
Parish Plans Biodiversity Project

Kingsteignton

Report by the
Devon Biodiversity Records Centre
and
Devon County Council

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*Devon
Biodiversity
Records
Centre*

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DEVON COUNTY COUNCIL

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Kingsteignton - Parish Plan Biodiversity Project

Introduction

The landscape of Kingsteignton is strongly influenced by ball clay extraction activities. Active and abandoned ball clay workings containing open cast quarries, spoil heaps and settling lakes account for at least 30% of the Parish. However, the abandoned workings quickly become colonised by pioneer scrub vegetation, limestone grassland and heathland, creating new wildlife habitats. Many of the ponds in the Bovey Basin are also now of national importance for their dragonfly populations. The Bovey Basin is one of the top sites in the Country for its dragonfly populations, and five of the species recorded here are nationally rare. Many of these areas have been identified as County Wildlife Sites.

Much of the rest of the Parish is gently rolling farmland dissected by minor valleys, with the Teign Estuary marking the southern edge. Kingsteignton has a variety of habitats ranging from the mudflats, saltmarsh and sandflats along the estuary, to lowland heathland with acidic broadleaved woodland, limestone woodland and unimproved limestone grassland, as well as the many abandoned clay pits with areas of open water.

There is also much interest in the hedgerows, the road verges, and the many areas of public open space in the parish. These features all act as corridors encouraging the movement of wildlife, and may support many animals and plants. These areas may in turn provide links to other unsurveyed areas of wildlife interest in the Parish, such as areas of potentially species-rich grassland and woodland.

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 some way 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 Kingsteignton 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 listed here in particular, please visit the English Nature web site: www.english-nature.org.uk.

Special Areas of Conservation (cSAC) are identified 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, almost all 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.

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 Nature Reserves (LNRs) are for both people and wildlife. They are places with wildlife or geological features that are of interest locally, which give people special opportunities to study and learn about them or simply enjoy and have contact with nature. They are designated by the local authority with support from English Nature.

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

Regionally Important Geological and Geomorphological Sites (RIGS) are earth science sites that are of regional or local importance. Like County Wildlife Sites, they are usually included in Local Plans and are referred to in Planning Policy Statement 9: Biodiversity and Geological Conservation. These may represent good examples of local rock formations or landform features or they may contain interesting fossils. RIGS are increasingly becoming known as County Geological Sites (CGS). There are 17 CGSs within the Teignbridge District. CGSs tend to be quite small and they only cover 29ha in Teignbridge. They are identified by the RIGS Group (Regionally Important Geological Sites Group).

Southacre Clay Pits geological Site of Special Scientific Interest

Southacre Clay Pits is a key locality for interpreting the stratigraphy, palaeogeography and palaeoenvironmental conditions of the late Palaeogene within the Bovey Basin and more widely.

The site is important for its exposures of lignite and clay sediments belonging to the Middle & Upper Bovey Formation. The Lignite beds have yielded a diverse fossil flora and 33 named species belonging to 31 families of trees and other vegetation have been identified. Sedimentation in the Bovey Basin is believed to have taken place on a river flood plain, and to a lesser extent, in freshwater lakes and a number of aquatic plants and marsh plants characteristic of this environment have been found, as well as various climbers, trees and shrubs.

'Pits, quarries and cuttings' are listed in 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. Uncommon species of bird such as the peregrine falcon and raven may use the quarry edges to nest, greater and lesser horseshoe bats nest in cave-like quarries and reptiles such as common lizard and adder may be found basking in sunny areas in many quarries.

The flooded pits and associated wetlands of the Bovey Basin provide one of the handful of sites in Devon for the great crested newt, and this area together with the workings of Lee Moor is one of the few sites in the County that supports the scarce blue-tailed damselfly.

Southacre Clay Pits is characteristic of other quarries in the Bovey Basin area which are predominantly ball clay pits.

Chudleigh Caves and Woods Site of Special Scientific Interest and candidate Special Area of Conservation

Chudleigh Caves and Woods includes some of the best examples of ancient semi-natural woodland developed on limestone in Devon. The main block of woodland occupies a steep-sided valley and is underlain by Devonian limestone; there are also several sheer rock faces.

The trees forming the canopy are a mixture of pedunculate oak, ash, field maple, small-leaved lime, Wych elm and wild cherry, with some wild service-tree (a local species).

The ground flora is herb-rich with several species indicative of calcareous soils including woodruff, yellow archangel and stinking iris. Uncommon species recorded from the site include toothwort and ivy broomrape.

Toothwort is a plant without green leaves and is a parasite which attaches itself onto the roots of hazel and elm trees and takes everything it needs from its host giving nothing in return. It also lives below ground for most of the year, out of sight until the spring when it pushes up its ghostly white flowering spike through the leaf litter. In April and May its dirty pink-tinged toothlike flowers can be found scattered around the woodland floor.

Chudleigh Caves and Woods also supports lichens of local interest and interesting palaeontological discoveries have been made in some of the caves. The caves provide important roosts for the greater horseshoe bat and there is also a breeding bird community that includes raven and buzzard.

The greater horseshoe bat is 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.

'Caves, karsts and mines' is a habitat listed in the **Devon Biodiversity Action Plan**. Devon's caves, karsts and mines are important and fascinating features which attract much interest from the biologist, geologist and archaeologist alike.

Karst is a distinctive environment, which is characterised by landforms that are largely the product of rock material having been dissolved by natural waters to a greater extent than in other landscapes, occurring both as surface and underground features. In Devon, karst is well represented as Devonian limestone-karst, occurring as "blocks" throughout south Devon, with smaller areas in other parts of the County, such as chalk-karst in east Devon and in sandstone in north Devon. Karst features in Devon include caves, sink holes, karst springs, solution pipes and hollows.

Cave systems in the County are characterised by two important types; lowland solution caves associated with river valleys, such as the Chudleigh and Buckfastleigh systems, and coastal solution caves, such as at Berry Head. Caves and mines provide ideal roosting sites for bats, which favour the stable environmental conditions and protection that these underground spaces provide. They also offer opportunities to observe rock formations and geological processes which otherwise would remain hidden from view.

Sediments and other deposits in caves can reveal evidence of past landscapes and climatic conditions and may contain remains of animals such as sabre-toothed cat, hyena, brown and cave bears, wolf, woolly rhinoceros and mammoth which once roamed the Devon countryside, together with the bones, teeth and flint artefacts of the human inhabitants of the time.

In addition to being a SSSI, the site is also designated a **Special Area of Conservation**, giving it a high degree of protection.

The South Hams **Special Area of Conservation** comprises several SSSIs including Berry Head to Sharkham Point; Buckfastleigh Caves - which include Rock Farm Barns - Bulkamore Iron Mine, Chudleigh Caves and Woods and Haytor and Smallacombe Iron Mines; and Beer Quarry and Caves.

The area is considered to have a high diversity of habitats and species of European importance. These include *Tilio-Acerion* forests of slopes, scree and ravines; caves not open to the public; European dry heaths; Greater horseshoe bat (*Rhinolophus ferrumequinum*); semi-natural dry grasslands and scrubland facies on calcareous substrates (i.e. limestone grassland!); and vegetated sea cliffs of the Atlantic and Baltic coasts.

Ugbrooke Park Site of Special Scientific Interest:

Ugbrooke Park is of national importance for the conservation of lichens. In particular, two very scarce communities are present and these include nationally rare species. The park possesses large and mature oak, ash and sycamore trees, upon the bark of which the lichens grow.

The site supports 110 lichen species, which were recorded from the site in 1989. Rarities present include *Lecanactis lyncea*, *Opegrapha prosodea* and *Strigula taylorii*.

Parklands and wood pasture are habitats listed on the **Devon Biodiversity Action Plan**. The parklands and wood pastures of Devon are ancient places, some of which date back to mediaeval times or even further. Their elegant and grand surroundings, with their associated country houses, estates and castles are a distinctive element of both the natural and historic heritage of the County.

