Parish Biodiversity Audit

for

Axmouth

Consultation draft – April 2010

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Report commissioned by Devon County Council

Data supplied by the Devon Biodiversity Records Centre

Devon County Council

Contents

Axmouth - Parish Plan Biodiversity Project

This document has been produced as a starting point to help community action for wildlife. By starting to bring together knowledge of the natural assets of the parish, it may go some way to achieving its aim of contributing to and stimulating ideas for – local action.

It should be emphasised that it is just a beginning. It does not represent a comprehensive account of the parish and is based very largely on existing records held by the Devon Biodiversity Records Centre (DBRC). There will be a wealth of local knowledge that can be used to build upon and improve this report. Indeed, it is important that it is seen as a 'living document' and one that belongs to the parish. It is hoped that it will be added to and refined by the people of Axmouth parish in future years.

Did you know…?

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 Department of the Environment, Food and Rural Affairs (Defra) has issued guidance for local authorities on implementing this biodiversity duty. It can be downloaded from Defra's website: www.defra.gov.uk/wildlife-countryside/pdf/biodiversity/la-guid-english.pdf

This audit and the ideas it may stimulate may help the Parish Council to fulfil this biodiversity duty.

Introduction

Biodiversity is a term that describes all of life on earth, from the smallest micro-organism to the largest mammal, the blue whale. Life is found almost everywhere on the planet and in huge variety. Even a humble back garden may be home to thousands of species and is therefore an important part of the planet's biodiversity. The Axmouth Parish Biodiversity Audit begins to describe the area's local wildlife and shows how it fits into the wider picture of biodiversity in Devon and the UK.

Axmouth parish is situated in the very south-east of Devon on the east Devon coast, not far from Lyme Regis and the Dorset border. As the name suggests it lies at the mouth of the River Axe. Seaton lies to the west of the parish, with the majority of Axmouth parish located to the east of the River Axe. The boundary between Seaton and Axmouth parishes does not follow the current route of the river, but possibly a more ancient course, so that the parish includes the pebble ridge together with some saltmarsh and mudflats east of the tramway on the west banks of the estuary. Hence the mouth and estuary of the River Axe are within the parish. In the north-west of the parish the boundary follows in part a tributary stream that flows into Axmouth Marsh. The parish extends eastwards by about 3.5km, with the coast as its southern boundary, to just beyond Dowlands near the coast, and inland about 3 to 4 km to just beyond Musbury House and Higher Bruckland Farm.

The parish covers an area of 1280 ha and lies within East Devon District and within the East Devon Area of Outstanding Natural Beauty (AONB).

The underlying geology is Upper Triassic, Rheatic beds, Keuper marls and sandstone to the west in the river basin and flood plain. To the east of this at higher levels there is Upper greensand and Gault with small amounts of Chalk in the far east of the parish.

Axmouth village is the main habitation and lies near the Axe Estuary about 1km inland from the coast. This is an attractive small village with a church and two public houses. Axmouth was once one of the busiest ports in the south-west, from the Roman through to medieval times, when the estuary was much wider and deeper. However, over the years the estuary has gradually silted up and the moving shingle bar formed at the mouth. This has allowed the formation of the wildlife-rich saltmarshes and mudflats present today. In 1870 a channel was dug and the small harbour with quay developed at the mouth of the river. To the north of the village there is an Iron Age hill fort on Hawkesdown Hill in a prominent position above the estuary and village.

The main A3052 Exeter to Lyme Regis road runs east-west through the north of the parish, with a major crossroads between this and the A358 running north to Axminster and Chard and the smaller B3172 running south to Axmouth and Seaton. The roads within the parish are otherwise small country lanes servicing the farmsteads scattered throughout the parish and the small hamlet at Dowlands. The countryside here can also be enjoyed from a

number of footpaths and bridleways routed along green lanes, across fields and along the Undercliffs.

The main land use is agricultural, with a mix of arable and grasslands; some grassland pastures, particularly in the north of the parish, are grazed by horses with riding stables located at Crabhayne Farm. Other land uses include woodlands, fishing ponds near Musbury House, a golf course south of Axmouth and a caravan park at Westhayes.

Axmouth has a dramatic coastline incorporating the western section of the Axmouth to Lyme Regis Undercliffs. Here in 1839 there was one of the largest and most important landslips that have occurred, in relatively recent times, along the coast of Britain. This created a unique area with areas of exposed geological features and areas of naturally developed and valuable wildlife woodland, coastal and grassland habitats. The importance of the Undercliffs has been recognised with a number of designations being within a Site of Special Scientific Interest (SSSI), a Special Area of Conservation (SAC) and a National Nature Reserve (NNR). The Undercliffs include areas of calcareous grassland, scrub and secondary woodland habitats. There are some other broadleaved woodlands, mainly to the north and west of the parish, some of which are designated as County Wildlife Sites (CWS). Springhead SSSI was designated an SSSI for its unimproved calcareous grassland. Two other areas of unimproved grassland have been identified in the past and designated as County Wildlife Sites.

Another major landscape feature of Axmouth parish is the River Axe marshes and estuary. These are important habitats for a rich variety of flora and fauna, notably waders, wildfowl and gulls. The River Axe rises in Dorset, flowing and meandering into the estuary and ultimately into Lyme Bay just south of Axmouth village. Part of the River Axe has been designated a SSSI. Although most of this lies to the north of the parish, a small section falls within Axmouth parish. The Rivers Coly and Yarty are its main tributaries which flow into the River Axe outside the parish. The Axe estuary and marshes have been designated a County Wildlife Site.

There are three small tributaries that flow eastwards from within or through the parish ultimately into the River Axe. The northern tributary flows near Higher and Lower Bruckland Farms and into the southern part of a wide floodplain of the River Axe. This northern section of the parish supports a mix of grassland (particularly in the floodplain and on steeper slopes) and arable crops. The other two tributaries have steep-sided valleys and mainly comprise hedged pastures and woodlands. These form important wildlife corridors through the parish. The most southerly valley includes areas of herb-rich scrub woodland, fen and calcareous grasslands.

The more elevated and generally gently sloping fields are also agricultural and mainly arable (primarily winter cereals, winter brassica crops and some

maize). These are concentrated in the south (right up to the boundary with the Undercliffs), middle and east of the parish.

Other features of biodiversity interest within the parish include some ponds just east of Musbury House, some woodlands (such as Boshill Wood and Haven Ball Woods) and numerous green lanes.

Axmouth parish lies within the East Devon Area of Outstanding Natural Beauty and the Blackdowns Natural Area. The coastline here forms part of the Jurassic Coast World Heritage Site. The area of Lyme Bay just off the coast of Axmouth falls within the Poole Bay to Lyme Bay Reefs draft Special Area of Conservation.

Notable sites and species recorded within Axmouth parish are given in Appendix 1. The common dormouse and the otter have been recorded within the parish. Both are UK Biodiversity Action Plan (UK BAP) and **Devon Biodiversity Action Plan** (Devon BAP) priority species. Other UK BAP species recorded within or near the parish include several moth species; butterflies (such as pearl-bordered fritillary, wood white, dingy skipper, wall brown, white-letter hairstreak, small heath and small pearl-bordered fritillary); bats (lesser horseshoe bat and brown long-eared bat); reptiles (grass snake, viviparous or common lizard, adder and slow-worm) and early gentian. Primrose and pearl-bordered fritillary are listed in the **Devon Biodiversity Action Plan.** An explanation of the Devon Biodiversity Action Plan is presented on page 56.

The parish site visit for this report was carried out in November and December 2009; it should be borne in mind that this is not the ideal season to carry out biodiversity surveys as some species will not be visible at this time of the year. A full species list recorded during the November and December site surveys is given in Appendix 2.

Designated Sites

Many designated sites are on private land: the listing of a site does not imply any right of public access.

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSI) are notified by Natural England (formerly English Nature) because of their plants, animals or geological features (the latter are geological SSSIs or gSSSIs). 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.

There are three SSSIs that lie within or partly within Axmouth parish.

Axmouth to Lyme Regis Undercliffs SSSI

The Axmouth to Lyme Regis Undercliffs SSSI, covering an area of about 335 ha, is an important geological and biological site which has also been designated a National Nature Reserve (NNR). The area is also included within the Sidmouth to West Bay Special Area of Conservation and Jurassic Coast World Heritage Site. Brief descriptions of these are covered in later text.

As the name suggests The Axmouth to Lyme Regis Undercliffs SSSI/NNR stretches along the coast from the mouth of the River Axe in the west to Lyme Regis in the east, a distance of about 8 km. The inland extent ranges from about a quarter to half a kilometre. The western section of the SSSI/NNR lies within Axmouth parish.

The rocks that underlie the SSSI/NNR get younger as you travel eastwards from Axmouth end towards Lyme Regis. Generally, in the west the rocks are around 210 million years old (of the late Triassic era) and the rocks towards the east of the site are around 185 million years old (early Jurassic era). Some cliffs are capped by younger sandstones and chalk (of the Cretaceous era) and the site has fine exposures of Lias and Cretaceous rocks. The coast here has revealed many preserved animal specimens of the Lower Jurassic period.

The SSSI/NNR contains the largest and most important landslip area on the British coast. A massive landslip, the Bindon Landslip, occurred in 1839 when a large block of land slipped seawards to some 150m below. This was caused by rainwater soaking into the overlying permeable Cretaceous rocks, which increased the weight to a point where it slipped towards the sea on the underlying impermeable slippery clays. This slipped area was left largely unmanaged leaving areas of scrub and woodland to develop. The slip also left a chasm and chasm-bound block known as ‘Goat Island’, which is now managed for its herb-rich chalk grassland. Besides the Chasm, Goat Island, the Bindon Cliffs and Dowlands Cliffs are notable geological features here.

Other notable geological features within Axmouth parish are Haven Cliffs and Rousdon Cliffs. The impressive red cliffs of Haven Cliffs, just east of the mouth of the River Axe, are composed of the red late Triassic rocks formed from deserts, with grey and green layers the remains of dried up lakes, and capped by white chalk cliffs of the Cretaceous, formed from life within tropical seas. The cliffs at Rousdon lie above a landslip that still holds the remains of some buildings that fell along with some non-native plant species, some of which have now spread into the surrounding areas.

There have also been a series of minor slips within the site, notably in the eastern section. The slips create a varied topography, with varied lengths of plant colonisation, helping to build a site with such a diverse range of habitats. The SSSI/NNR now supports species-rich naturally-developed secondary ash woodland, scrub and species-rich calcareous grassland, wet, cliff and softrock habitats. Around 400 flowering plant species have been recorded within the SSSI/NNR with many lower plants including 75 moss and 150 fungus species (source SSSI citation).

The naturally generated woodland areas (predominately ash and field maple) show a good example of plant succession. They support species such as hazel, dogwood, spindle and blackthorn in the often dense understorey. Areas of ivy and hart's-tongue dominate the ground flora. Other plant species include dog's mercury, enchanter's nightshade, herb-Robert, pendulous sedge, male fern, broad buckler-fern and soft shield-fern. There is a mosaic of woodland and scrub areas. The scrub areas contain dense areas of bramble and mixed scrub including spindle, wild privet and wayfaring tree. The nationally rare plant species, purple gromwell, can be found here growing next to privet scrub. Wild madder, ivy, travellers-joy and everlasting pea thrive here.

The open cliff-top grasslands include species such as sea-kale, Portland spurge, spring felwort, mountain St John's wort, rock sea-lavender, sea radish and Nottingham catchfly.

The long distance South West Coastal Footpath passes through the undercliffs. A walk along this path will take you into another world, far away from the hustle and bustle of modern life. Be careful though as the walk can be slippery and strenuous. With often just the sound of the sea and a few birds, a walk can reward you with a wide range of flora and fauna. During the site visit in November 2009 the following species were seen: ash, field maple, blackthorn, wayfaring tree, crab apple, bramble, bracken, spindle, hazel, sycamore, ivy, wild madder, hart's-tongue, wood sage, wood avens, dog's mercury, soft shield-fern, wood-sedge, barren strawberry, sanicle, traveller's-joy, bush vetch, violet, stinking iris, broom rape and agrimony. Birds seen included robin, wren, peregrine, blackbird, song thrush and hedge sparrow. A walk along the shingle ridge at the base of the cliffs offered views of some coastal cliff vegetation. Species noted here included common bird's-foot-trefoil, kidney vetch, tall mellilot, black medick, tall fescue, sea carrot, ribwort plantain, wild madder, black bog-rush, sea mayweed, creeping cinquefoil, mallow, willow, sea beet, wood sage, sea radish and an orchid spike.

Butterfly species recorded here (according to the SSSI citation) include the wood white butterfly (this being a key site for the species) and the Lulworth skipper. Over 100 species of birds frequent or pass through the area; they include those species typical of woodlands, scrub and coastal cliffs. Song thrush and bullfinch are present but also other interesting species such as the nightingale that breed here. Mammals inhabiting the Undercliffs include roe deer.

Intertidal rocks or shingle lie at the base of the cliffs. This is sparsely vegetated, but around 60 species of seaweed have been recorded (source: SSSI citation). Devon Wildlife Trust conducted a survey of inter-tidal habitats surveys here in 1995. River Ledge just east of the mouth of the River Axe is composed of a very exposed shingle ridge with mixed boulder reef below and supports typical shore communities. Sparrowbush Ledge further east is a very exposed shingle ridge with red marl ledges below; here there was very diverse algal turf with a large population of rock-boring bivalves.

DBRC have the following records of notable species recorded within the area: The nationally rare and Devon notable plant purple gromwell; the nationally scarce and UK BAP priority species early gentian; The UK BAP priority butterfly species: wall brown, dingy skipper (also in local decline) and wood white (also nationally notable); butterflies in local decline: brown argus, green hairstreak, chalk-hill blue and dark green fritillary; osprey, a bird of medium conservation concern; the UK BAP priority reptile species: slow-worm, adder and viviparous (common) lizard; and common frog which has protection under European legislation. DBRC also has records of a wide range of notable moths occurring in the vicinity.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadows and pastures (Devon BAP); Caves, karst and limestone habitats (Devon BAP); Lowland calcareous grassland (UK BAP)
- Lowland mixed deciduous woodland (UK BAP)
- Sea cliff and slope (Devon BAP); Maritime cliff and slopes (UK BAP)
- Coastal vegetated shingle (UK BAP)
- Rocky foreshore (Devon BAP); Intertidal underboulder communities (UK BAP)

Key species:

- Early gentian (UK BAP priority)
- Primrose (Devon BAP)
- Wall brown, Dingy skipper, Wood white (UK BAP priority)
- Slow-worm, Adder, Viviparous lizard (UK BAP priority)

Cliffs of the Axmouth to Lyme Regis Undercliffs SSSI/NNR

Bindon Cliff, the Axmouth to Lyme Regis Undercliffs SSSI/NNR

Woodlands of the Axmouth to Lyme Regis Undercliffs SSSI/NNR

Springhead Axmouth SSSI

Springhead Axmouth SSSI is located in the valley to the east of Axmouth village. The site covers 13.3 ha on the steep valley slopes on either side, and includes the valley bottom, through which a small stream flows, and the small lane from Axmouth. The soils are derived from a combination of Lower Jurassic and Cretaceous calcareous and clay-based rocks. The SSSI includes wood scrubland, calcareous grassland and fen which support a variety of orchids.

A lane runs through the site from which the woodlands (supporting mainly ash, with some oak and beech, with hazel, laurel and holly) can be seen; a south facing grassy slope with scattered bracken and scrub; and a reed bed can also be seen.

Plant species within the fen area include the Devon rarities: broad-leaved cottongrass and few-flowered spike-rush together with purple moor-grass, sweet vernal-grass, quaking grass, marsh arrowgrass, common sedge, carnation sedge, flea sedge, and black bog-rush (source: SSSI citation).

Springhead is important for orchids including the Devon notables marsh heleborine and marsh fragrant orchid together with the hybrid between the common spotted-orchid and the southern marsh-orchid known as leopard orchid.

Other notable species recorded here in the 1980's (source: DBRC records) include the Devon notables: hoary plantain, meadow oat-grass, marsh valerian, cowslip, downy oat-grass, crested hair-grass, dwarf thistle, marsh arrowgrass, pyramidal orchid, small scabious, tor-grass, black bog-rush and wood small-reed.

The site also supports a wide range of butterflies including marsh fritillary, green hairstreak, marbled white, dingy skipper and grizzled skipper (source: SSSI citation).

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)
- Flower-rich meadows and pastures (Devon BAP); Caves, karst and limestone habitats (Devon BAP); Lowland calcareous grassland (UK BAP)
- Lowland fens (UK BAP)
- Freshwater reedbed (Devon BAP)

Key species:

- Marsh fritillary (Devon BAP; UK BAP priority)
- Dingy skipper (UK BAP priority)

Part of Springhead SSSI

River Axe SSSI

The River Axe from Axe Bridge, around the tidal limit of the Axe, upstream approximately 13 km to the confluence with the Blackwater River was designated a SSSI in 1999. The river meanders through its floodplain which is dominated by improved dairy pasture. The contrasting patterns of meander formation are of geomorphologic interest and of national importance. The underlying geology of the riverbed is alluvium with areas of valley gravel, clay, shale and marl. The geology of the catchment area is mixed with sandstones and limestones, resulting in calcareous water. A summary of the entire SSSI is given here but only very small section of the River Axe SSSI flows through the very north-west of Axmouth parish. Some of the River Axe SSSI is also designated a Special Area of Conservation (the Axe River SAC), this is briefly discussed in another section.

The stretch of river designated as an SSSI has an exceptionally diverse range of aquatic and marginal flora, with a range of plant communities represented. The diversity is partly due to the range of natural features along its length (such as long riffles, deep pools, islands and meanders). The water course supports particular species of starwort and water-crowfoot. These include stream water-crowfoot, river water-crowfoot and nationally scarce species short-leaved water-starwort, the latter of which is found throughout the SSSI. Other plant species include perfoliate and fennel pondweed, amphibious bistort, brooklime, horned pondweed and spiked water-milfoil. Emergent and marginal plants include reed canary-grass, branched bur-reed, reed sweet-grass, water mint, marsh woundwort and water forget-me-not. Flowering rush (locally uncommon) and great yellow-cress are also present here. The flora becomes slightly richer in the lower reaches (and possibly within the section in Axmouth parish) and includes small and broad-leaved pondweed, various-leaved water-starwort and common reedmace.

