Parish Plans Biodiversity Project

Stokenham

Report by the

Devon Biodiversity Records Centre

and

Devon County Council

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Devon Biodiversity Records Centre

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

Devon County Council

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Introduction

Stokenham is a parish rich in wildlife. A wealth of habitats are found in and around Stokenham, and this is reflected in the number of designated sites in the parish. The coastline from Slapton Ley south to Start Point and then west towards Prawle Point is a Site of Special Scientific Interest, as is Slapton Ley, the largest freshwater lake in south-west England. Many areas of mixed farmland along the coast have been identified as County Wildlife Sites on account of the presence of the rare cirl bunting. This part of south Devon is a stronghold for the species.

Stokenham parish is also home to several rare species of breeding bird including Cetti's warbler, sedge warbler, bittern and Dartford warbler. Nationally rare plants such as pennyroyal, strapwort and shore dock are also found in Stokenham.

There are stunning views along the coast, and the whole area is within the South Devon Area of Outstanding Natural Beauty.

In addition to the many designated sites, there are a range of interesting wildlife features within the parish, including many areas of species-rich grassland, green lanes and arable land. There is a substantial resource of hedgerows in Stokenham parish, and although many hedges are not species-rich due to the high exposure of the parish, they are of considerable wildlife value for birds such as the cirl bunting, butterflies and small mammals.

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

It should be emphasised that it is just a start. 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. 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 Stokenham in future years.

Designated Sites

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

For further information on SSSIs in general, and the sites luisted here in particular, please visit the English Nature web site: www.english-nature.org.uk.

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 SSSIs, and does not have any legal status. County Wildlife Sites are usually included in Local Plans as sites of substantive nature conservation interest and are covered by Planning Policy Statement 9: Biodiversity and Geological Conservation. 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.

Local Wildlife Sites (LWS) are sites of significant wildlife interest within a local context that do not reach the criteria for County Wildlife Sites.

Slapton Ley Site of Special Scientific Interest and National Nature Reserve:

Slapton Ley is the largest freshwater lake in South-West England. It was formed in post-glacial times by the damming of a former estuary by a shingle bar. The site supports a wide variety of habitats and possesses a rich and diverse flora and fauna.

Habitats present on site include open water, fen and reedbed, wet meadow, wet woodland, semi-natural broadleaved woodland and the shingle bar. These habitats provide excellent feeding and breeding grounds for a rich and varied wildlife. Much is accessible by public footpath, and the Ley is a major attraction for birdwatchers and naturalists. Limited angling from boats is allowed, for pike and coarse fish.

A causeway separates the site into higher and lower leys. The lower is a large freshwater lagoon with aquatic flora, while the higher ley consists of mainly fen and carr vegetation. The margins of both leys are dominated by common reed, which is an important habitat and feeding area for sedge and reed warblers.

Yellow-horned poppy and sea spurge are amongst plants found on bare shingle, while common rest-harrow, common bird's-foot trefoil and viper's bugloss are often the dominant species in the more stabilised areas. Other species present in this area include wild carrot, scentless mayweed, sea beet, rock samphire, sea campion, thrift and lucerne.

The site is of great importance for its invertebrate fauna, with several rare species present including the regionally uncommon migrant hawker and the hairy dragonfly. The higher ley has a good population of otter with spraints and runs regularly found, and the western shore of the lower ley supports a colony of strapwort (*Corrigiola litoralis*), a nationally rare plant. Over 490 species of vascular plant have been recorded, as well as 197 species of mosses and liverworts.

Slapton Ley meets the criteria for designation as a Special Protection Area under the terms of the European Community Directive on the Conservation of wild birds. The site has a huge diversity of passage and wintering birds. Breeding birds include the Cetti's warbler, a very localised resident breeder.

Wet woodland, fen, reedbed and coastal vegetated shingle are all **UK Biodiversity Action Plan** habitats and wet woodland and freshwater reedbed are also listed in the **Devon Biodiversity Action Plan.** Slapton Ley is one of only two freshwater reedbeds in Devon over 10 hectares in size. Reedbed is a very rare habitat in the UK, and in Devon large areas are not common. Reedbeds can support large numbers of amphibians, fish, butterflies and dragonflies, and are home to some rare breeding birds such as the bittern, reed warbler and bearded tit.

Further information on Slapton Ley can be found at: www.slnnr.org.uk

Prawle Point and Start Point Site of Special Scientific Interest and candidate Special Area of Conservation:

The stretch of coastline, which includes Prawle Point and Start Point, is of national importance for its geology, lichens and invertebrates, and supports a good variety of flowering plants and breeding birds.

Geologically the coastline from Prawle Point to Start Point provides one of the best examples of head deposits in one of Britain's classic areas for this type of deposit. The cliffs are formed from Devonian schists. Raised beaches and low Pleistocene cliffs of pebble, gravel, sand and clay are found at the present high water mark. The hard rock outcrops support one of the richest lichen floras to be found on the coast of Britain, including several rare species.

Prawle Point to Start Point is part of the South Devon Shore Dock candidate Special Area of Conservation. The site contains habitats and species that are rare or threatened within a European context. Prawle Point to Start Point is considered to be one of the best areas in the United Kingdom for shore dock

(*Rumex rupestris*). It grows on rocky and sandy beaches and at the foot of cliffs. It is the rarest dock and one of the rarest plants in Europe.

This stretch of coastline is also considered to be one of the best areas in the UK for vegetated sea cliffs. The short turf on the cliffs is home to flowering plants typical of maritime grassland. These include species such as buck's-horn plantain, thrift and kidney-vetch. There are also several rare species present such as Autumn squill, Portland spurge, hairy bird's-foot trefoil and sea stork's-bill.

Sea cliffs and slopes comprise a mosaic of habitats including species-rich coastal grassland, coastal heathland, woodland, wetland, scrub, geological exposures and vegetated cliff faces. This habitat is listed in both the **UK and Devon Biodiversity Action Plans** as a habitat of conservation concern.

Prawle Point is the most southerly point in Devon. It is a fine vantage point from which to watch the passage of both shipping and seabirds along the channel. The ancient cliffs and prehistoric raised beaches are features of the areas unusual geology.

Hallsands to Beesands Site of Special Scientific Interest:

Hallsands to Beesands is a Geological Site of Special Scientific Interest and comprises a stretch of coastline within Start Bay that runs from the village of Beesands to beyond the ruined properties at Hallsands.

The rare coastline formation and wave action at Hallsands are important for the understanding of the coastal erosion processes that occur in Start Bay. Distinctive features in the bay include shingles of flints, granites, slates and quartzites which, when recycled, can lead to the formation of shingle bars and possibly leys if they form across a river mouth, such as nearby Slapton Ley and Widdicombe Ley. This site is of national importance for the understanding of both Variscan structural development of South West England and coastal geomorphology.