Parklands and wood pastures, due to their long standing, provide a continuity of habitat established over centuries. This has allowed plant and animal

communities of great richness and diversity to develop, many of which are found in few other habitats.

The main fabric of parklands and wood pastures are the trees - often several centuries old and mainly oak, but also beech, ash and other long-lived species. It is thought that the oak supports more species of organism than any other tree in Britain. This may be especially true of those specimens in parkland, which, over time, have developed particularly rich communities of invertebrates, lichens, mosses and fungi. The soils surrounding the trees often have been undisturbed by cultivation for similarly long periods and themselves support rich and diverse communities of soil and leaf-litter dwelling invertebrates, and a grass sward rich in flowering plants. Dead and fallen limbs of trees are the habitat to a specialised invertebrate fauna which feed on decaying wood.

Parklands and wood pastures are perhaps best known to the naturalist for the rich assemblages of lichens which grow on the bark of the trees, and the clean air of Devon is one factor which has allowed a particularly large number of species to live here.

Mammals also make their home in parkland trees, including several species of bat, for which the crevices in split trunks provide roosting sites. Also, parkland can provide the high densities of insects that bats rely on, especially when grazing stock are present as their dung can attract many insects.

A variety of birds use parklands and wood pastures for nesting and feeding. Invertebrate-rich bark provides food for tits, tree-creepers and woodpeckers, while other species, such as flycatchers and redstarts catch insects from the open perches of the lower canopy.

Babcombe Copse County Wildlife Site

Babcombe Copse is an area of secondary broadleaved woodland and mixed plantation, situated close to the A380 a mile north of Kingsteignton. Much of the woodland is of low botanical value, but 23 ancient woodland indicator species have been recorded from the site. These include woodruff, wood meadow-grass, wood sorrel and pignut.

Several uncommon birds have also been recorded from the site including siskin, willow warbler and the rare nightingale. There is also anecdotal evidence of the presence of nightjars.

Devon whitebeam is also present. Devon Whitebeam and related species are listed in the **Devon Biodiversity Action Plan**.

The nightingale is listed on the RSPB's amber list. Amber list species are birds 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 nightingale is a secretive bird that likes nothing better than hiding in the middle of 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 a dense undergrowth.

In the UK, nightingales 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.

Abbrook, Sawmills and Eddison Ponds County Wildlife Site

The site consists of a series of disused clay pits with a mosaic of habitats including ponds with broadleaved woodland, scrub and a small area of unimproved neutral grassland. Plant species recorded from the site include common knapweed, common centaury, ox-eye daisy and red bartsia.

The site is rich in invertebrates with many species of butterfly present including marbled white, red admiral, painted lady, meadow brown and orange tip. The site is also of great interest for its dragonfly and damselfly population, and has been identified as a Regionally Important dragonfly site. Dragonfly species recorded from the site include hairy dragonfly, emperor dragonfly, golden-ringed dragonfly and broad-bodied chaser.

These ponds are all leased to Newton Abbot Fishing Association and Exeter and District Angling Association.

Netherexe County Wildlife Site

This pond is a relatively new Bovey Basin pond on the site of what used to be one of the most important wetland sites in the Bovey Basin, with 18 dragonfly species recorded, a rich plant community and important amphibian populations including great crested newts. The original pond was lost in 1983 after it was infilled. Some species have re-colonised the new pond, and now nine dragonfly species are presumed breeding.

The site has been identified as a Nationally Important dragonfly site.

Rackerhayes Ponds County Wildlife Site

Rackerhayes Ponds comprises a series of ponds set in a mosaic of reedbed, willow scrub, tall herb vegetation and wet unimproved neutral grassland.

The site has been identified as a Nationally Important dragonfly site due to the presence of red-eyed damselfly, hairy dragonfly, downy emerald and ruddy

darther. The shallow waters, dense emergent vegetation and surrounding scrub all make this one of the top sites for dragonflies in the Bovey Basin.

The ruddy darther is an uncommon species restricted to just two or three breeding sites in Devon. Many of the previous breeding sites in the Bovey Basin may have been lost as a result of new clay workings.

Greater bladderwort and lesser marshwort (both Devon Notable plant species) have been recorded from some of the ponds and are of very local distribution in Devon.

Hackney Marsh County Wildlife Site and Local Nature Reserve

Hackney Marshes LNR comprises 9.7 hectares (24 acres) of low-lying flood meadows at the head of the Teign Estuary by Kingsteignton. The rich mosaic of marshy meadows, grassland, reedbeds and tranquil ponds makes Hackney home to a host of special plants and animals and a fascinating place to visit at any time of year. A network of level paths enables you to explore these seasonal flood meadows, which are surrounded by mature hedgerows, a small ornamental woodland and an old orchard.

The site is owned and managed by Teignbridge District Council and the whole area is open access. The site is also being positively managed under the Countryside Stewardship scheme.

Hackney Marshes is a County Wildlife Site and consists of five main habitat types: flood meadows, ponds, streams, hedgerows and woodland. There are two semi-natural meadows. The north meadow is more species-rich because it has not been so intensively farmed. The south meadow has been agriculturally improved. The areas of marshy grassland comprise species such as hard, soft and jointed rushes, false fox sedge, common spike-rush, sea club-rush, tufted hair-grass, fleabane, large bird's-foot trefoil and southern marsh orchid.

Species recorded from the dry grassland areas include timothy, rough meadow-grass, false oat-grass, wall barley, perennial rye-grass, tall fescue, red clover, mugwort and greater plantain.

Buzzards, kestrels and pheasants are often seen around the marshes. Snipe feed there at night as, occasionally, do woodcock. Mammals include a range of mice and vole species and larger animals such as the badger. The meadows are also very rich in invertebrates, which are especially noticeable in late summer.

The ponds and streams host a variety of freshwater and maritime species. The emerald damselfly, which is not common in Devon, has been recorded here. The presence of water increases the value of the site for birds. Kingfishers, moorhens, mallards and herons are often seen by the waterside.

The site is also known to be used by the rare Cetti's warbler and cirl bunting, as well as water rail.

Cetti's warbler first bred in the UK in 1972 and now has about 17% of its slowly increasing British population in Devon. The cirl bunting has about 25% of its British population in Teignbridge and the other 75% in Torbay and South Hams - truly a South Devon species.

The site's woodland is small in area and includes species both native and non-native to the region. Oak, alder, ash and willow are among the native species present. The woodland is important locally as a nesting site for kestrels and many small mammals and foxes are also found here.

Hackney Marshes, as an open space in a relatively built up area, is used by many local people particularly for quiet recreation such as dog walking and enjoying the wildlife. The level paths, the main circuits of which are surfaced, make exploring easy. There are seats and picnic tables where the scenery can be enjoyed. Otherwise, on this Nature Reserve site formal provision is limited.

The disused Hackney canal borders the southern end of the Marshes. It was opened in 1843 to decrease the distance that pack-horses carting clay had to travel. The clay, owned by Lord Clifford, was excavated from the Chudleigh Knighton, Preston and Kingsteignton areas. Originally the pack-horses carted the clay to the clay cellars in the Hackney hamlet from where the bargemen or lightermen loaded the barges.

The ruins of this hamlet are a few hundred metres from Hackney Marshes further along the footpath through the Marshes. The canal enabled barges to go right up to Kingsteignton. Trading along the canal ceased in 1928.

Ware Barton Fields County Wildlife Site

Ware Barton is of interest for its unimproved limestone grassland, a scarce habitat in Devon. The grassland is extremely species rich with at least 40 herb species recorded from the site. These include common restharrow, common knapweed, common cornsalad, salad-burnet, eyebright and agrimony.