The wide range of habitats is also important for invertebrates including several dragonfly and damselfly species such as white-legged damselfly and banded

demoiselle. The nationally scarce alder fly; two nationally scarce caddis fly species and the rare medicinal leech have been recorded in the river.

The SSSI contains species of fish important in a European context, such as Atlantic salmon and bullhead, together with other species including brown trout; it also supports a run of sea trout (source SSSI citation) and is also important for sea and brook lamprey (source JNCC). The habitats here are also important for breeding birds such as kingfisher, sedge warbler, reed bunting, sand martin and grey wagtails. Otters are present in small numbers.

Links to key habitats and species in Devon and UK BAP

Key habitat:

- Rivers, streams, floodplains and fluvial processes (Devon BAP); Rivers (UK BAP)

Key species:

- Otter (Devon BAP; UK BAP)
- Reed bunting (UK BAP)
- Atlantic Salmon (Devon BAP; UK BAP)
- Brown/sea trout (UK BAP)

Special Areas of Conservation

Special Areas of Conservation (SAC) 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 SACs are, or will be, also 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.

Sidmouth to West Bay Special Area of Conservation

The Sidmouth to West Bay SAC has been designated to protect its rich and diverse vegetated sea cliff habitats. As a result of the varied geology along this stretch of coast, there is a wide range of habitat types within the SAC, including pioneer communities, colonising new landslip areas, as well as more established areas of woodland, mixed scrub and grassland where conditions are more stable. The resulting mosaic of habitats support a wide range of plants and animals, especially invertebrates.

Within the parish of Axmouth the Sidmouth to West Bay SAC covers the same area as the Axmouth to Lyme Regis Undercliffs SSSI and NNR and details of the area's rich geology and biodiversity can be found in the relevant sections above.

River Axe Special Area of Conservation

The River Axe SAC has been designated to protect the important aquatic habitats of approximately 25 ha of the lower reaches of the River Axe. The River Axe SSSI and SAC overlap, but the SSSI covers a larger area. The small stretch of the River Axe within Axmouth parish north of the bridge on the A3052 is designated both an SSSI and SAC. The River Axe SSSI is described in an earlier section.

Poole Bay to Lyme Bay Reefs draft Special Area of Conservation

In 2009 Natural England announced a new set of marine SACs to increase the representation of reefs and sandbanks within the Natura 2000 network. At the time of writing these are known as draft SAC (dSAC) and are subject to a public consultation prior to designation. The Poole Bay to Lyme Bay Reefs dSAC contains four separate areas, one of which, Lyme Bay Reefs, has a boundary along the low water mark in the south of the parish.

Lyme Bay Reefs is proposed as an SAC as a result of its reef features, which range from cobbles and boulders to different types of bedrock. The wide variety of hard substrates support an equally wide range of seabed animals, including corals, such as the pink sea fan and sunset coral, sponges and bryozoans (‘moss animals’). Some of these species are long-lived and slow growing, which makes them particularly vulnerable to damage from human activities. The rich seabed communities also support a range of commercially important species such as scallop, crab and lobster.

National Nature Reserves

National Nature Reserves (NNR) are notified by Natural England because of their habitats or species. They are the best examples of a particular habitat or have important populations of rare species. Natural England needs to be consulted before any operations likely to damage the special interest are undertaken. NNR is a statutory designation with legal implications.

The Axmouth to Lyme Regis Undercliffs NNR within the parish of Axmouth covers the same area as the Axmouth to Lyme Regis Undercliffs SSSI and the Sidmouth to West Bay SAC. This area is discussed in the SSSI section above.

County Wildlife Sites

County Wildlife Sites (CWS) 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 Sites of Special Scientific Interest (SSSI), and does not have any legal status. County Wildlife Sites are usually included in Local Plans as sites of regional or local biodiversity interest

and are covered by Planning Policy Statement 9 (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.

Note: 'Planning Policy Statement 9: Biodiversity and Geological Conservation' was published by the Department of the Environment in August 2005. Planning Policy Statements (PPS) set out the Government's national policies on different aspects of planning in England. PPS9 sets out planning policies on protection of biodiversity and geological conservation through the planning system. This PPS replaces Planning Policy Guidance Note 9 (PPG9) on nature conservation published in October 1994.

There are seven County Wildlife Sites within Axmouth parish:

- Diggen's Moor Coppice County Wildlife Site
- Stedcombe Wood County Wildlife Site
- Boshill Wood County Wildlife Site
- Springhead (E) County Wildlife Site
- Parsonage Barn County Wildlife Site
- Haven Ball Woods County Wildlife Site
- Axe Estuary and Marshes County Wildlife Site

Records of previous habitat and species surveys for these CWSs are kept with the Devon Biodiversity Records Centre (DBRC), from which the descriptions here are derived; conditions may have changed since these surveys. The sites are privately owned and there is no public access onto them (other than normal public rights of way).

Diggen's Moor Coppice County Wildlife Site

Diggen's Moor Coppice County Wildlife Site is located in the north-east of the parish between, and slightly south of, Haye Farm and Higher Bruckland Farm. This ancient semi-natural broadleaved woodland covers an area of 4.6 ha on a north-west facing slope. When surveyed in 2003, besides the free-draining dense woodland with occasional woodland clearings the site also supported some wet woodland and springline flush. The drier areas were in the very west and east of the site but the wetter ground covers the majority of the central area and supports dense woodland with tree species including oak, ash, alder, hazel and elder. Other areas contained blackthorn, field maple and grey willow. The ground flora included bluebell, primrose, hart's-tongue, enchanter's-nightshade, sanicle, and water figwort. In this 2003 survey the following ancient woodland indicator species were recorded: field maple, pendulous sedge, bluebell, holly, wood millet, hart's-tongue, primrose and sanicle. An earlier survey in 1995 reported evidence of previous hazel coppicing and 19 ancient woodland species, including wood sorrel and yellow archangel. There is a record of common dormouse here (source: DBRC).

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)

Key species:

- Primrose (Devon BAP)
- Common dormouse (Devon BAP and UK BAP priority)

Stedcombe Wood County Wildlife Site

Stedcombe Wood County Wildlife Site is a reasonably large woodland of 20.4 ha located in the centre of the parish, on either side of Stedcombe valley. The woodland is a semi-natural woodland partly replanted with conifers and was surveyed in 1993 on an ancient woodland site. Conifers have been planted on the valley slope in the south but there had been some regeneration of broadleaved trees, resulting in a mixed canopy. Ancient woodland indicator species were restricted to the woodland rides. In the valley bottom and to the west of the site, a wet area was dominated by ash and alder trees with pendulous sedge and opposite-leaved golden-saxifrage amongst the ground flora. The remainder of the site was described as drier and dominated by ash with hazel, field maple, hawthorn and elder in the understorey and bluebell, dog's mercury and hart's-tongue amongst the ground flora. A small area dominated by oak in the north-west corner had bracken and bluebells below. 18 species of ancient woodland species, including primrose, wood sorrel, stinking iris, yellow archangel, yellow pimpernel, remote sedge, wood-sedge, hart's-tongue and sanicle, were recorded within the woodland. DBRC also has records of common dormouse and the nationally rare plant box here.

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)

Key species:

- Primrose (Devon BAP)
- Common dormouse (Devon BAP and UK BAP priority)

Boshill Wood County Wildlife Site

Boshill Wood County Wildlife Site also comprises semi-natural woodland on an ancient woodland site and covers an area of 9.8 ha. It is situated towards the north-west of the parish, on the north to west facing steep slopes of Boshill, overlooking vale of the River Axe. A survey was carried out in 1993. This recorded that much of the west facing slopes were replanted with broadleaved trees following the area having been clear felled in about 1981. The vegetation here was very dense and supported mainly ash and some sycamore with brambles below. The mature woodland area supported ash

and some oak, with hazel, holly, field maple, blackthorn and hawthorn in the understorey and ivy, dog's mercury, bluebell and stinking iris in the ground flora. There was also some dense blackthorn, hawthorn, hazel and bramble scrub to the north-east of the site, with a strip of English elm around the south and east perimeter. Fourteen ancient woodland species were recorded here including bluebell, field maple, primrose, holly, wood sedge, barren strawberry, soft shield-fern, wood spurge, pendulous sedge and stinking iris. DBRC also has records of common dormouse and of the Devon notable small-flowered sweet briar growing here.

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)

Key species:

- Primrose (Devon BAP)
- Common dormouse (Devon BAP and UK BAP priority)

Springhead (E) County Wildlife Site

Springhead (E) County Wildlife Site is made up of two parcels of land both of which abut the east boundary of Springhead SSSI, east of Axmouth village. The two parcels of land, totalling 2 ha, were surveyed in 1992 when they were reported to support unimproved and semi-improved grassland. The southern parcel of land had some scrub along the north boundary and bracken to the west. The rest of the area had been ungrazed with tall grasses including wood false-brome and also abundant common knapweed with agrimony and field scabious. Roe deer and fox were seen here at that time. The northern parcel of land is steep and supported some herb-rich grassland at the time of the survey. Species recorded in 1992 include field scabious, agrimony, knapweed, selfheal and violets. Primrose, greater knapweed and burnet-saxifrage were also recorded in the overall site species list. The DBRC also has records of roe deer and slow-worm for this site. The proximity to the SSSI increases the value of these sites further.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadows and pastures (Devon BAP); Lowland meadows (UK BAP)

Key species:

- Primrose (Devon BAP)
- Slow-worm (UK BAP priority)

Parsonage Barn County Wildlife Site

Parsonage Barn County Wildlife Site is a small site of 2.2 ha situated south-east of and close to the village adjacent to Stepps Road. The field is flat at the top then slopes steeply with terraces to the north, west and south with some limestone outcrops. At the time of survey in 1992 most of the field had been agriculturally improved but had remnants of unimproved calcareous grassland on the steeper slopes and mainly associated with the limestone outcrops. These unimproved areas were species-rich. The grass species included quaking-grass, yellow oat-grass, sheep's fescue, sweet vernal-grass and meadow oat-grass (a Devon notable plant); herbs included lady's bedstraw, salad burnet, fairy flax and mouse-ear-hawkweed. These species are typical of unimproved calcareous grasslands. Species-rich unimproved calcareous grassland is extremely scarce in Devon and is very limited in East Devon, making this an important site despite its small size. Later surveys also reported rue-leaved saxifrage and box to be growing on the limestone outcrops. The hedges were also noted to be particularly species-rich with hazel, field maple, holly, oak, elm, hawthorn and ash.

Links to Devon and UK BAP

Key habitat:

- Flower-rich meadows and pastures (Devon BAP); Caves, karst and limestone habitats (Devon BAP); Lowland calcareous grassland (UK BAP)
- Species-rich hedges (Devon BAP); Hedgerows (UK BAP)

Key species:

- Primrose (Devon BAP)

Haven Ball Woods County Wildlife Site

Haven Ball Woods County Wildlife Site is situated in the south-west of the parish, between the golf course and the estuary. It comprises a 13.4 ha strip of calcareous semi-natural woodland on an ancient woodland site situated on west facing slopes extending from just south of Axmouth to the coastline. The site has been cleared at some point. At the time of survey in 1993 ash and sycamore occupied the southern end with pendulous sedge, stinking iris, hart's-tongue and butcher's-broom (the latter protected under the European legislation) forming the ground flora indicating the calcareous influence. There was an area dominated by sycamore and, to the north, an area of abandoned coppiced hazel and an area of dense scrub (with hawthorn, holly, hazel and blackthorn) with a few mature trees at the north end of the woodland. Ten ancient woodland indicator species were recorded here on that survey including pendulous sedge, stinking iris, hart's-tongue, barren strawberry, holly, field maple, soft shield-fern and butcher's-broom. DBRC has records of wood white and dingy skipper (both UK BAP priority butterfly species) near Haven Cliff.

The long distance South West Coasttpath passes along a lane to the golf course through this site. During the November 2009 site visit the woodland adjacent to the footpath comprised ash and sycamore with occasional holly. Hart's-tongue, pendulous sedge, ivy and stinking iris were present in the ground flora.

Links to Devon and UK BAP

Key habitat:

- Lowland mixed deciduous woodland (UK BAP)

Key species:

- Dingy skipper (UK BAP priority)
- Wood white (UK BAP priority)

Axe Estuary and Marshes County Wildlife Site

The Axe Estuary and Marshes County Wildlife Site is a large CWS covering an area totalling 149.9 ha incorporating the Axe estuary and River Axe from Axmouth Bridge to Axe Bridge, with the A3052 forming the northern boundary. The western boundary runs along the tramway in the south and along the boundary between Seaton and Colyton parishes and south of Colyford to include part of Colyford Common Local Nature Reserve (LNR). The eastern boundary follows in the main B3172 from Boshill Cross. Hence about half of the CWS falls within Axmouth parish. The Seaton Marshes Local Nature Reserve abuts it to the west. The Axe Estuary and Marsh CWS has a wide range of habitats including the estuary with mudflats and saltmarshes together with some improved grassland and species-rich ditches. Together they form a wonderful combination of habitats important for a wide range of wildlife, notably bird species including various waders and wildfowl.

A vegetation survey of the CWS was carried out in 1993. A description of the compartments within Axmouth parish only are summarised here. Some of the species noted on the site visit in late 2009 from public access areas are also mentioned.

In the south in the lower estuary there are areas of ungrazed saltmarsh islands and margin to the tramway embankmant. The survey recorded sea-purslane and common salt-marsh communities with red fescue, sea plantain, sea aster, annual sea-blite, sea-milkwort, spear-leaved orache and glassworts. Further northwards and along the embankment margins there were areas of red fescue/ common saltmarsh-grass and red fescue/sea couch communities. *Enteromorpha* algae were recorded around the island margins. Curlew, redshank and oystercatchers were recorded roosting here. These areas can be seen from the bird hide, next to the tramway, on Seaton Marshes LNR.

The eastern margin of the lower estuary has a narrow strip of saltmarsh and has occasional influence of freshwater seepage in places. Species recorded

in 1993 included red fescue, sea plantain, English scurvey-grass, thrift, sea arrowgrass, sea aster, annual sea-blite, glassworts, common cord-grass, spear-leaved orache, greater sea-spurrey, saltmarsh rush, sea club-rush, sea beet and scentless mayweed. An algal zone was present with *Enteromorpha* above *Fucus*. Species recorded here on the late 2009 site visit included glasswort, red fescue, common cord-grass, sea plantain, thrift, lesser sea-spurrey and annual sea-blite. The 1993 survey recorded the shrub and tree margin (sycamore, dog-rose, hawthorn, wild privet, blackthorn, pedunculate oak, crab apple, ash and bramble) in the south against the B3172.

Further north there is a small section of saltmarsh, with typical saltmarsh species, adjacent to Coronation Corner. The 1993 survey recorded species including sea plantain, thrift, common sea-lavender, greater and lesser sea-spurrey and sea-milkwort. Here there is also a small stream flowing into the estuary with common reed, reed sweet-grass and greater pond-sedge recorded in the survey. Common reed, sea aster and sea purslane were noted here in the late 2009 site visit.

North again of this area there are areas of ungrazed saltmarsh with pan areas. The 1993 survey recorded a typical saltmarsh plant community similar to the eastern margin, but grading into a more grass-dominated vegetation (red fescue and sea couch) higher up the intertidal zone (generally northwards and eastwards). Beyond this there are stands of common reed (which can be seen from a distance) with a zone of sea club-rush recorded in the previous survey.

Further upstream in the upper estuary on parts of Axmouth Marsh there are some areas of grazed saltmarsh. In the previous survey this area was tightly grazed with the pasture dominated by red fescue and creeping bent with sea plantain, sea milkwort, sea aster, spear-leaved orache and sea arrowgrass also present.

To the north of this there are improved grassland fields. The other features of interest in the northern sections recorded in the 1993 survey were some ditches with a diverse range of plant species (including hemlock water-dropwort, purple loosestrife, reed canary-grass and wild angelica); a grown-out hedge, a line of pedunculate oaks and a small copse, Bushes Copse, which contained a surprising number of tree, shrub and ground flora species despite its small size.

On the site visit in late 2009 several birds were seen on the Axe estuary from the hide, Coronation Corner and Axmouth Bridge. These included curlew, herring gull, black-headed gull, greater black-backed gull, lapwing, shellduck, mallard, teal, redshank, little grebe, oystercatchers, wigeon and cormorant. There were notes in the hide that otters have been seen in this vicinity and probably use areas within Axmouth parish.

Links to Devon and UK BAP

Key habitat:

- Intertidal mudflats; tide-swept channels (UK BAP); Estuaries (Devon BAP)
- Coastal and floodplain grazing marsh (UK BAP); Coastal saltmarsh (UK BAP); Grazing marsh (Devon BAP)
- Reedbeds (UK BAP)

Key species:

- Curlew (Devon BAP)
- Herring gull (UK BAP)
- Lapwing (UK BAP)
- Otter (Devon BAP; UK BAP priority)

Ancient Woodland Inventory

The Devon Ancient Woodland Inventory was prepared in 1986 by the Nature Conservancy Council (now known as Natural England).

Ancient Woodland is a term applied to woodlands which have existed from at least medieval times to the present day without ever having been cleared for uses other than wood or timber production. A convenient date used to separate ancient and secondary woodland is about the year 1600. In special circumstances semi-natural woods of post-1600 but pre-1900 origin are also included.

The Ancient Woodland Inventory sites within Axmouth parish are Diggen's Moor Coppice, Stedcombe Wood, Boshill Wood and Haven Ball Wood. These sites are all designated County Wildlife Sites and are described under the CWS section.

Ancient woodland indicator species are plants that are slow colonisers and able to grow in the shade and hence usually only occur in older woodlands. It is not definitive and several indicator species need to be present, together with other evidence such as old maps, for a woodland to be thought of as possibly an ancient woodland. The list of indicator species will also vary with geographical location.

There are no County Geological Sites (also known as Regionally Important Geological and Geomorphological Sites or RIGS), Other Sites of Wildlife Interest (OSWI)/Local Wildlife Site (LWS) nor any Nationally or Regionally Important Key Dragonfly Sites within Axmouth parish. A brief explanation of these designations is given in Appendix 1.

