

Parish
Biodiversity
Audit 2022

Dowland



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Introduction

As part of the National Lottery Heritage Fund project -Conservation Communities - the original parish audits completed in 2015 have been updated, recognising the new biodiversity information that has been generated by the individuals and groups that have participated since it began.

Dowland parish is located in Torridge district and is 705 hectares. The hamlet of Dowland is located 1.6 km southwest of Dolton. The parish is bordered along its western boundary by the River Torridge.

Much of the land use of Dowland was found to be improved and species-poor semi improved grasslands grazed by sheep, cattle or horses. About a quarter of the parish was conifer plantation and there was some arable land. There was some areas of rush pastures being grazed by sheep or cattle.

Wildlife features occurring within the parish include the following: traditional orchards; unimproved grassland; lowland mixed deciduous woodland; wet woodland; species-rich hedges with mature oaks (some veteran); species-rich hedgebanks; ponds; species rich road verges; semi-improved grasslands; buffer strips/margins around arable and improved fields; areas of rush pastures. Dowland churchyard had some semi-improved grassland and an elm tree. Old farm buildings and houses/barns throughout the parish provided habitat for swallows, housemartins, barn owls and bats (all recorded within the parish). The River Torridge along the western and border of the parish provides habitat for otters, which had been recorded on stretches of the river just North of the parish.

The Tarka trail walking trail crosses the parish through Upcott up to Dolton and a green lane links up the hamlets of Dowland and Upcott providing access to the surrounding countryside.

Dowland parish falls within the North Devon Biosphere Reserve. Biosphere Reserves are places with world-class environments that are designated by the United Nations to promote and demonstrate a balanced relationship between people and nature. They are places where conservation and sustainable

development go hand in hand.

<https://www.northdevonbiosphere.org.uk/>

Most of the information used to create this report and land use map was secured from aerial photograph interpretation together with historical data collected with access permission.

Occasionally vantage points within the parish would have been used to help to map habitats and establish land use.

The fact that potential and confirmed wildlife-rich land is mapped does not imply any right of access and does not change any existing rights or use of the land.

Key species and habitats listed in the Devon and North Devon Biosphere Reserve Biodiversity Action Plans are indicated in bold italic text throughout the report

Designated / Non-designated sites

Designated statutory/non-statutory sites

There are no statutory or non-statutory wildlife sites within Dowland parish.

There is one site within the parish listed on the Ancient Woodland Inventory, Great Parkdown Wood, North of Bramblecombe Brake. The site was visited during the day of the parish visit with the permission of the landowner. The woodland is now conifer plantation with the exception of a small area of lowland mixed deciduous woodland, a UKBAP habitat in the North-west corner which is predominantly hazel coppice.

Lowland mixed deciduous woodland is on the North Devon Biosphere Biodiversity Action Plan and is a UK Biodiversity Action Plan habitat. Lowland mixed deciduous woodland includes woodland growing on the full range of soil conditions, from very acidic to base-rich, and takes in most seminatural woodland in southern and eastern England, and in parts of lowland Wales and Scotland. It occurs largely within enclosed landscapes, usually on sites with well-defined boundaries, at relatively low altitudes, although altitude is not a defining feature.

Many are ancient woods and they include the classic examples of ancient woodland studied by Rackham (1980) and Peterken (1981) in East Anglia and the East Midlands. The woods tend to be small, less than 20 ha. Often there is evidence of past coppicing, particularly on moderately acid to base-rich soils; on very acid sands the type may be represented by former wood-pastures of oak and birch.

There is great variety in the species composition of the canopy layer and the ground flora. *Quercus robur* is generally the commoner oak (although *Quercus petraea* may be abundant locally) and may occur with virtually all combinations of other locally native tree species. Lowland mixed deciduous woodland may form a mosaic with other woodland types, including patches of beech woodlands and small wet areas. Rides and edges may grade into grassland and scrub types.

There are no precise data on the total extent of lowland mixed deciduous woodland in the UK, but in the late 1980s the Nature Conservancy Council estimated the total extent of this type to be about 250,000ha. There is however no doubt that the area of this priority type on ancient woodland sites has declined in area by clearance, overgrazing and replanting with non-native species, by about 30-40% over the last 50 years.