Limestone grassland communities have a very restricted distribution in Devon, and Teignbridge is fortunate in having many of the remaining sites. Limestone grasslands are the rarest habitats in Teignbridge and they support a range of plant species that are locally distributed both in Devon and nationally. These include quaking grass, tor grass, common rock-rose, yellow-wort, hound's-tongue and hoary plantain. Unimproved calcareous grassland is listed on the **UK Biodiversity Action Plan** as it is a rare habitat.

The Nationally Scarce Deptford pink has also been recorded from the site. Deptford pink is a plant of dry pastures, disturbed ground, roadsides, field borders and hedgerows. It generally occurs on light, sandy soil often of rather

high pH. The precise conditions required for germination and establishment are not known, but it is thought to require open conditions for success. However, it is able to compete with taller vegetation once established.

The range of Deptford pink in Britain lies between north Wales and the south coast of England, with most of its sites occurring in southern England. It has declined severely over the last 60 years, exhibiting one of the most rapid declines of any species in the British flora. Having once been widespread, it was reduced to 34 sites by 1970 and is now known from only 13 to 15 sites. This decline appears to be ongoing and most of the remaining populations are small (1-50 plants), although there are a few sites with hundreds of plants where conditions are suitable. Deptford pink is not threatened in Europe as a whole, where it occurs widely across western and central regions.

Passage House Marsh County Wildlife Site

Passage House Marsh is a large area of reedbed and saltmarsh with plant interest. Species recorded from the areas of saltmarsh include sea club-rush, common couch, red fescue, sea aster, sea arrow-grass, sea purslane, English scurvy-grass and wild celery. There are also areas of brackish swamp, rank unimproved grassland, stands of common reed and a stand of common cord-grass.

Coastal saltmarsh is listed in the **UK Biodiversity Action Plan** as a habitat of conservation concern.

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 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 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 can 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 was 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).

Teign Estuary County Wildlife Site

The Teign Estuary is approximately 9km in length and less than 1 km wide at its widest point, and is one of South Devon's most valuable assets. The mouth of the Estuary is marked by a permanent spit, the Point, on the north bank at Teignmouth extending southwest, and the red cliffs at Shaldon to the south.

The estuary supports a wide range of habitats including mudflats, reedbed, mussel and barnacle beds, shingle, saltmarsh and sandflats. The main habitats in the Teign Estuary around Kingsteignton are intertidal soft mud, coastal saltmarsh and intertidal stones with the brown seaweed *Fucus ceranoides*.

An anecdotal record of eelgrass (*Zostera* sp) exists for the Teign Estuary somewhere between Buckland sewage treatment works and Coombe cellars.

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

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. They are among the most productive of natural environments on Earth and often contain a variety of habitats. These include mudflats, sandflats, eel grass (*Zostera*) beds and saltmarsh.

Devon has 12 estuaries of various types and sizes with an extremely diverse range of habitats and species present. Numerous invertebrates feed on the phytoplankton, bacteria and fragments of animal remains left by larger predators, including worms like the ragworm, molluscs like the mussel and cockle, and crustaceans such as the shore crab and various shrimps.

Fish are abundant and include bass, flounder, dab, plaice, grey mullet and sand eels. Many bird species of conservation concern are associated with estuaries. These include little egret, brent goose, avocet, curlew and golden plover.

Gappah Brake County Wildlife Site

This site comprises an area of dry heath and acidic secondary broadleaved woodland. The majority of the land adjacent to the site and previously included within the site boundary is an active landfill site.

The heathland areas comprise bell heather, Western gorse, bristle bent and scrub stands and the young broadleaved woodland is dominated by oak and birch.

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

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

Yellowhammer, tree pipit and hobby have been recorded from the site, as well as hornet and small pearl-bordered fritillary butterfly.

Coombesend Field Local Wildlife Site

Coombesend Field is an area of unimproved neutral grassland and rush-pasture. The areas of rush-pasture are dominated by hard rush and the areas of dry grassland on the slopes are quite species-rich. Species recorded from these areas include musk mallow, salad-burnet, barren strawberry, common cat's-ear, meadow vetchling, common bird's-foot trefoil and red clover.

Flower-rich meadows and pastures are a habitat of conservation concern in Devon and are listed in 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 and cirl bunting.

Kingsteignton Bypass Regionally Important Geological Site

Kingsteignton Bypass is of interest for its exposures of Chercombe Bridge Limestone. These rocks are mid to late Devonian in age and around 360 to 380 million years old. In much of the Chercombe Bridge Limestone the limestone is fine-grained and may have larger particles such as coral or shell fragments embedded within it.

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 laid.

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

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

Hedgerows are often an essential corridor for the movement of wildlife and may support many animals and plants. The hedgerows along Hackney Lane are species-rich with between 6 and 7 woody species recorded in a 30 metre length. Species include: English elm, blackthorn, field maple, ash, pedunculate oak, elder and hawthorn. Bank flora includes soft shield fern, hart's-tongue, herb-robert, black medick, cleavers and greater stitchwort.

The hedges adjacent to Gappah Brake are also species-rich with an average of 6 species in a 30 metre length. Woody species include hawthorn, holly, hazel, ash, blackthorn and pedunculate oak. The bank flora is also species-rich with wild madder, common polypody, meadowsweet, hedge bedstraw, red campion, common cow-wheat, primrose and wood spurge.

Species rich hedges are listed in the **Devon Biodiversity Action Plan** as a habitat of conservation concern in Devon. Most of the hedges along the lanes of Kingsteignton could be classified as species-rich, with an average of 6 woody species in a 30 metre length.

The churchyard

An area of moderately species rich semi-improved grassland is present in the churchyard of St. Michael's church. This is the ancient core of the town and contains medieval features such as the mill and the mill leat which passes through the churchyard.

Species recorded include ribwort plantain, ox-eye daisy, spotted medick, red fescue, herb-robert, yarrow, creeping buttercup and germander speedwell. The walls around the graveyard support several attractive flowering species and ferns including maidenhair spleenwort, ivy-leaved toadflax, pellitory-of-the-wall and common polypody.

Scattered trees include yew, common lime, rowan, cooper beech and holly.

Recreation areas and public open space

There are a number of areas of amenity grassland and open space in Kingsteignton managed as recreation grounds and playing fields, as well as a good network of public footpaths, nature reserves and links to the Templer Way (a walking route). The most well-used area of open space is Hackney Marshes Local Nature Reserve.

The Templer Way

The Templer Way is a route for walkers linking Haytor on Dartmoor to the mouth of the Teign. It follows, where possible, the route of the Granite Tramway, the Stover Canal and the Teign Estuary - the historic route by which granite and clay were transported to the port of Teignmouth before being shipped around the country. The route is named after the Templer family who built the tramway and canal. The Templer Way is 18 miles long and covers a wide range of scenery including open moorland, woodland, meadow, historical tracks, urban land and estuary foreshore.

The Templer Way uses a mixture of rights of way, permissive routes and minor roads, and in Kingsteignton runs along the edge of the Teign Estuary, along Jetty Marshes, along the Stover Canal joining the footpath by the River Teign near Teigngrace and taking you back into Kingsteignton.

The route is waymarked in both directions, and may be tackled in short stretches or in one go. On the open moorland at Haytor Down, the granite rails of the tramway can be followed. The waymarks show the Templer Way logo, a tramway wheel and the tiller and rudder of a barge. There are also a series of information boards along the route.

A public footpath runs from old Kingsteignton through the Marshes and on down past the ruined hamlet of Hackney to the Passage House Inn and Estuary shore.

Gardens

Gardens are a haven for wildlife and can provide links to other areas of wildlife habitat. A number of species have been recorded from the gardens of Kingsteignton including common frog, hedgehog, kestrel, slow-worm and song thrush.

