

Devon's County Wildlife Sites

Biodiversity Monitoring Framework
2009-2022 report



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Forward

County Wildlife Sites are the ‘Cinderella sites’ of nature conservation.

Their number, size and distribution make them fundamental to nature recovery in Devon. They provide common and uncommon species with the habitats they need. They provide the green and blue spaces through which wildlife can move, joining up an otherwise hostile and fragmented landscape.

Yet, County Wildlife Sites largely go unnoticed and underappreciated. They hold few of the protections and profile of other designations such as Sites of Special Scientific Interest or Special Areas of Conservation. Consequently, the public understand little about them, although they love the wildlife and natural beauty that they hold.

County Wildlife Sites face an uncertain future. Some have already been lost forever, others are in danger of going the same way. We need to take urgent action to protect those that remain and expand their number to protect their yet unknown natural riches.

If we are to achieve this, then the ongoing task of meticulous monitoring and designating more County Wildlife Sites must be better resourced to continue and grow. Without it we risk losing many more of these special places and the special wildlife that goes with them.

This report lays out the current position of County Wildlife Sites and the key monitoring efforts which are vital for their maintenance and growth in number and effectiveness.

In an age of climate and nature crises the report makes a powerful case for backing County Wildlife Sites and provides you with the opportunity of adding your support to their future.

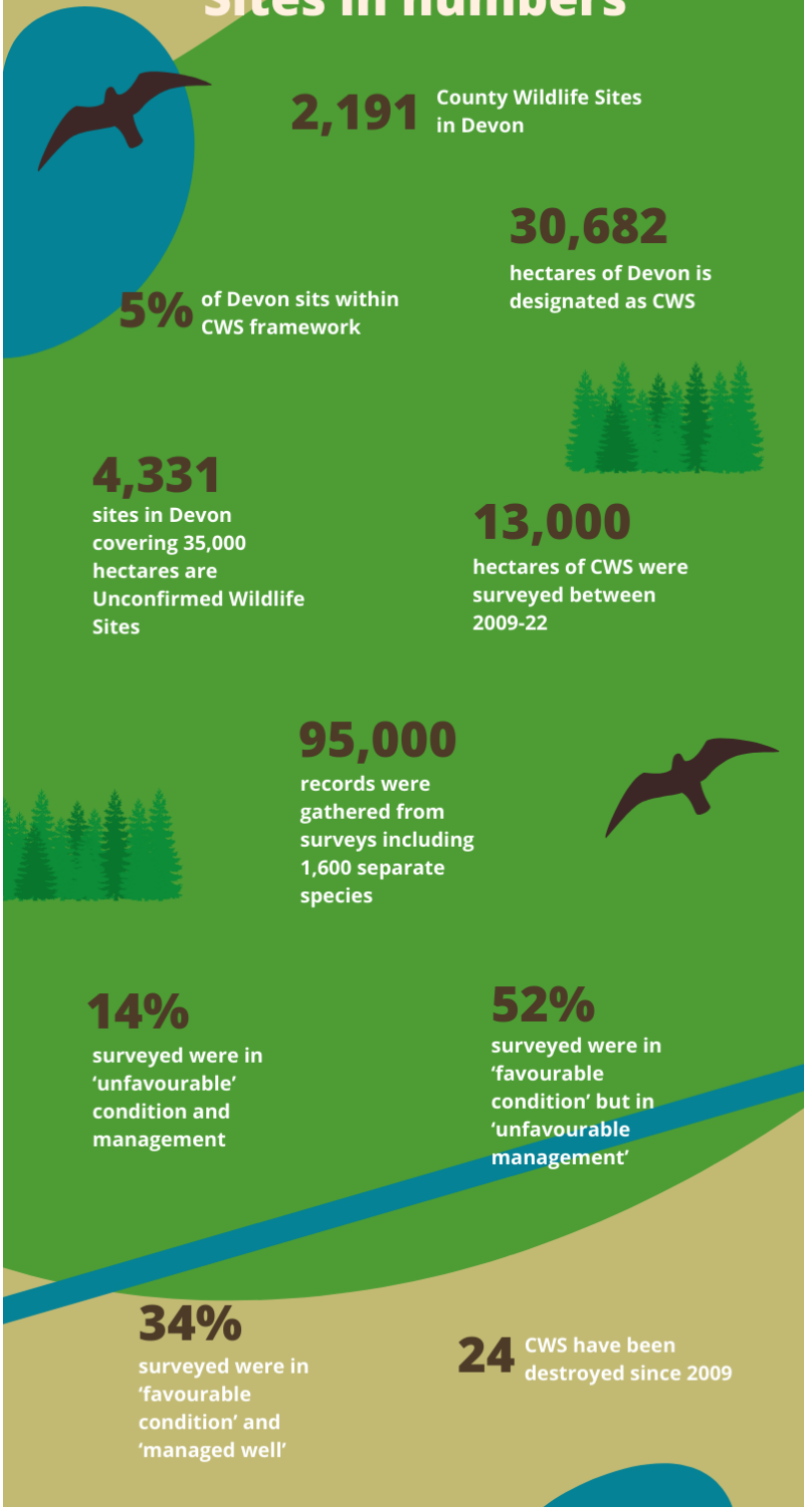
You and your organisation can play a key role in making this happen – to ensure that Devon has a wild future. Please make sure you take a look at the **What you can do to help realise this vision** section of this report on page 26.