Other designations and regional classifications

Areas of Outstanding Natural Beauty

Areas of Outstanding Natural Beauty (AONBs) are areas of national importance for their natural beauty and distinctive character. They are designated with statutory protection to conserve and enhance the natural beauty of their landscapes. This includes scenic beauty, but can also include the flora and fauna the area supports and cultural, geological and historic associations.

AONBs were first designated in the 1940s alongside the first designation of National Parks in England and Wales. The National Parks and Access to the Countryside Act of 1949 gave them special legal status to ensure their preservation for the nation as a natural resource. The Countryside and Rights of Way Act, 2000 (the CROW Act) added further regulation and protection. There are currently thirty-six AONBs in England.

Natural England is responsible for the designation of AONBs in England and also advises on policies for their protection. The CROW Act also clarified the role of local authorities which includes the preparation of management plans for the AONB.

The main purpose of AONB designation (summarising that described in www.naturalengland.org.uk and www.aonb.org.uk) is to:

- conserve and enhance the natural beauty of the landscape

Two secondary aims complement the purpose:

- to have regard for the interests of those who live and work there (to safeguard rural industries, such as agriculture and forestry, and the economic and social needs of local communities).

- to meet the need for quiet enjoyment of the countryside (but this recreation should not be a reason for designation nor be at the expense of the landscape's natural beauty and the needs of rural industries).

The AONBs are managed by partnerships that include local authorities and key organisations who aspire to achieving the aims of the AONB. This is done primarily through planning controls and practical countryside management. Most AONBs have a locally-based team of staff that co-ordinate and deliver action on the ground.

Devon has five AONBs:

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

Axmouth parish falls within the East Devon AONB.

East Devon AONB

The East Devon AONB was designated in 1963 and covers an area of 268 sq kms. The AONB ranges from near Exmouth in the west along the coast to near Uplyme in the east. The north-east border abuts the Blackdown Hills AONB. The inland extent is to just south of Honiton and Ottery St Mary. It includes the East Devon section of the Jurassic Coast (the Dorset and East Devon Coast World Heritage Site), England's first natural World Heritage Site.

The East Devon AONB has a beautiful landscape characterised by intimate wooded combes, vast areas of heathland, fertile river valleys and breathtaking cliffs or hilltops. The landscape is also characterised by hamlets, farmsteads and villages, many of which retain a vernacular character together with narrow lanes often bordered by steep-sided Devon hedgebanks.

The East Devon AONB is managed by a joint partnership (funded by Natural England, East Devon District Council and Devon County Council) which includes a wide range of representatives including those with land-owner, environmental and community interests.

The vision statement for East Devon AONB (from the East Devon AONB web site) is that "The natural beauty of the East Devon AONB landscape, its dramatic World Heritage Site coastline, internationally important habitats and species and its cultural heritage, is conserved, managed and enhanced to support and benefit present and future generations."

The underlying geology contributes to the character of the landscape , within the AONB there are 12 recognised landscape Character types

- Open inland planned plateaux
- Open coastal plateaux
- Pebblebed Heaths
- Wooded ridges and hilltops
- Steep wooded scarp slopes
- Coastal slopes and combes
- Upper farmed and wooded slopes
- Lower rolling farmed and settled slopes
- Unsettled farmed valley floors
- Unsettled Marine levels
- Estuaries

- Coastal Cliffs
- d)

The AONB supports a diverse range of habitats and include:

- unimproved permanent pastures and wet grassland
- chalk grassland
- lowland rivers
- estuaries
- lowland heath
- floodplains
- salt marsh and reedbeds
- woodlands
- cliffs
- traditional hedges
- shingle beaches

Jurassic Coast World Heritage Site

World Heritage Sites (WHS) are non-statutory designations and are places of international importance for the conservation of our cultural and national heritage. They are selected by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) because they contain important cultural or natural features. The Jurassic Coast WHS, also known as the Dorset and East Devon WHS, was designated in 2001, for its outstanding geology and geomorphology. It is the only site in England that has been designated primarily for its natural features rather than cultural identity. Other WHS in England include Cornwall and West Devon Mining Landscape WHS and Stonehenge WHS.

The Jurassic Coast covers 95 miles of East Devon and Dorset coastline from near Exmouth in the west to past Swanage to the east. The geology here ranges from the Triassic, Jurassic, Cretaceous and Quaternary Periods. The range in the geology is due to the rocks being tilted gently to the east. Generally this has resulted in the older rocks being in the west, such as the Triassic rocks, which include the red cliffs, between Exmouth and Branscombe and Seaton to Pinhay Bay. The coastline of Axmouth parish falls into the eastern end of this stretch of coastline and generally displays rocks over two million years old from the later Triassic period. Here the lower cliffs are capped by younger sandstones and chalk. These porous rocks overlay the impermeable clays, a combination which is a recipe for landslides, such as the major landslide which resulted in the Axmouth to Lyme Regis Undercliffs. To the east lie the rocks of the Jurassic period, including the dark clay cliffs of West Dorset. There is a small section of the more recent Cretaceous period west of Beer. The coast shows the most complete Lower Jurassic sequence in Europe. The coast between Charmouth and Lyme Regis is one of the most famous fossil collecting localities in the world.

The key geological features of Devon, including those of the Jurassic Coast, and how they relate to the global Geosite framework are described in the

Devon Biodiversity Action Plan. This can be viewed at the Devon Bap web site: www.devon.gov.uk/dbap-section_e.pdf.

The Jurassic Coast WHS is protected by a number of other designations. There are a number of geological SSSIs, several biological SSSIs, two NNRs, a SAC and the WHS abuts the draft Poole Bay to Lyme Bay Reefs SAC.

Natural Areas

Natural England divides the country into natural areas containing common or associated ecological and landscape features. The parish of Axmouth sits within the Blackdowns Natural Area. Natural England's web site summarises the Blackdowns Natural Area:

> "The Blackdowns Natural Area constitutes one of the finest and most extensive plateaux in England and includes much of the catchments of the Rivers Culm, Axe and Otter. Many of the valleys have a network of small, hedge-lined fields that are generally used for pasture, although other land uses include forestry and tourism.
>
> The majority of the Natural Area is characterised by Cretaceous Upper Greensand, although some of the westernmost outcrops of Chalk in England also occur. A number of sites are of great geological importance for the fossil reptiles and fossil fish they yield. Blackdowns is of national importance for a variety of habitats including lowland heathland, wet heath and acid grassland, purple moor-grass and rush pastures and other mires. This is probably one of the most important Natural Areas in the country for ancient and species-rich hedgerows.
>
> In all, 30 key species for conservation action have been identified, including some which are globally threatened and some which are still widespread such as the dormouse and bullfinch. Blackdowns contains one of only two sites in the United Kingdom for spring snowflake, and a disused quarry is of international importance for hibernating bats."

The coast off Axmouth lies within Lyme Bay Natural Area. Natural England's web site summarises the Lyme Bay Natural Area as follows:

> "Lyme Bay comprises over 150 km of the most varied, spectacular and ecologically important coastline in England. The variety and interest relates to the complex geology, which is renowned for its layers of Jurassic rock with fossil remains. Classic examples of landslips and shingle ridges are also present.
>
> The wealth of important habitats present along this stretch of coast include shingle ridges, sand dunes, estuaries, brackish lagoons, soft and hard sea cliffs, and woodland. The Fleet, a large saline lagoon, supports several nationally rare and scarce species.

> Lyme Bay spans part of the transition zone between the cold Boreal and the warmer Lusitanian provinces of the north-east Atlantic. Hence this Natural Area contains a wide range of habitats and a considerable diversity of communities with a wealth of marine life."

The full Blackdowns and Lyme Bay Natural Area profiles can be viewed at www.naturalareas.naturalengland.org.uk/Science/natural/NA_search.asp

Regional Nature Map

The South West Regional Nature Map, developed by Biodiversity South West in liaison with various experts, identifies blocks of land that are important for conservation in landscape scale terms. The habitats include woodland, neutral grassland, upland and lowland heath, purple moor-grass and rush pasture, coastal habitats and coastal and floodplain grazing marsh. The identified areas, known as Strategic Nature Areas, also suggest where recreation of these semi-natural habitats might occur. The Nature Map is hoped to be of value to conservationists, landowners and Local Planning Authorities. Apart from the coastal habitats and possibly a small area of neutral grassland and mosaic habitats, there are no other Strategic Nature Areas within Axmouth.

Further information can be found at:
http://www.devon.gov.uk/index/environment/natural_environment/biodiversity/regionalnaturemap.htm

Other habitats (identified from field survey):

Species-rich hedges

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

Many of the hedges along the lanes of Axmouth would be classified as species-rich with a minimum of five species per 30-metre length being typical. The hedges are of the traditional Devon bank style, with hedges on top of banks and are likely to be of medieval origin. Typical species recorded within these hedges include field maple, hazel, dogwood, oak, ash, elder, English elm, blackthorn, hawthorn, wild privet, willow, spindle and holly.

Minimum number of woody species per random 30m stretches of hedge		
Grid ref	Woody species in 30m	Minimum Species Number
SY263926	Field maple, dogwood, English elm, oak, willow and hawthorn	6
SY266927	Hazel, wild privet, field maple, dogwood, blackthorn, ash	6
SY274929	Hazel, English elm, oak, field maple, holly	5
SY279931	Wild privet, dogwood, blackthorn, hazel	4
SY253904	Hawthorn (relatively newly planted hedge)	1
SY278906	Elder, blackthorn, hazel, field maple, dogwood	5
SY282906	Ash, hazel, holly, hawthorn, blackthorn	5
SY266903	English elm, blackthorn, hazel	3
SY271912	Elder, blackthorn, holly, hazel, ash	5
SY260901	Elder, field maple, hazel, blackthorn	4
SY284933	Oak, blackthorn, field maple, hawthorn	5
SY280924	Ash, hazel, elder, field maple, hawthorn	5
NB. Recorded in November and December, which is not the optimum for recording hedgerow species. The plants were not in leaf and many hedges recently trimmed so some species may have been overlooked. Surveys at the appropriate time of year may reveal higher species diversity.		

However, due to the time of year it was not possible to survey the hedges in any detail; species may be overlooked in winter and further surveys are recommended.

Many of the hedges have been over-managed and neatly trimmed, with no examples of recent hedge laying seen during the site visit. A small number of hedges had not been regularly cut and had been left to grow out slightly. Some hedges have mature trees left within them, which provide a nice landscape feature besides wildlife value. The hedgerow trees are predominately ash, but there are some oaks and a few pines near the coast. A hedge in just west of Heathfield Cross has as a row of beech trees (SY278917), which form a noticeable landmark feature. The hedge on the opposite of the road shows signs of historic hedge laying.

Many of the hedges have a fairly diverse bank flora including species such as greater stitchwort, ivy, bush vetch, cow parsley, red campion, primrose, herb-Robert, hart's-tongue and polypody. The hedgebank along Bruckland Lane has a particularly rich bank flora; grasses included red fescue, false oat-grass, Yorkshire-fog and wood false-brome; other species recorded here included greater stitchwort, wild strawberry, creeping cinquefoil, common dandelion, bush vetch, hedge bedstraw, dog's mercury, a St. John's-wort, ground ivy, wild madder, red campion, wood avens, soft sow-thistle, common nettle, herb-Robert, ivy, yarrow, cow parsley, hart's-tongue, soft shield-fern and polypody.

The hedges provide sheltered corridors through areas of farmland for the movement of wildlife and may support many plants and animals including a good variety of invertebrates.

Hedgerows tend to be taken for granted as they always seem to be there, providing such a constant in a familiar landscape. However, they do require regular attention to keep them in good condition. That so many are still in good condition is a testament to the skill and hard work of generations of farmers. But there are changes even in the oldest hedgelines as the way the majority are managed has altered. There is now less farm labour available and more reliance on mechanical cutting rather than traditional hedge laying (or, as it is known in Devon, 'steeping').

Even the mechanical cutting has changed as reciprocating cutters that could cut shrub stems cleanly have given way to tractor-mounted flails which can tackle slightly older growth but at the expense of every stem being shattered. Flailing can actually promote bud development (on hawthorn, for example, research indicates that severe damage to the end of a branch encourages shoot development further down in the base of the plant which can help to thicken it up). However, flailing can also leave shrubs susceptible to infection. As individual hedge plants die, they leave gaps which render the hedge less effective and which would in the past have been filled when the hedge was next steeped.

With the advent of mechanical hedge-trimming has come another change - it is now possible to trim all the hedges on a farm in one year. It is this that perhaps has had the most impact on the vertebrate wildlife. Fruiting and seeding species are very much less productive and there is a different and less varied structure. Also, shrubs that do produce a good berry crop are sometimes cut in the early autumn before the birds, particularly the migrants, can gain any advantage from this food source. A couple of generations ago, many hedges on a farm might have been cut less frequently, allowing them to be much more productive in the meantime.

Recognising these changes does allow choices in the way hedges are managed in the future. Hedges can be cut on a two or even three year rotation. Alternatively, perhaps only one or two of the three 'faces' (the top and the two sides) could be cut in any one year. This wouldn't stop road or drive side hedges being cut from both the safety and visual aspects but for the majority of hedges it would have two major benefits: it would take less time (and hence cost) and it would benefit wildlife! However, whatever pattern of cutting is adopted, "all hedges, except perhaps holly, will need laying or coppicing sooner or later because they will become thin at the base. This is the best form of long-term management" (*Devon's hedges: Conservation and management*, Devon County Council / Devon Hedge Group).

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

criteria to be used by the local authority in determining which hedgerows are important (Bickmore, 2002).

In such a clearly agricultural landscape, the hedgerows and hedgebanks represent continuity as features in the landscape and provide a significant wildlife resource at a time when the fields themselves are being more intensively used. The UK Biodiversity Action Plan (UK Steering Group, 1995) listed ancient and or species-rich hedgerows as one of its priority habitats. This was later revised to listing hedgerows in general as a priority habitat. Species-rich hedges are also listed on the **Devon Biodiversity Action Plan** as a habitat of conservation concern in Devon.

Links to key habitats in Devon and UK BAP

- Species-rich hedges (Devon BAP); Hedgerows (UK BAP)

Typical hedgerow and spindle

Churchyards

The Axmouth parish church of St Michael is situated on the western edge of the village. The earliest parts of the church date back to Norman times. There are two graveyards adjacent to each other. The original older graveyard surrounds the church and is bounded by stone walls. Stone walls can be important for lichens, mosses and flowering plants and with crevices can also provide value for invertebrates and reptiles. The walls here support plant

species such as ivy, wall-rue, ivy-leaved toadflax, mosses and lichens. The southern boundary wall is wide and supports a number of other species including ash, fig, and unfortunately the invasive non-native Japanese knotweed. Further information on Japanese knotweed is provided on page 63.

There are several trees within the graveyard including cherry, holly, bay, oak and a good number of yew trees. The yew trees have been heavily trimmed, so it is hard to estimate their age, but yew trees within churchyards are often ancient.

The graveyard is otherwise mainly managed as a mown grassy area. The grasses which dominate include Yorkshire-fog, cock's-foot and red fescue with occasional herbs including common knapweed, ribwort plantain, creeping buttercup, mouse-ear hawkweed, yarrow, selfheal, daisy, rough hawkbit, common sorrel, white clover, dandelion and primrose together with mosses, the most prolific being *Rhytidiadelphus squarrosus* and *Pseudoscleropodium purum*. Other species recorded around the perimeter near the walls included wild madder, ground ivy, grey sedge, hart's-tongue, common nettle, false oat-grass, creeping cinquefoil and red valerian. Blackbird and robin were seen within the graveyard during the survey.

The gravestones provide an important habitat for mosses and lichens.

The newer graveyard lies to the east adjacent to the east stone wall. The north and east boundary walls are of a concrete construction and the southern boundary is what appears to be a stone or earth bank covered with ivy and hart's-tongue with bushes and small trees growing on it, including ash, elm and Wilson's honeysuckle. These shrubs provide valuable cover for wildlife. The south-west corner contains a pile of soil and garden waste. This area is also managed as a mown grassy area, like the other graveyard it is dominated by grasses (mainly Yorkshire-fog, cock's-foot and red fescue) and is not species-diverse, with few other species in low abundance including creeping buttercup, yarrow and ribwort plantain.

Links to key habitats in Devon and UK BAP

- Cities, towns and villages (Devon BAP)

Lichen-covered gravestone
St Michael's church, Axmouth

Recreation areas and public open space

There were three main areas of pubic open space identified during the site visit: Axmouth Silver Jubilee Recreation Ground, Coronation Corner and another small area next to Axmouth Bridge.

Axmouth Silver Jubilee Recreation Ground is a small (about 40m x 35m), north facing, area towards the east end of the village of Axmouth between Stepps Road and Chapel Street. There are a number of play equipment items here. These are placed quite close to each other and take up a good proportion of the area. Some have bark chips under them. There are some picnic tables and a bench but otherwise the area is managed as a mown grassy area, dominated by grasses including perennial rye-grass, annual meadow-grass, Yorkshire-fog and cock's-foot with occasional creeping buttercup and white clover. This area currently has little wildlife interest. The north and east boundaries are post and wire fences and the northern boundary comprises a tall wooden fence. The western boundary abuts one of the village properties. The recreation ground is in a pleasant position with grazed pastures on one side with views of woodland beyond and just beyond the northern boundary there is a small stream with elder and planted trees on

the banks. There are opportunities within the recreation area to improve the area for wildlife, which is discussed in later section.

Axmouth Silver Jubilee Recreation Ground

Coronation Corner is located to the west of the village, next to Axmouth Road at the sharp corner into the village, situated right next to and overlooking the Axe estuary. The area is small but affords some splendid views of the estuary, mudflats and marshes. It is an ideal place to spot the splendid array of waders, wild fowl and other birds the frequent the estuary. Several birds were seen from here during the site visit including mallard, wigeon, curlew, shelduck, redshank, and various gulls. There are some picnic tables, a bench and an information board on the locality and birdlife to be found here. The grassy area is mown and does not have a huge range of plant species, being dominated by perennial rye-grass. Other species recorded here in low abundance were white clover, daisy, ribwort plantain, common dandelion creeping buttercup, Yorkshire-fog and yarrow. A sycamore tree and a small stream running along the northern edge provide some additional interest. The sea wall supports some plants including stonecrop, and below the wall there is a small patch of saltmarsh.