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 Local Wildlife Sites. Roadside verges often support flower-rich grassland, as well as a variety of semi-natural habitats including calcareous grassland, neutral grassland, acid grassland, heathland, open water (ditches), broadleaved woodland, scrub,

hedgerows and walls. They may also support populations of scarce or declining species of flora and/or fauna, some of which enjoy statutory protection. Linear grassland habitats provide a valuable wildlife resource. Verges provide shelter and food for a variety of species from small mammals, to birds of prey and insects.

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

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

There is one **Special Verge Site** in Kingsteignton parish. This is the **A380 at Combe Hill** on the eastern edge of the parish. The verge is of interest for its herb-rich grassland, but there are no notable species present. The verge is attractive with species including common knapweed, ox-eye daisy, ribwort plantain, yarrow, wild carrot, meadow buttercup, Yorkshire fog and soft brome.

The many active and abandoned clay pits in the area support pioneer habitats such as regenerating limestone grassland, heathland and scrub along the clay pit margins. The footpath running adjacent to the Broadway clay works and along the River Teign supports a small area of unimproved limestone grassland along the edge of the footpath and the margin of the clay works. Species recorded from this area include common centuary, common bird's-foot trefoil, wild carrot, yarrow, red bartsia, common knapweed and tansy.

There is also a small area of regenerating lowland heathland near to Gappah Brake landfill site (excluded from the County Wildlife Site boundary). Species recorded from this clearing include red fescue, bristle bent, bell heather, heather, betony, common gorse, cat's-ear and wood spurge.

Potential County Wildlife Sites

There are 27 potential County Wildlife Sites in Kingsteignton parish. These are sites identified as having possible interest but not fully surveyed. Some of these sites will be areas of significant wildlife interest.

Mill Leat, Fosterville Wood, Gappah Copse, Lappathorn Copse, Tor's Hill, Ponswine Copse, Whitelands, Sand Pit Wood and Ware Barton Copse are all areas of secondary broadleaved woodland.

Bellamarsh Copse, Sandslade Copse, Colladown & Bickley Ball, Durley Wood and **Buckley and King's Wood** are all areas of ancient woodland. Some of these sites are ancient semi-natural woodland and some are replanted woodlands on an ancient site.

Clay Pit Pond is an area of open water, probably of interest for dragonflies.

Fosterville is an area of marshy grassland and broadleaved woodland.

Ugbrooke Park (S) is an area of semi-improved neutral grassland and broadleaved woodland and **Ugbrooke Park (N)** is part ancient semi-natural woodland, partly replanted with conifers, an area of secondary broadleaved woodland and parkland lakes.

Pylon Fields, Kiln Wood Field, Rydon Quarry area, Whiteway Barton Fields, A380 Verge North, A380 Verge South, A380 Verge West, Humble Lane Fields and **A380 road verge** are all areas of semi-improved and unimproved calcareous grassland.

Devon Key Dragonfly Sites

Netherexe Pond - Nationally Important Dragonfly site

Netherexe pond is a new pond on the site of the old Key Transport pond. The site used to be a rich dragonfly site up until the 1980's when it was lost. Today the site holds small numbers of red-eyed damselfly and hairy dragonfly. Nine species are thought to breed here and 18 species have been recorded from this site over the years.

Rackerhayes - Nationally Important Dragonfly site

A series of old, flooded, Bovey Basin clay pits, holding a large population of red-eyed damselfly and smaller numbers of hairy dragonfly, downy emerald and ruddy darter, though the last may now be extinct and the others appear to have declined recently. A total of 16 species have been recorded from the site between 1989 and 1995, and 14 species are presumed breeding at the site.

Nationally Important Key Dragonfly Sites 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 (*Platycnemis pennipes*) Scarce blue-tailed damselfly (*Ischnura pumilio*) Small red damselfly (*Ceragrion tenellum*) Hairy dragonfly (*Brachytron pratense*) Downy emerald (*Cordulia aenea*) and Keeled skimmer (*Orthoetrum coerulescens*).

Abbrook Pond, Eddison Pond and Sawmills Pond - Regionally Important dragonfly sites:

These ponds are all flooded claypits with populations of the uncommon small red damselfly, downy emerald and hairy dragonfly. All three sites have between seven and nine breeding species and as many as 11 species have been recorded from the site.

Regionally Important Key Dragonfly Sites 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 (*Platycnemis pennipes*), and not necessarily any other key species, are included here.

Rub-a-dub Pond

Rub-a-dub pond did have a downy emerald present at the site, before it was re-worked for clay in 1995. Only two species were recorded in the survey in 1995 as a result of this.

Species

Protected Species

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

Birds

Several species of birds were recorded during the survey including woodpigeon, rook, blue tit, great tit, stonechat, chiffchaff, magpie, wren and blackbird.

Several uncommon bird species have been recorded from Hackney Marshes. These include bullfinch, Cetti's warbler, skylark and ciril bunting.

Ciril buntings are listed in the **Devon Biodiversity Action Plan** as a species of conservation concern, as well as in the **UK Biodiversity Action Plan**. In Britain the ciril bunting is a bird of lowland mixed farmland, especially warm, south-facing slopes with tall bushy hedges. The ciril bunting population has declined rapidly since the 1970s and today is a rare breeding bird. The main causes are agricultural change; the decline of mixed farming systems, especially cereal stubble, has deprived the ciril bunting of food.

The ciril 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.

Yellowhammer, tree pipit and hobby have been recorded from Gappah Brake. Both the yellowhammer and the tree pipit have undergone a decline recently and as a result the yellowhammer is listed on the RSPB's red list. The red list species are birds of high conservation concern, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.

The hobby is an uncommon summer visitor to Britain, returning to Africa in September and October. There are as few as 500-900 breeding pairs in Britain.

Nightingale has been recorded from Babcombe Copse and raven from Chudleigh Caves and Woods.

Plants

Plant species noted on a visit on the 27 September 2004 are listed in Appendix 2.

Several rare plant species have been recorded from Kingsteignton parish. These include the Nationally scarce Deptford pink at Ware Barton fields, green-winged orchid at New Cross, ivy broomrape and toothwort at Chudleigh Caves and Woods and pyramidal orchids from the A38 road verges.

The pyramidal orchid favours dry, grassy habitats, usually on calcareous soils. In Devon it is relatively uncommon, but locally abundant on the chalk in East Devon, Teignbridge, Torbay and in the north of the County from Braunton Burrows.

Mammals

Badgers are frequently recorded from the area, but sadly most badger records are from road casualties on the A380 and A38 rather than live sightings. Signs of badgers have been recorded from Gappah Brake and Buckley Wood.

There have been sightings of brown hare near to Newton Abbot. The **brown hare** is listed in the **Devon Biodiversity Action Plan**. The brown hare was probably introduced to us by the Romans and is fairly common in areas of arable crops and grass leys. The hare is listed in the Devon Biodiversity Action Plan as it has undergone a significant decline in the last 50 years, probably associated with changes in farming practice and increased use of pesticides.

Otters are also listed in the **Devon Biodiversity Action Plan** and have been recorded from Rackerhayes Ponds. The River Teign passes along the western edge of the parish and otters are also regularly recorded from here.

Invertebrates

Dragonflies are the key invertebrate species in Kingsteignton parish. The many abandoned clay pit ponds support Nationally important populations with several uncommon species recorded including the downy emerald, hairy dragonfly, red-eyed damselfly and ruddy darter.

The wooded clay pits and lakes in the Bovey Basin (and East Devon) comprise the County's only breeding sites for the downy emerald. The species dependence on well-wooded margins makes them extremely vulnerable to loss from the re-working of clay pits.

The great green bush-cricket has been recorded along the road verges of the A380 near to Kingsteignton.

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.

Reptiles and Amphibians

The many ponds in the Kingsteignton area probably support many reptiles and amphibians. Common frogs have been recorded from many garden ponds in Kingsteignton parish, as well as a slow-worm. Other common species such as common toad, palmate newt, smooth newt, grass snake and common lizard are also likely to be present in the parish, but DBRC holds no records of them.