Devon Biodiversity Records Centre

Devon County Council

Devon Wildlife Trust

Devon's County Wildlife Sites in numbers





Introduction

Devon is a stunning county. It is blessed with two spectacular coastlines, 12 estuaries, two upland National Parks, five Areas of Outstanding Natural Beauty, the first UK Biosphere Reserve, two World Heritage Sites and the most biodiverse parish in the country, Braunton.

However, the county no longer supports any truly natural habitats. All have been modified over millennia by human hand, domesticated livestock, intensive agriculture, built infrastructure, commercial fisheries, deforestation, and extractive industries. Devon is also being impacted by climate change, aquatic and atmospheric pollution, and the spectres of disease and Invasive Non-Native Species (INNS).

This makes our remaining semi-natural places crucial life support systems to Devon's people and wildlife. However, comparatively few of these sites benefit from the legal protection provided by Site of Special Scientific Interest (SSSI) designation. Devon contains 211 SSSIs covering under 7% of its land, rivers, and coastal areas.

Instead, much of its remaining natural riches fall within County Wildlife Sites (CWS). These form the building blocks of the county's natural heritage. Devon has 2,191 of these, amounting to 5% of its land area. Yet they are vulnerable. CWS designation offers no legal protection to the landscapes and wildlife they contain, and they are only given 'material consideration' under planning regulations. Instead, the vast majority rely on farmers and landowners choosing to manage them sympathetically.

This report marks 12 years of survey effort to understand the extent and health of Devon's CWS resource. The news is mixed, and their future remains uncertain.

Our work has shown that 24 have been either damaged or destroyed since 2009, while the health of many others has deteriorated. The pressures of agricultural

intensification and land abandonment remain the largest threats. As we decouple our farming systems from the EU Common Agricultural Policy, new support measures to reward the provision of public goods are urgently needed to ensure that our future semi-natural habitats will be bigger, more numerous, in better condition and better connected. Devon's response to the biodiversity crisis will be framed by the Local Nature Recovery Strategy, which will include the Devon Nature Recovery Network Map and have CWS's at its core.

County Wildlife Sites also remain under-recorded. Despite the diligence of Devon Biodiversity Records Centre to secure our knowledge base, more than 4,000 areas of potential wildlife interest have yet to be surveyed and assessed. Many of these could and should be designated as CWS.

At the same time, it is vital to continue to monitor the health of those CWS that have already been designated. This is the critical task that the Biodiversity Monitoring Framework (BMF) has been delivering since 2009. Securing information about CWS habitat extent and condition, and where designated for species interest, capturing information about the populations of key species supported.

There are some hopeful signs for CWS and the wildlife they hold. Public attitudes are changing, with people more willing than ever to stand up and take action for nature. The future of CWS depends greatly on our ability to harness this drive, energy, and support. Key actions need to be taken.