Coronation Corner

There is a small area sandwiched between two roads and right next to the estuary near Axmouth Bridge. The area is managed as amenity grassland and is species-poor being dominated by perennial rye-grass and annual

meadow-grass, other species in low abundance include daisy, white clover and yarrow. There are some mainly non-native shrubs around the land edges, with some pines, hydrangea, broom, buddleia and tamarisk in the northern corner. It is unfortunate that the area seems to be used as a dog toilet, despite the signs asking dog owners to clean up after their dogs.

Small public area near Axemouth bridge

Axe Cliff Golf Course is a private golf course, but there is a public footpath running through it. Although managed primarily as mainly amenity grassland the golf course has some patches of rough areas of grassland and some small patches of scrub. These can provide a good habitat for wildlife. The Axe Cliff Golf Course is a proposed County Wildlife Site and DBRC have several notable plants for here on their database, including eyebright, henbane, pyramidal orchid, common rock-rose, cowslip, the nation ally scarce Nottingham catchfly, yellow-wort and blue fleabane.

There are several footpaths and bridleways within the parish, many of which run along green lanes. The long distance South West Coast Path runs along the coast through Axmouth parish. The route encompasses a range of habitats, it goes over Axmouth Bridge, passes through the golf course, along some green lanes, along some field margins and then through the woodlands and open habitats of the dramatic Undercliffs. The East Devon Way footpath just enters the north-east corner of the parish. There are some short footpaths linking the lanes that run eastwards from the village, enabling a variety of circular walks to be taken from the village. A walk along these public footpaths will afford opportunity for seeing a range of habitats and plethora of wildlife.

Links to key habitats in Devon and UK BAP

- Cities, towns and villages (Devon BAP)

Village and gardens

Gardens can be havens for wildlife and can provide links to other areas of wildlife habitat. On the site visit through the village several birds were noted: blackbird, blue tit, chaffinch, coal tit, great tit, house sparrow, jay, pied wagtail,

pheasant, robin and wren. In the summer there is likely to be a number of invertebrates, although the site visit was carried out in November surprisingly a red admiral was seen in flight in the village. Some of the gardens have stone walls; these can provide another habitat for lichens, mosses and plants species such as wall-rue and ivy-leaved toadflax, as well as creating micro-climates and shelter for wildlife within the gardens.

Axmouth has several older properties some with thatched roofs. These older properties can provide roosts for bats. Axmouth Old Bridge, a Scheduled Ancient Monument, also supports a variety of lichens.

Links to key habitats in Devon and UK BAP

- Cities, towns and villages (Devon BAP)

Roadside and railway verges

Several of the roads have grassy verges, particularly the larger roads of the A3052 and B3172 road running from Boshill Cross to Seaton. Some of the smaller lanes also have grassy 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. They may also support populations of scarce or declining species of flora and/or fauna, some of which enjoy statutory protection. Linear grassland habitats provide a valuable wildlife resource. Verges provide shelter and food for a variety of species from small mammals, to birds of prey and insects.

Most of the grass verges seen on the site visit supported typical species such as cow parsley, red campion, hogweed, creeping buttercup, Yorkshire-fog, cock's-foot, herb-Robert and ribwort plantain. Although at first glance a grassy verge may not look very species-diverse, they may in fact support a surprising number of plant species on close inspection. Several species were seen on the verges during the site visit. A typical grass verge near Boshill Cross supported grasses including cock's-foot, red fescue, tall fescue, Yorkshire-fog and false oat-grass with herb species including cow parsley, common nettle, ground ivy, hogweed, creeping buttercup, common dandelion, yarrow, bush vetch, white clover and wild onion. Another verge just south of Axmouth village supported cock's-foot, red fescue, tall fescue, Yorkshire-fog, wood false-brome, annual meadow-grass, ribwort plantain, bush vetch, hogweed, common sorrel, wild onion, herb-Robert and common knapweed.

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

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

The Seaton and District Electric Tramway route lies alongside just outside the south-west parish boundary alongside the Axe estuary. The verges on the embankments of the tramway may prove to be species-rich.

Links to key habitats in Devon, and UK BAP

- Flower-rich meadows and pastures (Devon BAP)

Green lanes

A green lane can be defined as an unmetalled track with field boundaries on either side. These boundaries may be banks, hedges, woodland edge, stone walls or fences and often features such as ditches or streams are incorporated within the lanes.

The combination of the track, its boundaries and associated features create a landscape unit with its own microclimate and ecology. These sheltered conditions within lanes are of great importance to butterfly populations and may be more botanically species-rich than single hedge boundaries.

There are numerous green lanes within Axmouth parish, many of which have public access along them. Each green lane has its own unique character, ranging from attractive winding, steep lanes with overgrown hedges, such as those of Haye Lane and the lane south of Higher Barn; to relatively flat lanes with neatly trimmed hedges such as the one at Barn Close Lane east of the golf course. Other green lanes include Leggetts Lane between lanes near Dowlands and Heathfield Farm; Green Lane off Bushes Lane in the centre of the parish; and a lane south of Higher Bruckland Farm (no public right of way). Many of these lanes have species-rich hedges and species-rich bank flora. Species recorded within the hedge and hedge bank along Hayes Lane during the site visit include hazel, ash, field maple, elder, hawthorn, field rose, bramble, ivy, primrose, hart's-tongue, dog's mercury, wood avens, bush vetch, foxglove, greater stitchwort, ground ivy and red campion. Plant species recorded during the site visit within Barn Close Lane included elder, field maple, hazel, blackthorn, spindle, dogwood, ash, English elm, willow, holly, honeysuckle, bramble, Yorkshire-fog, hart's-tongue, soft shield-fern, herb-Robert, red campion, dog's mercury, hedge bedstraw, bush vetch and hogweed.

Links to key habitats in Devon and UK BAP

- Species-rich hedges (Devon BAP); Hedgerows (UK BAP)

Green lane south of Haye Farm

Veteran trees

Natural England (previously English Nature) has defined veteran trees as: "trees that are of interest biologically, culturally or aesthetically because of their age, size or condition". In relation to oak it has been taken as those trees with a diameter at breast height of more than:

- 1.0 m (girth 3.1m) are potentially interesting
- 1.5 m (girth 4.7m) are valuable in terms of conservation
- 2.0 m (girth 6.3m) are truly ancient.

Veteran trees will be at least as big as these girth measurements (these figures refer to girth at breast height and not diameter):

- 1 m - Hawthorn, blackthorn
- 2.5 m - Field maple, rowan, yew, birch, holly
- 3 m - Oak, ash, Scot's pine, alder
- 4.5 m - Sycamore, limes, chestnuts, elms, poplars, beech, willows, pines, non-native 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: ancient yews in churchyards; mature oaks in hedgerows; black poplars along stream-sides; 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 stag beetles and hornets are associated with old trees.

A few veteran trees were noted during the site visit. There is a large probably veteran ash tree near the phone box at Dowlands (SY288903) with a girth at

breast height of about 4m. The yews in the church graveyard are heavily trimmed but some are likely to be veteran trees judging from the stump of one that has been cut and is now resprouting. A large pedunculate oak seen from the footpath north of Higher Bruckland Farm (SY282937) was estimated to have a girth at breast height of over 4m. Some trees may be protected by tree preservation orders (TPO). Another large, probably veteran, oak tree within a hedgerow west of Crabhayne Farm (SY269928) supports a small rookery. Some trees may be protected by tree preservation orders (TPO).

Possible veteran tree near Dowlands

Woodlands

The woodlands of the parish are a significant wildlife habitat feature. Many are located on the steep valley sides towards the north and west of the parish. Some are on ancient woodland sites, Diggen's Moor Coppice CWS, Stedcombe Wood CWS, Boshill Wood CWS and Haven Ball Wood CWS, but some have had varying degrees of replanting in their history. These woodlands are described in the CWS section above.

DBRC has identified Hawkedown Hill, in the west of the parish, and Majorhayes Coppice as a woodland site and Unconfirmed CWS (UWS). These UWS woodland sites would warrant surveys to assess their value. This was not possible within the scope of this report, due to access and time of year. Another woodland, Haye Coppice, is situated in the north of the parish; as the name suggests this may have been used for hazel coppicing in the past. During the site visit the eastern end next to the footpath appeared to have mainly ash trees with hazel and elder in the understorey with ivy and dog's mercury in the ground flora. There were also a couple of larch trees in the south-east corner.

Lowland mixed deciduous woodlands is a UK Biodiversity Action Plan habitat.

Devon is not a heavily wooded county, but the woodlands form an essential part of the character of its landscape. Most deciduous woodlands contain some oaks. Oak-dominated (English oak, sessile oak or hybrids between the two) woodlands predominately occur in the steeper river valleys, particularly in southern Dartmoor, and less so across Devon's lowland areas, here usually in small blocks. The ground flora of oak woodland is generally rich, with mosses ferns and woodland species such as bluebell and dog's mercury. Oak woodlands are also a good habitat for a variety of birds and invertebrates. They are associated with a number species of conservation concern: mammals such as the dormouse and certain bats (pipistrelle, greater and lesser horseshoe bats); birds (including the redstart, pied flycatcher, wood warbler); butterflies (including the silver washed and pearl-bordered fritillary; purple emperor and wood white) and moths (such as the orange upperwing and double line) together with plants such as the bluebell, wild daffodil and endemic whitebeams. These oak woodlands are threatened by such factors as neglect and lack of management, inappropriate grazing pressure, invasive species (for example rhododendron) and softwood forestry.

In addition there are some areas of newly planted broadleaved trees, such as the plantation, in the east of the parish, just north of the A3052.

<u>Links to key habitats in Devon, and UK BAP</u>

- Lowland mixed deciduous woodland (UK BAP)

Boshill Wood

Diggen's Moor Coppice

Pits, quarries and cuttings

Pits, quarries and cuttings are listed on the **Devon Biodiversity Action Plan** as habitats of conservation concern in Devon. The numerous working pits and quarries in Devon are used for the extraction of a variety of minerals and are of great importance to the local and national economy. The pits and quarries are also of importance for the varied wildlife they support.

There are no major quarries within Axmouth parish, but there are several small chalk pits, mainly scattered within the southern half of the parish. Disused quarries and pits are often grown over with vegetation and can be useful for wildlife for food and shelter to animals and providing a link to other features such as hedgerows.

Links to key habitats in Devon and UK BAP

- Pits, quarries and cuttings (Devon BAP)

Disused chalk pit

Ponds

A few ponds were noted within the parish during the site visit. There is a notable series of ponds that have been created between Musbury House and Lower Bruckland Farm on the northern end of the parish. A couple of ponds were also seen within or on the edge of the village of Axmouth itself. Maps also show a pond east of Stedcombe Farm.

Ponds are an important habitat for a wide range of wildlife: for aquatic and marginal flora and fauna; as a breeding place for frogs, toads, newts and dragonflies; together with a drinking and bathing place for birds and other animals. A sign at the ponds between Musbury House and Lower Bruckland Farm indicates that the area is part of the East Devon Water Vole Recovery Project. Water voles are Devon BAP and UK BAP priority species.

Links to key habitats in Devon and UK BAP

- Ponds (UK BAP)

Pond near Lower Bruckland Farm

Rivers, ditches and water's edge

Rivers, streams, floodplains and fluvial processes provide important habitats for wildlife and are listed in the **Devon Biodiversity Action Plan**. Rivers are listed in the UK BAP as a priority habitat.

The Axe River has a significant influence on the character of the western side of the parish. Whilst only a small stretch of the actual river flows through the north of the parish, the floodplain that it has created, with man-made ditches and the estuary with its associated marshes, mudflats and salt marshes are important habitats and significant landscape features within the parish. The River Axe supports a diverse range of aquatic and marginal flora and is important for a range of fauna including otter, reed bunting, kingfisher, Atlantic salmon and brown/sea trout. Its importance is recognised by a large stretch (mostly outside of Axmouth parish) being designated a SSSI and SAC and is discussed under the SSSI and SAC sections.

The north-west parish boundary follows in part a tributary of the River Axe. There are also small streams/water courses that flow down each of the three main valleys within the parish and ultimately into the River Axe or its tributaries. These water courses are also important wildlife habitats. One of these streams rises from the Springhead area and flows through the SSSI westwards and through the village of Axmouth, an attractive element of the village, entering the estuary near Coronation Corner. Another flows through Stedcombe Valley and the third through fields to the south of Higher and Lower Bruckland Farms. The watercourse that runs alongside Bruckland Lane is also an attractive feature and important wildlife resource.

The river, river banks, floodplains, streams and ditches provide an important feature and habitat for wildlife for the parish and important habitat corridors, linking other habitats together and providing a habitat through which wildlife can pass. During the site visit typical water and damp-loving plant species such as fool's water-cress were seen.

Links to key habitats in Devon and UK BAP

- Rivers, streams, floodplains and fluvial processes (Devon BAP); Rivers (UK BAP)

Shingle ridge

There is a shingle spit projecting eastwards from the Seaton side of the mouth of the Axe Estuary. The shingle is mainly unvegetated but there are areas supporting some vegetation, mainly on the more sheltered northern side of the spit. During the site visit the plant species recorded include sea beet, sea mayweed, rock samphire, buckthorn plantain, horned poppy, curled dock and sea carrot.

Links to key habitats in Devon and UK BAP

- Coastal Vegetated Shingle (UK BAP); Dynamic coastal landforms and habitats (Devon BAP)

Shingle spit at the mouth of the axe Estuary

Sea cliff and slope

Devon's sea cliffs and slopes are some of the most dramatic and widely appreciated landscape features of the county. With a huge variety of forms and conditions, from exposed granite cliffs to sheltered rolling slopes they support a wide range of plant communities and any particular site is likely to contain a mosaic of habitats. The nature of the plant communities will depend on a range of factors, including the underlying geology, degree and direction of slope, exposure to prevailing weather conditions, and exposure to salt spray. The wide range of plant communities is reflected in the huge diversity of animals that can be found on Devon's sea cliffs and slopes, many of which are only found in these habitats. Sea cliff and slope habitats are listed in the **Devon Biodiversity Action Plan**.

The entire coastline of Axmouth parish from the mouth of the Axe through to the coastline east of the parish falls within the Axmouth to Lyme Regis Undercliffs SSSI and NNR and Sidmouth to West Bay SAC. The sea cliff and slopes are discussed in the SSSI section.

Links to key habitats in Devon and UK BAP

- Sea cliff and slope (Devon BAP); Maritime cliff and slopes (UK BAP)

Estuaries and mud flats

Estuaries are listed in the **Devon Biodiversity Action Plan** and the South West Biodiversity Action Plan as a habitat of conservation concern in Devon.

Estuaries, including harbours and rias, are partially enclosed water bodies which are open to the sea but usually have reduced salinity as a result of freshwater inputs. Rias are drowned river valleys created by land subsidence, a rise in sea level, or a combination of both, forming deep narrow, well defined channels which have a large marine influence i.e. high salinity. Rias are characteristic of the South West, with the region accounting for approximately 90% of the UK resource. The high salinity and shelter of rias supports a very high biodiversity compared with normal estuaries of lower salinity regime.

Estuaries support a large number of species, often in large numbers. Organisms such as phytoplankton form the basis of the food web, with numerous invertebrate species including worms, molluscs such as mussel and cockle and crustaceans such as various shrimp and crab. Thousands of wading birds and wildfowl rely on these for a source of food particularly in the autumn and winter months. A variety of seaweeds also grow in estuarine situations. Estuaries also support fish such as bass, flounder, grey mullet and sand eels.

Mudflats are very productive areas and support an abundance of organisms such as lugworms, ragworms and other species such as the 'peppery furrow shell'. These invertebrates provide food for large numbers of birds and fish.

The mudflats provide feeding and resting areas for important populations of migrant and wintering wildfowl and waders – the total number of waders present at any one time can reach over 20,000 birds.

The Axe estuary is magnificent and is a renowned bird watching area. The Axe estuary and mudflats form part of the Axe Estuary and Marshes County Wildlife Site and is described in more detail in an earlier section.

Links to key habitats in Devon and UK BAP

- Estuaries (Devon BAP)
- Intertidal mudflats (UK BAP)

The Axe Estuary

Saltmarsh and grazing marsh

Coastal saltmarsh is listed on the UK Biodiversity Action Plan as a habitat of conservation concern. Grazing marsh is listed in both the UK and **Devon Biodiversity Action Plan**s as a habitat of conservation concern at both the county and national level.

The Axe Estuary supports some valuable saltmarshes and further upstream at the time of the CWS survey there were some areas of grazing marsh. These saltmarshes and grazing marsh fall within the Axe Estuary and Marshes CWS and are described in the CWS section.

Coastal saltmarshes in the UK comprise the upper, vegetated portions of intertidal mudflats, lying approximately between mean high water neap tides and mean high water spring tides. Saltmarshes are usually restricted to comparatively sheltered locations in five main physiographic situations: in estuaries, in saline lagoons, behind barrier islands, at the heads of sea lochs, and on beach plains. The development of saltmarsh vegetation is dependent on the presence of intertidal mudflats.

Saltmarsh vegetation consists of a limited number of salt tolerant species adapted to regular immersion by the tides. A natural saltmarsh system shows

a clear zonation according to the frequency of inundation. At the lowest level the pioneer glassworts, *Salicornia* spp, can withstand immersion by as many as 600 tides per year, while transitional species of the upper marsh can only withstand occasional inundation.

Saltmarshes are an important resource for wading birds and wildfowl. They act as high tide refuges for birds feeding on adjacent mudflats, as breeding sites for waders, gulls and terns and as a source of food for passerine birds particularly in autumn and winter. In winter, grazed saltmarshes are used as feeding grounds by large flocks of wild ducks and geese. Areas with high structural and plant diversity, particularly where freshwater seepages provide a transition from fresh to brackish conditions, are particularly important for invertebrates. Saltmarshes also provide sheltered nursery sites for several species of fish.

Since medieval times, many saltmarshes have been reduced in extent by land claim. This practice continued until very recently; for instance, in the Wash 858 ha of saltmarsh were converted to agricultural use between 1970 and 1980. The land enclosed by sea walls was originally converted to grazing marsh with brackish ditches, but since the 1940s large areas of grazing marsh have been agriculturally improved to grow arable crops.