The great crested newt, rare in Devon, has been recorded from Netherexe, but has probably been lost in recent years.

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 Kingsteignton and the Devon BAP:

Kingsteignton wildlife feature	Brief description of feature	Link with the Devon Biodiversity Action Plan (BAP)
Southacre Claypits SSSI	Important exposures of clay and lignite sediments.	<ul style="list-style-type: none"> • Pits, quarries and cuttings Habitat Action Plan
Chudleigh Caves and Woods SSSI	Ancient semi-natural woodland on limestone.	<ul style="list-style-type: none"> • Caves, karst and mines Habitat Action Plan • Devon whitebeam and related species Species Action Plan • Greater horseshoe bat Species Action Plan
Species-rich Hedges	Important – often ancient – wildlife habitats that can also form an important network of corridors along which wildlife can move and disperse.	<ul style="list-style-type: none"> • Species-rich Hedges Habitat Action Plan • Dormouse Species Action Plan • Great green bush-cricket Species Action Plan
Ugbrooke park	This site is of national importance for the conservation of lichens.	<ul style="list-style-type: none"> • Parklands and wood pasture Habitat Action Plan
Churchyard, road verges & other areas of species-rich grassland, eg. Coombsend Field	These features support species-rich grassland, which has been protected from agricultural improvement.	<ul style="list-style-type: none"> • Flower-rich Meadows and Pastures Habitat Action Plan • Great green bush-cricket Species Action Plan
Babcombe Copse	An area of secondary broadleaved woodland.	<ul style="list-style-type: none"> • Devon whitebeam and related species Species Action Plan
Teign Estuary and Passage House Marsh	An estuary with associated habitats of saltmarsh, reedbed, mudflats, shingle and mussel and barnacle beds.	<ul style="list-style-type: none"> • Estuaries Habitat Action Plan
Gappah Brake	Dry heathland and acidic broadleaved woodland	<ul style="list-style-type: none"> • Lowland Heathland Habitat Action Plan
Hackney Marshes	A series of low lying flood meadows and ponds.	<ul style="list-style-type: none"> • Cirl bunting Species Action Plan
River Teign		<ul style="list-style-type: none"> • Otter 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 Kingsteignton might include otter signs and species-rich hedges. The last two actions would directly contribute to the **Otter Action Plan** and the **Species rich hedges Action Plan**.

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

Survey work could be undertaken as a community group or in liaison with conservation groups active in the area. For example, the Devon Wildlife Trust is active around Kingsteignton and manage nature reserves nearby at Little Bradley Ponds and Chudleigh Knighton Heath.

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.

In Kingsteinton Parish, the creation (where safe and practical) of new ponds is likely to be of great value, even if they are relatively small in scale. The area is a Devon hotspot for dragonflies and damselflies, and new ponds may quickly become colonised by these beautiful insects.

3 Build relationships with local landowners:

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

4 Adopt a road verge:

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

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

5 Wildlife gardening:

Green up your garden! Collectively the gardens of Kingsteinton 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 Devon Wildlife Trust. This trust has a number of Local Groups that, 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 Kingsteignton 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 Centre¹. 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.

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

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/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.countryside-trust.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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Appendix 1 - Notable sites and species within Kingsteignton Parish.

File Code	Site Name	Grid Ref.	Area (ha)	Description	Status
SX87/199	Southacre Clay Pits	SX854754	62.5	Exposures of lignite and clay sediments belonging to the Middle & Upper Bovey Formation	gSSSI
SX87/070	Ugbrooke Park	SX870779	14.6	Important lichen communities	SSSI
SX87/072	Chudleigh Caves and Woods	SX865784, SX872789, SX859779 & SX855776	26.1	Ancient semi-natural woodland & broadleaved plantation on limestone. Lichen interest and palaeontological interest.	SSSI
SX87/080	Babcombe Copse	SX871768	27.4	Secondary broadleaved woodland, broadleaved and conifer plantation	CWS
SX87/138	Abbrook, Sawmills & Eddison Ponds	SX862746	10.5	Ponds with broadleaved woodland, scrub & a small area of unimproved neutral grassland. Dragonfly interest.	CWS
SX87/141	New Cross Pond	SX863737	14.0	Pond with dragonfly interest and broadleaved woodland	CWS
SX87/142	Rackerhayes Ponds	SX864728	32.2	Ponds, reedbed, willow scrub, tall herb vegetation & wet unimproved neutral grassland. Dragonfly interest.	CWS
SX87/148	Hackney Marsh	SX874722	11.2	Wet unimproved neutral grassland, dry semi-improved neutral grassland, reedbed & tall tall herb vegetation	CWS/LNR
SX87/152	Ware Barton Fields	SX884733	6.7	Unimproved limestone grassland, semi-improved neutral grassland & rush pasture	CWS
SX87/147	Passage House Marsh	SX875720, SX880723 & SX880722	24.0	Reedbed & saltmarsh with plant interest	CWS
SX97/101	Teign Estuary	SX910726	351.0	Estuary & associated habitats	CWS
SX87/060	Gappah Brake	SX858769	34.7	Dry heath & acidic secondary broadleaved woodland. Bird interest	CWS
SX87/173	Coombesend Field	SX882737	0.9	Semi-improved neutral grassland	LWS
SX87/034	Mill Leat	SX849762	1.7	Broadleaved woodland	pCWS*
SX87/056	Bellamarsh Copse	SX857778	5.2	Plantation on ancient woodland site	pCWS*
SX87/059	Sandslade Copse	SX856771	7.5	Ancient woodland & broadleaved woodland	pCWS*
SX87/062	Fosterville Wood	SX856764 & SX859761	1.7	Broadleaved woodland	pCWS*
SX87/063	Clay Pit Pond	SX851760	0.6	Open water	pCWS*

SX87/066	Lappathorn Copse	SX865752 & SX863758	3.8	Broadleaved woodland	pCWS*
SX87/067	Sand Pit Wood	SX867764	12.6	Mixed plantation & broadleaved woodland	pCWS*
SX87/069	Fosterville	SX865764	2.7	Marshy grassland & broadleaved woodland	pCWS*
SX87/061	Tor's Hill	SX876750	1.5	Broadleaved woodland	pCWS*
SX87/088	Ponswine Copse	SX872752	3.1	Broadleaved woodland	pCWS*
SX87/150	Whitelands	SX883743	7.4	Broadleaved woodland	pCWS*
SX87/151	Colladown & Bickley Ball	SX884738	11.5	Ancient woodland	pCWS*
SX87/156	Ware Barton Copse	SX884726	1.0	Broadleaved woodland	pCWS*
SX87/172	Durley Wood	SX889742, SX889739, SX888739 & SX891747	10.6	Ancient woodland & broadleaved woodland	pCWS*
SX87/078	Ugbrooke Park (S)	SX872777	28.4	Semi-improved neutral grassland & broadleaved woodland	pCWS*
SX87/189	Ugbrooke Park (N)	SX866777, SX867779, SX871783, SX873781 & SX874782	17.4	Part ancient semi-natural woodland, part replanted with conifers, secondary broadleaved woodland and parkland lakes	pCWS*
SX87/149	Buckley & King's Wood	SX882748	44.4	Ancient woodland & plantation on ancient woodland site	pCWS*
SX87/196	Pylon Fields	SX878724	0.4	Semi/unimproved rank grassland and species rich unimproved calcareous grassland road cuttings	pCWS*
SX87/209	Kiln Wood Field	SX860778	3.9	Unimproved grassland on limestone	pCWS*
SX87/211	Whiteway Barton Fields	SX886751	12.2	Semi-improved/unimproved grassland on limestone	pCWS*
SX87/213	A380 Verge North	SX872745	1.2	Semi-improved/unimproved grassland on limestone	pCWS*
SX87/214	A380 Verge South	SX877739	5.2	Unimproved grassland and scrub on limestone	pCWS*
SX87/215	A380 Verge West	SX874741	8.2	Unimproved/semi-improved grassland on limestone	pCWS*
SX87/216	Humble Lane Fields	SX877742	9.1	Unimproved/semi-improved grassland on limestone	pCWS*
SX87/203	Rydon Quarry area	SX875738	0.6	Calcareous grassland and scrub	pCWS*
SX87/229	A380 road verge	SX870751, SX870750, SX871749 & SX870748	7.5	Unimproved grassland, scrub & heathland	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.