Ancient Woodland Inventory (AWI): 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.

DBRC is currently working on an update to the AWI which will be released in the new year.

The project page can be found here: <https://www.dbrc.org.uk/projects-surveys/current-projects-and-surveys/#AWI>

Other habitats

Flower-rich meadows and pastures (or unimproved grasslands) are a habitat of conservation concern in Devon and are listed on the Devon and 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 skylark.

Culm grassland: Some areas of potential Culm grassland had been identified during the aerial photo interpretation of this parish audit.

Culm grassland is listed in the North Devon Biosphere Biodiversity Action Plan, Devon Biodiversity Action Plan (Rhôs pasture) and UK Biodiversity Action Plan (purple moor-grass and rush-pasture). Culm grassland is characterised by purple moor-grass, as well as sharp-flowered rush, and various flowering species such as devil's-bit scabious, meadow thistle, heath spotted orchid, water mint and round-leaved sundew. Culm grassland may support the rare marsh fritillary butterfly and narrow-bordered bee hawkmoth, as well as the barn owl and curlew.



Unimproved grassland

Wet woodland is a UK and Devon Biodiversity Action Plan habitat. Wet woodland occurs on poorly drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes including ash, oak, pine and beech on the drier riparian areas. It is found on floodplains, as successional habitat on fens, mires and bogs, along streams and hillside flushes, and in peaty hollows. These woodlands occur on a range of soil types including nutrient-rich mineral and acid, nutrient-poor organic ones.

Wet woodland supports a rich lichen flora as well as a rich invertebrate flora. Such an abundance of insect food attracts a rich assemblage of breeding birds including the uncommon willow tit. Wet woodland may also provide lying up areas for otters and suitable habitat for dormice.



Species-rich hedges

Species rich hedges are listed on the North Devon Biosphere Reserve Biodiversity Action Plan, Devon Biodiversity Action Plan and UK Biodiversity Action Plan.

Hedgerows are often an essential corridor for the movement of wildlife and may support many animals and plants. Berries provide an important food source for birds, and flowers and are an important nectar source for butterflies. 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. Most of the hedges occurring in Downland parish were a mixture of medieval and 18th and 19th century hedges. with oak (some veteran), blackthorn, hawthorn, hazel and ash being the main trees but also holly, field rose, birch, willow and beech were recorded. The location of the hedge within the landscape gives an indication of the age. A helpful explanation can be found here <https://devonhedges.org/wp-content/uploads/2015/11/Interactive-Distinctive-Hedge-Map-Devon.pdf>



Species rich hedge along roadside



Species rich hedges alongside bridleway from Dowland to Upcott

Cemetery/churchyard



The churchyard in Dowland was species poor semi-improved grassland with some more species-rich patches. Sorrel, creeping buttercup, cocksfoot, germander speedwell, daisy, knapweed, self heal and cats ear were recorded.

An Elm tree was recorded in the parish churchyard. Virtually all mature elm trees were killed in the 1970s and 1980s by Dutch elm disease (a fungus spread by beetles), so it is good to have a record of elm within the parish.

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.

In Dowland parish there is a green lane from Dowland down to Upcott over the stream and back up to Staple Farm. Diverse flora occurs alongside the lane characteristic of marshy grassland with abundant meadowsweet. This is good for butterflies and insects. There are also species rich hedges along the bridleway. The walk goes through many types of Devon habitat: farmland, rush pasture, culm, semi-natural broadleaved woodland, stream.

Green lane from Dowland to Upcott



Green lane from Dowland to Upcott



Types of habitat found in the parish

Traditional Orchards: Some orchards were identified during the aerial photo interpretation of this parish audit. Some of these may have been managed in a traditional way.

Traditional orchards are listed on the North Devon Biosphere Reserve Biodiversity Action Plan and Devon Biodiversity Action Plan.

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

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

Fruit and insects available in old orchards, provide food for birds and mammals. Birds such as woodpeckers (green and great-spotted), nuthatches, tree creepers and tits may be seen on tree trunks and hollow branches. Fieldfares, starlings, redwings, thrushes, blackbirds and jays will be feeding on the fruit (on or off the tree). Orchards are also home to a number of declining bird species, including tree sparrow and spotted flycatcher.