The most recent saltmarsh surveys of the UK estimate the total extent of saltmarsh (including transitional communities) to be approximately 45,500 ha (England 32,500 ha, Scotland 6747 ha, Wales 6089 ha, and Northern Ireland 215 ha).

Grazing marshes are areas of grassland, grazed by stock, which are seasonally waterlogged. They can occur inland or in coastal situations.

Although most of the marshes within Axmouth parish would be described as saltmarshes, some areas, where there is no saline influence, might be classified as grazing marsh. With the majority of grazing marsh occurring in East Anglia and Somerset, the relatively few examples in Devon are important to retain. Grazing marshes provide ideal feeding grounds for a range of over wintering bird species including curlew and golden plover and also provide breeding areas in the grassland for waders. The associated ditches provide important habitats for a range of submerged, floating, emergent and bank-side plant species, together with aquatic invertebrates and amphibians.

<u>Links to key habitats in Devon and UK BAP</u>

- Grazing marsh (Devon BAP); Coastal and floodplain grazing marsh (UK BAP)
- Coastal saltmarsh (UK BAP)

Saltmarshes of the Axe Estuary

Arable land

Large areas, particularly in the south and east of Axmouth parish are arable, with what appeared to be mainly winter and possibly some spring cereal, winter brassica crops and maize crops. Generally the arable land is on the elevated, more moderately sloping, fields. With winter arable crops, the stubble is not left over the winter (which would provide food and shelter for wildlife). Many of the arable fields within the parish were ploughed right up to the hedges leaving no field margins, which would have been beneficial for biodiversity. There is also the potential problem of rainwater runoff from these ploughed fields, leaching nutrients into watercourses, which can cause eutrophication. Environmental grant schemes can help local farmers establish flower-rich margins in their fields and reduce surface water runoff. Some fields had marginal crops probably left as bird cover for game birds, which can also provide cover for other birds and animals. Otherwise the hedgerows form the greatest wildlife interest in this arable landscape, also acting as wildlife corridors with other habitats.

Arable fields can support a number of rare arable weeds but this is usually in association with spring cereals and winter stubble. Arable weeds include cornflower, corn marigold, shepherd's-needle and weasel's-snout. Arable land in Britain has lost most of its arable plants over the last 50 years; several species have become extinct and there are many more that are now rare. Changes in arable farming practice are thought to be responsible for the losses. Technology that allowed more effective seed-cleaning caused an initial decline, but herbicide development was catastrophic for many plants. Nowadays, arable plants are generally confined to the strip along the field edge, which provides a home to many animals, invertebrates and plants.

There were a number of beehives on some uncultivated corners of the arable land.

Links to key habitats in Devon and UK BAP

- Arable field margins (UK BAP)

Arable field in the south-east of the parish

Calcareous grassland and other unimproved grassland

Calcareous grassland communities have a very restricted distribution in Devon, and are almost absent from North Devon. Calcareous grasslands are one of the rarest habitats in Devon and the grasslands support a range of plant species that are locally distributed both in Devon and nationally. Such species recorded within Axmouth parish include quaking grass, tor grass, common rock-rose, yellow-wort, hound's-tongue and hoary plantain. Unimproved calcareous grassland is listed on the UK Biodiversity Action Plan as it is a rare habitat.

Axmouth parish is fortunate to have examples of this important type of grassland. The Axmouth to Lyme Regis Undercliffs SSSI, Springhead SSSI and Parsonage Barn CWS contain areas of calcareous grassland and are described in either the SSSI or CWS sections.

Flower-rich meadows and pastures are a habitat of conservation concern in Devon and are listed on the **Devon Biodiversity Action Plan** as well as the UK Biodiversity Action Plan. Unimproved neutral grassland habitat has undergone a huge decline in the 20th century, almost entirely due to changing agricultural practice. It is estimated that by 1984 in lowland England and Wales, semi-natural grassland had declined by 97% over the previous 50 years to approximately 0.2 million ha. Unimproved grassland is often very flower-rich and as a result of this attracts an abundance of butterflies and other invertebrates. The rich insect life in turn attracts bats such as the greater horseshoe bat and birds such as the green woodpecker. Springhead (E) County Wildlife Site was designated for its unimproved and semi-improved neutral grassland.

Links to key habitats in Devon and UK BAP

- Lowland calcareous grassland (UK BAP)
- Flower-rich meadows and pastures (Devon BAP); Lowland meadows (UK BAP)

Other potential habitats

No orchards or parkland were seen within the parish of Axmouth. Traditional orchards and parklands can be valuable habitats for a wide range of species from fungi and lichens, through insects and other invertebrates, to birds and mammals.

Redundant buildings may well be present in the parish. Redundant and some traditional buildings can be important for a number of species including the barn owl and various bat species. A lot of traditional farm buildings have been converted to living accommodation, but a few traditional farm buildings remain within the parish.

Traditional farm building near East Bruckland Farm

Traditional farm building, Parsonage Barn on Stepps road

Unconfirmed County Wildlife Sites

The Devon Biodiversity Records Centre has identified five Unconfirmed Wildlife Sites and one proposed County Wildlife Sites (pCWS) within Axmouth parish. Unconfirmed County Wildlife Sites are sites identified as having possible interest but have not been fully surveyed. Access was not possible during this survey, but a couple were visible from public rights of way. Some

of these sites may contain areas of significant wildlife interest and further surveys would need to be carried out to determine whether they are of sufficient quality to be designated. Proposed County Wildlife Sites (pCWS) are either sites that have been surveyed but are awaiting consideration from the CWS Designation Panel, or sites that have been surveyed at an unfavorable time of year and are awaiting a re-survey.

The Unconfirmed Wildlife Sites identified by DBRC, along with an associated map showing their locations, are also listed in Appendix 1.

Unconfirmed County Wildlife Sites and Proposed County Wildlife Sites within Axmouth parish.

Site Name	Grid Ref.	Area (ha)	Description
Unconfirmed Wildlife Sites			
Hawksdown Hill	SY263914	16.2	Secondary woodland
Higher Barn	SY266907	4.7	Mosaic of scrub, grassland and broadleaved woodland
Springhead (N)	SY277911	6.8	Unimproved/ semi-improved grassland
Stedcombe Farm	SY267921	10.5	Unimproved grassland and scrub
Majorhayes Coppice	SY275906	0.7	Secondary broadleaved woodland. White-letter hairstreak, a UK BAP priority butterfly species, has been recorded near here (source DBRC).
Proposed County Wildlife Sites			
Axe Cliff Golf Course	SY260902	30.3	Golf course with areas of species-rich coastal grassland. Several notable plant species have been recorded here: eyebright, henbane, pyramidal orchid, common rock-rose, cowslip, Nottingham catchfly, yellow-wort and blue fleabane.

Axe Cliff golf course and South West Coast path

Hawkesdown Hill

Species

Important Species

A report from the DBRC database showing which legally protected, locally notable (e.g. otter) or noteworthy (e.g. the invasive non-native plant Japanese knotweed) species are known to have been present in Axmouth is presented separately (Appendix 1). Appendix 2 gives the species noted during the site visit in November and December 2009. It should be borne in mind that the parish visit was not carried out at the optimum time of year, as some species will not be visible in winter. A further survey at a more appropriate time of the year is recommended.

Birds

Several species of birds were recorded during the winter site visit: black redstart, blackbird, black-headed gull, blue tit, bullfinch, buzzard, carrion crow, chaffinch, coal tit, coot, cormorant, curlew, dunnock, goldfinch, great tit, greater black-backed gull, green woodpecker, herring gull, house sparrow, jackdaw, jay, kestrel, lapwing, little egret, little grebe, long-tailed tit, magpie, mallard, mute swan, oystercatcher, peregrine, pheasant, pied wagtail, redshank, robin, rook, shelduck, song thrush, starling, teal, whooper swan, wigeon, wood pigeon and wren.

Osprey has also been recorded at the mouth of the River Axe (source: DBRC records).

The bullfinch, curlew, herring gull, house sparrow, lapwing, song thrush and starling are all listed as UK Biodiversity Action Plan priority species.

The herring gull, house sparrow, lapwing, song thrush and starling are listed on the RSPB's red list, which lists 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. The curlew is also listed in the **Devon Biodiversity Action Plan** as a priority species for Devon.

There are many areas of arable land in Axmouth parish, particularly close to the coast. These areas are of considerable interest for farmland birds such as the skylark and meadow pipit and may support rare arable plants. Winter stubble left over from crops provides valuable feeding ground for skylarks and other farmland birds such as grey partridge and linnets. These birds may flock together to feed on the spilt grain, seeds and insects within the stubble.

The population of bullfinch has declined nationally, although the reasons for this are not clear. One reason could be the loss of nesting and feeding habitat with frequent hedge trimming being common practice.

The song thrush is a common and widespread species, but their numbers are declining throughout the UK. The song thrush is partially migratory. Many of the birds that breed in the UK over-winter further south and many continental-breeding birds over-winter in the UK. The reasons for the decline in numbers is not well understood but could relate to changes in farming, severe winter weather, predation, competition and hunting in southern France (from: UK BAP species action plan).

The black redstart (seen by the houses near the harbour), black-headed gull, bullfinch, curlew, dunnock, green woodpecker, kestrel, little egret, little grebe, mallard, osprey, oystercatcher, redshank, shelduck, teal, whooper swan (seen of field north of Axmouth village) and wigeon are on the Amber List. The Amber List are 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.

The SSSI citation refers to nightingale being present within the Axmouth to Lyme Regis Undercliffs SSSI. The nightingale is listed on the RSPB's Amber List. Nightingales like dense thickets and scrub with thick foliage. The edges of clearings or rides, or clumps of bushes surrounded by heath or open space, are ideal. They feed deep in secluded thickets or overgrown ditches and similar places. In southern England, they breed in clumps of blackthorn and other dense bushes. Many are found in oakwoods with dense undergrowth. It is a secretive bird which likes nothing better than hiding in the middle of an impenetrable bush or thicket. In the UK they breed mostly south of the Severn-Wash line and east from Dorset to Kent. The highest densities are found in the south-east: Essex, Suffolk, Norfolk, Kent and Sussex.

Although there are no official records with DBRC, skylark may be present within the parish. The skylark is listed on the UK Biodiversity Action Plan as a species of conservation concern. The UK breeding population of skylark on lowland farmland has declined by 54% between 1969 and 1991. Considerable research in recent years has indicated that the most likely cause of the decline is the increase in the winter-sowing of cereals, which restricts opportunities for late-season nesting attempts because of vegetation height, and may reduce over-winter survival by reducing the area of stubbles.

Plants

Despite the time of year a large number of plant species were noted on the site visits to the parish in November and December 2009, these are listed in Appendix 2.

DBRC has records of several Devon notable plant species within Axmouth parish. These include: an eyebright (1969), pyramidal orchid, common rock-rose, cowslip, Nottingham catchfly (also nationally scarce and rare in Devon), henbane (the latter five species in 2004), yellow-wort and blue fleabane (2006) on the golf course; meadow oat-grass at Parsonage barn (1992) and Springhead (1980); purple gromwell (also nationally rare) and the nationally scarce early gentian (1994) on the Undercliffs; small flowered sweet-briar at Boshill woods (1981); hoary plantain, few-flowered spike-rush (rare in Devon), marsh helleborine, marsh valerian, cowslip, downy oat-grass, crested hair-grass, dwarf thistle, fragrant orchid, pyramidal orchid, small scabious, tor-grass, black bog-rush, broad-leaved cottongrass (rare in Devon), wood small-reed and marsh arrowgrass (between 1980 and 1983) at Springhead; and box (rare in Devon) at Stedcombe Wood (1981) and Parsonage Barn. Many of the saltmarsh plants, recorded in the CWS survey and during the parish site visit, are Devon notable species such as common sea-lavender, glasswort, greater sea-spurrey and sea purslane. Early gentian is nationally scarce and listed as a UK BAP priority species. Butcher's broom at Haven Ball Woods recorded in 1993 and during the 2009 parish visit.

Primrose has been recorded at various locations and seen during the parish visit. The primrose is listed on the **Devon Biodiversity Action Plan** as it is intended to help to raise public awareness of the need to conserve commonplace and characteristic elements of Devon's countryside. The primrose is not rare in Devon, but it may act as an indicator species to the health of Devon's environment, and by conserving the primrose, we may help to conserve some of the habitats in which it is found. These include woodlands, hedges, road verges and churchyards.

Dogwood, privet and spindle frequently grow within the hedgerows here.

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

Spindle is native to most of Europe, but not the extreme south or north. It generally is found in woodland, hedgerows and scrub and likes chalk and lime soils. Wood from this tree was used to make spindles. Local names include

skewerwood and pegwood in Devon. It is said that spindle will only establish in a hedge which has six other shrub species present, which suggests that the hedge must be at least 600 years old before spindle will settle in.

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

Japanese knotweed is an invasive alien plant and has been recorded at an Axmouth village car park (2001-2007). It was not visible here on the parish visit, but was recorded on the southern boundary of the churchyard. Information on this invasive species is given on page 63.

Mammals

Several mammal species have been recorded from Axmouth parish. These include otter, common dormouse, badger, lesser horseshoe bat, brown long-eared bat, roe deer and fox. Grey squirrel, rabbit and evidence of moles were seen on the parish visit.

Otters:

DBRC has records of otter near Lower Buckland and near Haye Farm. There are also recent reports of them being seen in the vicinity of the Axe Estuary. The otter is listed on the **Devon Biodiversity Action Plan** as a species of conservation concern and is a UK BAP priority species.

Formerly widespread throughout the UK, the otter underwent a rapid decline in numbers from the 1950s to 1970s and was effectively lost from midland and south-eastern counties of England by the 1980s. Populations remain in Wales, south-west England and much of Scotland, where sea loch and coastal colonies comprise one of the largest populations in Europe. There is also a significant population of otters in Northern Ireland. The decline now appears to have halted and sightings are being reported in former habitats. 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 60’s and 70’s. The main serious threat to otters today is from road kills, with many animals sadly reported dead each year.

Bats:

Lesser horseshoe bat and brown long-eared bats have all been recorded within Axmouth parish. Both are listed as priority species in the UK Biodiversity Action Plan.

All species of British bat are protected under UK law and international law. This makes it illegal to intentionally kill, injure or take a bat, or to damage, obstruct or destroy any place that a bat uses for shelter or protection.

Dormouse:

The common dormouse is listed on the **Devon Biodiversity Action Plan** as a species of conservation concern in Devon and is a priority species in the UK BAP. The common dormouse has been recorded in Boshill Wood, Diggen's Moor Coppice and Stedcombe Wood (source: DBRC) with several other potentially suitable habitat sites within the parish.

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. However, no detailed quantification of population change has been possible, due to lack of comparable data over time. Having said this, 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, suggests that dormice may have declined in a similar fashion.

Water Vole:

The water vole is Britain's largest vole, they are herbivorous, feeding mainly on lush waterside vegetation on sedges, rushes and reeds. There has been a rapid decline in the numbers of water vole throughout its European range, and as such is a priority species in both the UK and **Devon Biodiversity Action Plan**s. Water voles prefer slow flowing watercourses with a relatively stable water level and adjacent to steep earth banks into which they tunnel burrows. This combination of habitats is not common in Devon, and the county has not supported large populations. The ponds near Lower Bruckland Farm form part of the East Devon Water Vole Recovery Project.

Dolphin strandings:

Unfortunately, this part of the coast can sometimes see dead marine mammals. Particularly common dolphins, washed up (stranded) in the winter as a result of being accidentally caught in fishing nets. This is known as bycatch and, due to the prevailing winds, the south coast of Devon, from Plymouth to Salcombe, is a hotspot for strandings, but they also ocur elsewhere. Every year it is estimated that thousands of cetaceans (whales, dophins and porpoises) die from being caught up in fishing gear. Should you find one please let Devon Biodiversity Records Centre (01392 274128) or Brixham Seawatch (07712 587799) know about it, as valuable information can still be gleaned from these sad events.

Invertebrates

Due to the time of year of the parish visit, a red admiral butterfly was the only invertebrate seen during the parish visit. Generally there is considerable under-recording of invertebrates with few records for the parish on the DBRC database.

However, there was an detailed survey of moths and butterflies conducted in 1965 near Rousdon, but, from the information provided, it is not possible to say whether these species were recorded within or just outside Axmouth parish. The moth species recorded in this survey included garden dart, green-brindled crescent, grey dagger, knotgrass, lackey, l-album wainscot, large nutmeg, mocha, mouse moth, mullein wave, orange footman, powdered Quaker, pretty chalk carpet, rosy minor, rosy rustic, rustic, September thorn, shaded broad-bar, shore wainscot, shoulder-striped wainscot, small emerald, small phoenix, small square-spot, spinach, white spot, white-line snout, august thorn, beaded chestnut, goat moth, brindled beauty, brindled ochre, chalk carpet, cloaked carpet, crescent dart, dark-barred twin-spot carpet, dot moth, dusky thorn, ear moth and galium carpet. Many of these moths are UK BAP priority species.

The butterfly species recorded in this survey include adonis blue, brown argus, chalk-hill blue, green hairstreak, grizzled skipper, pearl-bordered fritillary, small heath, small pearl-bordered fritillary, wall brown, white admiral and wood white. Since this survey the brown argus, chalk-hill blue, dark green fritillary, dingy skipper, green hairstreak, wall brown, white-letter hairstreak and wood white have recorded within Axmouth parish.

The Springhead SSSI citation also refers to marsh fritillary and marbled white butterflies.

The dingy skipper, grizzled skipper, marsh fritillary, pearl-bordered fritillary, wall brown, white-letter hairstreak and wood white are all listed as priority species in the UK Biodiversity Action Plans. The pearl-bordered fritillary and marsh fritillary are also on the **Devon Biodiversity Action Plans** as species of conservation concern in Devon.

The pearl-bordered fritillary is a butterfly of woodland clearings, usually in recently coppiced or clear-felled woodland and well-drained habitats with mosaics of grass, dense bracken, and light scrub. In all habitats it requires abundant food-plants growing in short, sparse vegetation, where there is abundant leaf litter. The most widely used food-plant is Common Dog-violet although it can use other violets such as Heath Dog-violet and Marsh Violet. The pearl-bordered fritillary has declined rapidly in recent decades, and Devon is now considered a national stronghold for the species.

