represented within the SSSI have an above average diversity of higher plants. The SSSI is notable for a large population of short-leaved water-starwort which is a nationally scarce species more usually associated with ditches. The river also supports diverse communities of invertebrates, including some that are nationally scarce or rare. Several species listed in the EC Directive on The Conservation of Habitats and of Wild Flora and Fauna are recorded here, including salmon, bullhead, otter and medicinal leech. Also of interest is kingfisher which is listed on Annex I of the EC Directive on the Conservation of Wild Birds.

The SAC is notified as a river with floating vegetation often dominated by water-crowfoot (the vegetation types *Ranunculion fluitantis* and *Callitriche-Batrachion*), and for the presence of three fish: sea lamprey, brook lamprey and bullhead.



Map 2. Wildlife sites in Chardstock parish. Sites are numbered in the table below.

SSSI		County Wildlife Sites		Unconfirmed Wildlife Sites		Other Sites of Wildlife Interest	
1	River Axe	2	Bewley Farm	12	Bewley Down	21	Bewley Down
		3	Brockfield Bottom	13	Brockfield Copse	22	Birchill Common
		4	Castle Wood Meadows	14	Chardstock Court & The Parks	23	Burridge Common
		5	Cotley Wash	15	Hook Meadow	24	Cotley Wash Brake
		6	Egg Moor Fields	16	Keates Farm Field	25	Farway Farm
		7	Narfords	17	Old Twist	26	Holy City (E)
		8	Reads Hill	18	The Half Moon	27	Holy City (W)
		9	Storrige Hill	19	Tytherleigh Woods	28	Hook Farm
		10	Sycamore Farm	20	Whitehouse		
		11	The Parks				

County Wildlife Sites

County Wildlife Sites (CWS) are sites of county importance for wildlife, designated on the basis of the habitat or the presence of particular species. Unlike SSSIs, this is not a statutory designation and does not have any legal status or implications for land management. CWS recognition does not demand any particular actions on the part of the Landowner and does not give the public rights of access. However, it may increase eligibility for land management grants. CWSs are usually included in Local Plans as sites of regional or local biodiversity interest. They were once covered by the now-deleted Planning Policy Statement 9 (PPS9) but do not appear in any more recent planning guidance.

Ten County Wildlife Sites have been designated in Chardstock Parish:

- Bewley Farm
- Brockfield Bottom
- Castle Wood Meadows
- Cotley Wash
- Egg Moor Fields
- Narfords
- Reads Hill
- Storridge Hill
- Sycamore Farm
- The Parks

Bewley Farm County Wildlife Site

Bewley Farm straddles the parishes of Chardstock and Membury; about 20 ha of the total 38.4ha are in Chardstock parish. The site lies at the valley bottom of a small un-named tributary of the River Yarty passing through the middle of the site. Most of the area is the wood Great Batch which is deciduous woodland with alders on the lower wetter ground, and oak and ash over hazel on drier higher slopes. There is a small adjoining pasture of unimproved neutral marshy grassland to the south of the wood and, within the wood, open bracken-dominated grassland, much of which was re-planted with mixed deciduous trees in about 2000. The site was surveyed by Gavin Saunders in 1992 and insects surveyed by Martin Drake in 2013.

The site supports several plants of interest. Ancient woodland indicator species include wood anemone, marsh violet, primrose, opposite-leaved golden-saxifrage, apple, holly, wood-sorrel, pignut, remote sedge, wood sedge, creeping soft-grass and bluebell. Several of these, for example, wood anemone, wood-sorrel and bluebell, are associated with more acid soils, although wood sedge and sanicle have affinities with base-rich soils. Plants of the wet grasslands include a mixture of those associated with acid to neutral conditions, such as tormentil, common bird's-foot-trefoil, corky-fruited water-dropwort, lousewort, common knapweed, pignut, crested dog's-tail, heath-grass and purple moor-grass, and only lady's bedstraw is associated with calcareous soils. Corky-fruited water-dropwort is a Devon Notable plant, frequent in east Devon but nationally uncommon. Uncommon insects of the wet woodland and stream margins include the craneflies *Dicranomyia lucida*, *Molophilus corniger*, *Pilaria fuscipennis* and *Tasiocera robusta* and the pointed-wing fly *Lonchoptera nitidifrons*, which is probably associated with the tufted hair-grass in the wet woodland. The uncommon meniscus midge *Dixa maculata* is found at the stream. Other nationally uncommon flies recorded in the glade area are *Acartophthalmus bicolor* and *Sapromyza albiceps*. Species associated with seepages are very well represented within the woodland.

A bridleway runs through the marshy grassland at the south of the site, and a lane passes along part of the south-west boundary.

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)
- Oak Woodland (Devon BAP)
- Alder / willow wet woodland (Devon BAP)

Key species:

- Primrose (Devon BAP)
- Corky-fruited water-dropwort (Devon Notable 3)
- *Lipsothrix nervosa* (aquatic cranefly) (UK Section 41)



Wet woodland at Great Batch in Bewley Farm CWS

Brockfield Bottom County Wildlife Site

Brockfield Bottom comprises a single field of marshy tall-herb vegetation and semi-improved neutral grassland, and a block of wet woodland isolated from the field by a similar block of woodland that appears to be little different in character to that included in the CWS. It is likely that all the woodland is secondary. The total area is given by DBRC as 3 ha which appears to be an underestimate. It lies on a steep slope of landslipped deposits just below the Greensand, where seepages emerge almost continuously throughout the woodland, and springs emerge in the pasture so the whole site is particularly wet. Within the woodland tufa (calcium carbonate, lime) is deposited in the seepages and tiny runnels. The River Kit falls just within its lower boundary. It was surveyed in 1992 by Joan Shotton whose plant list suggests that the field but not the woodland was investigated. Insects were surveyed by Martin Drake in 2013.

Wood small-reed is a Devon Notable plant which is abundant here. Plants indicative of old unimproved grassland are common bird's-foot-trefoil, common knapweed, greater knapweed and meadow vetchling, with the greater knapweed suggesting base-rich conditions, and the presence of the ancient woodland indicator pendulous sedge in the woodland supports this. Another ancient woodland indicator here is betony. The woodland is dominated by alder and ash, and the ground flora has extensive stands of great horsetail, and abundant opposite-leaved golden saxifrage in the seepages. Greater tussock-sedge is frequent in the block of woodland excluded from the CWS and its presence may indicate that this land was once open fen that has now been lost to secondary woodland.

The insects recorded in the woodland include several nationally scarce or uncommon species found in calcareous or base-rich conditions, including the caddis flies *Plectrocnemia brevis* and *Tinodes unicolor*, the soldierfly *Oxycera pardalina* and the crane fly *Dicranomyia lucida*. The rare crane fly *Scleroprocta pentagonalis* is associated with tiny streams. Other scarce flies found here are *Dixa maculata*, *Molophilus corniger*, *Pilaria fuscipennis*, *Sphegina verecunda*, *Stegana nigrithorax* and *Tasiocera robusta*.

A lane passes along the upper boundary of the site.

Links to Devon and UK BAP

Key habitat:

- Alder / willow wet woodland (Devon BAP)
- Rhôs pasture (Devon BAP)

Key species:

- *Lipsothrix nervosa* (aquatic crane fly) (UK Section 41)
- Wood Small-Reed (Devon Notable 2)
-



Brockfield Bottom CWS where the River Kit enters the parish

Castle Wood Meadows County Wildlife Site

Castle Wood Meadows comprises two separated fields of unimproved neutral grassland and species-rich hay meadows, covering 4.6 ha. It lies on the Charmouth Mudstone, perhaps in the western field overlapping with the more acidic landslipped deposits derived from the Greensand. It was surveyed by David Allen in 2007.

The meadows support two Devon Notable plants, pepper-saxifrage and corky-fruited water-dropwort. Plants indicative of old unimproved neutral grassland are agrimony, common bird's-foot-trefoil, common knapweed, meadow vetchling, oxeye daisy, crested dog's-tail and sweet vernal grass. Those indicative of more acid conditions are tormentil and bristle bent. A number of ancient woodland indicators have been recorded for the CWS but it is likely that these are in the adjacent woodland or perhaps the hedgerows. They include the shrubs alder buckthorn and guelder-rose, plants indicating acid soils including holly, bluebell, common cow-wheat, sanicle which occurs on more base-rich soils, and betony, black bryony, soft shield-fern and primrose. The site is perhaps the only known location in the parish for common cow-wheat.

A public right-of-way runs along part of the lower boundary.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadow and pasture (Devon BAP)

Key species:

- Primrose
- Pepper-Saxifrage (Devon Notable 1)
- Corky-fruited water-dropwort (Devon Notable 3)

Cotley Wash County Wildlife Site

Cotley Wash is an inaccurate label for the land known locally but just as inaccurately as Bewley Down. It occupies the middle contours of the south-east facing slope of the Kit valley north of the Cotley Wash road. It is the largest CWS in the parish, covering 27.6ha. The underlying geology is landslipped deposits derived from the Greensand. These are acid and waterlogged, giving rise to wet heath and spring-line acid mire which is becoming overgrown with scrub and secondary woodland where unmanaged. Several small streams arise within the site. As a consequence of its unsuitability as pasture, parts of the site were planted with conifers although recently (about 2010-2014) trees were removed and the land restored to wet heath. Low intensity cattle grazing is the main management tool. Areas of dense purple moor-grass have been invaded by extensive rhododendron, and part of this has also been cleared. The area was entered for Higher Level Stewardship with the aim of restoring wet heath and mire.

Plants indicative of old unimproved acid mire are tormentil, bristle bent, wavy hair-grass and purple moor-grass, of which the last two grasses form extensive stands. A small stand of wood horsetail, a Devon Notable plant, grows in the centre of the mire, and this may be the only population in the parish. Plants of more neutral conditions are common bird's-foot-trefoil and common knapweed. Deciduous woodland dominated by birch or oak supports several plants indicative of ancient woodland in Devon. Those of acid woodland are bilberry, holly, bluebell and wood-sorrel, while those indicating more calcareous conditions are hart's-tongue fern, sanicle and yellow archangel. Several shrubs or small trees of interest are wild cherry, alder buckthorn and guelder-rose. Other ancient woodland indicators are soft shield-fern, creeping soft-grass, marsh violet and primrose.

Two butterflies of interest have been recorded here. Small pearl-bordered fritillary is declining nationally, and purple hairstreak is declining in Devon. Several nationally uncommon insects associated with acid mire are present, including the flies *Eloeophila trimaculata*, *Molophilus corniger*, *Scleroprocta sororcula*, *Tachytrechus consobrinus* and *Tipula yerburyi*. Uncommon insects associated with the streams are the golden-ringed dragonfly, the trickle midge *Thaumalea truncata* and meniscus midge *Dixa maculata*. The woodlands support the flies *Atypophthalmus inustus*, *Diastata vagans* and *Tasiocera fuscescens* (Red Data Book). The assemblages associated with mires and flowing water are particularly well developed here, and are clearly more important than those associated with the woodland habitat.

A bridleway and public footpath run through the northern corner of the site.

Links to Devon and UK BAP

Key habitat:

- Rhôs pasture (Devon BAP)

Key species

- Primrose (Devon BAP)
- Wood horsetail (Devon Notable 2)
- Small pearl-bordered fritillary (UKBAP)



Mire and secondary woodland at Cotley Wash CWS



Purple moor-grass mire at headwater spring on Cotley Wash CWS



Runnels with bog pondweed on restored mire at Cotley Wash CWS

Egg Moor Fields County Wildlife Site

Egg Moor Fields is a series of several fields covering 9.7 ha of unimproved neutral grassland, rush-pasture, tall-herb vegetation and species-rich hay meadows. They lie on the gently sloping east flank of the Kit valley on sandy clay Head deposits which are moderately dry at the highest point and become increasingly wet as seepages emerge further down the slope. Tall hedgerows divide the fields and there are small channelled streams along some of them. The pasture is cattle-grazed and a single grass crop is taken each year. Plants were surveyed by Fiona Freshney in 2007 and both plants and insects were surveyed by Martin Drake in 2012 and 2013.

A suite of plants indicative of old unimproved neutral grassland are autumnal hawkbit, common bird's-foot-trefoil, common knapweed, corky-fruited water-dropwort, meadow vetchling, oxeye daisy, pignut, field wood-rush, crested dog's-tail and sweet vernal grass, of which corky-fruited water-dropwort is a Devon Notable plant which is widespread on the site. The hedgerows support hart's-tongue fern, bluebell and primrose, and opposite-leaved golden-saxifrage is locally abundant in the flushed shaded channels.

Barn owl, mistle thrush, snipe and swallow are on the national Amber list of declining birds.

The caddis fly *Tinodes unicolor* develops in the small hedgerow streams, and usually indicates base-rich conditions, although the suite of herbs in the pasture suggests neutral conditions. Two other uncommon flies are *Beris fuscipes* and *Pilaria fuscipennis*.

The lane from Tytherleigh to Chardstock runs along the top boundary of the site and the new village school was built on part of this CWS so that its land includes some of the herb-rich grassland. A public footpath crosses the south end of the site at Honey Hill. The topmost field is used annually for the Chardstock Street Fayre.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadow and pasture (Devon BAP)

Key species

- Barn owl
- Corky-fruited water-dropwort (Devon Notable 3)

Narfords County Wildlife Site

Narfords consists of two blocks of land totalling 5.5ha and comprising a mosaic of unimproved neutral grassland, tall herb fen and wet and dry broadleaved woodland. The larger block lies on the narrow alluvial floodplain of the River Kit and is mainly wet alder woodland but includes a single field of flushed pasture on the west flank of the hillside. In contrast to this wet block is a smaller block on the eastern hillside well above the Kit, of drier grassland on Greensand. Part of the secondary alder woodland was cleared in about 2012 so that wet fen meadow is returning under light cattle grazing. The hillside grassland has been ungrazed for several years (c. 2010–2014) and by 2014 was rank, tussocky and invaded by extensive bramble and nettle. The site was surveyed by Sarah Frears (1987) and David Allen (2009) although it is not clear in which block their records were made. Insects were surveyed by Martin Drake (2013).

The sites supports two Devon Notable plants: marsh helleborine, which was presumably recorded in the kit corridor, and corky-fruited water-dropwort in the flushed pasture. Several plants indicative of old unimproved neutral grassland are agrimony, common bird's-foot-trefoil, meadow vetchling, common knapweed, autumnal hawkbit, oxeye daisy, field wood-rush, crested dog's-tail and sweet vernal grass. In the flushed pasture is tormentil, which is more indicative of acid soils. The wooded corridor supports several plants ancient woodland indicator species characteristic of base-rich woodlands: hart's-tongue fern, sanicle, yellow archangel and pendulous sedge, while bluebell is more characteristic of acidic soils. Also present are betony, opposite-leaved golden-saxifrage and remote sedge.

Insects recorded on the grassland block included the uncommon soldierfly *Beris fuscipes*. The woodland block supported the nationally scarce flies *Acanthocnema glaucescens*, *Pilaria fuscipennis*, *Sapromyza quadricincta* and *Sphegina verecunda*.

Both blocks are on private land. Lanes run alongside the dry grassland site and along the top end of the wet block at the stream crossing.

Links to Devon and UK BAP

Key habitat:

- Alder / willow wet woodland (Devon BAP)
- Flower-rich meadow and pasture (Devon BAP)

Key species

- Marsh helleborine (Devon Notable 1)
- Corky-fruited water-dropwort (Devon Notable 3)

Reads Hill County Wildlife Site

Reads Hill is a small block (5.2 ha) of semi-improved acidic grassland and a block of deciduous woodland. Some of the grassland had been improved by 2013, perhaps by repeated application of fertiliser or farm-yard manure. The grassland is at most lightly grazed by cattle so that bracken is encroaching. It lies mainly on the steep Greensand slope, with the flatter upper part on clay-with-flint Head deposit. The site was surveyed by Sarah Frears in 1987 and Joan Shotton in 1992.