We must increase the number and area of County Wildlife Sites manyfold to slow the chronic rates of decline that will otherwise lead inexorably to species extinctions. CWS should be better protected through the planning system and prioritised for funding and support. CWS should also be at the forefront of the growing demand for public involvement through community science, becoming the core resource from which people gather and share information on the state of Devon's nature.

The work described in this report has been led by Devon Biodiversity Records Centre, Devon Wildlife Trust, and Devon County Council, and we are also indebted to many other partners and individuals for their support. Our task is far from complete. Our collective efforts need to build exponentially to ensure that all special sites are recognised and valued. Every local authority, government body, farmer and landowner, rural business and conservation and land management charity has a pivotal role to play.

Nature *can* bounce back – and County Wildlife Sites need to provide the foundations for its recovery.

The role of Devon Biodiversity Records Centre

Devon Biodiversity Records Centre (DBRC) is one of a national network of Local Environmental Records Centres. Run on a not-for-profit basis and hosted by Devon Wildlife Trust, DBRC's mission is to make the best available data on Devon's biodiversity as accessible as possible. It collects and manages species, habitat and geological records, and leads on the identification, survey, monitoring and designation of County Wildlife Sites

DBRC operates with support from key partners, and income secured from a range of products and services. It currently manages a database of over seven million species records which is typically updated with 2,000-5,000 new records every month. All are validated and verified, so that the data is of a known quality.

www.dbrc.org.uk

1. What are County Wildlife Sites?

The concept of County Wildlife Sites (also known as 'Local Wildlife Sites' or 'Sites of Importance for Nature Conservation' in other counties) was adopted nationally in the early 1990s. The aim was to raise the profile of sites that had high biodiversity value but did not benefit from statutory protections such as Site of Special Scientific Interest (SSSI) designation.

County Wildlife Sites are predominately designated for the presence of priority habitats or significant populations of protected, threatened or locally notable species.

2. Devon's County Wildlife Sites

There are 2,191 sites in Devon, extending to 30,682 hectares or almost 5% of the county. Each year the number and extent of County Wildlife Sites increases as new sites are surveyed and designated.

CWS are predominantly in private ownership, their value reliant on landowners maintaining sensitive management. However, although they are not afforded statutory protection, their status is recognised within Local Plans. As a result of the Environment Act, Local Planning Authorities now must demonstrate that the total extent of priority habitats is not negatively impacted by new developments, and that at least 10% Net Biodiversity Gain will be secured.

In addition to policies associated with the built environment there are other regulations that provide some limited protection for County Wildlife Sites. By designating priority habitat as CWS it raises its profile and so helps to ensure that sites are protected through the Environmental Impact Assessment Regulations. Recognition of the ecological value of CWS also provides opportunities to secure funding through, for example, agri-environment schemes and Biodiversity Net Gain.

Devon's CWS framework is far more widespread and evenly distributed than the SSSI network. The county's 211 SSIs cover a greater area (46,940ha) but are relatively few because they include extensive tracts of upland habitat in Dartmoor and Exmoor National Parks, large river estuaries and intertidal habitats.

Devon's largest CWS is the Dart Estuary at 741.7 hectares. The minimum size for a CWS to be designated for habitat is just 0.5 hectares, while sites designated specifically for species interest can be smaller still. Because the SSSI network is far from comprehensive, CWS play a vital role in identifying other high-quality sites which form a mosaic of wildlife-rich landholdings across Devon, some of which are of comparable or better ecological value.

The map and tables below provide more detail on the distribution and reasons for designation of Devon's County Wildlife Sites.

Map 1: Devon's County Wildlife Sites.