Stokenham Site of Special Scientific Interest:

This site comprises a row of mature trees and an adjacent boundary wall which together support an exceptionally rich lichen flora, which includes several nationally rare species. Over 50 species of lichen have been recorded growing on the mature sycamore trees including *Physia clementei* and Golden hair lichen (*Teloschistes flavicans)*. The stone wall is almost entirely dominated by *Nephroma laevigatum*, this being the largest colony of this species in South West England.

Start Farm, Middle Kernborough, Long Rock, Hallsands and Ridge Cross County Wildlife Sites

These County Wildlife Sites are all areas of mixed farmland of importance for the presence of cirl butings.

Cirl buntings are listed in the **Devon Biodiversity Action Plan** as a species of conservation concern, as well as in the **UK Biodiversity Action Plan** and the **RSPB's red list**. In Britain the cirl bunting is a bird of lowland mixed farmland, expecially warm, south-facing slopes with tall bushy hedges. The cirl bunting population has declined rapidly since the 1970s and today it is a rare breeding bird. The main cause is agricultural change. The decline of mixed farming systems, especially cereal stubble, has deprived the cirl bunting of food.
The cirl bunting is a Devon speciality and now largely confined to the south of the County, and a few areas in Teignbridge and close to Exeter.

The five sites comprise a variety of habitats including arable land, semi-improved and unimproved grassland and scrub. These areas are of considerable importance for breeding birds. As well as the cirl bunting there are also many other bird species present including linnet, yellowhammer, stonechat, rock pipit, meadow pipit and skylark. These are all declining species associated with mixed farmland.

Lannacombe County Wildlife Site

Lannacome is a shetered valley running down to the sea between Start and Prawle Points. The steep slopes support a mosaic of habitats including mixed farmland, scrub, unimproved neutral grassland and tall herb vegetation. Some of the grassland areas are extremely herb-rich and comprise species such as common bird's-foot trefoil, yarrow, common restharrow, red clover, field scabious and fairy flax.

Several notable plant species have been recorded from the areas of unimproved grassland. These include yellow vetch, slender bird's-foot trefoil, twiggy mullein, knotted clover and hairy bird's-foot trefoil. These species are all Devon notables and many are nationally scarce.

The site also supports a good invertebrate fauna including the dark green fritillary, marbled white and pearl-bordered fritillary butterflies. The bird population is also extremely rich, breeding species include cirl bunting, yellowhammer, linnet and whitethroat.

In Devon the pearl-bordered fritillary is a species of conservation concern as it has declined dramatically in recent decades. Devon is considered a national stronghold of the species and because of this it is listed on the **Devon Biodiversity Action Plan.** The pearl-bordered fritillary is confined to areas with a warm microclimate, short vegetation and an abundance of violets, the

food plant of the larvae. The butterfly occupies three main types of habitat: well-drained grassland habitats with scattered scrub, woodland clearings and bracken stands.

Middlecombe County Wildlife Site

Middlecombe County Wildlife Site is an extensive mosaic of habitats including reedbed, scrub, broadleaved woodland, arable land and semi-improved grassland. The site is also of importance for the presence of cirl buntings, as well as the rare Cetti's warbler, sedge warbler and reed bunting. Raven, skylark, yellowhammer, linnet and kestrel have also been recorded in the area.

Part of the County Wildlife Site falls within the National Trust's Middlecombe Farm Estate. The Middlecombe Estate also takes in part of Tinsey Head County Wildlife Site. Middlecombe farm is located between the villages of Hallsands and Beesands on the South Devon coast. It extends to 64.6 hectares and was purchased by the National Trust in 1999.
The farm is a traditional mixed farm, containing arable land and grassland of varying degrees of agricultural improvement. Some of the grassland is unmanaged and encroached by bracken and scrub. It is currently managed by two separate tenants and has been subject to a Countryside Stewardship agreement since 1999. The main crops grown are spring barley and field beans and the main livestock are sheep.

Three types of grassland are present: - improved, semi-improved (dry and marshy, species-poor and species-rich), and unimproved coastal. There are also areas of blackthorn and bramble scrub, as well as stands of bracken. The most abundant species present are red fescue, red clover, wild carrot, buck's-horn plantain, false-oat grass and thrift. Plants present to a lesser extent include hare's-foot clover, sea mayweed, sea beet, sheep's bit and the notable Lesser sea spurrey.

The most notable plant recorded is pennyroyal which is classified as: Nationally rare, Devon rarity, Devon notable 1, Endangered (GB red list, Red data book 1) and legally protected species under the Wildlife & Countryside Act 1981 Schedule 8.

There are also records of several declining arable weeds on the farm, including weasel snout, round-leaved fluellin (Devon notable 2), sharp-leaved fluellin, cut-leaved dead-nettle (Devon notable 1) and dwarf spurge (Devon notable 2).

Tinsey Head County Wildlife Site

Tinsey Head is an area of coastal grassland and scrub. The grassland is quite species-rich with wild carrot, common restharrow, ox-eye daisy, field scabious, sea campion and common bird's-foot trefoil. Bird species recorded from the site include meadow pipit, whitethroat and yellowhammer.

Beesands Ley County Wildlife Site

Beesands Ley is a freshwater lagoon, the margins of which are dominated by common reed. This provides an important habitat for breeding Cetti's, sedge and reed warblers. The site also supports swamp, coastal habitats and a vegetated shingle ridge. Several uncommon plant species have been recorded from the habitats associated with the shingle ridge including carrot broomrape, subterranean clover, musk stork's-bill and sea stork's-bill.

The site is also of importance for its dragonfly interest with at least 6 species confirmed breeding.

Beesands Quarry County Wildlife Site

Beesands Quarry comprises herb-rich coastal grassland, scrub, a quarry and a shingle beach. The grassland supports typical coastal species including wild carrot, common restharrow, red fescue, common bird's-foot trefoil and cock's-foot. The shingle ridge supports species such as yellow-horned poppy and sea beet. The quarry has been identified as a Regionally Important Geological Site on account of its Lower Devonian Meadfoot beds.

Start County Wildlife Site

Start County Wildlife Site is located adjacent to Slapton Ley and crosses the boundaries of Stokenham, Slapton and East Allington Parishes. Habitats include a mosaic of marshy, unimproved and semi-improved neutral grassland, carr woodland, reedbed and tall herb vegetation.

The areas of dry grassland are herb-rich with a good diversity of species including ox-eye daisy, common toadflax, pale flax, red bartsia, lesser trefoil and common knapweed. The uncommon small-flowered crane's-bill was also recorded in this area.

The wetland areas are also of great wildlife importance, and follow on from similar habitats at Slapton Ley. Wetland species recorded from this area include greater tussock sedge, marsh ragwort, purple loosetrife, meadowsweet, hemlock water-dropwort and common reedmace. Otters are regularly recorded from Deer Bridge and may possibly live in the areas of wet woodland.