The site supports two Devon Notable plants, cowslip and corky-fruited water-dropwort. Plants characteristic of old unimproved acid grassland are, along with corky-fruited water-dropwort, heath bedstraw and tormentil, and those of neutral grassland are agrimony, common bird's-foot-trefoil, meadow vetchling, common knapweed, oxeye daisy, crested dog's-tail and sweet vernal grass. In the woodland area are three plants indicative of ancient woodland, betony, primrose and creeping soft-grass. Both the wood and the open slope support a dense population of bluebell, and wood-sage is frequent on the open grassland.

The site is crossed by a public footpath and a lane runs along the lower boundary.

Links to Devon and UK BAP

Key habitat: The site does not support habitats that fit any BAP category. DBRC's account states that the site includes unimproved marshy grassland but this appears to be an error as there is no wet grassland here.

Key species:

- Primrose
- Cowslip (Devon Notable 3)
- Corky-fruited water-dropwort (Devon Notable 3)



Bluebell, pignut and bracken at Reads Hill CWS along the public footpath

Storridge Hill County Wildlife Site

Storridge Hill lies close to the highest point on the east boundary of the parish, at about 155m OD, and comprises three fields on the exposed hill-top occupying 5.3 ha. One is an old chalk or marl quarry, now in-filled, and the others are species-rich hay meadow and unimproved neutral grassland on the clay-with-flint deposit. The quarry field is ungrazed rank grassland with scrubby hedgerows (by 2013) while the two remaining pastures are cattle-grazed. The site is special in the parish as the only example of base-rich grassland and possibly the only location for some species. The site was surveyed by Fiona Freshney in 2007, and insects surveyed by Martin Drake in 2012 and 2013.

Two Devon Notable plants here are corky-fruited water-dropwort and hoary plantain which is unknown elsewhere in the parish. The underlying calcareous influence is clear in the presence of several plants indicative of old unimproved calcareous grasslands, which include hoary plantain, lady's bedstraw, mouse-ear-hawkweed, wild thyme, quaking-grass and yellow oat-grass. An old (1957) record of herb paris noted from chalk suggests that it may have been growing at this site, but was not seen in the 2007 botanical survey. Several indicators of old neutral grasslands are autumnal hawkbit, burnet-saxifrage, common bird's-foot-trefoil, common knapweed, corky-fruited water-dropwort, meadow vetchling, oxeye daisy and crested dog's-tail, while the only acid indicator is tormentil. The more catholic pignut is also here. Hart's-tongue fern and hard fern are indicators of ancient woodland but in the context of this site probably reflect the condition of the scrubby hedgerows with large trees which may be a remnant of quarrying times when their management was unimportant.

Four birds on the Red list of fast-declining birds are skylark, starling, yellowhammer and nightjar, while barn owl and swallow are on the Amber list.

The herb-rich grassland supports a rich assemblage of picture-wing flies (Tephritidae) with 11 species recorded so far, including the nationally scarce *Oxyna flavipennis*. These flies develop in the seeds of herbs.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadow and pasture (Devon BAP)

Key species

- Skylark (UKBAP (P); Red)
- Yellowhammer (UKBAP; Red)
- Barn owl (Devon BAP; Amber)
- Swallow (Amber)
- Nightjar (UKBAP; Devon BAP; Red)
- Herb Paris (Devon Rarity, Notable 1)
- Hoary plantain (Devon Notable 2)
- Corky-fruited water-dropwort (Devon Notable 3)



Ant-hills and bird-foot trefoil at Storridge Hill CWS

Sycamore Farm County Wildlife Site

Sycamore Farm is a series of small fields occupying 4.6 ha on the lower side of a small valley, bounded below by a stream. Spring-line mire is the feature of interest. The underlying geology is a mixture of Greensand and landslip deposits, although there are probably outcrops of limestone among these. The site is managed by low intensity grazing. Plants were surveyed by Joan Shotton in 1992 and by Samantha Davies in 2012.

This is the only site known in the parish for marsh arrowgrass which is a Devon Notable plant. Plants indicative of old unimproved wet acid grassland are lousewort, tormentil and purple moor-grass, and those of more neutral old grasslands are autumnal hawkbit, burnet-saxifrage, common bird's-foot-trefoil, mouse-ear-hawkweed and field wood-rush. In fringing woodland, there are several plants indicative of ancient woodland. Those of acid woods are hard fern, yellow pimpernel, wood-sorrel and holly, while plants more tolerant of a wide range of soil conditions are hart's-tongue fern, betony, marsh violet, opposite-leaved golden-saxifrage, tutsan, wood meadow-grass and creeping soft-grass.

A bridleway runs along the wooded upper (south) end of the site but the open pasture is not visible.

Links to Devon and UK BAP

Key habitat:

- Rhôs pasture (Devon BAP)

Key species:

- Marsh arrowgrass (Devon Notable 1)

The Parks County Wildlife Site

The Parks is one of the largest County Wildlife Sites in the parish, with an area of 24.4 ha. It occupies several fields from the floodplain at Kitbridge to a lane some 75m higher up the valley side, and two fields to the north which are separated from the main block by a single field of semi-improved pasture. The habitats include marshy and semi-improved neutral grassland, and secondary broadleaved woodland. Most of the fields lie on Charmouth Mudstone on the lower slopes and sandy clay Head deposits over Greensand above, with a strip of alluvium on the floodplain and some landslipped deposits derived from the

Greensand. Seepages arise at the junction of the Head with the underlying Mudstone giving rise to predominantly wet pasture. Pasture is grazed mainly by cattle and occasionally with sheep. A single grass crop is taken annually from the larger block.

Plants were surveyed by Joan Shotton in October 1992 and this late date may explain some missing records. Plants and insects were surveyed in the two northern fields by Martin Drake in 2013.

The pasture supports cowslip and corky-fruited water-dropwort, which are Devon Notable species. The dropwort is frequent and widespread on the site. Plants indicating old unimproved neutral grassland are agrimony, autumnal hawkbit, burnet-saxifrage, common bird's-foot-trefoil, meadow vetchling, pignut, crested dog's-tail and sweet vernal grass. Those of more acid soils are tormentil, purple moor-grass and dyer's greenweed which probably does not occur elsewhere in the parish. Meadow barley is also present. Ancient woodland indicators are found in the hedgerows and copses, and include hart's-tongue fern, soft shield-fern, hard fern, bilberry, betony, holly, pale sedge and creeping soft-grass. The acid nature of the soil is shown by several of these plants (hard fern, bilberry, holly), and is in contrast to the scarcity of acid-loving plants in the pasture. Along the river Kit within and outside the CWS boundary is the Devon rarity thin-spiked wood-sedge.

Access for insect survey was restricted, but along the River Kit at the north of the site were four nationally scarce flies: *Chelifera aperticauda*, *Orthonevra brevicornis*, *Syntormon macula* and *Themira gracilis*.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadow and pasture (Devon BAP)

Key species

- Cowslip (Devon Notable 3)
- Corky-fruited water-dropwort (Devon Notable 3)
- Pale Sedge (Devon Notable 2)
- Thin-spiked Wood-Sedge (Devon Rarity)
- Dyer's Greenweed (Devon Notable 1)
- Meadow Barley (Devon Notable 1)
- *Lipsothrix nervosa* (aquatic crane-fly) (UK Section 41)



Herb-rich pasture at Parks CWS, with alders along the River Kit behind

Unconfirmed Wildlife Sites (Potential County Wildlife Sites)

Several sites in Chardstock parish have been identified by Devon Biological Records Centre as having possible wildlife interest and potential for County Wildlife Site status, and are known as Unconfirmed Wildlife Sites (UWS). They were recognised primarily from aerial photograph interpretation, local knowledge or brief visits to the area seeking suitable sites. However, these sites have not been surveyed fully. Some may prove to contain significant wildlife interest, whilst others may prove to be of low value following further survey. Each site would require the landowners' permission for a detailed survey and subsequent assessment to determine whether they meet the County Wildlife Site criteria.

Nine UWS have been identified in Chardstock parish:

- Bewley Down
- Brockfield Copse
- Chardstock Court & The Parks
- Hook Meadow
- Keates Farm Field
- Old Twist
- The Half Moon
- Tytherleigh Woods
- Whitehouse

Bewley Down Unconfirmed Wildlife Site

Bewley Down comprises two fields on the top of Bewley Down, at the highest point in the parish. A trigonometric point here is at 243m OD. The larger field is semi-improved and has relatively low plant diversity. The smaller field is an unusual scrubby field with large patches of common gorse, bracken and bramble. The sward is of low interest but probably structurally resembles a past landscape when grazing and management were far less intensive than today. Two nationally uncommon flies associated with scrub occur here, *Sapromyza albiceps* and *S. opaca*, along with a few other species characteristic of dry heath. The scrubby field is probably the only example of dry acid grassland in the parish.

Brockfield Copse Unconfirmed Wildlife Site

Brockfield Copse is an area of woodland along the lane from Brockfield to Narfords. Its boundary is unclear on EDDC's map but appears to include the wet alder woodland that separates the two blocks constituting Brockfield Bottom County Wildlife Site, and the dry ash – oak woodland on the steep hillside above the lane. The wet woodland is discussed under that CWS account. The dry woodland on the steep Greensand slope has a different plant composition and contains older trees. The ground flora includes bluebell but is mostly dominated by bramble and bracken.

Chardstock Court & The Parks Unconfirmed Wildlife Site

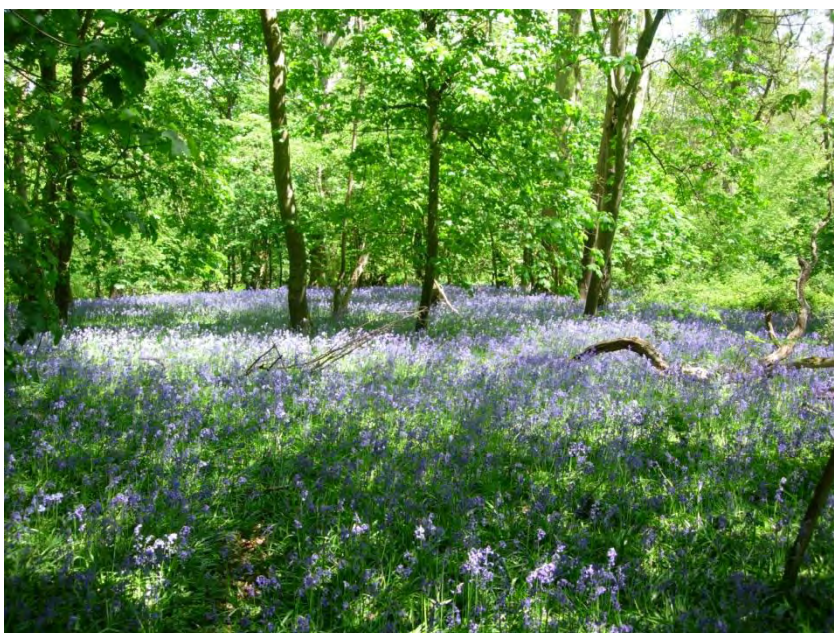
Chardstock Court & The Parks is a large area (65.3 ha) that, together with The Parks County Wildlife Site, forms the medieval deer hunting park from which the area derived its name. A small area has just south of The Parks County Wildlife Site has already been surveyed and found not to meet the standard for County Wildlife Site; this area is pasture with light birch woodland and tall hedgerows. Much of the remaining pasture has been improved by re-seeding, annual application of farmyard manure and under-draining, and that which is visible from footpaths and lanes is unlikely to be of wildlife value. The public footpath running through the site from the River Kit to the lane at Reads Hill Farm passes over less intensively improved pasture. Springs arising from the junction of the Mudstone and overlying Head deposit form streams on the lower slopes flowing into the River Kit. Most is cattle-grazed and a grass crop is taken annually.

Parks Coppice is a small woodland of mixed deciduous and coniferous trees, and whose main feature of interest is the dense carpet of bluebells adjacent to equally dense ramsons, the former preferring acid soils and the latter strongly indicative of calcareous conditions. Herb paris, a good indicator of calcareous woodlands, has been recorded here. Two uncommon flies have been recorded in Parks Coppice, *Atypophthalmus inustus* and *Beris fuscipes*.

Beside the River Kit along the section between the two County Wildlife Sites is a small colony of alternate-leaved golden-saxifrage which is a Devon Notable plant for which the River Kit is an important refuge for this plant in the south-west, and thin-spiked wood-sedge which is a Devon rarity. Another colony of alternate-leaved golden-saxifrage occurs at Kitbridge in a garden just outside the County Wildlife boundary, while thin-spiked wood-sedge occurs at Kitbridge and within The Parks CWS next to the River Kit.

Key species

- Alternate-leaved golden saxifrage (Devon Notable 1)
- Herb paris (Devon Rarity)
- Thin-spiked wood-sedge (Devon Rarity)
- Toothwort (Devon Rarity). It is not clear from the grid reference for the record whether the plant was in this site or perhaps in The Parks CWS.
- *Lipsothrix nervosa* (aquatic crane-fly) (UK Section 41)



Parks Coppice UWS in May

Hook Meadow Unconfirmed Wildlife Site

Hook Meadow is a small area (1.3 ha) of semi-improved rank grassland lying between the lane and Hook Stream at Brockfield. It has not been grazed for many years and was planted with mixed deciduous trees in about 2010. A pond was dug at its bottom end at about the same time.

Keates Farm Field Unconfirmed Wildlife Site

Keates Farm Field is a small field (0.9 ha) of marshy tall-herb vegetation. Nothing more is known about the site as it is not visible from nearby public footpaths.

Old Twist Unconfirmed Wildlife Site

Old Twist lies at the western edge of the parish and is at the headwater stream that flows through Churchill. It comprises a field and wet woodland on the steep eastern flank of the valley on Greensand, from which seepages arise where the Greensand meets the underlying Mudstone. This has led to the formation of wet tall-herb grassland and wet woodland on the lower slopes. The grassland is moderately unimproved but was not grazed for many years (up to 2013). Marsh valerian is a Devon Notable plant here, growing among other swamp plants such as greater tussock-sedge, meadowsweet, hemp-agrimony and water mint. Although wet alder woodland along the stream appears to be recent secondary growth, it supports a number of ancient woodland indicators including hard fern, opposite-leaved golden-saxifrage, primrose, wood anemone, wood-sorrel, creeping soft-grass and remote sedge. Three nationally uncommon flies occur here, *Beris fuscipes*, *Lonchoptera nitidifrons* and *Sphegina verecunda*.

The ash-alder woodland is more-or-less continuously wet with numerous seepages where opposite-leaved golden-saxifrage is abundant. Bluebell and wood-sorrel are ancient woodland indicators.

The Half Moon Unconfirmed Wildlife Site

The Half Moon lies on the crest and west-facing slope of Bewley Down. The upper half was re-seeded in 2011, leaving an area of about 6 ha of semi-improved cattle pasture with seepages giving rise to small patches of herb-rich acid wet grassland. It lies entirely on Head deposit. Lousewort is present.

Tytherleigh Woods Unconfirmed Wildlife Site

Tytherleigh Woods (Great Wood and Little Wood) is secondary deciduous woodland on the west-facing slopes of the Kit valley below Tytherleigh. It lies on the junction of the Head deposits and the underlying Mudstone which elsewhere in the parish gives rise to seepages, but, from the public footpath passing through the wood, it appears to be moderately dry. The ground flora is typical of old woodland and includes the indicators toothwort (Devon rarity) and early-purple orchid which gives a good display along the footpath in early summer. The site is unusual in the parish for its diverse flowery ground flora in spring.

Early purple orchids among dog's mercury at Great Wood along the public footpath



Whitehouse Unconfirmed Wildlife Site

Whitehouse is secondary deciduous woodland on a north-facing hillside at Holy City. Several old banks with ditches within the woodland suggest that the area was once pasture divided into quite small fields. It lies on a fairly steep slope on Greensand and landslipped deposits, from which numerous seepages arise to become the headwater stream that flows into the River Kit several fields away. The stream has the steepest gradient of all found in the parish, and rapidly slumping banks. Much of the wood is dry on the upper slopes, becoming wetter downhill. Seepages are frequently dominated by hemlock water-dropwort which suggests that, despite the underlying geology being acid Greensand, base-rich water arises from the seepages. There is extensive Himalayan balsam in the wetter parts of the wood and along the entire stream course.