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.

Local Nature Reserves (LNRs) are for both people and wildlife. They are places with wildlife or geological features that are of interest locally, which give people special opportunities to study and learn about them or simply enjoy and have contact with nature. They are designated by the local authority with support from English Nature.

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

No.	Name	Latin Name	Location	Date	UK Protection	International Protection	Status
1	Japanese Knotweed	Fallopia japonica	Jews Bridge between Chudleigh Knighton and Heathfield.	2001	WCA 9		
2	Badger	Meles meles	A38, near Drumbridges sliproad	1999	WCA 6, BA	Bern III	
3	Japanese Knotweed	Fallopia japonica	Upstream and downstream of New Bridge on the River Teign.	2001	WCA 9		

4	Japanese Knotweed	Fallopia japonica	On right bank of River Teign, just downstream of B3193.	2001	WCA 9		
5	Badger	Meles meles	Chudleigh Knighton. On verge of A38, two miles north east of Drumbridge junction.	2003	WCA 6, BA	Bern III	
6	Japanese Knotweed	Fallopia japonica	Beside Bovey-Teign River, Teigngrace.	2003	WCA 9		
7	Badger	Meles meles	Kingsteignton. Path through Gappah Brake.	2004	WCA 6, BA	Bern III	
8	Badger	Meles meles	Kingsteignton. Hedge adjacent to Gappah Brake.	2004	WCA 6, BA	Bern III	
9	Roe Deer	Capreolus capreolus	On the A38, half a mile west of the turn-off to Chudleigh (on the way to Exeter).	2003	DA	Bern III	
10	Badger	Meles meles	A38 before Chudleigh turn-off	2001	WCA 6, BA	Bern III	
11	Common Shrew	Sorex araneus		2002	WCA 6	Bern III	
12	Pygmy Shrew	Sorex minutus		2002	WCA 6	Bern III	
13	Badger	Meles meles	On the A38 dual carriageway, one mile south of Chudleigh.	2003	WCA 6, BA	Bern III	
14	Hobby	Falco subbuteo	Gappah Brake	1992	WCA 1		
15	Badger	Meles meles	B3193 just opposite the saw mills pond, Kingsteignton.	2003	WCA 6, BA	Bern III	
16	Otter	Lutra lutra	Rackerhayes Fish Ponds, Newton Abbot.	2001	WCA 5	EC IIa, IIIa; Bern II	UKBAP(P); DBAP
17	Common Frog	Rana temporaria	Wearcroft Rd. Kingsteinton	2001	WCA 5(S)	EC Va; Bern III	
18	Common Frog	Rana temporaria	Fox Hayes, Lower Sandygate, Newton	2002	WCA 5(S)	EC Va; Bern III	

			Abbott				
19	Kingfisher	<i>Alcedo atthis</i>	Stream behind Sandygate Mill, Kingsteignton.	2003	WCA 1		Amber
20	Whiskered Bat	<i>Myotis mystacinus</i>	Higher Sandygate, Kingsteignton.	2002	WCA 5, 6	EC IVa; Bern II; Bonn II	
21	Common Frog	<i>Rana temporaria</i>	Kingsteignton	2001	WCA 5(S)	EC Va; Bern III	
22	Badger	<i>Meles meles</i>	A380 Kingsteignton. Northbound side of central reservation.	2004	WCA 6, BA	Bern III	
23	Badger	<i>Meles meles</i>	A380, west side of carridgeway	2001	WCA 6, BA	Bern III	
24	Bluebell	<i>Hyacinthoides non-scripta</i>	Babcombe Copse	1994	WCA 8 (S)		
25	Japanese Knotweed	<i>Fallopia japonica</i>	Kingsteignton, besides Paddons Coombe.	2001	WCA 9		
26	Japanese Knotweed	<i>Fallopia japonica</i>	Paddons Coombe, Kingsteignton.	2000	WCA 9		
27	Common Frog	<i>Rana temporaria</i>	Humter Lane, Kingsteignton	2003	WCA 5(S)	EC Va; Bern III	
28	Butcher's-broom	<i>Ruscus aculeatus</i>	Kingsteignton. Hedges along Hackney Lane.	2004		EC Vb	
29	Common Frog	<i>Rana temporaria</i>	Darren Close, Kingsteignton	2004	WCA 5(S)	EC Va; Bern III	
30	Japanese Knotweed	<i>Fallopia japonica</i>	Tarrs Avenue on junction with Tarrs End, Kingsteignton.	2001	WCA 9		
31	Badger	<i>Meles meles</i>	A380, just south of junction at Gappah	2002	WCA 6, BA	Bern III	
32	Bluebell	<i>Hyacinthoides non-scripta</i>	Teign Estuary Target Note 87/1	2000	WCA 8 (S)		
33	Badger	<i>Meles meles</i>	A380, road bridge over river Teign.	2000	WCA 6, BA	Bern III	
34	Hedgehog	<i>Erinaceus europaeus</i>	Garden at Darran Close, Kingsteignton.	2002	WCA 6	Bern III	
35	Slow-worm	<i>Anguis fragilis</i>	Darran Close, Kingsteignton	2002	WCA 5(KIS)	Bern III	

36	Badger	Meles meles	On the Ware Barton slip road, from Kingsteignton to Ware Barton, to join the southbound carriageway of the A380.	2003	WCA 6, BA	Bern III	
37	Badger	Meles meles	Kingsteignton bypass, Exeter bound at side of road	2000	WCA 6, BA	Bern III	
38	Badger	Meles meles	A380 Kingsteignton. Near overbridge by side of Exeter bound carriageway.	2004	WCA 6, BA	Bern III	
39	Badger	Meles meles	On verge at junction of North bound link road	2000	WCA 6, BA	Bern III	
40	Badger	Meles meles	Buckley Wood, Kingsteignton.	2003	WCA 6, BA	Bern III	
41	Peregrine	Falco peregrinus	Buckley wood, Kingsteignton.	2003	WCA 1		Amber
42	Cetti's Warbler	Cettia cetti	Passage House Inn and Hackney Marshes, Passage House Marsh	2002	WCA 1		
43	Badger	Meles meles	A380 by turning to Teignmouth (heading past Kingsteignton), at the A381 junction.	2003	WCA 6, BA	Bern III	
44	Deptford Pink	Dianthus armeria	Kingsteignton, Ware Barton	1991	WCA 8		UKBAP(P); DN1; DR; vul
45	Deptford Pink	Dianthus armeria	Kingsteignton	1991	WCA 8		UKBAP(P); DN1; DR; vul
46	Deptford Pink	Dianthus armeria	Ware Barton Fields	1994	WCA 8		UKBAP(P); DN1; DR; vul
47	Bluebell	Hyacinthoides non-scripta	Phase One Target Note No. SX87SE/58	2000	WCA 8 (S)		
48	Primrose	Primula vulgaris	Kingsteignton. Hedge adjacent to Gappah	2004			DBAP