Widewell Plantation and Lannacombe Green Wood Local Wildlife Sites

These sites comprise small areas of secondary broadleaved woodland. Widewell Plantation is located to the south of Stokenham and Lannacombe Green south of Kellaton. The canopy of both woodlands is similar being

dominated by sycamore, with frequent ash, oak and sweet chestnut. Flora includes dog's mercury, wood-sorrel, herb-robert and enchanter's nightshade.

Torcross Local Wildlife Site

The majority of this site is open access being donated to South Hams District Council in 1990. Part of the site is managed as a butterfly reserve and 20 species of butterfly have been recorded from the site, including small tortoiseshell, peacock, painted lady and red admiral.

Other habitats (identified from field survey):

Species-rich hedges

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

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 layed.

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 form 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) lists ancient and or species-rich hedgerows as one of its priority habitats.

Many of the hedgerows around Stokenham parish have good banks and a reasonable diversity of flora. The hedges are actually quite species poor, even though they are probably quite old. Several hedges were looked at but only three or four woody species were recorded in a 30 metre length, with blackthorn generally being the dominant species. This is probably due to exposure of the area to high wind and salt spray. Occasional species recorded include hazel, grey willow, ash, holly and hawthorn.

Many of the hedges did have a species-rich bank flora despite being species-poor in terms of woody species. Species recorded from here include hedge bedstraw, wood sage, polypody, honeysuckle, creeping cinquefoil, common toadflax and meadow vetchling.

Species-rich hedges are listed on the **Devon Biodiversity Action Plan** as a habitat of conservation concern in Devon. However, most of the hedges along the lanes of Stokenham would not be classified as species-rich, particularly near to the coast. Although the hedges are not species-rich, they are still of good general value for birdlife, especially cirl buntings. The hedges also provide sheltered corridors through areas of farmland and probably support a good variety of invertebrates.

Churchyard

A small area of moderately species-rich grassland is found in the churchyard of the parish church in Stokenham. Species recorded include ribwort plantain, smooth hawk's-beard, red clover, yarrow, cat's-ear and germander speedwell.

Stone walls

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

Recreation areas and public open space

There are a few areas of amenity grassland and open space in Stokenham parish, namely the village green in Stokenham, the butterfly reserve at Torcross and the Woodland Trust's Great Hill Wood at Chillington. This woodland is managed as a community woodland and is a 'Wood on your Doorstep'.

The Woodland Trust's 'Woods on your Doorstep' project created 200 new woods in England & Wales and 50 more in Northern Ireland to celebrate the millennium. This project has received funding of £10.5 million from the Millennium Commission, supporting the acquisition and continued management of all the 'Woods on your Doorstep' sites.

There is also a good network of public footpaths around the parish. The South West Coast Path runs along the shingle ridge at Slapton Ley and south towards Start Point. It then continues on towards the edge of the parish at Lannacombe beach. Public footpaths take you around Start Point and Beesands, as well as from Chillington and Stokenham villages. Much of Slapton Ley nature reserve is also accessible by footpath.

There are several footpaths around Stokenham parish that could be described as 'green lanes'. A green lane can be defined as an unmetalled track with field boundaries 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.

Species recorded from green lanes in Stokenham parish include hedge bedstraw, barren strawberry, mugwort, red bartsia, greater stitchwort and

meadow vetchling. Several of the lanes had signs of badger activity including diggings and setts.

Gardens

Gardens are a haven for wildlife and can provide links to other areas of wildlife habitat. Several species have been recorded from gardens in Stokenham parish including common frog, common toad, badger, great green bush-cricket, slow worm, greater and lesser horsehoe bats and grass snake.

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

The greater horsehoe bat is also listed in the **Devon Biodiversity Action Plan** as a species of conservation concern.

During this century the greater horseshoe bat has declined significantly throughout northern Europe. In the UK, this species is restricted to south-west England and south Wales, although vagrants may be recorded elsewhere. There are currently 35 recognised maternity and all-year roosts and 369 hibernation sites. Current estimates range between 4,000 and 6,600 individuals. In Devon it breeds in disused farm buildings and caves. The feeding habitat requirements of the greater horseshoe bat are permanent pasture (unimproved and semi-improved, preferably grazed by cattle), tall hedgerows with mature trees, mixed deciduous woodland, wetland and scrub.

The greater horseshoe bat is under threat from the loss, destruction and disturbance of roosting and hibernation sites and the loss of insect-rich feeding habitats and flyways. The loss of feeding areas is often due to the loss of wetlands and hedgerows and the conversion of permanent pasture to arable.

Species-rich grassland

There are many areas of species-rich grassland within the parish. Most of these have been identified as County Wildlife Sites or Sites of Special Scientific Interest and contain coastal grassland. Roadside verges often support flower-rich grassland, as well as a variety of semi-natural habitats including calcareous grassland, neutral grassland, acid grassland, heathland, open water (ditches), broadleaved woodland, scrub, hedgerows and walls. They may also support populations of scarce or declining species of flora

and/or fauna, some of which enjoy statutory protection. Linear grassland habitats provide a valuable wildlife resource. Verges provide shelter and food for a variety of species from small mammals, to birds of prey and insects.

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

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

There are no **Special Verge Sites** in Stokenham parish, but the road verges close to Mattiscombe Cross appear to be quite species rich. Species recorded from here include red clover, meadow vetchling, ribwort plantain, smooth hawk's-beard, common centaury, tufted vetch, common bird's-foot trefoil, common knapweed and false oat-grass.

Arable land

There are many areas of arable land in Stokenham parish, particularly close to the coast. These areas are of considerable interest for farmland birds such as the skylark, cirl bunting 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, cirl buntings and linnets. These birds may flock together to feed on the spilt grain, seeds and insects within the stubble.

The skylark is listed in 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 overwinter survival by reducing the area of stubbles.

Several common arable plant species were recorded during the survey including common field speedwell, field madder, shepherd's-purse and pineappleweed.

There are also a number of rare arable weeds associated with spring cereals and winter stubble including 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 that allowed more effective seed-cleaning caused an initial decline, but herbicide development was catostrophic 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.

Cereal field margins are listed on the **UK Biodiversity Action Plan** as a habitat of conservation concern.

Field margins could provide nesting and feeding sites for game birds and some passerines. Many species of butterflies, grasshoppers, and plant bugs are associated with such sites. Even more dependent on cereal field margins are the rare arable flowers. Threatened and important species from these margins include pheasant's eye *Adonis annua*, cornflower *Centaurea cyanus*, broadleaved spurge *Euphorbia platyphyllos*, corn parsley *Petroselinum segetum*, shepherd's needle *Scandix pecten-veneris* and narrow-fruited cornsalad *Valerianella dentata*. Arable wild flowers are of conservation concern because of enormous national declines in their distribution and abundance. Overall, some 300 species of plants can occur in arable fields.