Several nationally uncommon insects have been recorded. Several species are associated with calcareous seepages, including the caddis fly *Ernodes articularis*, the soldierfly *Oxycera pardalina*, the crane flies *Dicranomyia lucida* and *Paradelphomyia ecalcarata* (Red Data Book). Other scarce flies are *Beris fuscipes*, *Coniosternum decipiens*, *Dixa maculata*, *Fannia ringdahlana* (predominantly Scottish and very rare in England), *Pilaria fuscipennis*, *Sphegina verecunda* and *Thaumalea truncata* (usually associated with acid conditions). Several of these species are particularly scarce in south-west England.

The base-rich aspect of this wood makes it of great interest in the context of Chardstock parish.

Key species

- *Lipsothrix nervosa* (aquatic crane fly) (UK Section 41)

Other Sites of Wildlife Interest

These are sites that have been surveyed but do not meet the criteria for a County Wildlife Site. Eight sites were identified by Devon Biological Records Centre, most of which are small (less than about 5 ha). Bewley Down and Burrige Common are extensive and have more public access along public footpaths or permissive footpaths than most sites of wildlife interest in the parish. Thus while they may not meet criteria for site selection, they are valuable as places for enjoyment of relatively unmanaged and remote countryside. More

sites of likely interest have been located, and two of them are mentioned here: Burr ridge Pasture and Whitehouse Fields (not so named on maps). They have not been notified to the Devon Biological Records Centre but deserve consideration as County Wildlife Sites.

but they include the extensive mosaic of coniferous woodland, semi-improved grassland, unimproved grassland and secondary woodland at Bewley Down (45 ha) and the mosaic of secondary broadleaved woodland, bracken and marshy tall-herb vegetation at Burr ridge Common (17.1 ha). These two sites are mentioned not only because of their large area but because they have more public access along public footpaths or permissive footpaths than most sites of wildlife interest in the parish. Thus while they may not meet criteria for site selection, they are valuable as places for enjoyment of relatively unmanaged and remote countryside. Uncommon species have been recorded at both sites, including at least 20 nationally scarce or rare insects.

Bewley Down

This is an extensive mosaic of coniferous woodland, semi-improved grassland, unimproved rough grassland and both dry and wet secondary woodland (45 ha). Large beech on old hedge-banks are likely to be of value to birds, insects and lichens. Public footpaths and bridleways pass through it.

Key species

- Adder (Wildlife & Countryside Act, Section 41 species)
- Kestrel (Amber)
- Purple hairstreak butterfly (declining in Devon)

Birchill Common

This is part of Parks. It has acid grassland with bracken and birch. Nothing more is known about it. It is visible from the lane.

Burr ridge Common

Burr ridge Common, one of the parish's old commons sold off in 1995, is mosaic of secondary broadleaved and conifer woodland, rough grassland with bracken and marshy tall-herb vegetation (17.1 ha). The Hook Stream arises in the common, passing through wet alder and willow woodland. Drier woodland on the greensand slope has a good show of bluebells in May, along with other woodland plants including sanicle and occasional common twayblade. A permissive path runs its entire length.

Key species

- Marsh valerian (Devon Notable 3)
- Narrow buckler-Fern (Devon Notable 3)
- Primrose (Devon BAP)
- *Lipsothrix nervosa* (aquatic crane fly) (UK Section 41)



Hook Stream and rough grassland at Burr ridge Common

Cotley Wash Brake

This small woodland (4.4ha) is mainly beech plantation on what was probably previously oak woodland, a little part of which still exists in the bottom corner, along with a true woodland ground flora that includes the ancient woodland indicator sanicle. The ground flora under the beech plantation is mundane but has a good show of bluebells in May. A few silver firs are probably the tallest trees in the parish. A public footpath runs through it and a track alongside.

Farway Farm

This is a small area (4.2 ha) of semi-improved pasture, rank grassland, tall hedges and alders alongside the Hook Stream. A weak springline arises near the stream. A public footpath runs up one side, where dubious native daffodils can be seen in spring.

Holy City (East)

This is a single damp horse-grazed field with one of the most sedge-rich turfs of unimproved neutral grassland in the parish (hairy sedge and yellow sedge), with frequent corky-fruited water-dropwort (0.6 ha). Lanes border two sides.

Holy City (West)

Two fields of unimproved neutral grassland (1.7 ha). Nothing more is known of this site. A footpath runs outside one border.

Hook Farm

Devon Biological Record Centre describe this small patch (0.6 ha) as 'marshy tall herb vegetation' but for many years it has been secondary wet woodland of alders and willows on continuous and possibly base-rich seepages, as can be seen from the lane at its upper boundary.

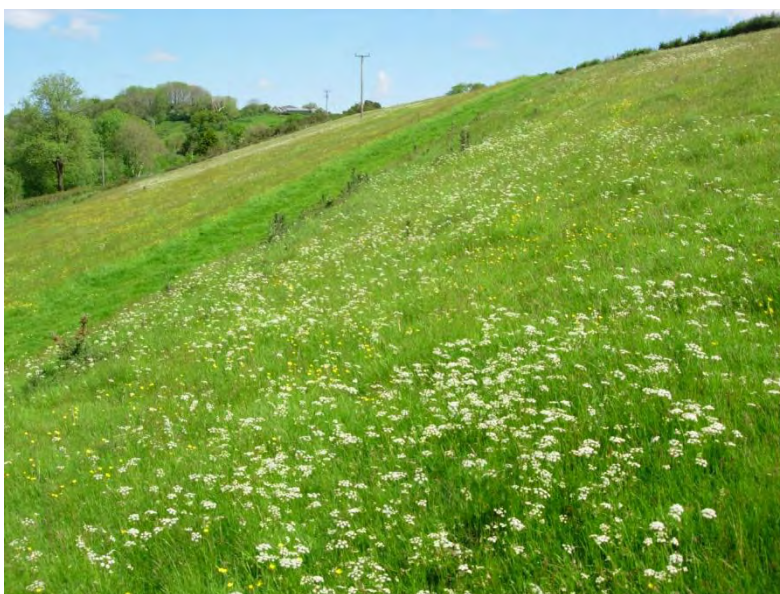
New sites worthy of closer survey

Burr ridge Pasture

Burridge Pasture (ST313060, ST312059) lies on the steep Greensand slope above the lane from Hook to Burridge. It is neutral to slightly acid moderately herb-rich grassland. The hillside is divided by fences now that hedgerows have been removed. It is lightly grazed by cattle and sheep although has had periods of no grazing, and with occasional topping to keep gorse from encroaching. Plants indicating old unimproved grassland are burnet-saxifrage, common bird's-foot-trefoil, common knapweed, corky-fruited water-dropwort (widespread but not frequent), cowslip, meadow vetchling, pignut, tormentil, crested dog's-tail, field wood-rush, sweet vernal grass and a small stand of quaking-grass which is unexpected on this Greensand site as it is an indicator of base-rich soils. There is occasional bluebell within the sward. A lane runs along its entire lower boundary.

Key species:

Corky-fruited water-dropwort (Devon Notable 3)



Pignut in profusion at Burridge pasture

Whitehouse Fields

Whitehouse Fields (ST297052, ST297053) lie on the slope downhill of Whitehouse Unconfirmed Wildlife Site wood. These are three fields of cattle-grazed herb-rich neutral grassland on landslipped deposits from which seepages arise, giving rise to flushed areas set in moderately damp pasture. Species indicative of old unimproved grassland are common knapweed, corky-fruited water-dropwort, which is widespread and frequent, heath bedstraw, meadow vetchling, pignut, crested dog's-tail, sweet vernal grass and wavy hair-grass. The site is not visible from public rights of way.

Key species:

Corky-fruited water-dropwort (Devon Notable 3)



Herb-rich pasture at Whitehouse Fields

Habitats

Water courses

Streams and seepages are one of the most important habitats in Chardstock parish. The Greensand that underlies much of the parish is classified by the Environment Agency as a principal aquifer, which is permeable rock that usually provides a high level of water storage. Principal aquifers may support water supply and river base flow on a strategic scale. It is therefore not surprising that water courses are so important in Chardstock parish. A small area from Ridge Hill to Hook stream is a Groundwater Protection Zone as this land is just above the small abstraction point at Hook Springs.

The River Kit has high water quality. Chemical monitoring by the Environment Agency up to 2009 rated the water quality A on a scale of A (very good) to F (very poor) at two points, Narfords where the stream enters the parish and at its confluence with the River Axe where it leaves. For its entire length within the parish the stream is therefore of high quality. The Kit river basin is one of relatively few in the Axe and Lim EA catchment areas that has 'good' ecological status, on a four-point scale from good to bad using the contemporary Water Framework Directive methodology. This indicates that there are no issues such as settlements or agricultural pollution affecting the catchment. The River Axe at its confluence with the Kit at Axe Farm was also rated A in 2009 but 'poor' on the WFD scale.

As well as the main artery provided by the River Kit, the next significant stream and valley is its tributary, the Hook Stream (not so named on maps but known locally by this name). A third stream of importance arises close to Woonton Farm and flows within woodland for much of its length. As with Hook Stream, there is little input of nutrients from adjacent landuse, leading to clean water. Many smaller streams arise discrete springs or as more diffuse seepages from the hillside at the junction of the Mudstone and overlying permeable Greensand. As they are derived from groundwater, rather than surface run-off, it is likely

that their water quality is high and that they acquire nutrients mainly from point sources such as leaking domestic septic tanks, cattle barns and from fertilised pasture and arable land.

Otter has been reported from both the River Kit and Hook Brook. Trout and salmon use the River Kit and small trout live in the Hook Stream. The Kit is probably the main spawning site for trout in the Axe catchment and therefore plays particular importance to local fishing. Brook lamprey breed in the River Kit at Brockfield at the road bridge where they can be seen in spring most years (and presumably elsewhere) and eel and bullhead have been recorded in the Hook Stream. A rich aquatic invertebrate fauna lives in the Hook Stream where several species such as the large stoneflies *Dinocras cephalotes* and *Perlodes microcephala* characteristic of northern and far western Britain have been found. The numbers of species in three important groups of aquatic invertebrates recorded in Chardstock parish give a good indication of the value of these small streams and seepages: 15 species of stoneflies (more than 40% of the British fauna), 13 species of mayflies (more than 25%) and 42 caddis flies (more than 20%). Among the many nationally uncommon or rare flies with aquatic larvae found in Chardstock parish is the BAP crane fly *Lipsothrix nervosa* which lives in saturated dead-wood lying in seepages. Fish benefit from the cover provided by less tidied-up reaches which characterise much of the Kit and its tributaries. Dipper has been recorded at the lower end of the Kit and kingfisher in its middle reaches.



River Kit upstream of Kitbridge

Wet heath and mire – Rhôs pasture

These wet habitats are open ground with permanently saturated soils. Wet heath is drained and often sandy or stony, whereas mire is defined as peat soils which develop when dead plant material accumulates rather than decays. Wet heath is usually acid whereas mires span the range from acid bogs to base-rich fens. Elsewhere in Devon such habitat is called 'Rhôs pasture', and is characterised by a mix of wet heath, rush pasture, fen meadow, mire and scrub. The most obvious dominant plant is purple moor-grass. Other plants living on these wet sites are specialised for the demanding conditions and include many that have become rare as a result of agricultural drainage. When left unmanaged, these wet sites become scrubbed over with birch, willow and alder to eventually become wet woodland. Rhôs pasture is listed as a priority habitat in the Devon Biodiversity Action Plan and 'Purple moor-grass and rush pastures' is a habitat of principal importance in England.

Within the parish of Chardstock there was once extensive heath on Bewley Down. This would have been dry heath on the hill-top and wet heath merging into mire as seepages arise downhill. Dry heath has gone but there are remnants of heathland plants in a few

places, such as the hedgebanks where bell heather, western gorse and bilberry can be found, for example on the Half Moon and the road from Holy City to Myrtle Farm. Tiny areas of this vegetation occur in rides within the conifer plantation on the top of Bewley Down.

Wet heath is being restored at Cotley Wash County Wildlife Site. At this site, heather, cross-leaved heath, bell heather, sundew, western gorse and bristle bent are now re-establishing. In the trickles here, the classic runnel flora with bog pondweed is developing. This site appears to be the only example of wet heath in the parish. Acid mire is extensive at this County Wildlife Site where it is dominated by hard tussocks of purple moor-grass interspersed with thickets of western gorse, with occasional pockets of *Sphagnum* moss. Succession to woodland with rowan and downy birch is seen here, particularly on the higher slopes near the conifer plantation. Birch is relatively uncommon in the parish but grows well here (and in parts of The Parks). Extensive rhododendron remains on this area. Invertebrates of acid mire and wet heath occur here, including keeled skimmer dragonflies whose larvae develop in little runnels. More details are given in the account of this County Wildlife Site.

Wet woodland

Wet woodland is a UK Biodiversity Action Plan habitat and is listed on the Devon Biodiversity Action Plan which provides a very clear exposition of the wildlife value and threats to this under-valued resource.

Wet woodland in Devon occurs on permanently waterlogged soils in river valleys, on ground surrounding bogs or mires, on the transition between open water and drier ground, and beside small streams. Nationally this is a rather scarce habitat, but the moist climate and often heavy soils of Devon make wet woodland a characteristic feature in the landscape and a home to a diversity of specialised wildlife. Although the plants and birds using wet woodlands are not nationally uncommon, some thrive here, for example, opposite-leaved golden saxifrage, marsh violet, angelica and marsh valerian, and willow tits. Lichens and invertebrates include many that are restricted to this habitat but their lack of popularity has under-played the importance of wet woodlands for these groups.

Wet woodland is a major feature of Chardstock parish as a consequence of the geological formation of porous Greensand lying over less pervious Mudstone which lies near the bottoms of the valleys throughout the parish. Spring-lines arising from this junction lead to saturated soils which are difficult to use for agriculture so have remained as or reverted to wet woodland. Wet woodland is the dominant type in the valley bottoms, and sometimes rises some distance up the hillsides where seepages are very extensive, as happens in the woodlands along the Hook Stream and upper part of the River Kit. Despite the importance of this habitat, little of it is included in the series of County Wildlife Sites, probably because the selection criteria are strongly biased towards higher plants which tend to be relatively mundane in these woodlands. The seepages and tiny streams are probably mostly neutral in pH but some are clearly calcareous and have depositing limestone (tufa). This type of seepage is particularly valuable to some invertebrates and is relatively uncommon nationally. A large number of nationally scarce insects, particularly flies, have been recorded at these wet woodlands in Chardstock parish, and many hundred species altogether. While not all are associated specifically with wet woodland, the richness does highlight the importance of these wet woods.

Good examples are found at:

- Burridge Common where there is a very long corridor along the Hook Stream
- Hook in the old knackers' yard, gardens and water authority's land on both sides of the valley
- Brockfield Bottom County Wildlife Site

- Sycamore in woodland south of Sycamore County Wildlife Site
- Whitehouse Unconfirmed Wildlife Site
- The Parks Unconfirmed Wildlife Site, a small area near the south boundary close to Fernhams
- Old Twist Unconfirmed Wildlife Site
- Great Batch within Bewley Farm County Wildlife Site

Dry woodland

These are distinguished from wet woods in this audit although they often grade into one another as they cut across spring-lines. They are characterised by being dominated by oak or ash, but with a considerable mix of other trees and large shrubs. Oak woods are listed in the Devon Biodiversity Action Plan as they are relatively scarce in the county when compared to the cover of oak woodlands in other southern English counties. Similarly in the Chardstock parish, these woods occupy only a small total area but are important not only for the different suite of species that they support, when compared to wet woods, but because they are more accessible and several have public footpaths running through them.

Many of the oak and ash woods have an understory of hazel, and it is highly likely that these were once working woods generating timber from the large oaks and ash standards and smaller products from hazel coppice. Within the parish, holly is particularly frequent in these woods as it favours the dry slightly acid Greensand soils. The ground flora is often spectacular in spring, with bluebells which also like the slightly acid to neutral soils, being a very widespread plant, along with primrose, anemone, wood sorrel and some less obvious plants such as sanicle and town-hall clock (moschatel).

Good examples that can be accessed from public rights of way are Great and Little Wood at Tytherleigh (also of interest because of early purple orchid), Burridge Common and the upper slopes of Cotley Wash County Wildlife Site. Footpaths or lanes pass along other moderately good examples at Parks Coppice, the unnamed wood above the road near Reads Hill Farm and above the lane between Brockfield and Ridge.