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

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



Veteran Trees

Some of the hedges within Dowland parish had old oak trees remaining in them. It was also noted on the day of the parish visit in 2015 that old oaks had been left in some fields.

English Nature (now Natural England) have defined veteran trees as: “trees that are of interest biologically, culturally or aesthetically because of their age, size or condition”. In relation to oak it has been taken that trees with a diameter of more than:

- 1.0metre are potentially interesting
- 1.5metres are valuable in terms of conservation
- 2.00metres are truly ancient.

Veteran trees will be at least as big as these measurements:

- 1 metre - Hawthorn, blackthorn
- 2.5 metres - Field maple, rowan, yew, birch, holly
- 3 metres - Oak, ash, scot's pine, alder
- 4.5 metres - Sycamore, limes, chestnuts, elms, poplars, beech, willows, pines, non-native trees.

It has been estimated that Britain may be home to around 80% of Europe's ancient trees. Veteran trees are large old trees found in wood-pasture and parkland, but also in a number of other locations: ancient yews in churchyards; mature oaks in hedgerows; black poplars along stream-sides; and many noble trees in ancient woodlands. Ancient trees support particularly rich assemblages of invertebrates, fungi, mosses and lichens. Several species of bat may use hollow trees as roosting sites and birds such as tree creepers and woodpeckers feed on the insects living in the bark. Insects such as stag beetles and hornets are associated with old trees.

Arable land: There are 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 allowed more effective seed-cleaning caused an initial decline, but herbicide development was catastrophic for many plants. Nowadays, arable plants are generally confined to the strip along the field edge, which provides a home to many animals, invertebrates and plants