Potential County Wildlife Sites

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

Dunstone Wood is an area of ancient semi-natural woodland. **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 Devon Ancient Woodland Inventory was prepared in 1986 by the Nature Conservancy Council.

Widdicombe House is an area of mixed woodland and **Mattiscombe** an area of broadleaved woodland. They are close to Stokenham Site of Special Scientific Interest, and so may be of interest for their lichen populations too.

It may well be that other possible CWS remain to be identified.

Devon Key Dragonfly Sites

Slapton Ley - Nationally Important Dragonfly site

Slapton Ley is a natural freshwater lagoon, separated from the sea by a shingle bar. The site supports the most south-westerly population of hairy dragonfly in England. 12 species are confirmed breeding at the site, and several uncommon species have been recorded at the site including keeled skimmer, ruddy darter and black-tailed skimmer.

Beesands Ley

Beesands Ley is a coastal lake, just south of Slapton Ley. It is also thought to be of importance for the hairy dragonfly, and at least five species are thought to breed at the site. Two unusual species were recorded from the site pre-1999. These are the red-veined and yellow winged darters. Both these species are fairly uncommon migrants to Britain, but sightings of individuals are often reported in most years.

Bickerton Ponds

Bickerton Ponds are two artificial fishing ponds with four breeding species present, including blue-tailed damselfly, common blue damselfly, azure damselfly and black-tailed skimmer.

Hallsands

Hallsands is a small coastal area of open water, where hairy dragonfly has been recorded in the past. Three species are reported to breed here including blue-tailed damselfly, scarce blue-tailed damselfly and emperor dragonfly.

Species

Important Species

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

Birds

Several species of birds were recorded during the survey including skylark, mallard, jackdaw, mute swan, house martin, coot, moorhen and house sparrow.

Important bird areas in Stokenham parish include Start Point to Prawle point and Slapton Ley. The coastline from Beesands to Start Point is an important area for cirl buntings with several breeding pairs present.

Slapton Ley is an extremely important bird area. The following text is taken from the citation for this Site of Special Scientific Interest (English Nature, 2004 - please visit the English Nature web site for a full copy of this document):

"The mosaic of freshwater habitats supports a nationally important assemblage of breeding birds, including water rail *Rallus aquaticus*, cuckoo *Cuculus canorus*, kingfisher *Alcedo atthis*, reed warbler *Acrocephalus scirpaceus*, sedge warbler *A. schoenobaenus*, and reed bunting *Emberiza schoeniclus*. Mute swan *Cygnus olor*, great crested grebe *Podiceps cristatus*, gadwall *Anas strepera*, pochard *Aythya farina* and tufted duck *Aythya fuligula* also feed in the open water and breed in the reed fringe. There is a nationally important population of Cetti's warbler breeding in the fen woodland fringing the Ley, as well as a heronry in Hartshorn plantation next to the Lower Ley.

The reed-beds fringing the Ley are important for migrant and wintering birds, particularly in autumn when large numbers of swallows *Hirundo rustica*, sand martins *Riparia riparia*, reed warblers *Acrocephalus scirpaceus* and sedge warblers *A. schoenobaenus* gather to roost. In winter, they are regularly used by bittern."

Seabirds are another important feature, as the Slapton Ley National Nature Reserve web site (www.slnnr.org.uk) makes clear, "Many seabirds use Start Bay, and migrating and wintering divers, grebes and sea ducks occur. Some of these species also cross the bar onto the freshwater of the Ley."

Skylarks have been recorded from Middlecombe Farm and the arable fields near Stokenham. Spotted flycatcher and willow warbler have been recorded from Batton (part of Middlecombe County Wildlife Site).

Plants

Plant species noted on a visit on the 22 September 2004 are listed in Appendix 2.

Stokenham parish is home to some very rare plants, including many that are nationally scarce as well as several Devon notable species.

Autumn squill, bloody crane's-bill, ivy broomrape, bastard balm, shore dock and hairy bird's-foot trefoil have been recorded from Start Point to Prawle Point.

Shore dock is a maritime plant found in Anglesey, South Devon, Cornwall and the Isles of Scilly. It also grows in the Channel Islands, Normandy, Brittany, Bordeaux and Galicia and is rare and declining throughout its range. During the last century, the number of mainland UK sites has declined by over 80% and the species is now found in ten 10km squares. The largest British population has no more than 50 individuals.

The rare pennyroyal is present at Middlecombe Farm as well as Hallsands and Tinsey Head. Pennyroyal is one of a number of plants associated with seasonally wet habitats, which have declined markedly over the last few decades. It is found in very short turf overlying clay and silt on sites that are subjected to grazing, trampling, dunging and general disturbance by livestock or vehicles. These conditions are often associated with traditionally managed lowland village greens, unmetalled trackways and the margins of ponds.

Most remaining populations occur where there is rutting and poaching in the absence of hard grazing. The species is a short-lived perennial that persists only where trampling enables stems to take root in the soil. Although seeds are produced, it is thought that very little recruitment takes place in this way.

In the UK, pennyroyal is now found in abundance only in the New Forest and on the western shores of Lough Beg in Northern Ireland. It has suffered one of the most severe and widespread declines of any species in the British flora over the last 50 years. Before 1970 it was known from 229 10 km squares, but has been recorded in only 15 of these since 1980. In Devon it is only known from around 5 sites.

Strapwort is classified as critically endangered in Britain. The only UK site where strapwort occurs now is at Slapton Ley. Here, muddy shingle is seasonally inundated by water and trampled by cattle coming to drink, conditions which seem to suit the plant.

It used to occur on just two sites, one in Devon and one in Cornwall. However, the plant disappeared from the Cornish site in the early part of the 20th century. Strapwort is also found in Russia, Turkey and widely in Africa where it occurs on a variety of habitats. This apparent adaptability makes it difficult to account for the rarity of the plant in the UK.

Mammals

Slapton Ley is home to several mammal species including otter, mink, common dormouse and badger, as well as nine species of bat including Daubenton's.

The elusive water shrew has also been recorded from Stokenham. Water shrews are semi-aquatic mammals, and are found in habitats close to water notably the banks of streams, rivers, ponds and ditches, as well as reedbeds, fens and watercress beds. They have a preference for clean, clear sources of water. They have a low population density compared with most mammals, with a maximum of about 9 shrews per hectare.

Water shrews feed on freshwater invertebrates (freshwater shrimps, water slaters and caddis larvae), as well as frogs, newts and small fish, on occasion. They also feed on many terrestrial invertebrates such as earthworms, snails and beetles.