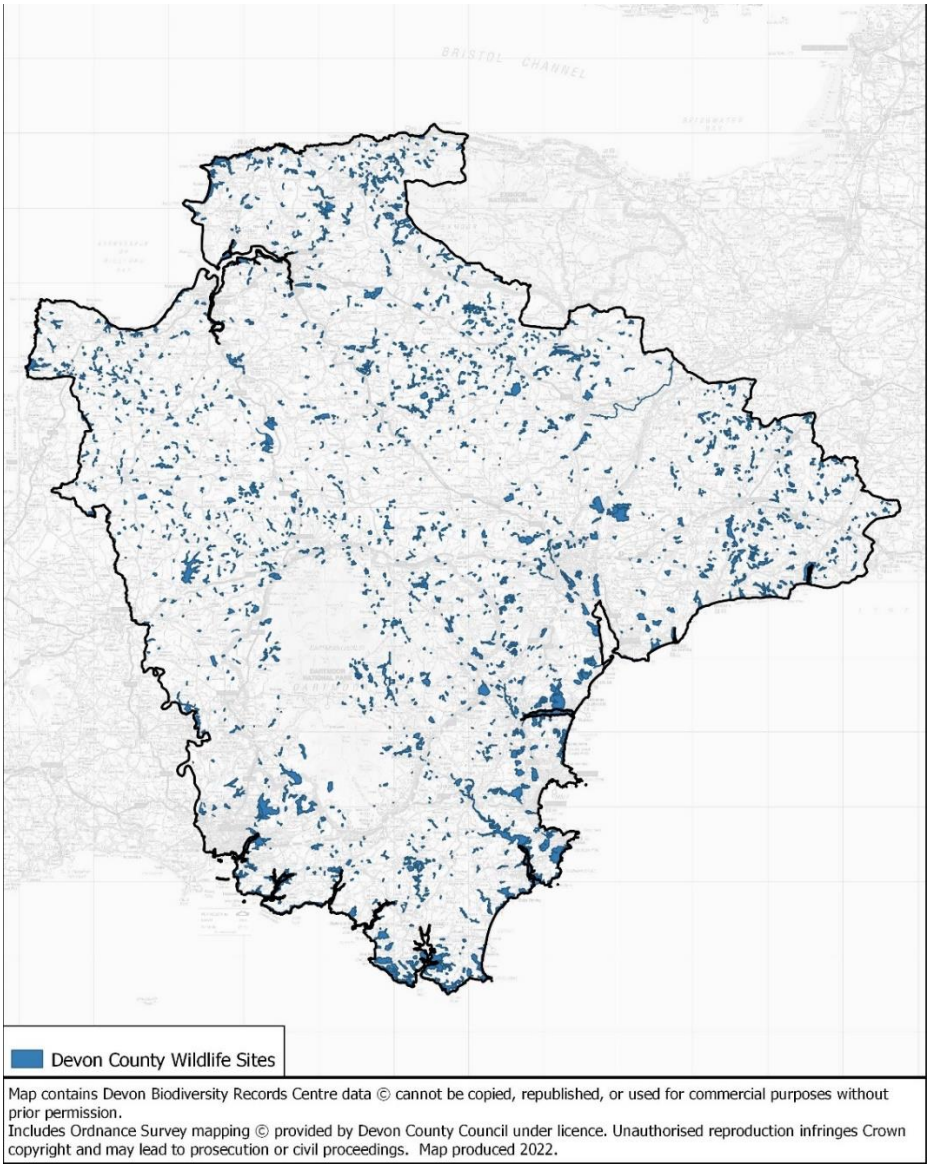


Table 1: Devon's County Wildlife Sites by district.

District	Number of CWS	Area (hectares)
East Devon	325	4157
Exeter	24	310
North Devon	459	5219
Mid Devon	230	2303
Plymouth	28	636
South Hams	295	6911
Teignbridge	238	4305
Torbay	31	1049
Torridge	271	2781
West Devon	290	3311

Table 2: Priority habitats and the number of Devon CWS which contain them.