			Brake.			
49	Small Pearl-bordered Fritillary	<i>Boloria selene</i>	Gappah Brake	1992		DeclineD
50	Tree Pipit	<i>Anthus trivialis</i>	Gappah Brake	1992		Amber
51	Yellowhammer	<i>Emberiza citrinella</i>	Gappah Brake	1992		Red
52	Downy Emerald	<i>Cordulia aenea</i>	Eddison Pond, Abbrook, Sawmills & Eddison Ponds	1995		Nb; KeyD (N)
53	Red-eyed Damselfly	<i>Erythromma najas</i>	Eddison Pond, Abbrook, Sawmills & Eddison Ponds	1995		KeyD (R)
54	Downy Emerald	<i>Cordulia aenea</i>	Netherexe	1995		Nb; KeyD (N)
55	Hairy Dragonfly	<i>Brachytron pratense</i>	Netherexe	1995		Nb; KeyD (N)
56	Red-eyed Damselfly	<i>Erythromma najas</i>	Netherexe	1995		KeyD (R)
57	Ruddy Darter	<i>Sympetrum sanguineum</i>	Netherexe	1995		Nb; KeyD (R)
58	Downy Emerald	<i>Cordulia aenea</i>	New Cross Pond	1995		Nb; KeyD (N)
59	Hairy Dragonfly	<i>Brachytron pratense</i>	New Cross Pond	1995		Nb; KeyD (N)
60	Red-eyed Damselfly	<i>Erythromma najas</i>	New Cross Pond	1995		KeyD (R)
61	Ruddy Darter	<i>Sympetrum sanguineum</i>	New Cross Pond	1995		Nb; KeyD (R)
62	Hairy Dragonfly	<i>Brachytron pratense</i>	Abbrook, Sawmills & Eddison Ponds	1995		Nb; KeyD (N)
63	Downy Emerald	<i>Cordulia aenea</i>	Rackerhayes Ponds	1995		Nb; KeyD (N)
64	Hairy Dragonfly	<i>Brachytron pratense</i>	Rackerhayes Ponds	1995		Nb; KeyD (N)
65	Keeled Skimmer	<i>Orthetrum coerulescens</i>	Rackerhayes Ponds	1995		KeyD (N)
66	Red-eyed Damselfly	<i>Erythromma najas</i>	Rackerhayes Ponds	1995		KeyD (R)
67	Ruddy Darter	<i>Sympetrum sanguineum</i>	Rackerhayes Ponds	1995		Nb; KeyD (R)
68	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Abbrook, Sawmills & Eddison Ponds	1994		DN3
69	Green Woodpecker	<i>Picus viridis</i>	Abbrook, Sawmills & Eddison Ponds	1994		Amber
70	Small Red Damselfly	<i>Ceriagrion tenellum</i>	Abbrook, Sawmills & Eddison Ponds	1994		Nb; KeyD (N)
71	Willow Warbler	<i>Phylloscopus trochilus</i>	Abbrook, Sawmills & Eddison Ponds	1994		Amber
72	Green-winged Orchid	<i>Orchis morio</i>	Kingsteignton, New Cross	1986		DN1

			Pond			
73	Brown Hare	<i>Lepus europaeus</i>	Newton Abbot	1997		UKBAP(P); DBAP
74	Ivy Broomrape	<i>Orobanche hederæ</i>	Chudleigh, Rock Lane	1990		NS; DN2
75	Great Green Bush Cricket	<i>Tettigonia viridissima</i>	Tesco, Newton Abbot	2002		DBAP
76	Song Thrush	<i>Turdus philomelos</i>	Newton Abbot Race Course area.	2001		UKBAP(P); Red
77	Song Thrush	<i>Turdus philomelos</i>	Trees opposite Town Quay, Newton Abbot.	2001		UKBAP(P); Red
78	Cyclamen	<i>Cyclamen hederifolium</i>	Babcombe Copse	1994		DN1; RDB2
79	Primrose	<i>Primula vulgaris</i>	Babcombe Copse	1994		DBAP
80	Grey Club-rush	<i>Schoenoplectus tabernaemontani</i>	Phase One Target Note No. SX87SE/46	2000		DN2
81	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Phase One Target Note No. SX87SE/45	2000		DN3
82	Saltmarsh Rush	<i>Juncus gerardii</i>	Phase One Target Note No. SX87SE/45	2000		DN3
83	Stonechat	<i>Saxicola torquata</i>	Kingsteignton. Hackney Marshes LNR., Hackney Marsh	2004		Amber
84	Annual Sea-blite	<i>Suaeda maritima</i>	Passage House Marsh	2000		DN2
85	Common Cord-grass	<i>Spartina anglica</i>	Passage House Marsh	2000		DN1; DR
86	Common Saltmarsh-grass	<i>Puccinellia maritima</i>	Passage House Marsh	2000		DN2
87	English Scurvygrass	<i>Cochlearia anglica</i>	Passage House Marsh	2000		DN2
88	Greater Sea-spurrey	<i>Spergularia media</i>	Passage House Marsh	2000		DN2
89	Long-bracted Sedge	<i>Carex extensa</i>	Passage House Marsh	2000		DN2
90	Parsley Water-dropwort	<i>Oenanthe lachenalii</i>	Passage House Marsh	2000		DN1
91	Sea Aster	<i>Aster tripolium</i>	Passage House Marsh	2000		DN3
92	Sea Couch	<i>Elytrigia atherica</i>	Passage House Marsh	2000		DN3
93	Sea Purslane	<i>Atriplex portulacoides</i>	Passage House Marsh	2000		DN2
94	Wild Celery	<i>Apium graveolens</i>	Passage House Marsh	2000		DN3
95	Great Pond-sedge	<i>Carex riparia</i>	Phase One Target Note	2000		DN2

			SX87SE/49				
96	Great Green Bush Cricket	<i>Tettigonia viridissima</i>	Rocky Acres, Kingsteignton, A380 Verge West	1999			DBAP
97	Lesser Centaury	<i>Centaurium pulchellum</i>	Rocky Acres, Kingsteignton, A380 Verge West	1999			DN1
98	Pyramidal Orchid	<i>Anacamptis pyramidalis</i>	Rocky Acres, Kingsteignton, A380 Verge West	1999			DN2
99	English Scurvygrass	<i>Cochlearia anglica</i>	Teign Estuary Target Note 87/3	2000			DN2
100	Sea Aster	<i>Aster tripolium</i>	Teign Estuary Target Note 87/3	2000			DN3
101	Sea Couch	<i>Elytrigia atherica</i>	Teign Estuary Target Note 87/3	2000			DN3
102	Great Green Bush Cricket	<i>Tettigonia viridissima</i>	A380 road verge at Kingsteignton.	2000			DBAP
103	Pyramidal Orchid	<i>Anacamptis pyramidalis</i>	A380 road verge at Kingsteignton.	2000			DN2
104	Kestrel	<i>Falco tinnunculus</i>	Darran Close, Kingsteignton	2003			Amber
105	Bullfinch	<i>Pyrrhula pyrrhula</i>	Passage House Inn and Hackney Marshes, Passage House Marsh	2002			UKBAP(P); Red
106	Lesser Pond-sedge	<i>Carex acutiformis</i>	Passage House Inn and Hackney Marshes, Passage House Marsh	2002			DN2
107	Skylark	<i>Alauda arvensis</i>	Passage House Inn and Hackney Marshes, Passage House Marsh	2002			UKBAP(P); Red
108	Corky-fruited Water-dropwort	<i>Oenanthe pimpinelloides</i>	Ware Barton Fields	1994			DN3
109	a glasswort	<i>Salicornia</i> sp.	Phase One Target Note No. SX87SE/60	2000			DN2

110	Annual Sea-blite	Suaeda maritima	Phase One Target Note No. SX87SE/60	2000			DN2
111	Common Cord-grass	Spartina anglica	Phase One Target Note No. SX87SE/60	2000			DN1; DR
112	Common Sea-lavender	Limonium vulgare	Phase One Target Note No. SX87SE/60	2000			DN1
113	Greater Sea-spurrey	Spergularia media	Phase One Target Note No. SX87SE/60	2000			DN2
114	Sea Purslane	Atriplex portulacoides	Phase One Target Note No. SX87SE/60	2000			DN2
115	Dingy Skipper	Erynnis tages	Fosterville	1990			DeclineD
116	Dingy Skipper	Erynnis tages	New Cross Ponds	1993			DeclineD
117	Silver-washed Fritillary	Argynnis paphia	Kingsteignton	1998			

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 (KIS) **Wildlife and Countryside Act (1981) Schedule 5: (killing & injury):** species protected against killing, injury and sale only.