Unimproved grassland

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 underwent 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 0.2 million ha (about 770 square miles).

Unimproved grassland is often very flower-rich and attracts an abundance of butterflies and other invertebrates. The rich insect life in turn attracts bats and birds such as the green woodpecker, and longer swards foster voles that are preyed upon by barn owls.

As in the rest of Devon, within Chardstock parish there is little genuinely unimproved grassland as it is so quickly and irreversibly damaged by the application of fertilizer, slurry and herbicide, and even all-but-light dressings of farmyard manure can favour grasses over herbs. Heavy and constant grazing can also reduce the interest. In Chardstock parish, most of the better examples have been recognised and included within County Wildlife Sites. Some County Wildlife Sites have grassland described as unimproved, for example Egg Moor Fields, but in practice it is semi-improved, that is, it receives light fertilizing, usually using farmyard manure. Better examples include the isolated northern fields of The Parks CWS through which the public footpath runs from the village to the footbridge, a few patches at Storridge Hill CWS, and some fields on Woonton Farm. Exceptionally herb-rich and sedge-rich swards exist in long-established gardens and some horse paddocks.

Chardstock's unimproved grasslands range from relatively infrequent dry and slightly calcareous swards to many more that are damp to marshy or rushy, and these are mainly neutral. More acid grasslands merge into acid mire in a few cases. Total lists of plants are usually long but the more obvious and attractive species are the grasses crested dog's-tail and sweet vernal grass, and the herbs common knapweed, common sorrel, cuckooflower, large bird's-foot-trefoil, pignut and rough hawkbit. Where the ground is wetter, the larger obvious plants include meadowsweet, marsh ragwort and marsh thistle. On the more acid soils where Greensand is close to the surface, tormentil can be abundant.

These grasslands usually support good populations of the Devon Notable corky-fruited water-dropwort, which is uncommon nationally but moderately frequent in east Devon and west Dorset. Skylark and barn owl are associated with less-improved grasslands in Chardstock.

Hedges

The Devon Hedge Group provides a summary of the importance of hedgerows and is quoted here. Devon's hedges are truly world class. In a country famed for its hedgerows, Devon has a larger and more intact hedgerow heritage than any other county in Britain. Most of the county's hedgerows are ancient, most dating back to Medieval times or before, and through their rich and intricate patterns tell the story of Devon's landscape and farming traditions over many centuries. They are a distinctive feature of our countryside, important culturally, of great value to wildlife including threatened species like the dormouse, and deliver numerous other public benefits like soil protection, water regulation and carbon storage.

Devon has more hedges remaining than any other county in the UK, reflecting its large size, its pastoral landscape and the favourable management and agricultural systems adopted by local farmers. It is estimated that there are 53,000 km (33,000 miles) of hedge in Devon and this includes about 20% of all the species-rich hedges left in the UK. Devon's hedgebanks are an intimate element of the farmed landscape and over large areas of the county are the main refuge for a wide range of plants and animals. The successful conservation of hedges is critical to that of Devon's characteristic landscapes and much of the county's wildlife. (Devon Hedge Group, 2014). As well as providing home for several rare species such as dormouse, hedges are important for a wide range of commoner species. In areas of more intensive agriculture they provide refuges for plants and animals, and corridors along which animals can move safely. Hedgerow trees support a disproportionately large resource for insects and birds compared to the same tree within woodland.

Within Chardstock parish, Devon hedges are by far the commonest field boundary; fences without adjoining hedges are relatively uncommon. Hedges were removed in 1970-1990 using government grant-aid but since about 2000 there has been no noticeable removal of hedges. The length of hedgerows has not been estimated. A large proportion of hedges in the parish is well maintained and is stock-proof, even if supplemented by fencing. From a wildlife perspective these annually flailed hedges are less interesting than those left for a longer before being managed, as they tend to bear few flowers and fruit. A smaller proportion has been allowed to grow tall so that although not necessarily stock-proof, they produce more flowers and fruit, favouring pollen and nectar-feeding insects and seed-feeding birds.

Many shrubs and trees are found in Chardstock's hedges, and many are probably species-rich when compared to hedges nationally, that is, they support at least five woody species per 30m length. The composition varies throughout the parish but the commonest components are hazel, blackthorn and hawthorn, often with conspicuous amounts of ash, dogwood, elder, elm, field maple holly, oak and sallow (grey willow). Typical beech hedges

of the Blackdowns are found on Bewley Down. Sometimes gorse has been left to grow as part of a hedge.

As most of the pasture in the parish is improved or semi-improved but species-poor in plants, hedgerows provide an important refuge for plants. Without the dense network of hedgerows, many common plants that are taken for granted in Chardstock parish would be much less frequent. These include domineering species such as cow parsley and hogweed, but also the many spring flowers such as primrose and greater stitchwort, and summer species such as bush vetch, black bryony jack-by-the-hedge and red campion. Even species regarded as more typical of old woodland, such as bluebell and dog's mercury, are frequent in Chardstock's hedgerows. Hedgerows along the lanes can be seen to support many flowers from spring to autumn but their value is particularly obvious on the more intensively farmed uppers slopes and tops of hills where the fields, even if pasture, support only a few common plants. In winter hedge banks can be seen to support plants that are not present in the pasture, for example polypody ferns can be particularly obvious at this time of year. Some hedge banks on Bewley Down support remnants of the heath vegetation that was probably once extensive here, including bell heather, bilberry and western gorse. Hedge banks are one of the few places where wall penny can be seen in the parish.



Tall and short hedges on Reads Hill

Green Lanes

Green lanes are tracks with a boundary along both sides. The boundary may be a hedge, fence or some other stock-proof barrier, and ditches or streams may be included. The effect is a relatively unmanaged corridor which, if hedged on both sides, provides a considerably warmer and sheltered microclimate than a single hedge can. In some parishes green lanes offer wildlife a haven in an otherwise agricultural landscape, supporting ancient woodland species long after the adjoining woodland has gone.

In the parish of Chardstock there are several green lanes, some of which are public footpaths. Curiously some of these have names when most metalled lanes in the parish have none. Examples on public rights of way are the track leading uphill from Yard Farm, at Sycamore and at Woonton Farm, Chillpits Lane near Chillcots Farm, Farthing Lane above Burridge Common and the bottom of Egg Moor Lane. Others with no public right-of-way are

two leading up to Huntley Hill (Homeclose Lane and a second un-named, both impassable overgrown in 2013), one running parallel with the footpath at Keates Farm in Broom Lane, at Thornfield off Storridge Lane, Stockstyle Lane (now just a narrow field) below the farm of this name, and Egg Moor Lane as it runs along the contours.

Without grazing, the vegetation of these green lanes is usually more luxuriant than that growing on the pasture side of the hedges, and the greater numbers of flowers attracts more insects, noticeably butterflies and hoverflies. A similar effect can be seen on a few public footpaths where a fence has been erected to separate the crop or pasture from the footpath, for instance the path from Brinscombe Lane that runs along the parish boundary over the high point of Reads (Cleve) Hill.



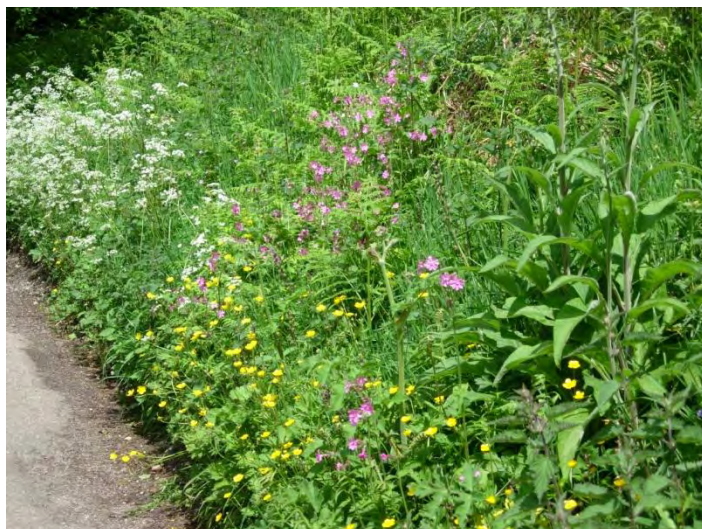
Green lane on the public footpath at Yard Farm

Verges

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. 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. They may support populations of scarce or declining species of plants and animals. 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.

Within the parish of Chardstock, verges tend to be very narrow or non-existent owing to most highways being lanes bordered by Devon banks. The narrow strip of grass between the bank and the tarmac tends to be a nutrient-enriched rank grass sward with common large herbs such as hogweed, cow parsley and nettles, although the adjacent hedge banks are

often more floristically interesting. There are a few wider verges but none appears to be of much interest, for example at the north end of Brinscombe Lane and towards the top of Narfords Lane where bluebell is frequent.



A Chardstock road-verge in May

Veteran Trees

It has been estimated that Britain may be home to around 80% of Europe's ancient trees. Veteran trees are large old trees found in wood-pasture and parkland, but also in a number of other locations, such as ancient yews in churchyards, mature oaks in hedgerows and many noble trees in ancient woodlands.

Ancient trees support particularly rich assemblages of invertebrates, fungi, mosses and lichens. Several species of bat may use hollow trees as roosting sites and birds such as tree creepers and woodpeckers feed on the insects living in the bark. Insects such as hornets are associated with old trees.

Natural England has defined veteran trees as "trees that are of interest biologically, culturally or aesthetically because of their age, size or condition". Veteran trees will have a girth at breast height which is at least:

- 1 metre - hawthorn, blackthorn
- 2.5 metres - field maple, rowan, yew, birch, holly
- 3 metres - oak, ash, Scots pine, alder
- 4.5 metres - sycamore, limes, chestnuts, elms, poplars, beech, willows, pines, non-native trees.

In relation to oak it has been taken that trees with a diameter (not girth, as above) at breast height of more than:

- 1.0m are potentially interesting
- 1.5m are valuable in terms of conservation
- 2.0m are truly ancient.

No survey has been undertaken to locate such trees in Chardstock parish but several beech and ash may be candidates, for example beech on the parish boundary at Farthing Lane above Burr ridge Common.

Orchards

Traditional orchards have great cultural and landscape importance and can be valuable habitat for a wide range of species from fungi and lichens, insects and other invertebrates, to birds and mammals. The trees themselves support a variety of mosses, lichens and often mistletoe, while the large amount of deadwood provides an important habitat for insects and fungi including some very rare ones. Hole-nesting birds find opportunities here, woodpeckers, nuthatches, tree-creepers and tits may be seen on tree trunks and hollow branches, and fieldfares, starlings, redwings, thrushes, blackbirds and jays eat the fruit. As there is no herbicide use in most old orchards, the ground flora often thrives.

Losses of traditional orchards have been severe in recent decades, with estimates ranging from 40 to 95% loss.

Apple orchards were once frequent in Chardstock parish but now only a few remain, and these are fragmented. Some contain local apple varieties that are now scarce, notably Bewley Pippen. This loss in the parish has been recognised and is being addressed by a project to replace old apple varieties to rejuvenate orchards.

Pits and quarries

Pits, quarries and cuttings are listed on the Devon Biodiversity Action Plan as habitats of conservation concern in Devon as they can support uncommon species of bird such as peregrine falcon and raven, bats roosting in cave-like quarries and reptiles such as common lizard and adder using the hot conditions of found in quarries.

Chardstock parish has a few small pits which are mainly overgrown with trees and the only once-extensive quarry at Storridge Hill is now in-filled. A pit by the lane leading uphill out of Holy City was probably quarried for marl as it lies on one of the rare outcrops of Chalk in the parish, although the vegetation shows no indication that the soil is particularly calcareous. The pit at Cuckold's Pit is now a small plantation.

The quarry at Storridge Hill (a County Wildlife Site) was quarried for marl and stone as the rocks consisted of lower layers of sandstone, passing through hard sandy limestones of the Upper Greensand, and topped by Chalk. This exposure was once of geological interest as it was one of the few examples of this stratigraphy away from the coast, and which is also seen at Snowden Quarry near Chard. The base-rich soil supports several plants of calcareous grasslands that occur no-where else in the parish (see the account for Storridge Hill County Wildlife Site).

Public open space

There is no land with unhindered public access except for the green at Westcombes. Chardstock Park Trust manage land by the community hall as children's play area, and have plans to improve the flower-richness of a small area of grassland. St Andrews Church of England Primary School owns some herb-rich grassland that was once part of the Egg Moor Fields CWS, and also have plans to develop this grassland for wildlife. The Cricket Club's pitch is improved grassland with well tended margins and surrounding hedges. There is a very small area of tended grass outside Chardstock Community Hall.

St Andrew's Church and churchyard

A church has been at the present site since at least the early 14th century, and possibly long before this as the settlement (but not a church) is mentioned in the Domesday Book. The present church of knapped chert and sandstone was built in 1864. The churchyard supports neutral grassland with patches that resemble the relatively unimproved sward in the nearby County Wildlife Site (The Parks, northern fields) but in general it has relatively low interest. The churchyard is well tended. There are two large Lebanon cedars and a moderately old yew.

Sandstone and limestone gravestones support lichens but the few granite stones are free of mosses and lichens. The only Devon record of the lichen *Aspicilia radiosa* and the nationally scarce *Toninia verrucarioides* were recorded on the tops of two calcareous (ham stone?) box tombs.

Serotine bats fly within the church where their droppings can be found.

The built environment; stone walls, bridges, houses and barns

Stone walls can be important habitat for crustose lichens, mosses and certain flowering plants such as wall pennywort and ferns like maidenhair spleenwort and black spleenwort. Where walls have gaps and crevices, they are particularly good habitat for invertebrates and reptiles, especially coupled with south-facing banks for basking.

Stone walls are not numerous in Chardstock parish and are mostly found in Chardstock village, around gardens and at farmsteads. Most of these walls have been pointed and capped, but those that are less well maintained are of greater benefit to wildlife. Rusty-back fern and mining mason bees can be seen in some garden walls, especially those with lime mortar.

Houses and barns are a valuable habitat for bats and some nesting birds. Birds such as house martins and house sparrows will nest in the eaves and bats will roost behind ivy-clad house walls, and in roof spaces. There are records of five species of bats in Chardstock parish, most associated with houses and St Andrews Church.

Arable land

Contemporary arable farming is inimical to most wildlife. Before agricultural intensification, many annual plants thrived in the constantly disturbed ground, much as annual garden plants do. Some of these plants, such as cornflower and corn marigold, have become rare. Commoner species such as scentless mayweed survive in the margins or arable fields or in stock-trampled gateways. Grassy field margins also provide cover for small mammals and insects.

In Chardstock parish, arable land occupies about 10% of the area, and is almost confined to the agricultural Grade 3 land on the higher slopes and hilltops which have well drained neutral soils. Crops include mainly maize, legumes, brassicas and barley. Some is grown for feedstock for use on local farms. Ley and arable crops are often grown alternately.

Nearly all the land within Chardstock parish east of the River Kit falls within a Groundwater Nitrogen Sensitive Area that extends east to Chard and north to Combe St Nicholas. The implication is that greater controls are required on fertilizer application and storage of livestock manures. This should help to reduce the input of nitrogen compounds into the aquifer under the parish and consequently into the streams which are fed by seepages from the aquifer, and thus maintain the high water quality.

There is no survey of the wildlife associated with arable land in the parish. Some is used by buzzards for feeding.

Species

Plants

Plants have been moderately well recorded in Chardstock parish. Many records undoubtedly have been made but not collected for this report. Well over 300 species have

been recorded but the list omits some native species that can be seen frequently in the parish.

No nationally rare or scarce plants have been recorded in the parish. Plants that are uncommon in Devon are given a status according to their distribution in the county, from the least common, Notable 1, to most widespread, Notable 3. Those found in only three or fewer localities in Devon are termed Devon Rarities (definitions at the end of Appendix 2). The location of these plants is given in Appendix 2.