Priority habitat	No. of sites	Area (hectares)
Purple moor grass and rush pasture	799	3252
Lowland mixed deciduous woodland	695	7178
Lowland meadow	454	1617
Wet woodland	361	976
Lowland fen, and Upland flushes, fens, and swamps	133	155
Lowland dry acid grassland	109	559
Upland oakwood	97	961
Lowland heath	96	790
Maritime cliff and slope	36	1125
Lowland calcareous grassland	35	87
Wood-pasture and parkland	28	1795
Traditional orchard	28	89
Coastal saltmarsh	25	116
Upland mixed ash wood	25	117
Coastal floodplain and grazing marsh	17	681
Intertidal mudflat	16	673
Reedbed	14	68
Arable field margins	6	5

Priority habitat	No. of sites	Area (hectares)
<i>Sabellaria alveolate</i> reef	4	2
Upland heathland	4	6
Ponds	2	N/A
Coastal sand dune	3	44
Blanket bog	3	3
Eutrophic standing waters	1	N/A
Coastal vegetated shingle	1	1

Table 3: Species groups and the number of Devon CWS which contain them.

Sites designated for species interest	No. of sites
Vascular plants	59
Invertebrates	50
Birds	16
Mammals	14
Non-vascular plants and fungi	11
Amphibians and reptiles	4

3. Unconfirmed Wildlife Sites

Unconfirmed Wildlife Sites (UWS) are areas that have been noted as having the potential to meet CWS standard by supporting priority habitats or species, but for which we currently have insufficient evidence. There are 4,331 in Devon, extending to over 35,000 hectares. They have been identified by Devon Biodiversity Records Centre through aerial photograph interpretation projects, local knowledge, and by information provided by DWT and other partners.

There are currently limited resources for survey of Unconfirmed Wildlife Sites, however, when site visits are undertaken many Unconfirmed Wildlife Sites are found to meet the criteria for County Wildlife Site designation, some proving to be truly exceptional examples of priority habitats. Wildlife rich land that does not meet CWS designation criteria may still be recorded within DBRCs systems, especially those which have potential for recovery.

Not all areas of potentially high-quality habitat within the county have been listed as Unconfirmed Wildlife Sites, there are undoubtedly many that DBRC is still unaware of.

The map and tables below provide more detail on the distribution of Devon's Unconfirmed Wildlife Sites.

Map 2: Devon's Unconfirmed Wildlife Sites.