Marsh fritillaries are very habitat specific: they breed in two main habitats, damp neutral or acid grasslands (Rhôs pastures) and dry chalk and limestone grasslands. They are dependant on the presence of their larval food plant, devil’s-bit scabious. The UK is a major European stronghold for the species,

but even here it has declined substantially over the last 150 years. In Britain, its range has reduced by over 62%, and it has recently disappeared from most of eastern England and eastern Scotland. It is still quite widespread in parts of south-west England and Wales, but colonies are estimated to be disappearing at a rate of well over 10% per decade. Colonies are often small and prone to extinction, so extensive networks of habitat patches which permit re-colonisation are essential to their long term survival.

A number of beehives were observed in corners of some arable fields during the parish site visit.

Reptiles, Amphibians and Fish

There are records held with DBRC of common frog, grass snake, slow-worm, adder and viviparous (or common) lizard within the parish. The grass snake, slow-worm, adder and viviparous (or common) lizard and are all UK Biodiversity Action Plan priority species. No reptiles or amphibians were recorded during the site visit due to the time of year.

The River Axe and estuary are also important for fish and support species such as Atlantic salmon and brown/sea trout. Both are UK Biodiversity Action Plan species and Atlantic salmon also listed in the **Devon Biodiversity Action Plan** as a species of conservation concern in Devon.

The Devon Biodiversity Action Plan (BAP).

The Devon Biodiversity Action Plan (BAP) describes the key actions needed to look after 40 of Devon's most important habitats and species. It does not stand alone, but is part of a much wider process aimed at conserving our biodiversity.

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

The Devon BAP[1] builds on this endeavour, identifying local priorities and providing targets and plans of action for the County.

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

Biodiversity links:

- The Devon BAP can be viewed at www.devon.gov.uk/biodiversity. This site also contains links to other nature conservation issues relevant to Devon, such as information on hedges. If you do not have access to the internet and require paper copies of relevant sections of the Devon BAP please contact Devon County Council's Biodiversity Officer on 01392 382804.

- Details of biodiversity planning in the South West region can be viewed at www.swbiodiversity.org.uk.

- Detailed national Action Plans can be viewed at www.ukbap.org.uk. This site also contains useful background information on UK biodiversity action planning. The list of UK priority habitats and species was revised in 2008 and, following political devolution, a separate list of priority BAP habitats and species has been produced in England. These are known as 'habitats and species of principal important in England'. The lists can be viewed here: www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx

  Where they have been produced, national objectives and targets for these features can be seen on the Biodiversity Action Reporting System web site: www.ukbap-reporting.org.uk/outcomes/targets.asp

[1] In fact, it integrates wildlife and geological conservation in one document and is now officially known as the Devon Biodiversity and Geodiversity Action Plan (still commonly referred to as the Devon Biodiversity Action Plan and always abbreviated to the Devon BAP).

Links between the wildlife of Axmouth and the Devon BAP:

Axmouth wildlife feature	Brief description of feature	Link with the Devon Biodiversity Action Plan (BAP)
Estuary and shingle ridge	*Axe Estuary supports different biological communities including mudflats and saltmarsh, which in turn supports a range of species. Notable for wading birds and wildfowl. Axe Estuary and Marshes County Wildlife Site. Shingle ridge spit at mouth of Axe estuary. Foreshore.*	• *Estuaries Habitat Action Plan* • *Grazing Marsh Habitat Action Plan* • *Dynamic Coastal Landforms and Habitats Action Plan* • *Curlew Species Action Plan* • *Otter Species Action Plan*
Woodland and scrub	*Axmouth to Lyme Regis Undercliffs SSSI and NNR: extensive areas of coastal scrub, woodland and grassland. Several rare plants are present, as well as uncommon butterflies and birds. Other woodlands including woodlands on ancient woodland sites. Semi-natural woodlands within Diggen's Moor Coppice CWS; Stedcombe Wood CWS; Boshill Wood CWS and Haven Ball CWS.*	• *Common Dormouse Species Action Plan* • *Primrose Species Action Plan*
Unimproved and semi-improved grassland	*Species-rich unimproved calcareous and semi-improved and unimproved neutral grassland, which have been protected from agricultural improvement. Calcareous grasslands within Axmouth to Lyme Regis Undercliffs SSSI and NNR; Springhead SSSI and Parsonage Barn CWS.*	• *Flower-rich Meadows and Pastures Habitat Action Plan* • *Caves, Karst and Limestone Habitats Action Plan* • *Sea Cliff and Slope Habitat Action Plan*
Hedges and green lanes	*Network of species-rich hedges throughout the parish.*	• *Species-rich Hedges Pastures Habitat Action Plan* • *Common Dormouse Species Action Plan* • *Primrose Species Action Plan*
Rivers, streams and ponds	*River Axe. River Axe SSSI has a diverse range of aquatic and marginal flora. Supports nationally scarce plant, invertebrate and fish species. Ponds notably west of Lower Bruckland Farm. Reedbed within Springhead area.*	• *Rivers, Streams, Floodplains and Fluvial Processes Habitat Action Plan* • *Freshwater Reedbed Habitat Action Plan* • *Atlantic Salmon Species Action Plan* • *Otter Species Action Plan* • *Water Vole Species Action Plan*

View the Devon Biodiversity and Geodiversity Action Plan at www.devon.gov.uk/biodiversity.

Some Ideas for Local Action…

A major step to knowing what you can do for your local wildlife and geology is to know what you have already got. This report will help you in this, but it is just a start. Ultimately, the protection and enhancement of the local natural environment requires the interest and enthusiasm of the local community.

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

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

1 Further survey:

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

Specific features to survey in Axmouth parish might include hedges and for otter and common dormouse signs. These actions would directly contribute to the **Species-rich Habitat Hedges Action Plan** habitat and the **Otter Species Action Plan** and the **Common Dormouse Species Action Plan**.

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

Survey work could be undertaken as a community group or in liaison with conservation groups active in the area. For example, Operation Otter is an initiative organised by the Devon Wildlife Trust (www.devonwildlifetrust.org), which aims to monitor and protect Devon's otter population with the help of volunteers.

Seaquest South-West is a joint project bringing together several independent researchers within the Cornwall and Devon Wildlife Trusts to find out more about marine life. To find out more about volunteering or submitting records of marine animal sightings contact the Devon Biodiversity Records Centre (DBRC) office or view:

www.devonwildlifetrust.org

In addition, you can help to build up a picture of the state of Devon's environment by sending your records to the Devon Biodiversity Records Centre where they can be properly collated. There are surprisingly few records for the parish, so any records (including 'who', 'where', 'what' and 'when') of any species recognised is useful.

Follow the links to the Devon Biodiversity Records Centre
www.devonwildlifetrust.org

e-mail: dbrc@devonwildlifetrust.org

Devon Biodiversity Records Centre
C/o Exeter Central Library
Castle Street
Exeter EX4 3PQ
Tel. 01392 274128

2 Influence the management of Public Open Space:

Creating areas of more species-rich grassland will help to reduce the isolation of the remaining fragments of traditionally managed agricultural land, contributing to the **Flower-rich Meadows and Pastures Action Plan**.

Churchyards have often received less intensive management than the surrounding land and can provide good opportunities for wildlife. Axmouth parish church of St Michael has two graveyard areas; there are already a number of trees here. The grassland appears to be managed by regular mowing over the entire grassy area. The area could be enhanced for wildlife by having some areas, perhaps around the perimeter, which could be less managed, providing some cover for wildlife. This could take the form of some areas of grass being cut infrequently, perhaps just in late summer. Ideally such areas should have a meandering perimeter, both for aesthetic reasons but also to create different micros habitats and micro climates. The valuable yew trees are tightly trimmed, it might be beneficial for some to take a more natural growth form. For the benefit of wildlife, it is recommended that herbicides and pesticides, including slug pellets are generally avoided. The invasive Japanese knotweed is unfortunately growing on the southern boundary, this could be carefully eradicated. Further information on Japanese knotweed can be found on page 63.

Axmouth Silver Jubilee Recreation Ground is quite a small area and is fairly tightly packed with play equipment. However, it is in a very pleasant position on the edge of the village next to a stream and pastures and despite its small size it can still provide an ideal opportunity for wildlife enhancement. A hedge could be planted on the eastern boundary, alongside the current rather barren looking post and wire fence and possibly the northern boundary as well. Native hedgerow species typical of the area should be used, for example field maple, hazel, dogwood, oak, elder, English elm, blackthorn, hawthorn, spindle and holly. If there is enough room, a margin alongside this could be set aside, where the grass was cut only once in late summer, like a hay meadow. This would create an ideal wildlife area

for people to enjoy. A native tree, perhaps an oak, could be planted in the north-east corner. Another opportunity would be to plant some native and/or wildlife friendly climbers to grow up the wooden fence on the southern boundary. Leaving a gap between any trellis and the fence will provide additional habitat. The erection of bird, insect and bat boxes would encourage these important species.

Coronation Corner and the area next to the estuary near Axmouth Bridge are small areas with limited scope for enhancement. However, there might be scope to have a small strip of grassland left along one edge (possibly along the northern edge of Coronation Corner), where the grass was cut only once in late summer, like a hay meadow.

3 Build relationships with local landowners:

Encourage the adoption of more wildlife-friendly land management. For example, hedges which are cut only 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, why not get involved with practical management, such as traditional hedge laying or pond restoration?

Farmers and landowners may be eligible for agri-environmental schemes such as the environmental stewardship which provides funding to farmers and landowners who manage their land in a specific environmental way. Some farms within Axmouth parish are under the Entry Level and Higher Level Environmental Stewardship Scheme and the parish is within the Blackdown Hills and east Devon HLS HLS target area.

Further information can be found at
www.naturalengland.org.uk

4 Adopt a road verge:

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

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

5 Wildlife gardening:

You could ‘green up’ your garden! Collectively the gardens of Axmouth parish represent a significant area that could be used to benefit wildlife. Large or small, you can turn your garden (or a part of it!) into a haven for wildlife.

A very good source of information on wildlife gardening is the Natural England web site:

www.naturalengland.org.uk (search for 'wildlife gardening')

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

Here are some initial ideas:

Various measures can be taken in varying degrees to providing water, shelter, food and places to breed, which will benefit wildlife. Your garden does not have to be big to make a contribution. Some initial ideas are:

- Planting nectar-rich plants, such as buddleia for butterflies.
- Climbing plants, such as honeysuckle, provide shelter, roosting and nesting sites for birds.
- Native trees and shrubs are beneficial for wildlife.
- Erect bird boxes for tits and nuthatches.
- Feed birds with seeds and nuts, and provide clean water.
- Use peat-free compost.
- Create your own compost bin.
- A pile of logs can provide a home for insects and perhaps a hedgehog.
- Create a wildflower meadow border. Flowers such as oxeye daisy, harebell, yarrow, primrose and devil's-bit scabious produce beautiful flowers as well as being good for wildlife.
- Construct a pond for wildlife.

Be sure to use native species with local provenance.

Other good sources of information on wildlife gardening:

- The Devon Wildlife Trust (DWT) web site:

www.devonwildlifetrust.org

which also has links to DWT approved garden centres.

- The Royal Horticultural Society (RHS) web site:

www.rhs.org.uk

- The Natural History Museum web site:

www.nhm.ac.uk

This site has a database that can be searched to generate lists of native plants for any specified postal district in the UK. These lists are divided into annuals, biennials, climbers, bulbs/rhizomes, herbaceous perennial, large shrub/small trees, marsh plant, parasite, perennial, shrub and trees.

6 Join local conservation organisations:

Examples of prominent local conservation organisations are the Devon Wildlife Trust and the Woodland Trust. These trusts have a number of Local Groups which, amongst other things, get involved in practical management work. The East Devon group is the nearest local groups of the Devon Wildlife Trust. The Axe Valley & District Conservation Society is another local conservation organisation. These groups often organise wildlife walks and talks.

More information can be found at:
www.devonwildlifetrust.org
www.yourwoods.org.uk
www.axevaleconservation.co.uk
www.eastdevonaonb.org.uk

7 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:

www.devonwildlifetrust.org
www.rspb.org.uk

Devon Hedge Week is an annual event run by Devon Hedge Group (01392 382257). There is a week of hedge-related events and activities for all the family. These are aimed at raising appreciation and awareness of Devon's wonderful hedges.
www.devon.gov.uk

A local wildlife group or ecologist could create a leaflet for walks around the parish, highlighting the wildlife of the area. Members of the parish could take photographs of wild flowers to enhance this document.

Visit a local nature reserve. Besides the Axmouth to Lyme Regis Undercliffs NNR, Colyford Common Local Nature Reserve (LNR) and Seaton Marshes Local Nature Reserve are situated close by on the west of the Axe Estuary. These marshes provide habitats for a range of wildlife. The bird hide on Seaton Marshes LNR is an excellent place to watch the birds of the estuary and marshes. The Axe Estuary Wetland Project hopes to link the two reserves to create a nature reserve stretching from Seaton to Colyford. The nearest Devon Wildlife Trust reserve is Hawkswood (SY 201 978) which supports a mosaic of dry heath and species-rich grassland with areas of naturally-regenerating birch scrub. The reserve is known for its diversity of butterflies

and fungi species. Trinity Hill Local Nature Reserve is located a few miles north-east of the parish and supports lowland heathland.

Devon Wildlife Trust is currently running an 'adopt a species' campaign, so you can adopt a species and help safeguard its future in Devon.

Visit www.devonwildlifetrust.org for more details.

There was a lot of washed up rubbish along the shore, particularly on the shingle spit. If not already organised, events to pick up rubbish, particularly damaging plastics, can clean up the environment and reduce potential damage to wildlife. Consider health and safety issues when clearing rubbish.

Unfortunately there was some garden rubbish dumped on the side of the road on Stepps road at the junction with Barn Close Lane. This is can introduce unwanted non-native plants into the natural environment, which appears to be the case here with the invasive variegated form of yellow archangel growing alongside the garden rubbish.

8 Volunteer:

You can volunteer your time to do practical conservation tasks or helping a wildlife organisation with monitoring or office work. There are many ways you can help. Organisations that may be interested in volunteers include Devon Wildlife Trust, Devon Bat Group and Devon Mammal Group.

www.devonwildlifetrust.org

This also has links to other organisations.

You could set up a local group to carry out conservation tasks.

9 Link biodiversity to Axmouth Parish Plan:

You could encourage Axmouth Parish Council to consider the impact on the biodiversity and wildlife of the parish in existing and any future plans.

10 Japanese Knotweed:

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

For these reasons Japanese knotweed is listed under the Wildlife and Countryside Act 1981 as a plant that is not to be planted or otherwise

introduced into the wild. In addition, all parts of the plant are considered as controlled waste under the Waste Regulations.

What can you do?

- Firstly, it is important to build up a picture of where Japanese knotweed is present. This will give an idea of the scale of the problem and will help to prevent it being accidentally spread during any ditch clearance, highway work and so on. To help develop an understanding of the problem in Devon, records should also be sent to the Devon Biodiversity Records Centre[2]. Ideally, records should include when you first saw it and confirmation of when it was seen most recently; its precise location (notes or a sketch map are helpful, as is a grid reference if you have one); the kind of habitat it is in (e.g. next to running water, on a road verge), and a rough indication of how abundant it is.

- Secondly, be careful not to spread the plant further! This is all too easily done as it can regenerate from even the smallest fragment and is easy to spread unknowingly. It is important not to flail it or to try and dig it up. Often, it is best not to cut Japanese Knotweed at all, but if it is it should be very carefully disposed of on site when dead or removed as Controlled Waste. Any tools used should be properly cleaned.

- Finally, if Japanese knotweed is on your land, the best way to prevent its spread is to control or eradicate it as soon as possible. Regular cutting can weaken and eventually kill the plant but it is a time-consuming job and proper disposal of the cut material can be a problem. Usually, the most effective method of control is to treat the plant with herbicide. This can take a number of years to be successful but if the plant is left untreated it will inevitably spread. A number of issues should be taken into account in deciding which herbicide to use, particularly the presence of water (where special care needs to be taken and the advice of the Environment Agency must be sought).

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

www.devon.gov.uk/knotweed

[2] dbrc@devonwildlifetrust.org

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.

British Trust for Conservation Volunteers: www.btcv.org.uk

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)

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

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

East Devon AONB: www.eastdevonaonb.org.uk

East Devon AONB Partnership
4 East Devon Business Centre
Heathpark Way
Heathpark
Honiton
Devon EX14 1SF
Tel/Fax 01404 46663
Or Tel 01404 549173

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

Jurassic Coast: www.jurassiccoast.com

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.

In addition to management advice, the toolkit provides guidance on seeking funding for project work.

Possible sources of funding:

Please note that funding sources change quite frequently and are often short lived. It is worth exploring widely what may be available. However, 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

Esmee 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

It should be noted that many of these grants only have a finite pot of money and this could run out at any time. It is also important to check that your project meets any relevant funding criteria. Please check with the different organisations before applying.