Devon Rarity

Dwarf elder
Herb paris
Thin-spiked wood-sedge
Toothwort

Notable 2

Blunt-flowered rush
Hoary plantain
Pale sedge
Wood horsetail
Wood small-reed

Notable 1

Alternate-leaved golden-saxifrage
Dyer's greenweed
Mare's-tail
Marsh arrowgrass
Marsh helleborine
Meadow barley
Pepper-saxifrage
Round-leaved crowfoot

Notable 3

Corky-fruited water-dropwort
Cowslip
Marsh valerian
Narrow buckler-fern

Devon Biodiversity Action Plan
Primrose

Most of these plants are scarce in the parish, known from only one or a few locations. A few records were made over 20 years ago and may not have been confirmed more recently (marsh helleborine 1987, marsh arrowgrass 1992, wood small-reed 1992, narrow buckler-fern 1993). Dwarf elder has not been seen at its known site for several years. In contrast to these scarce species, corky-fruited water-dropwort is widespread in the parish, being recorded from at least 15 discrete sites and it is sometimes frequent within a field. The Devon BAP primrose is also widespread and often locally abundant.



Toothwort in Great Wood, Tytherleigh



Wood Horsetail on Hell Bottom, Cotley Wash
CWS



Alternative-leaved Golden Saxifrage by the R. Kit



Round-leaved crowfoot at Cotley Wash Brake



Corky-fruited water-dropwort

Non-native plants

Several undesirable nuisance plants occur in the parish. These originated as garden escapes that have become very well established in the countryside to the extent that they suppress native flora. A characteristic is that they are attractive plants, for instance, the spectacular show of rhododendron on Bewley Down, which is why they were introduced to gardens in the first place. In some cases there is resentment when they are cleared.

Himalayan balsam is well established in the woodland below Whitehouse Farm. This wood has headwaters of one of the larger tributaries of the River Kit, so there is plenty of opportunity for the species to spread downstream. Already Himalayan balsam is scattered down the Kit. Japanese Knotweed occurs in several places, including the old knackers' yard at Hook, Green Lane at Chardstock and along the A358 near Tytherleigh. Rhododendron is a major component of the scrub at Hell Bottom on Bewley Down (Cotley Wash Country Wildlife Site) but steps are being taken to reduce its extent here. Greater cuckooflower is scarce in Britain but has been recorded in East Devon. It is very well established along the Hook Stream within the woodland corridor where it covers the banks and adjacent watercourse, and it is possibly spreading by seed. It may become a nuisance plant.



Greater cuckooflower at Burr ridge Common



Rhododendron at Hell Bottom, Cotley Wash CWS

Fungi and Lichens

Toninia verrucarioides is a nationally scarce lichen, recorded by Barbara Benfield at St Andrews churchyard.

It is hoped to rectify the absence of fungus records in a revision of this audit.

Mammals

Dormouse

The dormouse is listed on the Devon Biodiversity Action Plan as a species of conservation concern in Devon. Nationally, the dormouse has experienced a marked contraction in range in recent decades, and has become extinct in up to seven counties where it occurred in the last century, representing about half of its former range. In Devon, the dormouse appears to be holding its own, and the county is now a major stronghold of the species. No detailed quantification of population change has been possible due to lack of comparable data over time but indirect evidence, from the losses of hedgerow length and declines in quality of

hedgerows and woodlands that have occurred in the county over the past few decades, indicates that dormice have probably declined in a similar fashion.

There are few reports of dormouse in the parish (Chardstock village, Burrridge) but it is almost certainly widespread, as is suggested by the ease with which dormouse-chewed hazel nuts may be found. The dense network of hedges which often include important food sources (e.g. hazel, bramble), the occurrence of copses and small clumps of trees and relatively benign land-use should help the species survive well in the parish.

Bats

All bats are legally protected because they have, as a group, undergone considerable declines in recent decades, and their longevity and low reproduction rate makes their populations particularly susceptible. Brown long-eared, greater horseshoe and lesser horseshoe bats are listed under Section 41 of the NERC Act.

There are records in the parish for brown long-eared, greater horseshoe, lesser horseshoe, pipistrelle (probably common pipistrelle) and serotine bats. Most of the records are associated with gardens, although serotines roost in St Andrews Church where their droppings may be found throughout the church. There has been no concerted effort to record bats in the parish, and these few reports are likely to underestimate the number of species and their abundance. Pipistrelles are the commonest British bat, and they can often be seen flying along lanes in the parish. Records of serotines range from Tytherleigh and Birchill to Brockfield. Records of brown long-eared come from the far west of the parish, Brockfield and Chardstock village. Both the horseshoe bats were recorded from the same site at Birchill and the records may need confirming.

Otter

Devon has an internationally important otter population and otters are now found on most watercourses and wetlands throughout the county. Otters are even now recolonising areas where they were thought to have been lost during the 1960s and 1970s. The otter is legally protected and is listed on the Devon Biodiversity Action Plan as a species of conservation concern.

There are records of otter from the River Kit between 2004 and 2009, from Fordwater, Kitbridge, Mill Bridge and the bridge at Brockfield. It has also been reported along the Hook Stream at Hook.

Badger

This is a common animal in the parish. Although few records have been submitted to the Devon Biological Records Centre, there are active sets in many places, aided by the ease with which the Greensand can be burrowed into. Badgers are protected by law but their populations are increasing as a consequence of the relief from persecution and control. It is not threatened in Devon.

Hare

Hare is a species of principal importance (listed under Section 41 of the NERC Act) and is listed on the Devon Biodiversity Action Plan. It has been reported from Bewley Down.

Other mammals

Other common mammals known to occur in the parish are roe deer, rabbit, bank vole, field vole, field mouse, house mouse, brown rat, grey squirrel, fox, weasel, common shrew, mole and hedgehog. The records of hedgehogs from Honey Hill to Brockfield are of interest as they are eaten by badgers which are a major predator, and as badgers are common, hedgehogs suffer. Roe deer are frequent in the parish but do not appear to reach high densities, perhaps because they are hunted. There is an unconfirmed record of water shrew from Burrridge. There is no reason to suppose that stoat or pygmy shrew are absent from the parish.

Mink (non-native) have been reported from the Hook Stream at Hook and Burrridge.

Reptiles and Amphibians

Adders are reported from Bewley Down where they are scarce in the rough vegetation of the mire and bracken area. Adder is protected from killing under the Wildlife & Countryside Act as it has declined markedly in Britain. Grass snakes occur in several places (including Burrridge), and slow worms are likely to be frequent throughout the parish in areas of ranker grassland. There are no reports of common lizard.

Common frog, common toad and palmate newt are frequent in the parish, often breeding in garden ponds. Tadpoles may be seen year after year in the same long-standing wheel-ruts at Cotley Wash CWS. None of these common species is likely to be under threat within the parish although loss of ponds is a serious problem for them in more intensively farmed countryside. There are no records of smooth or great crested newts.

Fish

Brook lamprey has been seen spawning for several years in the River Kit below the bridge at Brockfield. The species is an Annex II species of the EC Habitats and Species Directive, although it has no special protection outside Special Areas of Conservation designated for it, such as the River Axe. It is a non-migratory freshwater species occupying small streams, and favours clear water with suitable areas of gravels, silt or sand for spawning.

Bullheads are known from the Hook Stream and a small stream flowing through the Cotley Wash County Wildlife Site. It is almost certainly present in the River Kit and other small tributaries. This fish is listed on the Habitats Directive, requiring Special Areas of Conservation to be designated for it, but it is common in Britain and has no special protection or rarity status.

Eels are known from the Hook Stream at Hook and Burrridge and are probably more widespread. They are declining nationally.

Atlantic salmon is listed on the Devon Biodiversity Action Plan. Devon has a significant proportion of the salmon rivers in southern England, although some of Devon's rivers have far fewer salmon than they used to. Water quality is of great importance to salmonid fish, together with some bank-side cover for shelter. Siltation, too much vegetation, too little vegetation and the loss of deep pools can all contribute to the loss of salmon.

Within Chardstock, salmon are being reared from eggs on a small scale using spring water at Hook, and released into the Kit. The project is under the supervision of the Environment Agency.

Birds

Barn owls have been reported from Egg Moor and Storridge Hill in 2007. The barn owl is listed on the Devon Biodiversity Action Plan as species of principle importance as it 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 Devon, and its numbers are now on the increase in much of the county.

Nightjar was recorded at Storridge Hill in 2007. It is a nocturnal summer visitor to Britain where it prefers heathland with low sparse vegetation, but it can also be found in conifer plantations in recently re-planted clear-fell areas. Largely as a result of the losses of heathland, the nightjar has declined dramatically over the past century, and by 50%

nationally between surveys carried out in 1968-72 and 1988-91. As a result of its decline, nightjar is listed in Annex 1 of the EC Birds Directive, Appendix II of the Bern Convention, the UK BAP, the RSPB Red List of the Birds of Conservation Concern and Devon Biodiversity Action Plan as species of principle importance. Within the last ten years or so, the species has showed signs of recovering, and this is in part due to increases in habitat provided by clear-felling of conifer plantations. Devon has the second largest population of nightjar in the south-west.

A number of birds are that are known from casual observation in the parish are on Section 41 of the NERC Act: bullfinch, cuckoo, dunnoek, house sparrow, skylark, song thrush, starling and yellowhammer. Several of these along with fieldfare, redwing and wren are also on the bird Red List (cuckoo, house sparrow, skylark, yellowhammer). Many of these are recorded widely in Chardstock; cuckoos are occasionally heard here, and fieldfare and redwing are frequent winter visitors. None of these appear to be under any obvious threat within the parish.

Invertebrates

Invertebrates cover a vast number of species, about 35,000 larger species, so it is not easy to summarise the interest, particularly as nearly all are unfamiliar and have no common names. There are many recent records of insects, mainly flies and moths, from the parish. The list of all invertebrates stands at well over 1600 species. There are no outstandingly rare species among these although there are six flies with Red Data Book status and about 50 with Nationally Notable status (some of which are probably over-generous – they are known to be more widespread than this status suggests). Nevertheless, the tally is impressive and reflects the varied habitats and relatively unintensive land-use. Some notes are given for a few more noteworthy species.

Butterflies and moths

Three butterflies recorded in the parish are declining and are listed on Section 41 of the NERC Act - brown hairstreak, white-letter hairstreak and small pearl-bordered fritillary. The two hairstreaks are Nationally Scarce. Brown hairstreak is an uncommon butterfly in southern Britain where its larvae feed on blackthorn, especially where hedgerows are left to grow tall. It has been found at Cuckold's Pit, although careful searching of hedges in winter for its eggs may show it to be more widespread in the parish. White-letter hairstreak is undergoing a strong contraction in its range and is particularly scarce in Devon. The records from the parish is from Brockfield where there are suckering elms on which its larvae feed. Elm in the parish is short-lived as it suffers from Dutch elm disease after a few years, and this will reduce the food resource of the butterfly. Small pearl-bordered fritillary has a strongly western distribution in Britain and Chardstock parish is on the eastern edge of its core range (although it does occur further east). It was recorded at Cotley Wash CWS which is one of the few woods in the parish with the right mix of glades and wet ground which it favours and where violets, on which it feeds, are frequent. Purple hairstreak is more widespread and its range is not decreasing as much as the other two hairstreaks. It is associated with oak canopies so is easily overlooked. It has been recorded at Bewley Down in the woodlands of the Cotley Wash CWS and Bewley Down unconfirmed wildlife site.

About 420 species of moths have been recorded from the parish, almost all from a single garden at Tytherleigh. They include single records of two nationally scarce species: small eggar which is associated with hedgerows that provide its foodplant, and the micromoth *Sitochroa palealis* whose larvae feed on some umbels. Another 46 species are included in the 2007 BAP list (Section 41 species). Nearly all of these are listed because, while they may be common and widespread now, they are currently undergoing rapid decline. This group includes such familiar species as white ermine, garden tiger and cinnabar moth. The exception is goat moth whose larvae bore into the heartwood of a number of tree species, so is listed to help highlight the issue of retaining old or diseased trees.

Beetles

This group has not been well surveyed, and there are records for only about 150 species which is a tiny percentage of the British fauna. None of these is particularly uncommon nationally but two are worth highlighting. Glow-worm is seen in several parts of the parish, often in gardens where it may be scarce but seen consistently from year-to-year. It is not particularly rare but, like many species, appears to be declining. The southern coast from Devon to Hampshire appears to hold more records than many other parts of the south-west, so the widespread, if infrequent, occurrence of glow-worm in Chardstock parish is not unexpected. Violet oil beetle is a nationally scarce species and listed on Section 41 of the NERC Act. These beetles parasite solitary bees by feeding on the pollen collected by the bee for its own larva. A thriving population exists in Burr ridge where its host is the ash-grey mining bee.



Oil beetle, *Meloe violaceus*, at Burr ridge

Caddis flies

Three nationally scarce species, all of which are associated with calcareous streams, have been recorded in the streams and seepages in the parish: *Tinodes unicolor* which occurs at Brockfield and Eggmoor, *Ernodes articularis* at Holy City (Whitehouse Farm woods) and *Plectrocnemia brevis*, also at Brockfield. In view of the predominantly acid to neutral conditions in the parish, the occurrence of these species in the few areas of base-rich conditions is noteworthy.

Dragonflies

No rare species have been recorded. Keeled skimmer is an uncommon species living in small trickles on bogs, and has been recorded at Hell Bottom on Cotley Wash County Wildlife Site. Golden-ringed dragonflies are frequent in the parish at small streams in which their larvae live.

Two-winged Flies

Flies have been well recorded in the parish, with well over 900 species altogether, of which nearly 50 species are nationally rare or scarce. A convenient way to discuss them is by their habitat associations. Over half of these rare or scarce species are associated with wetlands, either those linked to flowing water or to still wetlands. Streams and seepages support a large number of scarce flies, including many crane flies, soldier flies, trickle midges and meniscus midges. Special mention is made of the soldier flies *Oxycera pardalina* and *O. morrisoni* which are restricted to the occasional base-rich seepages. A smaller number are associated with mires, both acid such as on Cotley Wash CWS and more calcareous marshes as occur in Great Batch. These suites of wetland species are found mainly in the wet woodlands of the parish and on the open mire at Cotley Wash. Damp woodlands

support a smaller number of small undistinguished but rare flies, while even fewer are associated with dead wood or fungi in old woodlands. These include the spectacular hoverfly *Volucella inflata* which is associated with wasps' nests in trees. Those associated with grasslands include the dotted bee-fly, which has been selected as fly of importance in Devon. It has been recorded at Burrridge and develops in large colonies of the ash-grey mining bee which it parasitises. The picture-wing fly *Oxyna flavipennis* is associated with calcareous grasslands and occurs at Storridge Hill.

The cranefly *Lipsothrix nervosa* is a Species of Principal Importance (listed under Section 41 of the NERC Act). It is widespread in the parish in shaded seepages. The dotted bee-fly was on the original BAP list but was removed from the new NERC Act. It has been recorded at Burrridge.

Ideas for local action

Ideas for local nature conservation action are given here. Their purpose varies from directly helping to achieve the objectives of the habitat and species action plans contained in the *Devon Biodiversity Action Plan*, while others will help planning decisions or are designed to increase interest and enthusiasm without which protection and enhancement of the local natural environment will fail.

Further survey

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 provides a start but there is clearly much more to know about the parish. Gaining a better understanding of the resource is usually a key objective of the Devon BAP's habitat and species action plans.

Obvious gaps in this report can be filled without specialised knowledge:

Hedgerow surveys. As these are thought to be one of the key features of Chardstock, a better record of hedges could be useful. This could include estimating the lengths of hedge with different value (species-rich, species-poor), their management or lack of it, the prevalence of hedgerow trees, particularly ash which may disappear when ash-dieback takes hold, and the value of hedges for plants, birds and mammals. The Devon Hedge Group can provide help.

Bird surveys. Apart from a paucity of records for all species, there is a need to identify areas of particular value to the species on the red and amber lists. Nearly all those listed in this report are quite frequent in the parish and could easily be surveyed without special knowledge or equipment.

Bat surveys. Given that all but one species of British bat occur in Devon, and most in the Blackdowns, it is likely that Chardstock supports rather more than the five species listed here. All bats have legal protection, for good reasons, so more understanding of their distribution within Chardstock could be useful in identifying sensitive areas. Their survey requires specialist knowledge and more dedication than most groups but the rewards could be great.