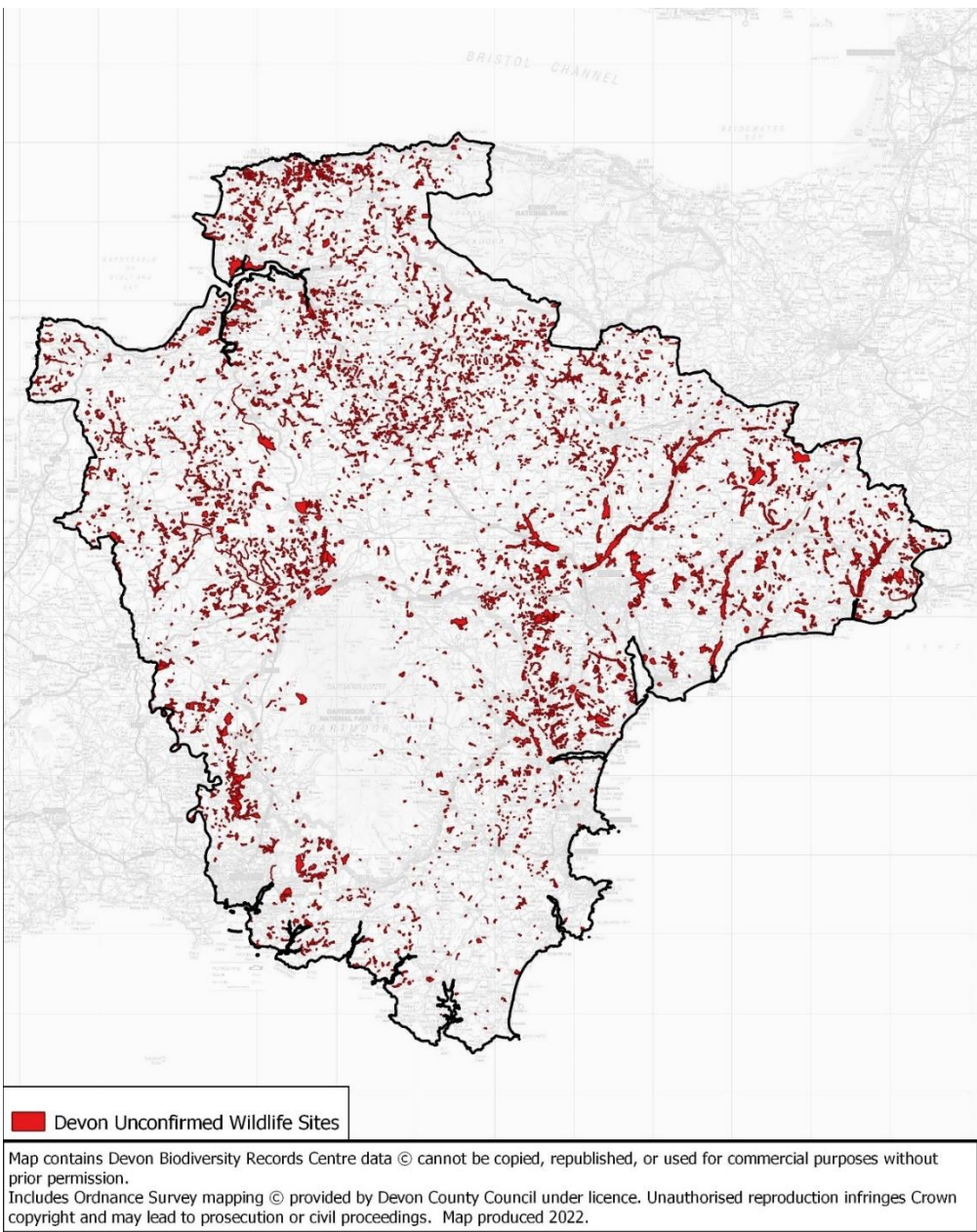


Table 4: Devon's Unconfirmed Wildlife Sites by district.

District	Number of UWS	Area (hectares)
East Devon	463	6932
Exeter	7	29
North Devon	1301	7996
Mid Devon	567	4835
Plymouth	13	185
South Hams	273	1967
Teignbridge	632	4265
Torbay	4	54
Torridge	612	4913
West Devon	567	5305

4. The importance of County Wildlife Sites

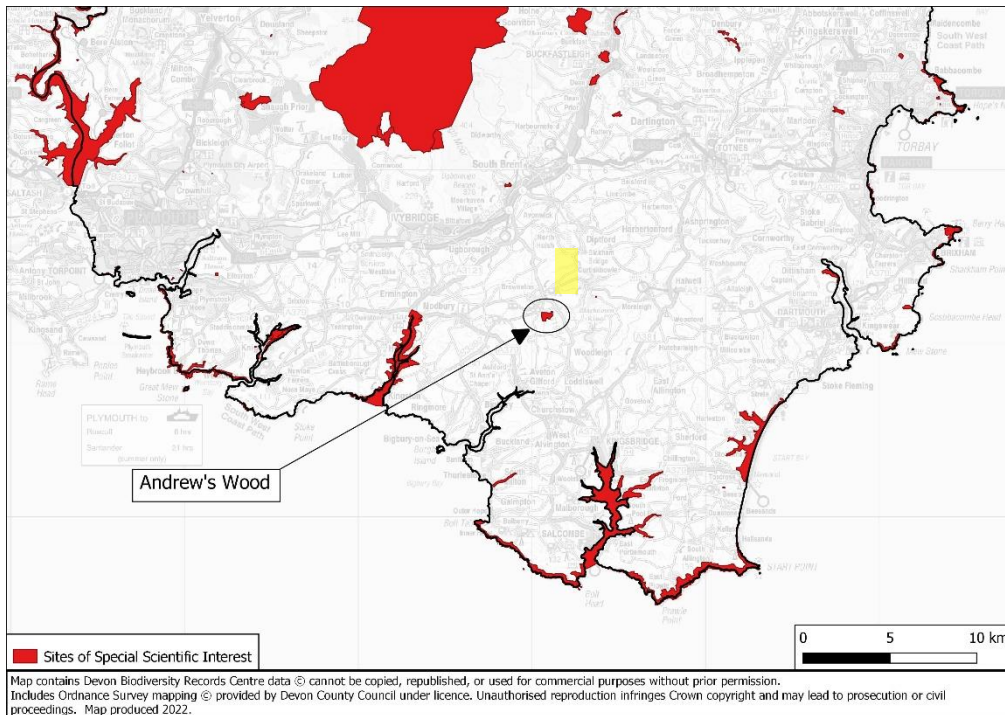
Devon's County Wildlife Sites and its statutorily protected sites represent the foundations on which we must rebuild to achieve the widely accepted goal for wildlife to be in recovery across at least a third of Devon's landscape by 2030.