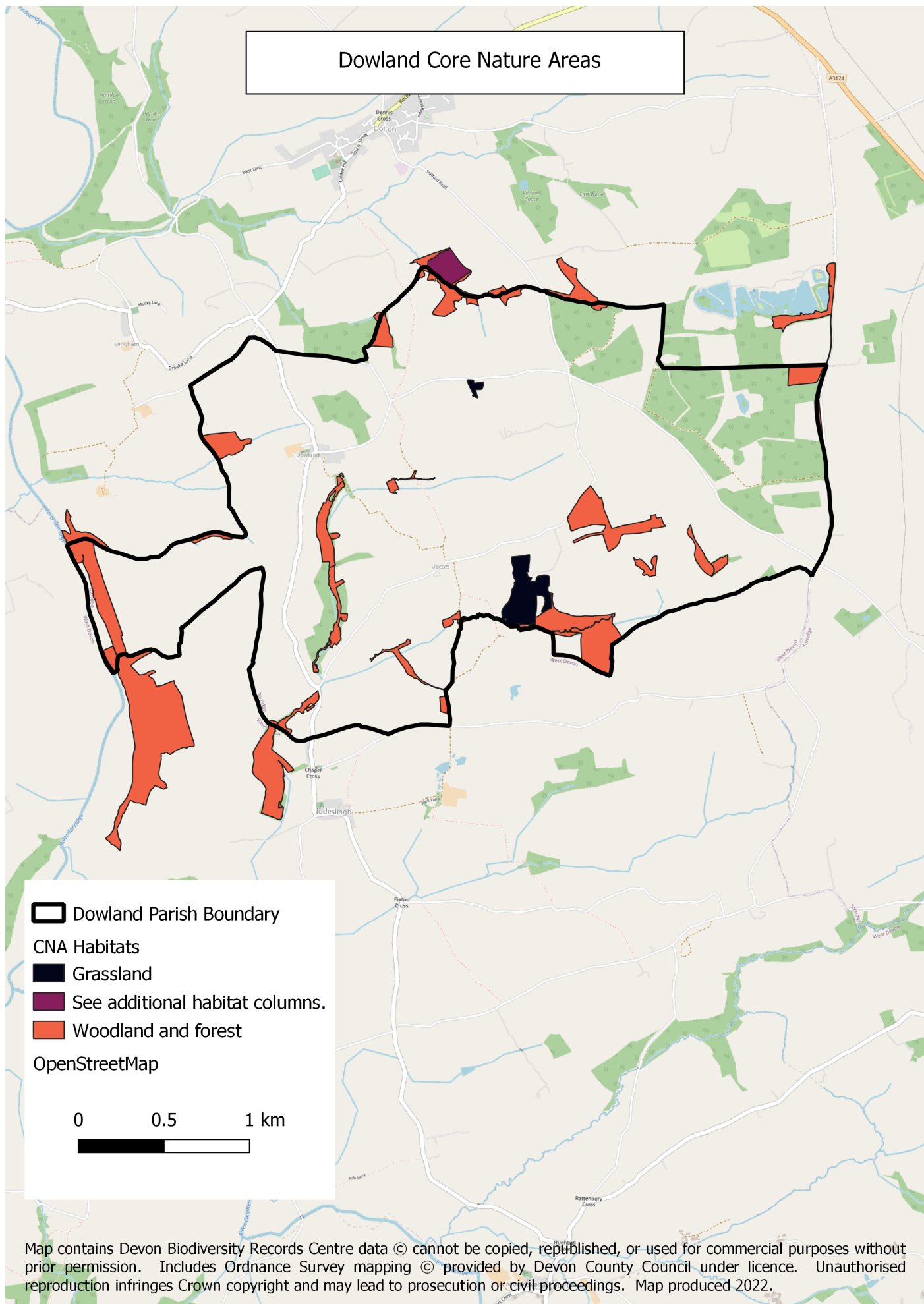
Nature recovery networks

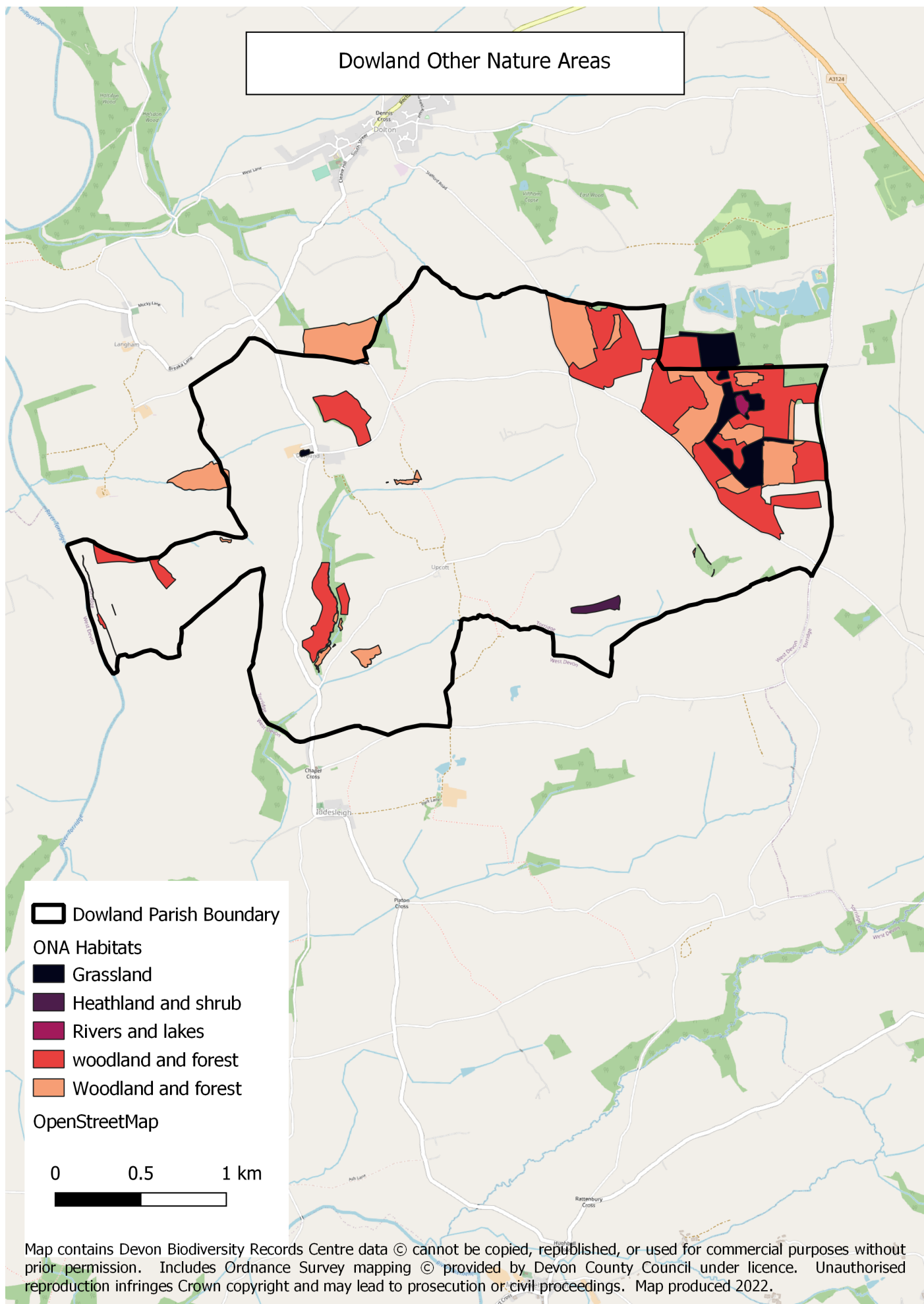
Details of the nature recovery networks can be found here - <https://www.devonlnp.org.uk/our-work/nature-recovery-network/>