There is little information about the habitat preferences and population status of water shrews. Without such information it is difficult to make appropriate recommendations about habitat management and assess conservation needs. It is not known if water shrew populations are under threat, but like water voles and otters, they are likely to have suffered declines over the last 50 years through habitat loss and fragmentation, and pollution of wetland habitats. Populations are likely to be affected by drainage schemes and river-bank clearance management which alter water supplies, reduce food supplies and destroy burrows and vegetation cover.

Badgers have been recorded from gardens in Chillington, Stokenham and Torcross, and there are also many records of setts in the parish.

Invertebrates

Start Point to Prawle Point and Slapton Ley are listed as **Invertebrate Site Register Grade A sites.** These are sites of national importance for invertebrate conservation.

Species recorded from Start Point to Prawle Point include the silver-studded blue, dark green fritillary, pearl bordered fritillary and green hairstreak butterflies, great green bush-cricket, as well as many other uncommon beetles, flies and bumblebees.

The silver-studded blue is listed on the **UK Biodiversity Action Plan** as a species of conservation concern.

The silver-studded blue occurs on predominantly lowland heathland and calcareous grassland. In all habitats, the species requires the presence of ant species of the genus *Lasius*, open ground for breeding, and either bare soil or short vegetation.

The silver-studded blue has undergone a severe decline in range this century, estimated at 80%. It has become extinct in Scotland and northern England, and throughout most of central, eastern and south-eastern England. In Great Britain the silver-studded blue is classified as *Nationally Scarce*.

Slapton Ley is of importance for the migrant hawker, hairy dragonfly and the great green bush-cricket.

Reptiles and Amphibians

Slapton Ley is home to eight out of the nine Devon species of reptile and amphibian - adder, common lizard, slow worm, grass snake, common toad, common frog and smooth and palmate newts.

Common frog, common toad, slow worm and grass snake have all been recorded from gardens in Start, Chillington and Stokenham.

The Devon Biodiversity Action Plan (BAP).

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

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

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

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

Biodiversity links:

- The Devon BAP can be viewed at www.devon.gov.uk/biodiversity. 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.

- National Action Plans can be viewed at www.ukbap.org.uk. This site also contains useful background information on UK biodiversity action planning.

Links between the wildlife of Stokenham and the Devon BAP:

Stokenham wildlife feature	Brief description of feature	Link with the Devon Biodiversity Action Plan (BAP)
Slapton Ley	Slapton Ley is the largest freshwater lake in South-West England. It supports a wide variety of habitats and possesses a rich and diverse flora and fauna.	• Freshwater reedbed Habitat Action Plan • Alder/willow wet woodland Habitat Action Plan • Great green bush-cricket Species Action Plan • Otter Species Action Plan • Dormouse Species Action Plan
Coastal grassland from Beesands to Start Point	Extensive areas of coastal grassland and scrub. Several rare plants are present, as well as uncommon butterflies and birds.	• Sea cliff and slope Habitat Action Plan • Rocky foreshore Habitat Action Plan • Cirl bunting Species Action Plan • Great green bush-cricket Species Action Plan
Beesands Quarry		• Pitts, quarries and cuttings Habitat Action Plan
Lannacombe, Start and Middlecombe County Wildlife Sites. Also the churchyard and road verges.	These features support species-rich grassland which has been protected from agricultural improvement.	• Flower-rich meadows and pastures Habitat Action Plan • Pearl bordered fritillary Species Action Plan

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

Some Ideas for Local Action…

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

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

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

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

1 Further survey:

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

Specific features to survey in Stokenham might include otter signs and coastal grassland. The last two actions would directly contribute to the **Otter Action Plan** and the **Sea cliff and slope Action Plan**.

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

Survey work could be undertaken as a community group or in liaison with conservation groups active in the area. For example, the Field Studies Council at Slapton Ley Field Centre manages the 211 hectares (521 acres) nature reserve as an "outdoor laboratory" to maintain habitats and conserve wildlife. The Centre, established in 1959, is a base for educational courses and research, which integrate with reserve management. More research has probably been carried out at Slapton than on any other National Nature Reserve in Britain. An important element of this work are investigations into the physical processes occurring outside the reserve that are responsible for changes taking place in the aquatic environment of the two Leys.

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

2 Influence the management of Public Open Space:

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

Planting up areas that are currently of little wildlife interest with new copses of native trees and shrubs will also help to attract wildlife. Suitable sites might include unused areas of playing fields, for example.

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?

4 Adopt a road verge:

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

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

5 Wildlife gardening:

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

www.english-nature.org.uk/Nature_In_The_Garden

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

6 Join local conservation organisations:

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

7 Japanese Knotweed:

Not something to cherish, but it can't be ignored! Unfortunately, Japanese Knotweed is present at several locations in Stokenham 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[1]. 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

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

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/biodiversity/japanese_knotweed.

Useful sources of further information:

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

Possible sources of funding:

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

Awards for All: www.awardsforall.org.uk

Countryside Trust Awards: 01242 521382 or www.countrysidetrust.org

Living Spaces: 0845 600 3190 or www.living-spaces.org.uk

Local Heritage Initiative: 01226 719019 or www.lhi.org.uk

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

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

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Wilson P & King M (2003) *Arable Plants – A Field Guide* Wildguides

Websites:

www.slnnr.org.uk

www.woodland-trust.org.uk

www.mammal.org.uk

www.plantlife.org.uk

www.ukbap.org.uk

Appendix 1 – Notable sites and species within Stokenham Parish.

File Code	Site Name	Grid Ref.	Area (ha)	Description	Status
SX73/021	Prawle Point and Start Point	SX742372 to SX819381	353.1	Coastal habitats and mixed farmland with bird interest	SSSI, SAC
SX84/037	Stokenham	SX 811417	0.9	Notable wall lichens	SSSI
SX84/039	Slapton Ley	SX 824441	221.8	Freshwater lake, swamp, carr woodland and coastland habitats	SSSI
	Hallsands to Beesands	SX819403 - SX819379	13.3	A stretch of coastline with geological interest including Varsican Structures of South West England and Coastal Geomorphology of England.	gSSSI
SX74/075	Middle Kernborough	SX793413	4.1	Mixed farmland with bird interest	CWS
SX74/076	Ridge Cross	SX794422	12.6	Mixed farmland with bird interest	CWS
SX83/002	Lannacombe	SX802375	46.4	Mixed farmland, scrub, unimproved neutral grassland & tall herb vegetation with bird interest	CWS
SX83/003	Middlecombe	SX810395	74.2	Mixed farmland with bird interest and ISR moths & reedbed & birds other than CB	CWS
SX83/004	Tinsey Head	SX818398	14.6	Coastal grassland & scrub	CWS
SX83/005	Hallsands	SX815387	24.7	Mixed farmland with bird interest & unimproved grassland and dragonflies	CW
SX83/006	Long Rock	SX817383	15.5	Mixed farmland with bird interest	CWS
SX83/007	Start Farm	SX820373 & SX814373	28.9	Mixed farmland with bird interest	CWS
SX84/034	Start	SX807447 & SX813446	15.0	Marshy, unimproved & semi-improved neutral grassland, carr woodland, reedbed & tall herb vegetation	CWS
SX84/041	Beesands Ley	SX820410	20.2	Freshwater lake, swamp & coastal habitats	CWS
SX84/042	Beesands Quarry	SX822414	8.9	Coastal grassland, scrub & shingle	CWS
SX83/001	Lannacombe Green Wood	SX803385	1.4	Secondary broadleaved woodland	LWS
SX84/035	Widewell Plantation	SX810424	3.3	Broadleaved woodland	LWS
SX84/040	Torcross	SX819421	1.6	Broadleaved plantation & bracken	LWS
SX74/074	Dunstone Wood	SX791404	1.7	Ancient semi-natural woodland	pCWS
SX84/036	Mattiscombe	SX809419	2.2	Broadleaved woodland	pCWS
SX84/038	Widdicombe House	SX813417	5.7	Mixed woodland	pCWS