WCA 5 (S) **Wildlife and Countryside Act (1981) Schedule 5: (sale):** species protected against sale only.

WCA 6 **Wildlife and Countryside Act (1981) Schedule 6:** animals (other than birds) which may not be killed or taken by certain methods

WCA 8 **Wildlife and Countryside Act (1981) Schedule 8:** plants which are protected.

WCA 8 (S) **Wildlife and Countryside Act (1981) Schedule 8: (sale):** plants protected against sale only.

WCA 9 **Wildlife and Countryside Act (1981) Schedule 9:** animals and plants for which release into the wild is prohibited.

BA **Protection of Badgers Act 1992:** badgers may not be deliberately killed, persecuted or trapped except under licence. Badger setts may not be damaged, destroyed or obstructed.

DA **Deer Act 1991:** deer protected under the Deer Act.

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.
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 IIIb: Species used as criteria for designating Special Areas of Conservation (SACs).
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 Decline	Devon Biodiversity Action Plan species: these have been identified as species of key conservation concern in Devon. Substantial local decline in Devon
Red List	Bird species of high conservation concern, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.
Amber List	Bird species of medium conservation concern, such as those whose population is in moderate decline, rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.
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 Notable¹: 1-25 2 km squares in Atlas of Devon Flora 1984.

DN2	Devon Notable²: 26-50 2 km squares in Atlas of Devon Flora 1984.
DN3	Devon Notable³: Selected species recorded from over 50 2 km squares in Atlas of Devon Flora 1984.
DR	Devon Rarity: native species recorded from 3 or fewer localities within Devon.
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.
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 (<i>Platynema pennipes</i>) Scarce blue-tailed damselfly (<i>Ischnura pumilio</i>) Small red damselfly (<i>Ceragrion tenellum</i>) Hairy dragonfly (<i>Brachytron pratense</i>) Downy emerald (<i>Cordulia aenea</i>) and Keeled skimmer (<i>Orthoetrum coerulescens</i>).
KeyD (R)	Regionally Important Key Dragonfly Species: those which have been recorded in 10-20% of the 10km squares in Britain: Red-eyed damselfly (<i>Erythromma najas</i>) and Ruddy darter (<i>Sympetrum sanguineum</i>).
Vul	Vulnerable (Collins and Wells 1987, Invertebrates in need of special protection in Europe)

Appendix 2

Species list for Kingsteignton parish, recorded during the field survey on 27 September 2004.

Scientific name	Common name
<i>Acer campestre</i>	Field Maple
<i>Achillea millefolium</i>	Yarrow
<i>Adalia bipunctata</i>	Two-spot Ladybird
<i>Aesculus hippocastanum</i>	Horse-chestnut
<i>Aeshna cyanea</i>	Southern Hawker
<i>Agrostis capillaris</i>	Common Bent
<i>Agrostis curtisii</i>	Bristle Bent
<i>Alnus glutinosa</i>	Alder
<i>Anagallis arvensis</i>	Scarlet Pimpernel
<i>Arctium minus</i>	Lesser Burdock
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Arum maculatum</i>	Lords-and-ladies
<i>Asplenium adiantum-nigrum</i>	Black Spleenwort
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort
<i>Brachypodium sylvaticum</i>	False-brome
<i>Calluna vulgaris</i>	Heather
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Carex pendula</i>	Pendulus Sedge
<i>Centaurea nigra</i>	Common Knapweed
<i>Centaureum erythraea</i>	Common Centaury
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cirsium arvense</i>	Creeping Thistle
<i>Claytonia sibirica</i>	Pink Purslane
<i>Columba palumbus</i>	Woodpigeon
<i>Corvus frugilegus</i>	Rook
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Cymbalaria muralis</i>	Ivy-leaved Toadflax
<i>Dactylis glomerata</i>	Cock's-foot
<i>Daucus carota</i>	Wild Carrot
<i>Deschampsia caespitosa</i>	Tufted Hair-grass
<i>Digitalis purpurea</i>	Foxglove
<i>Dryopteris filix-mas agg</i>	Male Fern
<i>Epilobium sp</i>	a willowherb
<i>Erica cinerea</i>	Bell Heather
<i>Euphorbia amygdaloides</i>	Wood Spurge
<i>Fagus sylvatica</i>	Beech
<i>Fagus sylvatica 'purpurea'</i>	Copper Beech
<i>Festuca rubra agg</i>	Red Fescue
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Galium mollugo</i>	Hedge Bedstraw

<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill
<i>Geranium robertianum</i>	Herb-robert
<i>Geum urbanum</i>	Herb Bennet
<i>Glechoma hederacea</i>	Ground-ivy
<i>Hedera helix</i>	Ivy
<i>Heracleum sphondylium</i>	Hogweed
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Ilex aquifolium</i>	Holly
<i>Impatiens glandulifera</i>	Indian Balsam
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus effusus</i>	Soft Rush
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Medicago arabica</i>	Spotted Medick
<i>Medicago lupulina</i>	Black Medick
<i>Meles meles</i>	Badger
<i>Mentha aquatica</i>	Water Mint
<i>Odontites vernus</i>	Red Bartsia
<i>Pararge aegeria</i>	Speckled Wood
<i>Parietaria judaica</i>	Pellitory-of-the-Wall
<i>Parus caeruleus</i>	Blue Tit
<i>Parus major</i>	Great Tit
<i>Phragmites australis</i>	Common Reed
<i>Phyllitis scolopendrium</i>	Hart's-tongue
<i>Phylloscopus collybita</i>	Chiffchaff
<i>Pica pica</i>	Magpie
<i>Pieris napi</i>	Green-veined White
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain
<i>Polygonia c-album</i>	Comma
<i>Polypodium vulgare agg</i>	Polypody
<i>Polystichum setiferum</i>	Soft Shield-fern
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Potentilla sterilis</i>	Barren Strawberry
<i>Primula vulgaris</i>	Primrose
<i>Prunella vulgaris</i>	Selfheal
<i>Prunus sp</i>	a planted cherry
<i>Prunus spinosa</i>	Blackthorn
<i>Pteridium aquilinum</i>	Bracken
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Quercus robur</i>	Pedunculate Oak
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubia peregrina</i>	Wild Madder
<i>Rubus fruticosus agg</i>	Bramble
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex obtusifolius</i>	Broad-leaved Dock

<i>Ruscus aculeatus</i>	Butcher's-broom
<i>Salix cinerea</i>	Grey Willow
<i>Sambucus nigra</i>	Elder
<i>Saxicola torquata</i>	Stonechat
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio vulgaris</i>	Groundsel
<i>Silene dioica</i>	Red Campion
<i>Sorbus aucuparia</i>	Rowan
<i>Stachys officinalis</i>	Betony
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Stellaria holostea</i>	Greater Stitchwort
<i>Talpa europaea</i>	Mole
<i>Tanacetum vulgare</i>	Tansy
<i>Taraxacum officinale agg</i>	Dandelion
<i>Taxus baccata</i>	Yew
<i>Teucrium scorodonia</i>	Wood Sage
<i>Tilia cordata x platyphyllos</i>	Lime
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Troglodytes troglodytes</i>	Wren
<i>Turdus merula</i>	Blackbird
<i>Ulex europaeus</i>	Gorse
<i>Ulmus procera</i>	English Elm
<i>Urtica dioica</i>	Common Nettle
<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Vespa crabro</i>	The Hornet
<i>Vicia sativa</i>	Common Vetch
<i>Viola sp</i>	a violet