Mammal survey. The report hints that dormouse is widespread but this needs to be confirmed. As dormouse is protected, it is not straight-forward to survey them directly but their characteristic nibbles at hazel-nuts makes distribution-mapping practicable and relatively easy.

Plant surveys. Most records are quite old, and even if the sites have apparently not changed, some plants have not been seen for a long time. With the land-owners permission, it would be useful to establish that we have not lost plants of interest.

Influence the management of Public Open Space

Plans are already in hand to improve the species richness of grassland in the school's ground and the Park Trust play area.

Build relationships with local landowners

Encourage the adoption of more wildlife-friendly land management. For example, hedges which are cut every other 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, it may be possible for the community to become involved with practical management, such as traditional hedge laying.

Wildlife gardening

Collectively the gardens of Chardstock parish represent a significant area that could be used to benefit wildlife. Suggestions range from simple actions, such as putting up bird nest boxes and planting bee-friendly flowers, to the psychologically more demanding, such as taking a more relaxed attitude to our mammal fauna (deer, badgers, moles). There is help on the websites of the Royal Horticultural Society, Devon Wildlife Trust and Natural England.

Involvement and education

Get children interested in wildlife. There are many activities, puzzles and games that can enthuse and get children interested in wildlife. Some further information and ideas can be found at the websites of the Devon Wildlife Trust and RSPB.

Devon Hedge Week is an annual event run by Devon Hedge Group involving hedge-related events and activities for all abilities and ages. These are aimed at raising appreciation and awareness of Devon's wonderful hedges.

Chardstock has a well used network of footpaths kept in good order by the Parish Paths Partnership scheme (PPP). As part of the Blackdowns Natural Future's HLF bid, Chardstock has begun preparation of a natural trail leaflet and app. This will highlight some of the best features of the parish that are visible from public rights of way.

Useful sources of further information

The following organisations can offer advice and information on various wildlife topics as well as organising events and carrying out projects.

Association of British Fungus Groups: www.abfg.org

British Dragonfly Society: www.dragonflysoc.org.uk

Butterfly Conservation: www.butterfly-conservation.org (Tel: 0870 7744309)

Devon Bat Group: www.dbg.me.uk

Devon Birdwatching and Preservation Society: www.devonbirds.org

Devon Mammal Group: www.devonmammalgroup.org

Devon Wildlife Trust: www.devonwildlifetrust.org (Tel: 01392 279244)

East Devon AONB Partnership, Tel/Fax 01404 46663 or 01404 549173

East Devon AONB: www.eastdevonaonb.org.uk

East Devon: <http://www.eastdevon.gov.uk/index/visiting/countryside>

Jurassic Coast: www.jurassiccoast.com

Natural England: www.naturalengland.org.uk (National Tel: 0845 600 3078, Devon Tel: 0300 060 1110)

Plantlife: www.plantlife.org.uk (Tel: 01722 342730)

RSPB: www.rspb.org.uk

The Conservation Volunteers: www.tcv.org.uk

The Living Churchyards & Cemeteries Project, Arthur Rank Centre, National Agricultural Society, Stoneleigh Park, Warwickshire, CV8 2LZ Tel: 01203 696969 ext.364/339.

The Woodland Trust: www.woodland-trust.org.uk (Tel: 01476 581111)

In addition, Devon County Council has produced a Community Wildlife Toolkit which is available via the DCC web site (www.devon.gov.uk/biodiversity). This toolkit aims to provide practical advice on management to encourage wildlife and, in particular, provides a central point from which to access the large amount of advice that is already available from a huge range of other organisations.

Possible sources of funding

Funding sources change quite frequently and are often short lived. It is worth exploring widely what may be available. The sources listed below should provide a good starting point.

Heritage Link – a funding directory supported by the Heritage Lottery Fund. A good source of information.

<http://www.heritagelink.org.uk/fundingdirectory/main/fundinghome.php>

Major sources of funding

Environmental Stewardship – whole farm agri-environment scheme funding.

www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx

SITA Trust - Enriching Nature: for biodiversity conservation projects within ten miles of any landfill site in England.

www.sitatrust.org.uk

GrantScape – significant sums of money often available for biodiversity action, including landscape-scale projects.

www.grantscape.org.uk/home

The Tubney Charitable Trust – large funds available but on an invitation-to-bid only basis.

www.tubney.org.uk

Esmée Fairbairn Foundation – no maximum size of grant. “Priority will be given to high quality projects that are exemplars of good practice or imaginative approaches to old problems, that have wider impact, leading to changes in the law, policy or practice or that may be viewed as difficult to support or too 'high risk' by other funders.”

www.esmeefairbairn.org.uk

Big Lottery Fund – “Every year BIG gives out millions of pounds from the National Lottery to good causes. Our money goes to community groups and to projects that improve health, education and the environment.” Often has large programmes relating to the environment, for example:

- *Changing Spaces: Access to Nature* - grants: £50,000 - £715,000. This programme aims to encourage more people to enjoy the outdoors, particularly those who face social exclusion.

http://www.biglotteryfund.org.uk/prog_cs_access_nature?regioncode=uk

- Changing Spaces: Community Places - grants: £10,000 - £450,000.

This programme will fund community groups who want to improve local green spaces such as play areas, community gardens and parks.

http://www.biglotteryfund.org.uk/prog_cs_comm_spaces?regioncode=uk

Possible funding for smaller projects

Many of these grants have only a finite pot of money which could run out at any time. It is important to check that your project meets any relevant funding criteria.

Big Lottery Fund (see above) – BIG also gives smaller grants, for example:

- *Awards for All England* - Grants: £300 - £10,000. 'Awards for All gives money to projects that encourage people to take part in arts, sport, heritage and also community projects'.

http://www.biglotteryfund.org.uk/prog_a4a_eng?regioncode=uk

AONB Sustainable Development Funds -

- Blackdown Hills
- East Devon
- North Devon
- South Devon
- Tamar Valley

Biffawards - grants for biodiversity projects within 10 miles of a Biffa operation (landfill)

www.biffaward.org/projects/smallgrants.php

BBC Breathing Places – currently only available for projects that have received Breathing Places funding already. Grants of £1000 to £5000 available.

www.biglotteryfund.org.uk/prog_breathingplaces

SITA Trust - Enriching Nature: for biodiversity conservation projects within ten miles of any landfill site in England.

www.sitatrust.org.uk

Forestry Commission - grants and sources of funding available for improving biodiversity (for example, the Woodland Improvement Grant).

www.forestry.gov.uk/forestry/hcou-4u4j28

Tree Council - small grants for schools and communities for tree planting schemes.

www.treecouncil.org.uk/?q=grants

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Appendix 1. Statutory & non-statutory sites within Chardstock Parish (2011)

File Code	Site Name	Grid Reference	Area (ha)	Description	Status
	River Axe	ST325023 to SY259927	25.1	River with a diverse aquatic and marginal flora, a wide variety of habitats for invertebrates, species of fish important in a European context, valuable habitats for breeding birds. Otters are present in small numbers.	SAC
	River Axe	ST325023 to SY259927	71.3		SSSI
ST20/026	Bewley Farm	ST271058	35	Unimproved neutral & marshy grassland & bracken	CWS
ST20/030	Cotley Wash	ST288064	27.6	Wet heath and springline mire with scrub and secondary woodland	CWS
ST20/031	Sycamore Farm	ST292058	4.6	Springline mire	CWS
ST20/032	Narfords	ST299061 & ST297059	5.5	Unimproved neutral grassland, wet and dry broadleaved woodland and tall herb fen	CWS
ST20/090	Reads Hill	ST299036	5.2	Unimproved marshy grassland & semi-improved acidic grassland	CWS
ST20/112	Castle Wood Meadows	ST290066	4.6	Unimproved neutral grassland and species-rich hay meadows	CWS
ST30/001	Brockfield Bottom	ST301058 & ST303057	3	Marshy tall herb vegetation & semi-improved neutral grassland	CWS
ST30/002	Storridge Hill	ST317044	5.3	Species-rich hay meadow, unimproved neutral grassland and old quarry	CWS
ST30/003	Egg Moor Fields	ST312039	9.7	Unimproved neutral grassland, rush-pasture, tall herb vegetation and species-rich hay meadows	CWS
ST30/008	The Parks	ST305038 & ST307044	24.4	Marshy & semi-improved neutral grassland & secondary broadleaved woodland	CWS
ST20/029	Bewley Down	ST283064	45.7	Mosaic of coniferous woodland, semi-improved grassland, unimproved grassland and secondary woodland	OSWI
ST20/034	Holy City (W)	ST294051	1.7	Unimproved neutral grassland	OSWI
ST20/035	Holy City (E)	ST298050	0.6	Unimproved neutral grassland	OSWI

File Code	Site Name	Grid Reference	Area (ha)	Description	Status
ST20/114	Cotley Wash Brake	ST295063	4.4	Secondary broadleaved woodland	OSWI
ST30/004	Farway Farm	ST305053	4.2	Springline mire in improved pasture	OSWI
ST30/005	Hook Farm	ST307055	0.6	Marshy tall herb vegetation	OSWI
ST30/006	Burridge Common	ST311065	17.1	Mosaic of secondary broadleaved woodland, bracken & marshy tall herb vegetation	OSWI
ST30/009	Birchill Common	ST305035	5.5	Bracken-dominated fields	OSWI
ST20/033	Whitehouse	ST295054	7.8	Secondary woodland	UWS
ST30/003	Brockfield Copse	ST303058	1.2	Secondary woodland	UWS
ST30/013	Tytherleigh Woods	ST315031	7.6	Secondary broadleaved woodland	UWS
ST30/010	Keates Farm Field	ST323034	0.9	Marshy tall herb vegetation	UWS
ST20/113	Old Twist	ST294032	5.5	Unimproved grassland	UWS
ST20/110	The Half Moon	ST280056	10	Marshy grassland and acid grassland	UWS
New Site	Hook Meadow	ST307054	1.3	Unimproved grassland	UWS
ST30/007	Chardstock Court & The Parks	ST304039	65.3	Parkland	UWS
ST20/028	Bewley Down	ST281005	17.2	Flat plateau semi-improved to improved grassland. Scattered gorse and bracken	UWS

Special Areas of Conservation (SAC): these are notified by Natural England because they contain species and/or habitats of European importance (listed in the Habitats Directive 1994), and are part of a network of conservation sites set up through Europe known as the Natura 2000 series. On land, almost all candidate SACs are, or will be notified as SSSIs. Natural England needs to be consulted before any operations likely to damage the special interest are undertaken. SAC is a statutory designation with legal implications.

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

County Wildlife Sites (CWS): these are sites of county importance for wildlife, designated on the basis of the habitat or the known presence of particular species. This is not a statutory designation like SSSIs, and does not have any legal status. County Wildlife Sites are usually included in Local Plans as sites of substantive nature conservation interest and are covered by Planning Policy Statement note nine (PPS9).

CWS recognition does not demand any particular actions on the part of the Landowner and does not give the public rights of access. However, it may increase eligibility for land management grants.

Other Sites of Wildlife Interest (OSWI): these are sites of significant wildlife interest within a local context that have been surveyed but do not reach the criteria for County Wildlife Sites. They are not covered by PPS9, but may be included in Local Plans.

Unconfirmed Wildlife Sites (UWS): these are sites identified as having possible interest but not fully surveyed. Some of these sites will be areas of significant wildlife interest.

Appendix 2. Legally protected & notable species records within Chardstock Parish

Sources: The first column ("No") is the code number of the source. Just a number = DBRC, 2011; prefix = 'Is' = J. Ison, BSBI recorder; 6-figure numbers = M. Drake, DMG – Devon Moth Group

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
Is505	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	Chardstock, Kit Bridge, in ditch	1962	ST3104			DN1
Is505	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	Chardstock, south of Kit Bridge	2002	ST309036			DN1
Is505	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	on both sides of the stream, Chardstock	1998	ST3004			DN1
Is505	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	West of Chardstock	2002	ST305043			DN1
252418	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	Chardstock	2010	ST305042			DN1
252420	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	Chardstock	2010	ST307039			DN1
252419	Alternate-leaved Golden-saxifrage	<i>Chrysosplenium alternifolium</i>	Chardstock	2011	ST305042			DN1
Is1076	Blunt-flowered Rush	<i>Juncus subnodulosus</i>	Chardstock, plentiful in marshy ground on Burr ridge Common	1976	ST3104			DR2
285516	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Brockfield, Hook	2013	ST305052			DN3
252421	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Burr ridge hillside	2007	ST312059			DN3
1	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Bewley Farm	1992	ST271058			DN3
285508	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Bewley Farm (Great Batch)	2013	ST273054			DN3
12	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Castle Wood Farm	2007	ST290065			DN3
61	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Egg Moor Fields	2007	ST312039			DN3
285125	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Egg Moor Fields	2013	ST312039			DN3

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
276243	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Great Wood, Tytherleigh	2013	ST312030			DN3
285560	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Homelea Farm, Tytherleigh	2012	ST322035			DN3
285510	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Huntley Farm, Hook	2013	ST309057			DN3
285563	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Keates Farm, Tytherleigh	2012	ST323032			DN3
285572	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Lower Tytherleigh Farm	2012	ST322028			DN3
26	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Reads Hill	1987	ST299036			DN3
285517	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Stockstyle Farm	2013	ST304051			DN3
80	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Storrige Hill	2007	ST317044			DN3
264428	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Storrige Hill quarry fields	2011, 2013	ST317041			DR3
Is1367	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	Chardstock	1996	ST30C			DR3
Is1367	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	The Parks, Chardstock	2006	ST304036			DR3
Is1367	Corky-Fruited Water-Dropwort	<i>Oenanthe pimpinelloides</i>	The Parks, Chardstock	2006	ST306037			DR3
285552	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	The Parks, Chardstock Court Fields	2012	ST305042			DR3
285535	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	The Parks, Chardstock Court Fields	2013	ST306043			DR3
285387	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Whitehouse Farm Field	2013	ST297052			DR3
285520	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Woonton Farm fields	2013	ST296059			DR3
285509	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Woonton Farm, Holy City	2013	ST297055			DR3
21	Cowslip	<i>Primula veris</i>	Holy City (E)	1984	ST298050			DN3
25	Cowslip	<i>Primula veris</i>	Reads Hill	1987-1992	ST299036			DN3

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
39	Cowslip	<i>Primula veris</i>	The Parks	1992	ST305038			DN3
Is1605	Cowslip	<i>Primula veris</i>	The Parks, Chardstock	2006	ST304037			DR3
285225	Cowslip	<i>Primula veris</i>	Burridge hillside	2013	ST313060			
285576	Cowslip	<i>Primula veris</i>	Ransomes Farm, Holy City	2012	ST297046			
58	Dwarf Elder	<i>Sambucus ebulus</i>	Chardstock	2006	ST311041			DN1; DR
Is893	Dyer's Greenweed	<i>Genista tinctoria</i>	The Parks, Chardstock	2006	ST304037			DN1
Is1436	Herb Paris	<i>Paris quadrifolia</i>	Chardstock	1957	ST3104			DN1; DR
Is1436	Herb Paris	<i>Paris quadrifolia</i>	Chardstock, refund at the The Parks. Four plants in 1998	1998	ST3004			DN1; DR
Is1490	Hoary Plantain	<i>Plantago media</i>	Chardstock	1996	ST30C			DR2
72	Hoary Plantain	<i>Plantago media</i>	Storridge Hill	2007	ST317044			DN2
70	Japanese Knotweed	<i>Fallopia japonica</i>	A358 heading north up hill near Tytherleigh.	2002	ST317029	WCA 9		
53	Japanese Knotweed	<i>Fallopia japonica</i>	Chardstone. Between Harestone Cross and Hooks Cross. Lane adjacent to bottom of cricket pitch.	2006	ST309049	WCA 9		
68	Japanese Knotweed	<i>Fallopia japonica</i>	Green Lane, Chardstock	2010	ST314046	WCA 9		
17	Marsh Arrowgrass	<i>Triglochin palustre</i>	Sycamore Farm	1992	ST292058			DN1
19	Marsh Helleborine	<i>Epipactis palustris</i>	Narfords	1987	ST297061			DN1
22	Marsh Valerian	<i>Valeriana dioica</i>	Holy City (E)	1984	ST298050			DN3
282335	Marsh Valerian	<i>Valeriana dioica</i>	Burridge Common	2011,	ST311059			DN3
285045				2013				
282391	Marsh Valerian	<i>Valeriana dioica</i>	Yard Farm (Old Twist UWS)	2013	ST293031			DN3
Is993	Meadow Barley	<i>Hordeum secalinum</i>	The Parks, Chardstock	2006	ST304037			DN1
60	Narrow Buckler-Fern	<i>Dryopteris carthusiana</i>	Burridge Common	1993	ST311065			DN3
Is399	Pale Sedge	<i>Carex pallescens</i>	The Parks, Chardstock	2006	ST30520371			DR2
Is399	Pale Sedge	<i>Carex pallescens</i>	The Parks, Chardstock	2006	ST30400380			DR2
Is399	Pale Sedge	<i>Carex pallescens</i>	The Parks, Chardstock	2006	ST30530382			DR2
13	Pepper-Saxifrage	<i>Silaum silaus</i>	Castle Wood Farm	2007	ST290065			DN1
2	Primrose	<i>Primula vulgaris</i>	Bewley Farm	1992	ST271058			DBAP