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

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.

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

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

Regionally Important Geological and Geomorphological Sites (RIGS): these are earth science sites that are of regional or local importance. Like CWS, they are included in Local Plans and referred to under PPG9.

Special Areas of Conservation (SAC): these are notified by English Nature 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, all candidate SACs are, or will be notified as SSSIs. English Nature needs to be consulted before any operations likely to damage the special interest are undertaken. SAC is a statutory designation with legal implications.

No.	Name	Latin Name	Location	Date	UK Protection	International Protection	Status
1	Badger	Meles meles	Side of lane leading north to Frogmore.	2003	WCA 6, BA	Bern III	
2	Otter	Lutra lutra	A new pond at Mill Farm, between Frogmore and Chillington.	2000	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
3	Greater Horseshoe Bat	Rhinolophus ferrumequinum	Garage at Well Farm House, Chillington, Kingsbridge.	2003	WCA 5, 6	EC IIa, IVa; Bern II; Bonn II	UKBAP(P); DBAP
4	Common Frog	Rana temporaria	Home Close, Chillington,	2002	WCA 5(S)	EC Va; Bern III	

			Kingsbridge.				
5	Badger	Meles meles	Somereye, Chillington.	2001	WCA 6, BA	Bern III	
6	Badger	Meles meles	Green lane near Chillington.	2002	WCA 6, BA	Bern III	
7	Tree-mallow	Lavatera arborea	Lannacombe	1992			DN3
8	Sea Stork's-bill	Erodium maritimum	Lannacombe	1996			DR
9	Clustered Clover	Trifolium glomeratum	Lannacombe	2000			NS; DN1; DR
10	Knotted Clover	Trifolium striatum	Lannacombe	2000			DN2
11	Weasel	Mustela nivalis	Kellaton.	2004		Bern III	
12	Japanese Knotweed	Fallopia japonica	Stokenham Area Primary School, Kiln Lane.	2004	WCA 9		
13	Hairy Bird's-foot-trefoil	Lotus subbiflorus	Lannacombe	2000			NS; DN1
14	Slender Bird's-foot-trefoil	Lotus angustissimus	Lannacombe	2000			NS; DN1
15	Yellow Vetch	Vicia lutea	Lannacombe	2000			NS; DN1; DR
16	Yellow Vetch	Vicia lutea	The Narrows	1985			NS; DN1; DR
17	Otter	Lutra lutra	Darnacombe	2000	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
18	Burnet Rose	Rosa pimpinellifolia	Near Start	2000			DN2
19	Cirl Bunting	Emberiza cirlus	Batton	1992	WCA 1		UKBAP(P); DBAP; Red
20	Spotted Flycatcher	Muscicapa striata	Batton	1992			UKBAP(P); Red
21	Willow Warbler	Phylloscopus trochilus	Batton	1992			Amber
22	Badger	Meles meles	Fern Cottage, Start, Slapton	2001	WCA 6, BA	Bern III	
23	Common Frog	Rana temporaria	Fern Cottage, Start, Slapton	2001	WCA 5(S)	EC Va; Bern III	
24	Common Toad	Bufo bufo	Fern Cottage, Start, Slapton	2001	WCA 5(S)	Bern III	
25	Great Green Bush Cricket	Tettigonia viridissima	Fern Cottage, Start, Slapton	2001			DBAP
26	Slow-worm	Anguis fragilis	Fern Cottage, Start, Slapton	2001	WCA 5(KIS)	Bern III	
27	Badger	Meles meles	Woodland at Vine	2001	WCA 6, BA	Bern III	

			Cottage, Start, near Slapton.				
28	a bat	bat sp.	Watergate Cottage, Start, Slapton.	2002	WCA 5, 6	EC IVa; Bonn II	
29	Greater Horseshoe Bat	Rhinolophus ferrumequinum	Watergate Cottage, Start, Slapton.	2002	WCA 5, 6	EC IIa, IVa; Bern II; Bonn II	UKBAP(P); DBAP
30	Lesser Horseshoe Bat	Rhinolophus hipposideros	Watergate Cottage, Start, Nr Slapton, Kingsbridge.	1998	WCA 5, 6	EC IIa, IVa; Bern II; Bonn II	UKBAP(P)
31	Whiskered Bat	Myotis mystacinus	Watergate Cottage, Start, Slapton.	2002	WCA 5, 6	EC IVa; Bern II; Bonn II	
32	a bat	bat sp.	Lower Middlecombe Farm buildings (barn), Beesands.	2002	WCA 5, 6	EC IVa; Bonn II	
33	Badger	Meles meles	Deerbridge Mill, Start, near Slapton.	2001	WCA 6, BA	Bern III	
34	Frosted Orache	Atriplex laciniata	Hallsands Marsh	1992			DN1
35	Pennyroyal	Mentha pulegium	Hallsands	2002	WCA 8		UKBAP(P); DN1; DR
36	Reed Bunting	Emberiza schoeniclus	Hallsands Marsh	1992			UKBAP(P); Red
37	Yellow Horned Poppy	Glaucium flavum	Hallsands Marsh	1992			DN1
38	Cirl Bunting	Emberiza cirlus	Lamacroft	1992	WCA 1		UKBAP(P); DBAP; Red
39	Grass Snake	Natrix natrix	Start Bay Caravan Club Site, Stokenham.	2001	WCA 5(KIS)	Bern III	
40	Otter	Lutra lutra	Avon, Erme, Slapton	1989	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
41	Otter	Lutra lutra	Slapton Ley at Deer Bridge	1999	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
42	Bullfinch	Pyrrhula pyrrhula	In hedge at Deer Bridge, Slapton.	2001			UKBAP(P); Red
43	Otter	Lutra lutra	Slapton Town	1997	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
44	Cetti's Warbler	Cettia cetti	Slapton Ley nature trail, in wet reedbed	2001	WCA 1		