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 vailable for projects that have reveived 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 – Notable sites and species within Axmouth parish (2009)

Statutory & non-statutory sites within Axmouth parish

File Code	Site Name	Grid Reference	Area (ha)	Description	Status
	River Axe			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/SSSI
	Sidmouth to West Bay			Coastal scrub and unimproved calcareous grassland	SSSI, SAC
	Poole Bay to Lyme Bay Reefs			A mosaic of four areas containing extremely diverse reef habitats, comprising many geological and topographical forms, and nationally important sea caves	draft SAC
SY28/012	Axmouth to Lyme Regis Undercliff	SY257897 to SY331914	334.8	The largest coastal landslip in Britain. Calcareous grassland, scrub, secondary broadleaved woodland and softrock habitats	NNR/SSSI
SY29/082	Springhead	SY268908	13.3	Unimproved calcareous grassland	SSSI
SY29/078	Diggen's Moor Coppice	SY282927	4.6	Ancient semi-natural woodland	CWS
SY29/080	Stedcombe Wood	SY273918	20.4	Ancient semi-natural woodland partly replanted with conifers	CWS

SY29/081	Boshill Wood	SY266923	9.8	Ancient semi-natural woodland	CWS
SY29/083	Springhead (E)	SY274909 & SY276907	2	Unimproved & semi-improved neutral grassland	CWS
SY29/084	Parsonage Barn	SY264906	2.2	Unimproved calcareous grassland	CWS
SY29/086	Haven Ball Woods	SY256903	13.4	Calcareous ancient semi-natural woodland	CWS
SY29/088	Axe Estuary & Marshes	SY256918	149.9	Saltmarsh & improved grassland with species - rich ditches	CWS
SY29/087	Hawksdown Hill	SY263914	16.2	Secondary woodland	UWS
SY29/117	Higher Barn	SY266907	4.7	Mosaic of scrub, grassland and broadleaved woodland	UWS
SY29/120	Springhead (N)	SY277911	6.8	Unimproved/ semi-improved grassland	UWS
SY29/119	Stedcombe Farm	SY267921	10.5	Unimproved grassland and scrub	UWS
SY29/116	Axe Cliff Golf Course	SY260902	30.3	Golf course with areas of species-rich coastal grassland	pCWS
SY29/096	Majorhayes Coppice	SY275906	0.7	Secondary broadleaved woodland	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 Guidance note nine (PPG9). 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.

Proposed County Wildlife Sites (pCWS): these are either sites that have been surveyed but are awaiting consideration from the CWS Designation Panel, or sites that have been surveyed at an unfavorable time of year and are awaiting a re-survey.

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.

National Nature Reserves (NNR) - these are notified by English Nature because of their habitats or species. They are the best examples of a particular habitat or have important populations of rare species. English Nature needs to be consulted before any operations likely to damage the special interest are undertaken. NNR is a statutory designation with legal implications.

Additional designation types not found within Axmouth parish:

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.

Special Protection Areas (SPAs): The Joint Nature Conservation Committee (JNCC) define SPAs as '*strictly protected sites classified in accordance with Article 4 of the EC Directive on the conservation of wild birds (79/409/EEC), also known as the Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds, listed in Annex I to the Birds Directive, and for regularly occurring migratory species'*.

Local Nature Reserves (LNRs): These are declared by local authorities in conjunction conservation organisations as areas of local importance for wildlife or geological features. LNRs give access to the public to study or learn about nature or simply to enjoy it.

Nationally Important Key Dragonfly Sites. These are sites holding breeding populations of nationally scarce species, defined for this purpose as those which have been recorded in less than 10% of 10km squares in Britain. Those occurring in Devon are White-legged damselfly (*Playcnemis pennipes*) Scarce blue-tailed damselfly (*Ischnura pumilio*) Small red damselfly (*Ceriagrion tenellum*) Hairy dragonfly (*Bracytron pratense*) Downy emerald (*Cordulia aenea*) and Keeled skimmer (*Orthoetrum coerulescens*).

Regionally Important Key Dragonfly Sites. These are sites holding breeding populations of Regionally scarce species, designated as 'Key Species' for Devon which have been recorded in 10-20% of the 10km squares in Britain: Red-eyed damselfly (*Erythromma najas*) and Ruddy darter (*Sympetrum sanguineum*). In addition, well-studied sites with Keeled skimmer (*Orthoetrum coerulescens*) and White-legged damselfly (*Playcnemis pennipes*), and not necessarily any other key species, are included here.

Regionally Important Geological and Geomorphological Sites (RIGS) are earth science sites that are of regional or local importance. Like County Wildlife Sites, they are included in Local Plans and referred to under PPG9. These may represent good examples of local rock formations or landform features or they may contain interesting fossils.

Country Park: is an area of land, or land and water normally not less than 25 acres in extent, designed to offer to the public, with or without charge, opportunity for recreational activities in the countryside. There is not necessarily any public rights of access to Country Parks and visitors are subject to any byelaws made by the local authority and enforced in the parks.

Legally protected & notable Species within Axmouth parish

No	Common Name	Scientific Name	Location	Date	Grid Reference	UK protection	International protection	Status
1	Badger	*Meles meles*	B3172, road between Seaton and Axmouth.	1999	SY254905	WCA 6, BA	Bern III	
2	Wood White	*Leptidea sinapis*	Haven Cliff	2003	SY255899	WCA 5 (S); NERC 41		UKBAP (P); Nb
3	Dingy Skipper	*Erynnis tages*	Haven Cliff	2003	SY255899	NERC 41		UKBAP (P); Decline
4	Wall Brown	*Lasiommata megera*	Axmouth Harbour	1999	SY255904	NERC 41		UKBAP (P)
5	Dingy Skipper	*Erynnis tages*	Axmouth Harbour	1999	SY255904	NERC 41		UKBAP (P); Decline
6	Osprey	*Pandion haliaetus*	Mouth of Seaton Estuary.	2000	SY256897	WCA 1		Amber
7	Butcher's-Broom	*Ruscus aculeatus*	Haven Ball Woods	1993	SY256903		EC Vb	
8	Japanese Knotweed (an invasive alien plant)	*Fallopia japonica*	Village Hall car park, Axmouth.	2001-2007	SY256910	WCA 9		
9	Wall Brown	*Lasiommata megera*	Haven Cliff NNR	2001	SY258897	NERC 41		UKBAP (P)
10	Eyebright	*Euphrasia pseudokerneri*	Seaton, golf course E of	1969	SY258903	NERC 41		NS; DN1; DR
11	Common Frog	*Rana temporaria*	6 Elm Orchard, Axmouth, EX12 4AH	2002	SY258911	WCA 5 (S)	EC Va; Bern III	

12	Grass Snake	*Natrix natrix*	Pond at Hazelbrook Lodge, Axmouth.	1998	SY2591	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
13	Primrose	*Primula vulgaris*	Axe Cliff Golf Course	2004	SY260902			DBAP
14	Henbane	*Hyoscyamus niger*	Axe Cliff Golf Course	2004	SY260902			DN1
15	Pyramidal Orchid	*Anacamptis pyramidalis*	Axe Cliff Golf Course	2004	SY260902			DN2
16	Common Rock-Rose	*Helianthemum nummularium*	Axe Cliff Golf Course	2004	SY260902			DN1
17	Cowslip	*Primula veris*	Axe Cliff Golf Course	2004	SY260902			DN3
18	Nottingham Catchfly	*Silene nutans*	Axe Cliff Golf Course	2004	SY260902			NS; DN1; DR
19	Yellow-Wort	*Blackstonia perfoliata*	Axe Cliff Golf Course	2006	SY260902			DN2
20	Dunnock	*Prunella modularis*	Axe Cliff Golf Course	2006	SY260902			Amber
21	Blue Fleabane	*Erigeron acer*	Axe Cliff Golf Course	2006	SY260902			DN2
22	Badger	*Meles meles*	Garden at Monkscroft, Stepps Lane, Axmouth, Seaton.	2004	SY261907	WCA 6, BA	Bern III	
23	Badger	*Meles meles*	B3172 between Boshill Cross and Axmouth	1997	SY261919	WCA 6, BA	Bern III	
24	Wall Brown	*Lasiommata megera*	Axmouth	2000	SY262907	NERC 41		UKBAP (P)
25	a Bat	*Chiroptera*	Coombe Farm, Axmouth.	1993	SY262909	WCA 5, 6	EC IVa; Bonn II	
26	Wall Brown	*Lasiommata megera*	Axemouth Coast Path	2001	SY263901	NERC 41		UKBAP (P)

27	Meadow Oat	*Helictotrichon pratense*	Parsonage Barn	1992	SY263907			DN1
28	Primrose	*Primula vulgaris*	Parsonage Barn	1992	SY263907			DBAP
29	Lesser Horseshoe Bat	*Rhinolophus hipposideros*	1 The Farmhouse, Stedcombe Manor, Axmouth.	1993-1996	SY263919	WCA 5, 6; NERC 41	EC IIa, IVa; Bern II; Bonn II	UKBAP (P)
30	Brown Long-Eared Bat	*Plecotus auritus*	1 The Farmhouse, Stedcombe Manor, Axmouth.	1993-1995	SY263919	WCA 5, 6; NERC 41	EC IVa; Bern II; Bonn II	UKBAP (P)
31	Wall Brown	*Lasiommata megera*	Haven Cliff NNR	2001	SY264897	NERC 41		UKBAP (P)
32	Box	*Buxus sempervirens*	Parsonage Barn	1996	SY264906			NR
33	Meadow Oat	*Helictotrichon pratense*	Parsonage Barn	1992	SY264906			DN1
34	Primrose	*Primula vulgaris*	Boshill Wood	1993	SY265924			DBAP
35	Purple Gromwell	*Lithospermum purpureocaeruleum*	Axmouth/Lyme NNR	1994	SY266896			NR; DN1
36	Small-Flowered Sweet-Briar	*Rosa micrantha*	Boshill Wood	1981	SY266923			DN1
37	Wall Brown	*Lasiommata megera*	Bindon Fields	2001	SY267896	NERC 41		UKBAP (P)
38	Common Dormouse	*Muscardinus avellanarius*	Boshill Wood, Axmouth.	1995	SY267923	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
39	Lesser Horseshoe Bat	*Rhinolophus hipposideros*	Musbury House, Axmouth, Seaton.	1994	SY267930	WCA 5, 6; NERC 41	EC IIa, IVa; Bern II; Bonn II	UKBAP (P)
40	Wall Brown	*Lasiommata megera*	Bindon Estate	2003	SY268896	NERC 41		UKBAP (P)
41	Brown Argus	*Aricia agestis*	Bindon Estate	2003	SY268896			Decline

42	Badger	*Meles meles*	Side of A3052 road near Rousdon on the Devon/Dorset border	2001	SY270925	WCA 6, BA	Bern III	
43	Otter	*Lutra lutra*	Lower Bruckland	2004-2009	SY271930	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
44	Hoary Plantain	*Plantago media*	Springhead; Dry chalk bank - rich grassland	1980	SY272907			DN2
45	Meadow Oat	*Helictotrichon pratense*	Springhead; Dry chalk bank - rich grassland	1980	SY272907			DN1
46	Few-Flowered Spike-Rush	*Eleocharis quinqueflora*	Springhead; Marshy grassland 1b	1980	SY272907			DN1; DR
47	Marsh Helleborine	*Epipactis palustris*	Springhead; Marshy grassland 1b	1980	SY272907			DN1
48	Marsh Valerian	*Valeriana dioica*	Springhead; Marshy grassland 1b	1980-1983	SY272907			DN3
49	Cowslip	*Primula veris*	Springhead; Dry chalk bank - rich grassland	1980-1983	SY272907			DN3
50	Downy Oat	*Helictotrichon pubescens*	Springhead; Dry chalk bank - rich grassland	1980-1983	SY272907			DN2
51	Crested Hair-Grass	*Koeleria macrantha*	Springhead; Grassland (no cattle)	1983	SY272907			DN1
52	Dwarf Thistle	*Cirsium acaule*	Springhead; Unimproved grassland	1980-1983	SY272907			DN2
53	Fragrant Orchid	*Gymnadenia conopsea*	Springhead; Calcareous fen	1980-1983	SY272907			DN1
54	Marsh Arrowgrass	*Triglochin palustre*	Springhead; Calcareous fen	1983	SY272907			DN1
55	Pyramidal Orchid	*Anacamptis pyramidalis*	Springhead; Grassland (no cattle)	1983	SY272907			DN2
56	Small Scabious	*Scabiosa columbaria*	Springhead; Grassland (no cattle)	1980-1987	SY272907			DN2

57	Tor-Grass	*Brachypodium pinnatum*	Springhead; Grassland (no cattle)	1983	SY272907			DN1
58	Black Bog-Rush	*Schoenus nigricans*	Springhead; Calcareous fen	1980-1983	SY272907			DN2
59	Broad-Leaved Cottongrass	*Eriophorum latifolium*	Springhead; Calcareous fen	1980-1983	SY272907			DR
60	Primrose	*Primula vulgaris*	Stedcombe Wood; Westlake/Colliers wood	1981-1993	SY272918			DBAP
61	Box	*Buxus sempervirens*	Stedcombe Wood; Westlake/Colliers wood	1981	SY272918			NR
62	Dingy Skipper	*Erynnis tages*	Culverhole Cliffs	2001	SY273894	NERC 41		UKBAP (P); Decline
63	Wall Brown	*Lasiommata megera*	Culverhole Cliffs	2001	SY273894	NERC 41		UKBAP (P)
64	Wood White	*Leptidea sinapis*	Culverhole Cliffs	2001	SY273894	WCA 5 (S); NERC 41		UKBAP (P); Nb
65	Wood Small-Reed	*Calamagrostis epigejos*	Springhead; Quarry & bank	1980	SY273908			DN2
66	Common Dormouse	*Muscardinus avellanarius*	Stedcombe Wood, Axmouth.	1995	SY273919	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP
67	Dingy Skipper	*Erynnis tages*	Culverhole	1999-2003	SY274893	NERC 41		UKBAP (P); Decline
68	Wall Brown	*Lasiommata megera*	Culverhole	2003	SY274893	NERC 41		UKBAP (P)
69	Wood White	*Leptidea sinapis*	Culverhole	2001-2003	SY274893	WCA 5 (S); NERC 41		UKBAP (P); Nb
70	Green Hairstreak	*Callophrys rubi*	Culverhole	2003	SY274893			Decline
71	Green Hairstreak	*Callophrys rubi*	Culverhole	2003	SY274894			Decline

72	White-letter Hairstreak	*Satyrium w-album*	Axmouth	2000	SY274906	WCA 5 (S); NERC 41		UKBAP (P); Nb; Decline
73	Slow-Worm	*Anguis fragilis*	Springhead; Orchid Marsh	1980	SY274908	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
74	Roe Deer	*Capreolus capreolus*	Springhead (E)	1992	SY274909	DA	Bern III	
75	White-letter Hairstreak	*Satyrium w-album*	Southcombe	1999	SY275906	WCA 5 (S); NERC 41		UKBAP (P); Nb; Decline
76	Common Frog	*Rana temporaria*	Axmouth to Lyme Regis Undercliff	2002	SY276893	WCA 5 (S)	EC Va; Bern III	
77	Slow-Worm	*Anguis fragilis*	Axmouth to Lyme Regis Undercliff	2001-2002	SY276893	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
78	Adder	*Vipera berus*	Axmouth to Lyme Regis Undercliff	2002	SY276893	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
79	Wood White	*Leptidea sinapis*	Goat Island	2001	SY276895	WCA 5 (S); NERC 41		UKBAP (P); Nb
80	Brown Argus	*Aricia agestis*	Goat Island	2003	SY276895			Decline
81	Primrose	*Primula vulgaris*	Site Deleted - Haye Coppice	2003	SY277924			DBAP
82	Badger	*Meles meles*	Haye Coppice	2003	SY277924	WCA 6, BA	Bern III	
83	Indet. Deer	*Cervidae*	Site Deleted - Haye Coppice	2003	SY277924	DA	Bern III	
84	Dingy Skipper	*Erynnis tages*	Bindon Cliff	1997-2003	SY278894	NERC 41		UKBAP (P); Decline
85	Otter	*Lutra lutra*	Haye Farm	2004-2009	SY278929	WCA 5; NERC 41	EC IIa, IIIa; Bern II	UKBAP (P); DBAP
86	Common Dormouse	*Muscardinus avellanarius*	Diggen's Moor Coppice	1993	SY282927	WCA 5, 6; NERC 41	EC IVa; Bern III	UKBAP (P); DBAP

87	Primrose	*Primula vulgaris*	Diggen's Moor Coppice	1993-2003	SY282927			DBAP
88	Badger	*Meles meles*	Crocker's Pit Coppice	2003	SY282936	WCA 6, BA	Bern III	
89	Wall Brown	*Lasiommata megera*	Dowlands Landslips	2001	SY285894	NERC 41		UKBAP (P)
90	Dingy Skipper	*Erynnis tages*	Dowlands Landslips	1997-2001	SY285894	NERC 41		UKBAP (P); Decline
91	Green Hairstreak	*Callophrys rubi*	Axmouth	1997	SY285895			Decline
92	Brown Argus	*Aricia agestis*	Axmouth	1997	SY285895			Decline
93	Badger	*Meles meles*	A3052 between Lyme Regis and Colyford	2000-2003	SY286916	WCA 6, BA	Bern III	
94	Badger	*Meles meles*	A3052 1.5 miles east of Musbury cross road, near Rousdon.	2003	SY287917	WCA 6, BA	Bern III	
95	Early Gentian	*Gentianella anglica*	Axmouth/Lyme NNR	1994	SY290896	WCA 8; NERC 41	EC IIb, IVb; Bern I	UKBAP (P); NS
96	Brown Argus	*Aricia agestis*	Downlands Undercliff	1998	SY290896			Decline
97	Dingy Skipper	*Erynnis tages*	Downlands Undercliff	1998	SY290896	NERC 41		UKBAP (P); Decline
98	Wall Brown	*Lasiommata megera*	Dowlands Undercliff	1998	SY290896	NERC 41		UKBAP (P)
99	Green Hairstreak	*Callophrys rubi*	Downlands Undercliff	1998	SY290896			Decline
100	Garden Dart	*Euxoa nigricans*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
101	Green Hairstreak	*Callophrys rubi*	Rousdon, Allhallows School	1965	SY290900			Decline
102	Green-Brindled Crescent	*Allophyes oxyacanthae*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)

103	Grey Dagger	*Acronicta psi*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
104	Grizzled Skipper	*Pyrgus malvae*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P); Decline
105	Knotgrass	*Acronicta rumicis*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
106	Lackey	*Malacosoma neustria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
107	L-Album Wainscot	*Mythimna l-album*	Rousdon, Allhallows School	1965	SY290900			Nb
108	Large Nutmeg	*Apamea anceps*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
109	Mocha	*Cyclophora annulata*	Rousdon, Allhallows School	1965	SY290900			Nb
110	Mouse Moth	*Amphipyra tragopoginis*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
111	Mullein Wave	*Scopula marginepunctata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
112	Orange Footman	*Eilema sororcula*	Rousdon, Allhallows School	1965	SY290900			Nb
113	Pearl-bordered fritillary	*Boloria euphrosyne*	Rousdon, Allhallows School	1965	SY290900	WCA 5 (S); NERC 41		UKBAP (P); DBAP; Nb
114	Powdered Quaker	*Orthosia gracilis*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
115	Pretty Chalk Carpet	*Melanthia procellata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
116	Rosy Minor	*Mesoligia literosa*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
117	Rosy Rustic	*Hydraecia micacea*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)