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
59	Primrose	<i>Primula vulgaris</i>	Burridge Common	1993	ST311065			DBAP
14	Primrose	<i>Primula vulgaris</i>	Castle Wood Farm	2007	ST290065			DBAP
Is1607	Primrose	<i>Primula vulgaris</i>	Chardstock	1996	ST30C			DBAP
11	Primrose	<i>Primula vulgaris</i>	Cotley Wash	1991	ST287065			DBAP
63	Primrose	<i>Primula vulgaris</i>	Egg Moor Fields	2007	ST312039			DBAP
23	Primrose	<i>Primula vulgaris</i>	Holy City (E)	1984	ST298050			DBAP
27	Primrose	<i>Primula vulgaris</i>	Reads Hill	1992	ST299036			DBAP
Is1607	Primrose	<i>Primula vulgaris</i>	The Parks, Chardstock	2006	ST302036			DBAP
Is1607	Primrose	<i>Primula vulgaris</i>	The Parks, Chardstock	2006	ST304037			DBAP
Is1607	Primrose	<i>Primula vulgaris</i>	The Parks, Chardstock	2006	ST306037			DBAP
5	Round-leaved Crowfoot	<i>Ranunculus omiophyllus</i>	Half Moon; Bewley Down, Chardstock	2002	ST280057			DN1
287119	Round-leaved Crowfoot	<i>Ranunculus omiophyllus</i>	Castle Wood, east of lane	2011	ST295063			DN1
57	Snowdrop	<i>Galanthus nivalis</i>	Chardstock	2006	ST311041		EC Vb(where native); CITES II	
55	Spring Snowflake	<i>Leucojum vernum</i>	Chardstock	2003	ST311041			RDB2
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	Chardstock	2004	ST309036			DN1; DR
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	Chardstock	2004	ST305043			DN1; DR
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	Kit Bridge, Chardstock	2002	ST308036			DN1; DR
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	Kit Bridge, Chardstock	2002	ST308038			DN1; DR
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	The Parks, Chardstock	2006	ST306043			DN1; DR
Is420	Thin-spiked Wood-sedge	<i>Carex strigosa</i>	under trees in marshy area near Chardstock	1998	ST3004			DN1; DR
Is1107	Toothwort	<i>Lathraea squamaria</i>	Chardstock	1998	ST3004			DN1; DR
287118	Toothwort	<i>Lathraea squamaria</i>	Great Wood, Tytherleigh	2013	ST314031			DN1; DR
264432	Wood Horsetail	<i>Equisetum</i>	Bewley Down, Old Mire	2012,	ST287065			DN2

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
29	Wood Small-Reed	<i>sylvaticum</i> <i>Calamagrostis</i>	Brockfield Bottom	2013 1992	ST301058			DN2
66	Barn Owl	<i>epigejos</i> <i>Tyto alba</i>	Egg Moor Fields	2007	ST312039	WCA 1, 9		DBAP; Amber
74	Barn Owl	<i>Tyto alba</i>	Storridge Hill	2007	ST317044	WCA 1, 9		DBAP; Amber
65	Barn Swallow	<i>Hirundo rustica</i>	Egg Moor Fields	2007	ST312039			Amber
78	Barn Swallow	<i>Hirundo rustica</i>	Storridge Hill	2007	ST317044			Amber
18	Dunnock	<i>Prunella modularis</i>	Sycamore Farm	1992	ST292058			Amber
9	Kestrel	<i>Falco tinnunculus</i>	Bewley Down	2007	ST283064			Amber
62	Mistle Thrush	<i>Turdus viscivorus</i>	Egg Moor Fields	2007	ST312039			Amber
75	Nightjar	<i>Caprimulgus europaeus</i>	Storridge Hill	2007	ST317044	NERC 41		UKBAP (P); DBAP; Red
76	Skylark	<i>Alauda arvensis</i>	Storridge Hill	2007	ST317044			UKBAP (P); Red
64	Snipe	<i>Gallinago gallinago</i>	Egg Moor Fields	2007	ST312039			Amber
275604	Snipe	<i>Gallinago gallinago</i>	Reads Hill, Chardstock	2013	ST297034			Amber
77	Starling	<i>Sturnus vulgaris</i>	Storridge Hill	2007	ST317044			Red
6	Woodcock	<i>Scolopax rusticola</i>	Half Moon; Bewley Down, Chardstock	2002	ST280057			Amber
79	Yellowhammer	<i>Emberiza citrinella</i>	Storridge Hill	2007	ST317044	NERC 41		UKBAP (P); Red
38	Badger	<i>Meles meles</i>	Field near Kitbridge, Chardstock	2003	ST305036	WCA 6, BA	Bern III	
47	Badger	<i>Meles meles</i>	Garden at Roselea, Kitbridge, Chardstock	2002	ST307038	WCA 6, BA	Bern III	
37	Badger	<i>Meles meles</i>	Near Dommetts House, Axminster	2002	ST305036	WCA 6, BA	Bern III	
54	Badger	<i>Meles meles</i>	Near Egg moor Lane, Axminster	2002	ST310038	WCA 6, BA	Bern III	
24	Badger	<i>Meles meles</i>	Paddock at South Riding, Holy City, Chardstock, Axminster	2001	ST298051	WCA 6, BA	Bern III	
73	Badger	<i>Meles meles</i>	Storridge Hill	2007	ST317044	WCA 6, BA	Bern III	
67	Common Dormouse	<i>Muscardinus avellanarius</i>	Chardstock	1994	ST314037	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
83	Common Dormouse	<i>Muscardinus avellanarius</i>	Chardstock	1994	ST321036	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
56	Common Dormouse	<i>Muscardinus avellanarius</i>	Chardstock	2006	ST311041	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
48	Common Dormouse	<i>Muscardinus avellanarius</i>	Garden of Mount Cottage, Chardstock	1999	ST307056	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
252413	Common Dormouse	<i>Muscardinus avellanarius</i>	Burridge (garden)	2007	ST313061	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
34	Otter	<i>Lutra lutra</i>	Brookfield Bridge (PF called this site 'Farway' originally)	2006	ST304052	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
35	Otter	<i>Lutra lutra</i>	Brookfield Bridge (PF called this site 'Farway' originally)	2006-2008	ST304052	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
40	Otter	<i>Lutra lutra</i>	Chardstock Bridge	2004	ST305045	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
69	Otter	<i>Lutra lutra</i>	Fordwater	2004-2009	ST316023	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
49	Otter	<i>Lutra lutra</i>	Kit Bridge	1997-2009	ST308039	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
4	Roe Deer	<i>Capreolus capreolus</i>	Half Moon; Bewley Down, Chardstock	2002	ST280057	DA	Bern III	
20	Roe Deer	<i>Capreolus capreolus</i>	Narfords	2009	ST297061	DA	Bern III	
45	a Bat	<i>Chiroptera</i>	Birchill Cottage, Chardstock, Axminster.	1995	ST307031	WCA 5, 6	EC IVa; Bonn II	
50	a Bat	<i>Chiroptera</i>	St Andrew's Church, Chardstock, near Axminster.	1996	ST30900443	WCA 5, 6	EC IVa; Bonn II	
42	Brown Long-Eared Bat	<i>Plecotus auritus</i>	Brockfield Cottages, Chardstock, Axminster.	1999	ST306054	WCA 5, 6; NERC 41	EC IVa; Bern II; Bonn II	UKBAP (P)
3	Brown Long-Eared Bat	<i>Plecotus auritus</i>	Ford House, Furley, Nr Membury, Axminster.	1996	ST273054	WCA 5, 6; NERC 41	EC IVa; Bern II; Bonn II	UKBAP (P)
259207	Brown Long-eared Bat	<i>Plecotus auritus</i>	Chardstock	2011	ST305044	WCA 5, 6; NERC 41	EC IVa; Bern II; Bonn II	UKBAP (P)
32	Greater Horseshoe Bat	<i>Rhinolophus ferrumequinum</i>	Longacre, Birchill, Axminster.	2005	ST304033	WCA 5, 6; NERC 41	EC IIa, IVa; Bern II; Bonn II	UKBAP (P); DBAP
33	Lesser Horseshoe Bat	<i>Rhinolophus hipposideros</i>	Longacre, Birchill, Axminster.	2005	ST304033	WCA 5, 6; NERC 41	EC IIa, IVa; Bern II; Bonn	UKBAP (P)

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
46	Pipistrelle	<i>Pipistrellus pipistrellus</i>	Kit Cottage, Chardstock, Nr Axminster.	1998	ST307038	WCA 5, 6	EC IVa; Bern III, Bonn II	
81	Pipistrelle	<i>Pipistrellus pipistrellus</i>	Tamarisk, Tytherleigh, Axminster.	1998	ST319031	WCA 5, 6	EC IVa; Bern III, Bonn II	
44	Pipistrelle	<i>Pipistrellus pipistrellus</i>	Woodhayne, Birchill, Chardstock, Axminster.	1998	ST307029	WCA 5, 6	EC IVa; Bern III, Bonn II	
31	Pipistrelle	<i>Pipistrellus pipistrellus</i>	Woodhayne, Chardstock, Axminster.	1999	ST303034	WCA 5, 6	EC IVa; Bern III, Bonn II	
43	Serotine	<i>Eptesicus serotinus</i>	Brockfield Cottages, Chardstock, Axminster.	1999	ST306054	WCA 5, 6	EC IVa; Bern II; Bonn II	
71	Serotine	<i>Eptesicus serotinus</i>	Culverstead, Chardstock Lane, Tytherleigh, Axminster	1992	ST317034	WCA 5, 6	EC IVa; Bern II; Bonn II	
36	Serotine	<i>Eptesicus serotinus</i>	Little Oaks, Birch Hill, Axminster.	1996	ST30500338	WCA 5, 6	EC IVa; Bern II; Bonn II	
82	Serotine	<i>Eptesicus serotinus</i>	Tamarisk, Tytherleigh, Axminster.	1998-1999	ST319031	WCA 5, 6	EC IVa; Bern II; Bonn II	
30	Serotine	<i>Eptesicus serotinus</i>	Woodhayne, Chardstock, Axminster.	1998	ST303034	WCA 5, 6	EC IVa; Bern II; Bonn II	
262265	Serotine	<i>Eptesicus serotinus</i>	Chardstock, St Andrews Church	2011	ST309044	WCA 5, 6	EC IVa; Bern II; Bonn II	
8	Adder	<i>Vipera berus</i>	Bewley Down	2007	ST283064	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
252414	Grass Snake	<i>Natrix natrix</i>	BurrIDGE	2007, 2008	ST313061	NERC 41		UKBAP (P)
52	Common Frog	<i>Rana temporaria</i>	St Andrew's School, Chardstock.	2000	ST309045	WCA 5 (S)	EC Va; Bern III	
252423	Common Frog	<i>Rana temporaria</i>	BurrIDGE	2002-2014	ST313061	WCA 5 (S)	EC Va; Bern III	
252422	Common Toad	<i>Bufo bufo</i>	BurrIDGE	2002-2014	ST313061	WCA 5 (S); NERC 41	EC Va; Bern III	UKBAP (P)
51	Palmate Newt	<i>Lissotriton helveticus</i>	St Andrew's School, Chardstock.	2000	ST309045	WCA 5 (S)	Bern III	
260018	Trout	<i>Salmo trutta</i>	Hook Stream	2011	ST305052	NERC 41		UKBAP (P)
263100	Bullhead	<i>Cottus gobio</i>	Bewley Down, stream 3	2012	ST292066			

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
259749	Bullhead	<i>Cottus gobio</i>	Hook Stream	2011	ST310058			
259958	Bullhead	<i>Cottus gobio</i>	Hook Stream	2011	ST308054			
260017	Bullhead	<i>Cottus gobio</i>	Hook Stream	2011	ST305052			
284899	Eel	<i>Anguilla anguilla</i>	Burridge (garden)	2013	ST313061	NERC 41	Global Red list – CR	UKBAP (P)
28	Brown Hairstreak	<i>Thecla betulae</i>	Cuckold's Pit	1997	ST301045	WCA 5 (S); NERC 41		UKBAP (P); Nb Decline
10	Purple Hairstreak	<i>Quercusia quercus</i>	Bewley Down	1990-1991	ST286066			Decline
7	Purple Hairstreak	<i>Quercusia quercus</i>		1991	ST283064			Decline
16	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Cotley Wash	1999	ST291066	NERC 41		UKBAP (P); Decline
15	Wall Brown	<i>Lasiommata megera</i>		1990	ST2906	NERC 41		UKBAP (P)
41	White-letter Hairstreak	<i>Satyrrium w-album</i>	Ridge to Hook	1996	ST305054	WCA 5 (S); NERC 41		UKBAP (P); Nb; Decline
DMG	a micro-moth	<i>Sitochroa palealis</i>	Tytherleigh	1997	ST315035			Nb
DMG	August Thorn	<i>Ennomos quercinaria</i>	Tytherleigh	1978-2008	ST315035	NERC 41		UKBAP (P)
DMG	Autumnal Rustic	<i>Eugnorisma glareosa</i>	Tytherleigh	1978-2004	ST315035	NERC 41		UKBAP (P)
DMG	Beaded Chestnut	<i>Agrochola lychnidis</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Blood-vein	<i>Timandra comae</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Brindled Beauty	<i>Lycia hirtaria</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Brindled Ochre	<i>Dasypolia templi</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Buff Ermine	<i>Spilosoma luteum</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Centre-barred Sallow	<i>Atethmia centrargo</i>	Tytherleigh	1978-2006	ST315035	NERC 41		UKBAP (P)
DMG	Cinnabar	<i>Tyria jacobaeae</i>	Tytherleigh	1978-2002	ST315035	NERC 41		UKBAP (P)
DMG	Dark-barred Twin-spot Carpet	<i>Xanthorhoe ferrugata</i>	Tytherleigh	2006	ST315035	NERC 41		UKBAP (P)
DMG	Dot Moth	<i>Melanchra persicariae</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Dusky Brocade	<i>Apamea remissa</i>	Tytherleigh	1978-2008	ST315035	NERC 41		UKBAP (P)