45	Small-flowered Buttercup	Ranunculus parviflorus	Mattiscombe	1989			DN3
46	White Water-lily	Nymphaea alba	Bickerton Farm Fishery	1992			DN1
47	Badger	Meles meles	Middlecombe Farm	2003	WCA 6, BA	Bern III	
48	Crested Hair-grass	Koeleria macrantha	Middlecombe Farm	2003			DN1
49	Kestrel	Falco tinnunculus	Middlecombe Farm	2003			Amber
50	Lesser Sea-spurrey	Spergularia marina	Middlecombe Farm	2003			DN3
51	Pennyroyal	Mentha pulegium	Middlecombe Farm	2003	WCA 8		UKBAP(P); DN1; DR
52	Rough Hawk's-beard	Crepis biennis	Middlecombe Farm	2003			DN2
53	Skylark	Alauda arvensis	Middlecombe Farm	2003			UKBAP(P); Red
54	Swallow	Hirundo rustica	Middlecombe Farm	2003			Amber
55	White-legged Damselfly	Platycnemis pennipes	Middlecombe Farm	2003			Nb; KeyD (N)
56	Wild Cabbage	Brassica oleracea var. oleracea	Middlecombe Farm	2003			DN1
57	Yellowhammer	Emberiza citrinella	Middlecombe Farm	2003			Red
58	Badger	Meles meles	Stokeley Barton Barns, Stokenham.	2003	WCA 6, BA	Bern III	
59	Water Shrew	Neomys fodiens	France Wood, Slapton Ley.	2001	WCA 6	Bern III	
60	Cirl Bunting	Emberiza cirlus	Hallsands	1992	WCA 1		UKBAP(P); DBAP; Red
61	Japanese Knotweed	Fallopia japonica	Tinsey House, North Hallsands	2000	WCA 9		
62	White Ramping-fumitory	Fumaria capreolata	Hallsands	1993			DN3
63	a bat	bat sp.	Hallsands Hotel.	2002	WCA 5, 6	EC IVa; Bonn II	
64	Pipistrelle	Pipistrellus pipistrellus	Hallsands Hotel and Coach House, Hallsands, Kingsbridge.	2001	WCA 5, 6	EC IVa; Bern III, Bonn II	UKBAP(P)
65	Badger	Meles meles	Woodland, near Torcross.	2001	WCA 6, BA	Bern III	
66	Water Shrew	Neomys fodiens	Side of footpath, near Slapton.	2000	WCA 6	Bern III	

67	Sea Spleenwort	Asplenium marinum	Hallsands	1997			DN3
68	Tree-mallow	Lavatera arborea	Hallsands	1989			DN3
69	Linnet	Carduelis cannabina	Tinsey Head	1992			UKBAP(P); Red
70	Meadow Pipit	Anthus pratensis	Tinsey Head	1992			Amber
71	Pennyroyal	Mentha pulegium	Tinsey Head	2002	WCA 8		UKBAP(P); DN1; DR
72	Yellowhammer	Emberiza citrinella	Tinsey Head	1992			Red
73	Cut-leaved Dead-nettle	Lamium hybridum	Tinsey Head	2001			DN1
74	Dwarf Spurge	Euphorbia exigua	Tinsey Head	2001			DN2
75	Grass-leaved Orache	Atriplex littoralis	Tinsey Head	2001			DN1; DR
76	Round-leaved Fluellen	Kickxia spuria	Tinsey Head	2001			DN2
77	Japanese Knotweed	Fallopia japonica	Beside the ley at Beesands, Kingsbridge.	2002	WCA 9		
78	Great Green Bush Cricket	Tettigonia viridissima	Slapton Ley	2000			DBAP
79	Bird's-foot clover	Trifolium ornithopodioides	Beesands	1996			DN1
80	Round-leaved Crane's-bill	Geranium rotundifolium	Beesands	1996			DN3
81	Upright Chickweed	Moenchia erecta	Beesands	1996			DN2
82	Hairy Bird's-foot-trefoil	Lotus subbiflorus	Start Point	1988			NS; DN1
83	Rough Clover	Trifolium scabrum	Beesands	1996			DN2
84	Henbane	Hyoscyamus niger	Beesands	2001			DN1
85	Nettle-leaved Goosefoot	Chenopodium murale	Beesands	2001			DN2
86	Sea Pearlwort	Sagina maritima	Beesands	2001			DN2
87	Japanese Knotweed	Fallopia japonica	By Slapton Ley nature reserve, Torcross.	1980	WCA 9		
88	Yellow Horned Poppy	Glaucium flavum	Beesands	1993			DN1
89	Great Green Bush Cricket	Tettigonia viridissima	Sunnydale Quarry, Beesands	1992			DBAP
90	Musk Stork's-bill	Erodium moschatum	Beesands	1993			NS; DR
91	Sea Stork's-bill	Erodium maritimum	Beesands	1993			DR

92	Small-flowered Sweet-briar	Rosa micrantha	Beesands	1995			DN1
93	Badger	Meles meles	The Grebes, Lane End, Torcross.	2001	WCA 6, BA	Bern III	
94	Dartford Warbler	Sylvia undata	By cliff path walking west from Start Point (just below next beach).	2003	WCA 1		Red
95	Autumn Squill	Scilla autumnalis	Start Point	2000			NS; DN1
96	Blue Fescue	Festuca longifolia	Start Point	2000			vulnerable
97	Portland Spurge	Euphorbia portlandica	Torcross, S side of headland	1991			NS; DN3
98	Japanese Knotweed	Fallopia japonica	Torcross.	2002	WCA 9		
99	Great Green Bush Cricket	Tettigonia viridissima	Bird hide at Torcross Carpark	2002			DBAP
100	Great Green Bush Cricket	Tettigonia viridissima	Start Point.	2001			DBAP
101	Grey Bush Cricket	Platycleis albopunctata	Start Point SSSI	1992			Nb
102	Strapwort	Corrigiola litoralis	Slapton Ley	1989	WCA 8		DN1; DR
103	Sea Stork's-bill	Erodium maritimum	Start Point, nr lighthouse	1996			DR
104	Laneolate Spleenwort	Asplenium obovatum	Start Point, nr. lighthouse	1992			NS; DN3
105	Small Pearl-bordered Fritillary	Boloria selene	Lannacombe	1997			DeclineD
106	Green Hairstreak	Callophrys rubi	Mattiscombe	1995			DeclineD
107	Dark Green Fritillary	Argynnis aglaja	Mattiscombe	1995			DeclineD
108	Green Hairstreak	Callophrys rubi		1990			DeclineD
109	Green Hairstreak	Callophrys rubi	Start Point	1998			DeclineD
110	Dark Green Fritillary	Argynnis aglaja	Start Point	1998			DeclineD
111	Silver-studded Blue	Plebejus argus	Start Point	2000	WCA 5 (S)		UKBAP(P); Nb

WCA 1	**Wildlife and Countryside Act (1981) Schedule 1:** birds which are protected by special penalties at all times.
WCA 5	**Wildlife and Countryside Act (1981) Schedule 5:** species protected against killing, injury, disturbance and handling.
WCA 5 (S)	**Wildlife and Countryside Act (1981) Schedule 5: (sale):** species protected against sale only.
WCA 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.
Bern III	**Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix III:** Exploitation of listed animal species to be subject to regulation
Bern II	**Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II:** Special protection for listed animal species and their habitats.
ECIVa, IVb	**EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IVa:** Exploitation of listed animals and plants to be subject to management if necessary.
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.
ECIIa, IIb	**EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IIa and IIb:** Designation of protected areas for animal and plant species listed.
ECIIIa, IIIb	**EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats & Species Directive) Annex IIIa and IIb:** Species used as criteria for designating Special Areas of Conservation (SACs).