118	Rustic	*Hoplodrina blanda*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
119	September Thorn	*Ennomos erosaria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
120	Shaded Broad-Bar	*Scotopteryx chenopodiata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
121	Shore Wainscot	*Mythimna litoralis*	Rousdon, Allhallows School	1965	SY290900			Nb
122	Shoulder-Striped Wainscot	*Mythimna comma*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
123	Small Emerald	*Hemistola chrysoprasaria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
124	Small Heath	*Coenonympha pamphilus*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
125	Small Pearl-Bordered Fritillary	*Boloria selene selene*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P); Decline
126	Small Phoenix	*Ecliptopera silaceata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
127	Small Square-Spot	*Diarsia rubi*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
128	Spinach	*Eulithis mellinata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
129	Wall	*Lasiommata megera*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
130	White Admiral	*Ladoga camilla*	Rousdon, Allhallows School	1965	SY290900	NERC 41		Decline
131	White Spot	*Hadena albimacula*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P); RDB2
132	White-line snout	*Schrankia taenialis*	Rousdon, Allhallows School	1965	SY290900			Nb

133	Wood White	*Leptidea sinapis sinapis*	Rousdon, Allhallows School	1965	SY290900	WCA 5 (S); NERC 41		UKBAP (P); Nb
134	Adonis Blue	*Lysandra bellargus*	Rousdon, Allhallows School	1965	SY290900	WCA 5 (S)		
135	August Thorn	*Ennomos quercinaria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
136	Beaded Chestnut	*Agrochola lychnidis*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
137	Goat Moth	*Cossus cossus*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
138	Brindled Beauty	*Lycia hirtaria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
139	Brindled Ochre	*Dasypolia templi*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
140	Brown Argus	*Aricia agestis*	Rousdon, Allhallows School	1965	SY290900			Decline
141	Chalk Carpet	*Scotopteryx bipunctaria cretata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P); Nb
142	Chalk-Hill Blue	*Lysandra coridon*	Rousdon, Allhallows School	1965	SY290900	WCA 5 (S)		Decline
143	Cloaked Carpet	*Euphyia biangulata*	Rousdon, Allhallows School	1965	SY290900			Nb
144	Crescent Dart	*Agrotis trux lunigera*	Rousdon, Allhallows School	1965	SY290900			Nb
145	Dark-Barred Twin-Spot Carpet	*Xanthorhoe ferrugata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
146	Dot Moth	*Melanchra persicariae*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
147	Dusky Thorn	*Ennomos fuscantaria*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)

148	Ear Moth	*Amphipoea oculea*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
149	Galium Carpet	*Epirrhoe galiata*	Rousdon, Allhallows School	1965	SY290900	NERC 41		UKBAP (P)
150	Wall Brown	*Lasiommata megera*	The Plateau	2001-2003	SY291896	NERC 41		UKBAP (P)
151	Dingy Skipper	*Erynnis tages*	The Plateau	2001-2003	SY291896	NERC 41		UKBAP (P); Decline
152	Brown Argus	*Aricia agestis*	The Plateau	2001	SY291896			Decline
153	Chalk-hill Blue	*Lysandra coridon*	The Plateau	2001	SY291896	WCA 5 (S)		Decline
154	Green Hairstreak	*Callophrys rubi*	The Plateau	2001	SY291896			Decline
155	Dark Green Fritillary	*Argynnis aglaja*	The Plateau	2003	SY291896			Decline
156	Viviparous Lizard	*Lacerta vivipara*	Axmouth to Lyme Regis Undercliff	2002	SY292897	WCA 5 (KIS); NERC 41	Bern III	UKBAP (P)
157	Wall Brown	*Lasiommata megera*	Charton Bay	2000	SY293896	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 8	**Wildlife and Countryside Act (1981) Schedule 8:** plants which are protected.
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.

NR **Nationally Rare:** 1-15 10km squares in Atlas of British Flora 1962.

NS **Nationally Scarce:** 15-100 10km squares in Atlas of British Flora 1962.

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 Notable[1]:** 1-25 2 km squares in Atlas of Devon Flora 1984.

DN2 **Devon Notable[2]:** 26-50 2 km squares in Atlas of Devon Flora 1984.

DN3 **Devon Notable[3]:** 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.

Nb **Nationally Notable B:** known from 100 or fewer 10km squares. Taken from the Invertebrate Site Register.

Decline Substantial local decline in Devon

Amber List Bird species of medium conservation concern, such as those whose population is in moderate decline, rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.

RDB2 **Red Data Book 2:** Vulnerable. Taxa believed likely to move into the endangered category in the near future if casual factors continue to operate. Includes taxa which are still abundant but are under threat from serious adverse factors throughout their range.

Appendix 2 – Species list recorded for Axmouth parish during the field visit

Species list for Axmouth parish, recorded during the parish site visits in November and December 2009.

Scientific Name *Ancient Woodland Indicator species are listed in Bold*	**English name**	**Date** additional species for 26,28/11&01/12/09
Acer campestre	Field Maple	25/11/2009
Acer pseudoplatanus	Sycamore	25/11/2009
Achillea millefolium	Yarrow	25/11/2009
Agrimonia eupatoria	Agrimony	28/11/2009
Agrostis stolonifera	Creeping Bent	25/11/2009
Ajuga reptans	Bugle	25/11/2009
Allium vineale	Wild Onion	25/11/2009
Alnus glutinosa	Alder	01/12/2009
Angelica sylvestris	Wild Angelica	28/11/2009
Anthriscus sylvestris	Cow Parsley	25/11/2009
Anthyllis vulneraria	Kidney Vetch	28/11/2009
Aphanes arvensis agg.	Parsley-piert	26/11/2009
Apium nodiflorum	Fool's Water-cress	25/11/2009
Arctium minus	Lesser Burdock	25/11/2009
Armeria maritima	Thrift	26/11/2009
Arrhenatherum elatius	False Oat-grass	25/11/2009
Artemisia vulgaris	Mugwort	25/11/2009
Asplenium ruta-muraria	Wall-rue	26/11/2009
Asplenium trichomanes	Maidenhair Spleenwort	01/12/2009
Aster tripolium	Sea Aster	25/11/2009
Atriplex portulacoides	Sea Purslane	25/11/2009
Bellis perennis	Daisy	25/11/2009
Beta vulgaris subsp. maritima	Sea Beet	25/11/2009
Betula sp	Birch sp	25/11/2009
Brachypodium sylvaticum	Wood False-brome	25/11/2009
Buddleja davidii	Butterfly-bush	25/11/2009
Carduus nutans	Musk Thistle	28/11/2009
Carex divulsa subsp. divulsa	Grey Sedge	26/11/2009
Carex flacca	Glaucous Sedge	28/11/2009
Carex pendula	Pendulous Sedge	26/11/2009
Carex sylvatica	Wood-sedge	28/11/2009
Centaurea nigra	Common Knapweed	25/11/2009
Centaurium erythraea	Common Centaury	25/11/2009
Centranthus ruber	Red Valerian	25/11/2009
Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage	26/11/2009
Cirsium arvense	Creeping Thistle	25/11/2009
Cirsium vulgare	Spear Thistle	25/11/2009
Clematis vitalba	Traveller's-joy	26/11/2009
Cornus sanguinea	Dogwood	25/11/2009
Corylus avellana	Hazel	25/11/2009
Crataegus monogyna	Hawthorn	25/11/2009
Crepis capillaris	Smooth Hawk's-beard	26/11/2009
Crithmum maritimum	Rock Samphire	25/11/2009

Cymbalaria muralis	Ivy-leaved Toadflax	25/11/2009
Cynosurus cristatus	Crested Dog's-tail	01/12/2009
Cytisus scoparius	Broom	25/11/2009
Dactylis glomerata	Cock's-foot	25/11/2009
Dactylorhiza sp	Orchid sp	28/11/2009
Daucus carota	Sea Carrot	25/11/2009
Digitalis purpurea	Foxglove	26/11/2009
Dipsacus fullonum	Teasel	25/11/2009
Dryopteris filix-mas	Male-fern	25/11/2009
Equisetum sp.	Horsetail	26/11/2009
Euonymus europaeus	Spindle	28/11/2009
Euphorbia peplus	Petty Spurge	28/11/2009
Fagus sylvatica	Beech	25/11/2009
Fallopia japonica	Japanese Knotweed	25/11/2009
Festuca arundinacea	Tall Fescue	25/11/2009
Festuca rubra agg.	Red Fescue	25/11/2009
Filipendula ulmaria	Meadowsweet	25/11/2009
Fragaria vesca	Wild Strawberry	26/11/2009
Fraxinus excelsior	Ash	25/11/2009
Galium aparine	Cleavers	25/11/2009
Galium mollugo	Hedge-bedstraw	25/11/2009
Geranium robertianum	Herb-Robert	25/11/2009
Geranium sp	Cranesbill sp	25/11/2009
Geum urbanum	Wood Avens	25/11/2009
Glaucium flavum	Yellow Horned-poppy	25/11/2009
Glechoma hederacea	Ground-ivy	25/11/2009
Hedera helix	Ivy	25/11/2009
Heracleum sphondylium	Hogweed	25/11/2009
Hippophae rhamnoides	Sea-buckthorn	25/11/2009
Holcus lanatus	Yorkshire-fog	25/11/2009
Hypericum androsaemum	Tutsan	28/11/2009
Hypericum sp	St John's-wort sp	28/11/2009
Hypochaeris radicata	Cat's-ear	28/11/2009
Ilex aquifolium	Holly	25/11/2009
Iris foetidissima	Stinking Iris	25/11/2009
Iris pseudacorus	Yellow Iris	25/11/2009
Juncus effusus	Soft-rush	25/11/2009
Juncus inflexus	Hard Rush	28/11/2009
Lamiastrum galeobdolon subsp. Montanum	Yellow Archangel	26/11/2009
Lamium album	White Dead-nettle	25/11/2009
Lapsana communis	Nipplewort	25/11/2009
Leontodon hispidus	Rough Hawkbit	26/11/2009
Ligustrum vulgare	Wild Privet	25/11/2009
Linaria vulgaris	Common Toadflax	26/11/2009
Lolium perenne	Perennial Rye-grass	25/11/2009
Lonicera nitida	Wilson's honeysuckle	26/11/2009
Lonicera periclymenum	Honeysuckle	25/11/2009
Lotus corniculatus	Common Bird's-foot-trefoil	28/11/2009
Malus sylvestris	Crab Apple	28/11/2009
Malva sp	Mallow	28/11/2009
Medicago lupulina	Black Medick	28/11/2009
Melilotus altissimus	Tall Mellilot	28/11/2009
Mentha aquatica	Water Mint	26/11/2009

Mercurialis perennis	Dog's Mercury	25/11/2009
Odontites vernus	Red Bartsia	28/11/2009
Oenanthe crocata	Hemlock Water-dropwort	01/12/2009
Orobanche sp	Broomrape	28/11/2009
Parietaria judaica	Pellitory-of-the-wall	28/11/2009
Petasites fragrans	Winter Heliotrope	25/11/2009
Phalaris arundinacea	Reed Canary-grass	25/11/2009
Phragmites australis	Common Reed	25/11/2009
Phyllitis scolopendrium	Hart's-tongue	25/11/2009
Pilosella officinarum	Mouse-ear Hawkweed	26/11/2009
Pinus nigra	Austrian/Corsican Pine	25/11/2009
Pinus sp	Pine	25/11/2009
Plantago coronopus	Buck's-horn Plantain	25/11/2009
Plantago lanceolata	Ribwort Plantain	25/11/2009
Plantago major	Greater Plantain	25/11/2009
Plantago maritima	Sea Plantain	26/11/2009
Poa annua	Annual Meadow-grass	25/11/2009
Polypodium agg.	Polypody	26/11/2009
Polystichum setiferum	Soft Shield-fern	25/11/2009
Potentilla reptans	Creeping Cinquefoil	25/11/2009
Potentilla sterilis	Barren Strawberry	26/11/2009
Primula vulgaris	Primrose	25/11/2009
Prunella vulgaris	Selfheal	26/11/2009
Prunus laurocerasus	Cherry Laurel	26/11/2009
Prunus sp	Cherry	28/11/2009
Prunus spinosa	Blackthorn	25/11/2009
Pteridium aquilinum	Bracken	25/11/2009
Quecus sp	Oak	25/11/2009
Quercus robur	Pedunculate Oak	25/11/2009
Ranunculus ficaria	Lesser Celandine	26/11/2009
Ranunculus repens	Creeping Buttercup	25/11/2009
Raphanus raphanistrum ssp maritimus	Sea Radish	25/11/2009
Rosa arvensis	Field-rose	01/12/2009
Rosa canina agg.	Dog-rose	25/11/2009
Rosa rugosa	Japanese Rose	25/11/2009
Rubia peregrina	Wild Madder	26/11/2009
Rubus fruticosus agg.	Bramble	25/11/2009
Rumex acetosa	Common Sorrel	25/11/2009
Rumex crispus	Curled Dock	25/11/2009
Rumex obtusifolius	Broad-leaved Dock	25/11/2009
Rumex sanguineus	Wood Dock	28/11/2009
Ruscus aculeatus	Butcher's-broom	25/11/2009
Salicornia sp	Glasswort	26/11/2009
Salix sp	Willow sp	25/11/2009
Sambucus nigra	Elder	26/11/2009
Sanicula europaea	Sanicle	28/11/2009
Sansuisorba minor	Salad Burnet	26/11/2009
Schoenus nigricans	Black bog-rush	28/11/2009
Scrophularia auriculata	Water Figwort	26/11/2009
Sedum anglicum	English Stonecrop	25/11/2009
Senecio jacobaea	Common Ragwort	25/11/2009
Senecio vulgaris	Groundsel	25/11/2009
Silene dioica	Red Campion	25/11/2009
Smyrnium olusatrum	Alexanders	25/11/2009

Solanum dulcamara	Bittersweet	25/11/2009
Sonchus oleraceus	Smooth Sow-thistle	25/11/2009
Spartina sp	Cord-grass	26/11/2009
Spergularia marina	Lesser Sea-spurrey	26/11/2009
Stachys sylvatica	Hedge Woundwort	28/11/2009
Stellaria holostea	Greater Stitchwort	25/11/2009
Stellaria media	Common Chickweed	25/11/2009
Tamarix gallica	Tamarisk	25/11/2009
Tanacetum vulgare	Tansy	26/11/2009
Taraxacum aggregate	Common Dandelion	25/11/2009
Taxus baccata	Yew	26/11/2009
Teucrium scorodonia	Wood Sage	26/11/2009
Trifolium repens	White Clover	25/11/2009
Tripleurospernum maritimum	Sea Mayweed	25/11/2009
Ulex europaeus	Gorse	26/11/2009
Ulmus procera	English Elm	25/11/2009
Urtica dioica	Common Nettle	25/11/2009
Veronica beccabunga	Brooklime	26/11/2009
Veronica chamaedrys	Germander Speedwell	26/11/2009
Viburnum lantana	Wayfaring-tree	25/11/2009
Vicia sepium	Bush Vetch	25/11/2009
Vinca minor	Lesser Periwinkle	26/11/2009
Viola sp	Violet sp	28/11/2009
Fucus spiralis	Spiral wrack	28/11/2009
Rhytidiadelphus squarrosus	Lawn moss	25/11/2009
Pseudoscleropodium purum	a moss	25/11/2009

Aegithalos caudatus	Long-tailed Tit	25/11/2009
Anas crecca	Teal	01/12/2009
Anas penelope	Wigeon	25/11/2009
Anas platyrhynchos	Mallard	25/11/2009
Buteo buteo	Buzzard	26/11/2009
Carduelis carduelis	Goldfinch	26/11/2009
Chroicocephalus ridibundus	Black-headed Gull	25/11/2009
Columba palumbus	Wood Pigeon	26/11/2009
Corvus corone	Carrion Crow	25/11/2009
Corvus frugilegus	Rook	25/11/2009
Corvus monedula	Jackdaw	28/11/2009
Cygnus cygnus	Whooper Swan	28/11/2009
Cygnus olor	Mute Swan	25/11/2009
Egretta garzetta	Little Egret	25/11/2009
Erithacus rubecula	Robin	25/11/2009
Falco peregrinus	Peregine	28/11/2009
Falco tinnunculus	Kestrel	01/12/2009
Fringilla coelebs	Chaffinch	01/12/2009
Fulica atra	Coot	25/11/2009
Garrulus glandarius	Jay	26/11/2009
Haematopus ostralegus	Oystercatcher	25/11/2009
Larus argentatus	Herring gull	25/11/2009
Larus marinus	Greater black-backed gull	28/11/2009
Motacilla alba yarrellii	Pied Wagtail	25/11/2009
Numenius arquata	Curlew	25/11/2009
Parus ater	Coal tit	01/12/2009
Parus caeruleus	Blue Tit	26/11/2009

Parus major	Great Tit	26/11/2009
Passer domesticus	House Sparrow	26/11/2009
Phalacrocorax carbo	Cormorant	25/11/2009
Phasianus colchicus	Pheasant	25/11/2009
Phoenicurus ochruros	Black Redstart	28/11/2009
Pica pica	Magpie	01/12/2009
Picus viridis	Green Woodpecker	28/11/2009
Prunella modularis	Dunnock	25/11/2009
Pyrrhula pyrrhula	Bullfinch	01/12/2009
Sturnus vulgaris	Starling	25/11/2009
Tachybaptus ruficollis	Little Grebe	28/11/2009
Tadorna tadorna	Shelduck	25/11/2009
Tringa totanus	Redshank	28/11/2009
Troglodytes troglodytes	Wren	25/11/2009
Turdus merula	Blackbird	25/11/2009
Turdus philomelos	Song thrush	28/11/2009
Vanellus vanellus	Lapwing	25/11/2009
Oryctolagus cuniculus	Rabbit	26/11/2009
Sciurus carolinensis	Grey Squirrel	28/11/2009
Talpa europaea	Mole (hills)	01/12/2009
Vanessa atalanta	Red Admiral	26/11/2009