The following two maps show Core Nature Areas as well as Other Nature Areas along with their associated habitats.

Core Nature Areas are our richest wildlife habitats. They include Priority Habitats (excluding hedges and arable margins) and statutory and non-statutory designated sites such as Special Areas of Conservation, Special Protection Areas, Sites of Special Scientific Interest, National Nature Reserves and Ancient semi-natural woodlands. Habitats are grouped together and mapped as Broad Habitats (grasslands, woodlands, wetlands etc).

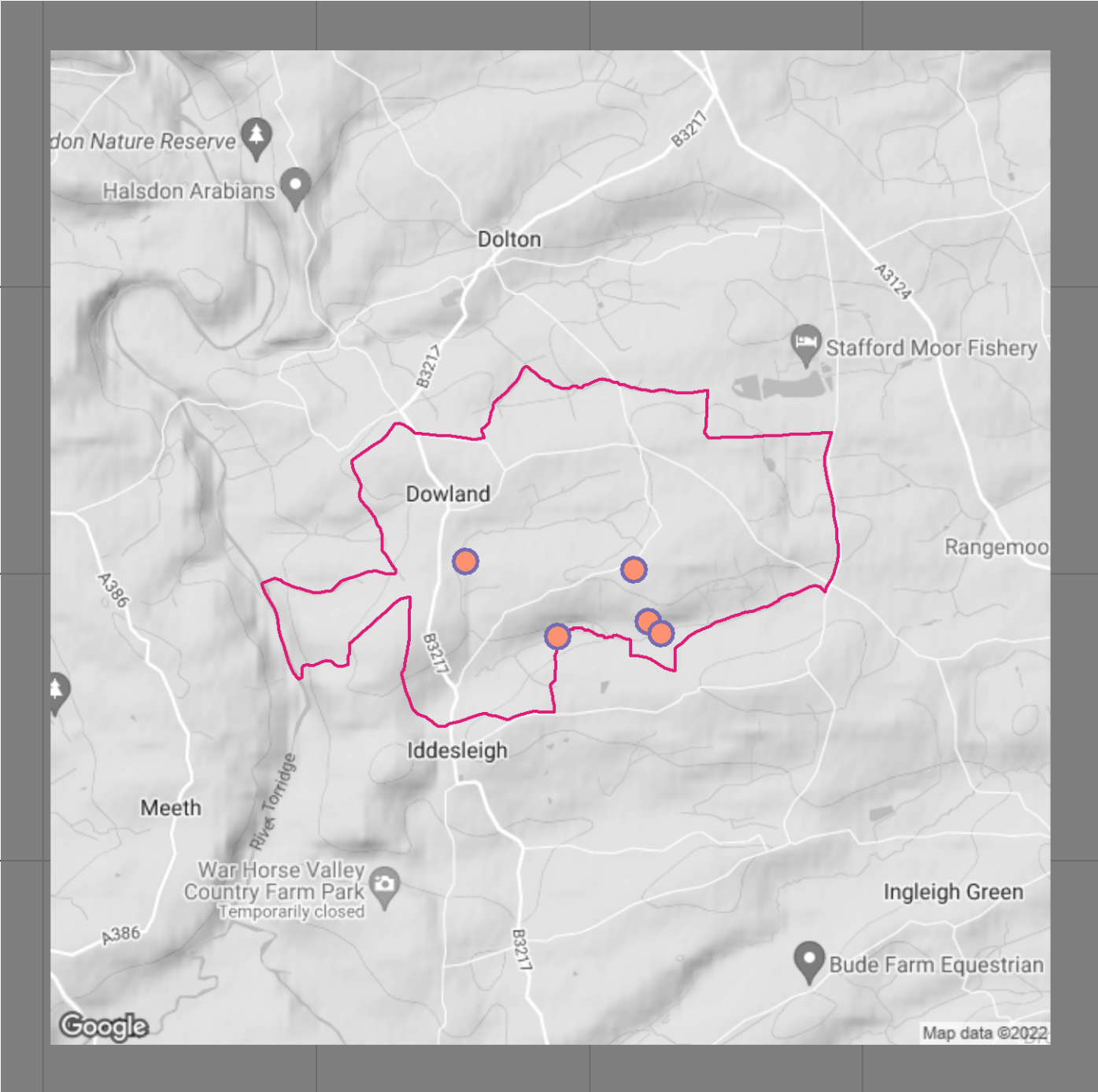
Other Nature Areas are existing habitats which have wildlife value (or potential value) but which are not Priority Habitats or designated sites. These currently include: Other Sites of Wildlife Importance, parks, urban greenspaces, some churchyards, National Nature Reserves, Local Nature Reserves and non-Priority Habitats on the National Forest Inventory. Other habitats will be included in future iterations when data is available.