Bonn II **Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) Appendix II:** Range states encouraged to conclude international agreements to benefit species listed.

UKBAP(P) **UK Priority Species (Short and Middle Lists - UK Biodiversity steering Group Report 1995)** i.e. species that are globally threatened and rapidly declining in the UK (by more than 50% in the last 25 years). Has a Species Action Plan.

DBAP **Devon Biodiversity Action Plan species:** these have been identified as species of key conservation concern in Devon.

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.

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.

Red List Bird species of high conservation concern, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.

Nb **Nationally Notable B:** recorded from 30-100 10km squares in Great Britain since 1980.

KeyD (N) **Nationally Important Key Dragonfly Species:** 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).

Appendix 2

Species list for Stokenham parish, recorded during the field survey in September 2004.

Scientific name	Common name
Achillea millefolium	Yarrow
Alauda arvensis	Skylark
Alnus glutinosa	Alder
Anagallis arvensis	Scarlet Pimpernel
Anas platyrhynchos	Mallard
Armeria maritima	Thrift
Arrhenatherum elatius	False Oat-grass
Artemisia vulgaris	Mugwort
Asplenium trichomanes	Maidenhair Spleenwort
Bellis perennis	Daisy
Beta vulgaris ssp. maritima	Sea Beet
Brachypodium sylvaticum	False-brome
Calystegia sepium	Hedge Bindweed
Capsella bursa-pastoris	Shepherd's-purse
Centaurea nigra	Common Knapweed
Centaurium erythraea	Common Centaury
Centranthus ruber	Red Valerian
Cerastium fontanum	Common Mouse-ear
Cirsium arvense	Creeping Thistle
Convolvulus arvensis	Field Bindweed
Corvus monedula	Jackdaw
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Crepis capillaris	Smooth Hawk's-beard
Crithmum maritimum	Rock Samphire
Crocosmia x crocosmiiflora	Montbretia
Cyclamen hederifolium	Cyclamen
Cygnus olor	Mute Swan
Cymbalaria muralis	Ivy-leaved Toadflax
Cynosurus cristatus	Crested Dog's-tail
Dactylis glomerata	Cock's-foot
Daucus carota	Wild Carrot
Delichon urbica	House Martin
Digitalis purpurea	Foxglove
Dryopteris filix-mas agg.	Male Fern
Echium vulgare	Viper's Bugloss
Euonymus europaeus	Spindle
Eupatorium cannabinum	Hemp-agrimony
Festuca rubra agg.	Red Fescue
Fraxinus excelsior	Ash
Fulica atra	Coot
Fumaria officinalis	Common Fumitory
Galium aparine	Cleavers

Galium mollugo	Hedge Bedstraw
Gallinula chloropus	Moorhen
Geranium dissectum	Cut-leaved Crane's-bill
Geranium robertianum	Herb-robert
Glaucium flavum	Yellow Horned Poppy
Hedera helix	Ivy
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
Hypochaeris radicata	Cat's-ear
Ilex aquifolium	Holly
Lamiastrum galeobdolon ssp. argentatum	a yellow archangel
Lamium album	White Dead-nettle
Lapsana communis	Nipplewort
Lathyrus pratensis	Meadow Vetchling
Linaria vulgaris	Common Toadflax
Lolium perenne	Perennial Rye-grass
Lonicera periclymenum	Honeysuckle
Lotus corniculatus	Common Bird's-foot-trefoil
Matricaria discoidea	Pineapple Weed
Medicago arabica	Spotted Medick
Medicago lupulina	Black Medick
Medicago sativa ssp. sativa	Lucerne
Mentha sp.	a mint
Odontites vernus	Red Bartsia
Oxalis acetosella	Wood-sorrel
Parietaria judaica	Pellitory-of-the-Wall
Passer domesticus	House Sparrow
Phleum pratense sens.str.	Timothy
Phragmites australis	Common Reed
Phyllitis scolopendrium	Hart's-tongue
Picris echioides	Bristly Oxtongue
Plantago coronopus	Buck's-horn Plantain
Plantago lanceolata	Ribwort Plantain
Plantago major	Greater Plantain
Plantago maritima	Sea Plantain
Polypodium vulgare agg.	Polypody
Polystichum setiferum	Soft Shield-fern
Potentilla anserina	Silverweed
Potentilla reptans	Creeping Cinquefoil
Potentilla sterilis	Barren Strawberry
Prunella vulgaris	Selfheal
Prunus spinosa	Blackthorn
Pteridium aquilinum	Bracken
Pulicaria dysenterica	Common Fleabane
Quercus robur	Pedunculate Oak
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Bramble
Rumex acetosa	Common Sorrel
Rumex obtusifolius	Broad-leaved Dock

Salix cinerea	Grey Willow
Sambucus nigra	Elder
Sedum album	White Stonecrop
Senecio jacobaea	Common Ragwort
Senecio vulgaris	Groundsel
Sherardia arvensis	Field Madder
Silene dioica	Red Campion
Silene uniflora	Sea Campion
Smyrnium olusatrum	Alexanders
Stachys sylvatica	Hedge Woundwort
Stellaria holostea	Greater Stitchwort
Talpa europaea	Mole
Tanacetum vulgare	Tansy
Taraxacum officinale agg.	Dandelion
Teucrium scorodonia	Wood Sage
Trifolium campestre	Hop Trefoil
Trifolium pratense	Red Clover
Trifolium repens	White Clover
Tripleurospermum maritimum agg	Scentless Mayweed [agg.]
Ulex europaeus	Gorse
Umbilicus rupestris	Navelwort
Urtica dioica	Common Nettle
Vanessa atalanta	Red Admiral
Veronica chamaedrys	Germander Speedwell
Veronica persica	Common Field-speedwell
Vicia cracca	Tufted Vetch
Vicia sativa ssp. sativa	Common Vetch