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
DMG	Dusky Thorn	<i>Ennomos fuscantaria</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Ear Moth	<i>Amphipoea oculea</i>	Tytherleigh	2003-2004	ST315035	NERC 41		UKBAP (P)
DMG	Feathered Gothic	<i>Tholera decimalis</i>	Tytherleigh	1978-2004	ST315035	NERC 41		UKBAP (P)
DMG	Figure of Eight	<i>Diloba caeruleocephala</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Flounced Chestnut	<i>Agrochola helvola</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Garden Tiger	<i>Arctia caja</i>	Tytherleigh	1978-2006	ST315035	NERC 41		UKBAP (P)
DMG	Goat Moth	<i>Cossus cossus</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Green-brindled Crescent	<i>Allophyes oxyacanthae</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Grey Dagger	<i>Acronicta psi</i>	Tytherleigh	1978-2005	ST315035	NERC 41		UKBAP (P)
DMG	Gypsy Moth	<i>Lymantria dispar</i>	Tytherleigh	1978	ST315035			RDB-EX
DMG	Haworth's Minor	<i>Celaena haworthii</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Hedge Rustic	<i>Tholera cespitis</i>	Tytherleigh	1978-1997	ST315035	NERC 41		UKBAP (P)
DMG	Knot Grass	<i>Acronicta rumicis</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Lackey	<i>Malacosoma neustria</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Large Nutmeg	<i>Apamea anceps</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Large Wainscot	<i>Rhizedra lutosa</i>	Tytherleigh	1997-2006	ST315035	NERC 41		UKBAP (P)
DMG	Minor Shoulder-knot	<i>Brachylomia viminalis</i>	Tytherleigh	1997	ST315035	NERC 41		UKBAP (P)
DMG	Mottled Rustic	<i>Caradrina morpheus</i>	Tytherleigh	1978-2008	ST315035	NERC 41		UKBAP (P)
DMG	Mouse Moth	<i>Amphipyra tragopoginis</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Oak Hook-tip	<i>Watsonalla binaria</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Pale Eggar	<i>Trichiura crataegi</i>	Tytherleigh	1978-2004	ST315035	NERC 41		UKBAP (P)
DMG	Powdered Quaker	<i>Orthosia gracilis</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Rosy Minor	<i>Mesoligia literosa</i>	Tytherleigh	1978-2008	ST315035	NERC 41		UKBAP (P)
DMG	Rosy Rustic	<i>Hydraecia micacea</i>	Tytherleigh	1997-2010	ST315035	NERC 41		UKBAP (P)
DMG	Rustic	<i>Hoplodrina blanda</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Sallow	<i>Xanthia icteritia</i>	Tytherleigh	1978-2008	ST315035	NERC 41		UKBAP (P)
DMG	September Thorn	<i>Ennomos erosaria</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
DMG	Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Shoulder-striped Wainscot	<i>Mythimna comma</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Small Eggar	<i>Eriogaster lanestris</i>	Tytherleigh	1978	ST315035			RDB-VU
DMG	Small Emerald	<i>Hemistola chrysoprasaria</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Small Phoenix	<i>Ecliptopera silaceata</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Small Square-spot	<i>Diarsia rubi</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
DMG	Spinach	<i>Eulithis mellinata</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	Sprawler	<i>Asteroscopus sphinx</i>	Tytherleigh	1978	ST315035	NERC 41		UKBAP (P)
DMG	White Ermine	<i>Spilosoma lubricipeda</i>	Tytherleigh	1978-2010	ST315035	NERC 41		UKBAP (P)
252412	Violet Oil Beetle	<i>Meloe violaceus</i>	BurrIDGE (garden)	2011-2014	ST313061	NERC 41		UKBAP (P)
279453	a crane fly	<i>Lipsothrix nervosa</i>	Bewley Down, Bewley Wood (lower)	2013	ST287065	NERC 41		UKBAP (P)
159287	a crane fly	<i>Lipsothrix nervosa</i>	BurrIDGE wet woodland	2005, 2007	ST311059	NERC 41		UKBAP (P)
280954	a crane fly	<i>Lipsothrix nervosa</i>	Great Batch	2013	ST271056	NERC 41		UKBAP (P)
264446	a crane fly	<i>Lipsothrix nervosa</i>	Parks Coppice	2012	ST302041	NERC 41		UKBAP (P)
282062	a crane fly	<i>Lipsothrix nervosa</i>	Ridge, Brockfield Bottom Wood	2013	ST301057	NERC 41		UKBAP (P)
279527	a crane fly	<i>Lipsothrix nervosa</i>	Sycamore Farm Wood	2013	ST289057	NERC 41		UKBAP (P)
282595	a crane fly	<i>Lipsothrix nervosa</i>	Twist, Churchill	2013	ST292032	NERC 41		UKBAP (P)

NERC 41 **NERC Act (2006) Section 41:** Species listed under Section 41 of the Natural Environment and Rural Communities Act (2006). These are the species found in England which have been identified as requiring action under the UK BAP. All local authorities and other public authorities in England and Wales have a duty to promote and enhance biodiversity in all of their functions.

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 5 (KIS) **Wildlife and Countryside Act (1981) Schedule 5: (killing & injury):** species protected against killing, injury and 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 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.
DA	Deer Act 1991: deer protected under the Deer Act.
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.
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
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).
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.
ECVa, Vb	EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex Va and Vb: Exploitation of listed animals and plants to be subject to management if necessary.
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.
Devon Notable Species: Selected species recorded from over 50 2km squares in the Atlas of Devon Flora 1984 (R.B. Ivimey-Cook, Department of Biological Sciences, The University of Exeter).	
DN1	Devon Notable¹: 1-25 2 km squares in Atlas of Devon Flora 1984.
DN2	Devon Notable²: 26-50 2 km squares in Atlas of Devon Flora 1984.
DN3	Devon Notable³: Selected species recorded from over 50 2 km squares in Atlas of Devon Flora 1984.
DR	Devon Rarity: native species recorded from 3 or fewer localities within Devon.

Decline	Substantial local decline in Devon
Red List	Bird species of high conservation concern, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.
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.
RDB	Red Data Book: known from 30 or fewer 10km squares. Taken from the Invertebrate Site Register.
Nb	Nationally Notable B: known from 100 or fewer 10km squares. Taken from the Invertebrate Site Register.

Appendix 3. Latin names of species mentioned by their common name in the audit

Common name	Latin name		
Ferns and horsetails			
black spleenwort	<i>Asplenium adiantum-nigrum</i>	bramble	<i>Rubus fruticosus agg.</i>
bracken	<i>Pteridium aquilinum</i>	burnet-saxifrage	<i>Pimpinella saxifraga</i>
great horsetail	<i>Equisetum telmateia</i>	bush vetch	<i>Vicia sepium</i>
hard fern	<i>Blechnum spicant</i>	common bird's-foot-trefoil	<i>Lotus corniculatus</i>
hart's-tongue fern	<i>Phyllitis scolopendrium</i>	common cow-wheat	<i>Melampyrum pratense</i>
maidenhair spleenwort	<i>Asplenium trichomanes</i>	common gorse	<i>Ulex europaeus</i>
narrow buckler-fern	<i>Dryopteris carthusiana</i>	common knapweed	<i>Centaurea nigra</i>
polypody	<i>Polypodium vulgare agg.</i>	common nettle	<i>Urtica dioica</i>
rusty-back fern	<i>Ceterach officinarum</i>	common sorrel	<i>Rumex acetosa</i>
soft shield-fern	<i>Polystichum setiferum</i>	common twayblade	<i>Listera ovata</i>
wood horsetail	<i>Equisetum sylvaticum</i>	corky-fruited water-dropwort	<i>Oenanthe pimpinelloides</i>
Flowering plants		corn marigold	<i>Glebionis segetum</i>
agrimony	<i>Agrimonia eupatoria</i>	cornflower	<i>Centaurea cyanus</i>
alder	<i>Alnus glutinosa</i>	cow parsley	<i>Anthriscus sylvestris</i>
alder buckthorn	<i>Frangula alnus</i>	cowslip	<i>Primula veris</i>
alternate-leaved golden-saxifrage	<i>Chrysosplenium alternifolium</i>	cross-leaved heath	<i>Erica tetralix</i>
angelica	<i>Angelica sylvestris</i>	cuckooflower	<i>Cardamine pratensis</i>
apple	<i>Malus sylvestris</i>	dog's mercury	<i>Mercurialis perennis</i>
ash	<i>Fraxinus excelsior</i>	dogwood	<i>Cornus sanguinea</i>
autumnal hawkbit	<i>Leontodon autumnalis</i>	downy birch	<i>Betula pubescens</i>
beech	<i>Fagus sylvatica</i>	dwarf elder	<i>Sambucus ebulus</i>
bell heather	<i>Erica cinerea</i>	dyer's greenweed	<i>Genista tinctoria</i>
betony	<i>Stachys officinalis</i>	early dog-violet	<i>Viola reichenbachiana</i>
bilberry	<i>Vaccinium myrtillus</i>	early-purple orchid	<i>Orchis mascula</i>
birch	<i>Betula</i>	elder	<i>Sambucus nigra</i>
black bryony	<i>Tamus communis</i>	elm (English)	<i>Ulmus procera group</i>
blackthorn	<i>Prunus spinosa</i>	field maple	<i>Acer campestre</i>
bluebell	<i>Hyacinthoides non-scripta</i>	gorse (common)	<i>Ulex europeaus</i>
bog pondweed	<i>Potamogeton polygonifolius</i>	greater cuckooflower	<i>Cardamine raphanifolia</i>
		greater knapweed	<i>Centaurea scabiosa</i>
		greater stitchwort	<i>Stellaria holostea</i>

guelder-rose	<i>Viburnum opulus</i>
hairy sedge	<i>Carex hirta</i>
hawthorn	<i>Crataegus monogyna</i>
hazel	<i>Corylus avellana</i>
heath bedstraw	<i>Galium saxatile</i>
heather	<i>Calluna vulgaris</i>
hemlock water-dropwort	<i>Oenanthe crocata</i>
hemp-agrimony	<i>Eupatorium cannabinum</i>
herb paris	<i>Paris quadrifolia</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
hoary plantain	<i>Plantago media</i>
hogweed	<i>Heracleum sphondylium</i>
holly	<i>Ilex aquifolium</i>
ivy	<i>Hedera helix</i>
jack-by-the-hedge (garlic mustard)	<i>Alliaria petiolata</i>
Japanese knotweed	<i>Fallopia japonica</i>
lady's bedstraw	<i>Galium verum</i>
large bird's-foot-trefoil	<i>Lotus pedunculatus</i>
Lebanon cedar	<i>Cedrus libani</i>
lousewort	<i>Pedicularis sylvatica</i>
mare's-tail	<i>Hippuris vulgaris</i>
marsh arrowgrass	<i>Triglochin palustre</i>
marsh helleborine	<i>Epipactis palustris</i>
marsh ragwort	<i>Senecio aquaticus</i>
marsh thistle	<i>Cirsium palustre</i>
marsh valerian	<i>Valeriana dioica</i>
marsh violet	<i>Viola palustris</i>
meadow vetchling	<i>Lathyrus pratensis</i>
meadowsweet	<i>Filipendula ulmaria</i>
mouse-ear-hawkweed	<i>Pilosella officinarum</i>
oak	<i>Quercus</i>
opposite-leaved golden-saxifrage	<i>Chrysosplenium oppositifolium</i>
oxeye daisy	<i>Leucanthemum vulgare</i>
pepper-saxifrage	<i>Silaum silaus</i>

pignut
 primrose
 ramsons
 red campion
 rhododendron
 rough hawkbit
 round-leaved crowfoot
 rowan
 sallow (grey willow)
 sanicle
 scentless mayweed
 Scots pine
 short-leaved water-starwort
 silver fir
 sundew
 sycamore
 toothwort
 tormentil
 town-hall clock (moschatel)
 tutsan
 wall penny
 water mint
 western gorse
 wild cherry
 wild thyme
 wood anemone
 wood sage
 wood-sorrel
 yellow archangel
 yellow pimpernel
 yellow sedge
 yew
Grasses
 blunt-flowered rush

Conopodium majus
Primula vulgaris
Allium ursinum
Silene dioica
Rhododendron ponticum
Leontodon hispidus
Ranunculus omiophyllus
Sorbus aucuparia
Salix cinerea
Sanicula europaea
Tripleurospermum inodorum
Pinus sylvestris
Callitriche truncata
Abies alba
Drosera
Acer pseudoplatanus
Lathraea squamaria
Potentilla erecta
Adoxa moschatellina
Hypericum androsaemum
Umbilicus rupestris
Mentha aquatica
Ulex gallii
Prunus avium
Thymus polytrichus
Anemone nemorosa
Teucrium scorodonia
Oxalis acetosella
Lamiastrum galeobdolon
Lysimachia nemorum
Carex demissa
Taxus baccata

Juncus subnodulosus

bristle bent
 creeping soft-grass
 crested dog's-tail
 field wood-rush
 greater tussock-sedge
 heath-grass
 meadow barley
 pale sedge
 pendulus sedge
 purple moor-grass
 quaking-grass
 remote sedge
 sweet vernal grass
 thin-spiked wood-sedge
 tufted Hair-grass
 wavy hair-grass
 wood meadow-grass
 wood sedge
 wood small-reed
 yellow oat-grass

Fish

brook lamprey
 brown trout
 bullhead
 eel
 salmon
 sea lamprey
 trout

Amphibians & reptiles

adder
 common frog
 common lizard
 common toad
 grass snake

Agrostis curtisii
Holcus mollis
Cynosurus cristatus
Luzula campestris
Carex paniculata
Danthonia decumbens
Hordeum secalinum
Carex pallescens
Carex pendula
Molinia caerulea
Briza media
Carex remota
Anthoxanthum odoratum
Carex strigosa
Deschampsia caespitosa
Deschampsia flexuosa
Poa nemoralis
Carex sylvatica
Calamagrostis epigejos
Trisetum flavescens

Lampetra planeri
Salmo trutta
Cottus gobio
Anguilla anguilla
Salmo salar
Petromyzon marinus
Salmo trutta

Vipera berus
Rana temporaria
Zootoca vivipara
Bufo bufo
Natrix natrix

great crested newt
 palmate newt
 slow worm
 smooth newt

Mammals

badger
 bank vole
 brown long-eared bat
 brown rat
 common dormouse
 common shrew
 field vole
 fox
 greater horseshoe bat
 grey squirrel
 hare
 hedgehog
 house mouse
 lesser horseshoe bat
 mink
 mole
 otter
 pipistrelle bat
 pygmy shrew
 rabbit
 roe deer
 serotine bat
 stoat
 water shrew
 weasel
 wood mouse

Birds

barn owl
 bullfinch

Triturus cristatus
Triturus helveticus
Anguis fragilis
Lissotriton vulgaris

Meles meles
Myodes glareolus
Plecotus auritus
Rattus norvegicus
Muscardinus avellanarius
Sorex araneus
Microtus agrestis
Vulpes vulpes
Rhinolophus ferrumequinum
Sciurus carolinensis
Lepus europaeus
Erinaceus europaeus
Mus musculus
Rhinolophus hipposideros
Neovison vison
Talpa europaea
Lutra lutra
Pipistrellus pipistrellus
Sorex minutus
Oryctolagus cuniculus
Capreolus capreolus
Eptesicus serotinus
Mustela erminea
Neomys fodiens
Mustela nivalis
Apodemus sylvaticus

Tyto alba
Pyrrhula pyrrhula

buzzard
 cuckoo
 dipper
 dunnoek
 fieldfare
 green woodpecker
 house martin
 house sparrow
 kestrel
 kingfisher
 mistle thrush
 nightjar
 peregrine falcon
 raven
 redwing
 skylark
 snipe
 song thrush
 starling
 swallow
 tree creeper
 willow tit
 wren
 yellowhammer

Invertebrates

ash-grey mining bee
 brown hairstreak
 cinnabar moth
 dotted bee-fly
 garden tiger moth
 glow-worm
 goat moth
 golden-ringed dragonfly
 hornet

Buteo buteo
Cuculus canorus
Cinclus cinclus
Prunella modularis
Turdus pilaris
Picus viridis
Delichon urbicum
Passer domesticus
Falco tinnunculus
Alcedo atthis
Turdus viscivorus
Caprimulgus europaeus
Falco peregrinus
Corvus corax
Turdus iliacus
Alauda arvensis
Gallinago gallinago
Turdus philomelos
Sturnus vulgaris
Hirundo rustica
Certhia familiaris
Poecile montanus
Troglodytes troglodytes
Emberiza citrinella

Andrena cineraria
Thecla betulae
Tyria jacobaeae
Bombylius discolor
Arctia caja
Lampyris noctiluca
Cossus cossus
Cordulegaster boltonii
Vespa crabro

keeled skimmer dragonfly
 medicinal leech
 purple hairstreak
 small eggar moth
 small pearl-bordered fritillary
 violet oil beetle
 white ermine moth

Orthetrum coerulescens
Hirudo medicinalis
Neozephyrus quercus
Eriogaster lanestris
Boloria selene
Meloe violaceus
Spilosoma lubricipeda