Species found in the parish

The map below shows the location of recording within the parish boundary over the lifetime of the Conservation Communities project.



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Species records

Listed below are the species records held by DBRC for the parish of Dowland. The list is broken into three tables. The first table holds Section 41 species, the second Priority species, and the third common species. The table shows the number of records we hold per species in our database (1968 - 2022). As well as the number of records per species collected over the period of this project (2020 - 2022).

Taxon Group	Records added during project
flowering plant	34
34 New species records for Dowland	

Summary of common species recorded during project.

 New records added during Conservation Communities

Taxon group	Common name	Scientific	2020 to 2022	1968 to 2019	1968 to 2022
flowering plant	a Bentgrass	Agrostis	1		1
flowering plant	a Catsear	Hypochaeris	1		1
flowering plant	a Dock	Rumex	1		1
flowering plant	a Gorse	Ulex	1		1
flowering plant	a Rush	Juncus	2		2
flowering plant	a St John's wort	Hypericum	1		1
flowering plant	a Thistle	Cirsium	2		2
flowering plant	Bird's foot trefoil	Lotus	1		1
flowering plant	Bramble	Rubus fruticosus agg.	1		1
flowering plant	Common Knapweed	Centaurea nigra	1		1
flowering plant	Creeping Buttercup	Ranunculus repens	2		2
flowering plant	Creeping Thistle	Cirsium arvense	1		1
flowering plant	Crested Dog's-tail	Cynosurus cristatus	2		2
flowering plant	Dandelion	Taraxacum	1		1
flowering plant	Greater Bird's-foot Trefoil	Lotus pedunculatus	1		1
flowering plant	Greater Plantain	Plantago major	1		1
flowering plant	Lesser Stitchwort	Stellaria graminea	1		1
flowering plant	Perennial rye grass	Lolium perenne	1		1
flowering plant	Ribwort Plantain	Plantago lanceolata	2		2
flowering plant	Selfheal	Prunella vulgaris	2		2
flowering plant	Sweet vernal grass	Anthoxanthum odoratum	2		2
flowering plant	Timothy	Phleum pratense	1		1
flowering plant	White Clover	Trifolium repens	1		1
flowering plant	Yorkshire fog	Holcus lanatus	4		4

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 follows 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 Dowland might include species-rich hedgerows and flower-rich road verges. The last two actions would directly contribute to the Species-rich hedgerow Action Plan and the Flower-rich meadows and pastures 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.

Help to build up a picture of the state of Devon's environment by sending your wildlife records to the Devon Biodiversity Records Centre <https://www.dbrc.org.uk/wildlife-sightings/> 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? Devon County Council's website has some very good resources for hedge management and ideas for community involvement <https://www.devon.gov.uk/environment/wildlife/habitats-and-species/hedges>

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 Dowland 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 Devon Wildlife Trust web site: <https://www.devonwildlifetrust.org/take-action/garden-wildlife>

6 Contact the North Devon Biosphere Reserve:

The North Devon Biosphere reserve has a number of initiatives running to enable communities within the North Devon Biosphere Reserve to improve wildlife. On their website <https://www.northdevonbiosphere.org.uk/> you can get ideas of how to improve nature in your area including tips on wildlife gardening and details of community initiatives in your area.

7 Japanese Knotweed:

Not something to cherish, but it can't be ignored! Unfortunately Japanese Knotweed is present in several locations in Dowland. 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.

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: <https://www.devonlnp.org.uk/knowledge-hub/invasive-species/japanese-knotweed/>

8 Himalayan Balsam:

Himalayan or Indian balsam (*Impatiens glandulifera*) is another very invasive plant. A relative of the busy Lizzie, it is known by a wide variety of common names, including Indian balsam, jumping jack and policeman's helmet. It was introduced to Britain in 1839, but escaped from gardens and rapidly

colonised riverbanks and areas of damp ground.

Himalayan balsam grows in dense stands that suppress the growth of native grasses and other flora. In the autumn, the plants die back, leaving the banks bare of vegetation and vulnerable to erosion. It is sometimes seen in gardens, either uninvited or grown deliberately, but care must be taken to ensure that it does not escape into the wild.

It is a tall, robust, annual producing clusters of purplish pink (or rarely white) helmet-shaped flowers. These are followed by seed pods that open explosively when ripe, shooting their seeds up to 7m (22ft) away. Each plant can produce up to 800 seeds.

Although Devon Biodiversity Records Centre does not hold any official records of Himalayan Balsam in Dowland it is known to be widespread along rivers and water courses.

A useful leaflet on Himalayan Balsam can be viewed by following this link: <https://www.devonlnp.org.uk/knowledge-hub/invasive-species/>



Japanese Knotweed

Useful sources of further information

Northern Devon Nature Improvement Team www.devonwildlifetrust.org
(Tel: 01392 279244)

Devon Biodiversity Records Centre www.dbrc.org.uk/ (Tel: 01392
274128)

Devon Wildlife Trust: www.devonwildlifetrust.org

Devon Birdwatching and Preservation Society: www.devonbirds.org

Natural England: www.naturalengland.org.uk

Plantlife: www.plantlife.org.uk

RSPB: www.rspb.org.uk

The Woodland Trust: <https://www.woodlandtrust.org.uk/>

Butterfly Conservation <https://butterfly-conservation.org/>

Environment Agency <https://www.gov.uk/government/organisations/environment-agency>

Devon Hedge Group <https://devonhedges.org/>

Forestry Commission <https://www.gov.uk/government/organisations/forestry-commission>

Guidance

<https://www.northdevonbiosphere.org.uk/>
<https://www.dbrc.org.uk/information/sites-and-habitats/>
<https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions#ancient-and-veteran-trees>
UKBAP-BAPHabitats-65-WoodPastureParkland-2011
UKBAP-BAPHabitats-29-Lowland-Meadows
UKBAP-BAPHabitats-56-TraditionalOrchards
UKBAP-BAPHabitats-64-WetWoodland
UKBAP-BAPHabitats-30-LowlandMixedDecWood
UKBAP-BAPHabitats-02-ArableFieldMargins
UKBAP-BAPHabitats-07-CoastFloodGrazingMar
<https://www.devonlnp.org.uk/our-work/nature-recovery-network/nature-recovery-network-map/>
<https://jncc.gov.uk/our-work/uk-bap-priority-species/>
<https://hub.jncc.gov.uk/assets/2829ce47-1ca5-41e7-bc1a-871c1cc0b3ae>