These nature rich core zones need to be increased in size, improved in condition, and made more resilient, through connecting additional areas of land managed for wildlife. The result will be a thriving Nature Recovery Network. This approach follows the principles introduced by Professor John Lawton in 'Making Space for Nature' (2010). Making Space for Nature first embodied 'bigger', 'better', 'more', and 'joined'.

The maps of the South Hams below illustrate the critical role that the County Wildlife Site resource plays as building blocks of an ecologically rich nature network. Map 3 (below) shows that away from Dartmoor, the district's SSSIs (coloured red) are largely restricted to the coastline, including areas of maritime cliff, a variety of freshwater and coastal habitats associated with Slapton Ley, and river estuaries. Further inland, Andrew's Wood nature reserve (notable for the UK's largest population of heath lobelia) is conspicuously isolated.

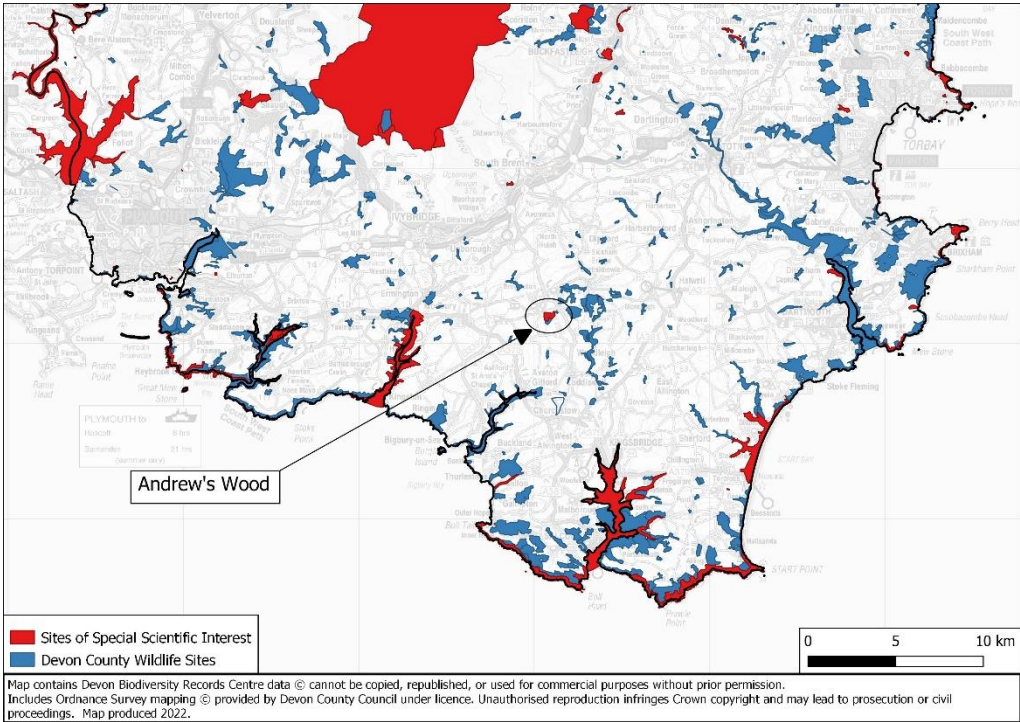
Recognising that SSSI were not designated to create a network of sites that provided strategic stepping stones across a county, and that they are often disparate, the CWS framework provides these critical connecting elements within the landscape. In this example, Andrews Wood nature reserve is functionality supported by 114 other CWS within a 10km radius, directly through the CWS system.

Map 3: SSSIs in the South Hams.



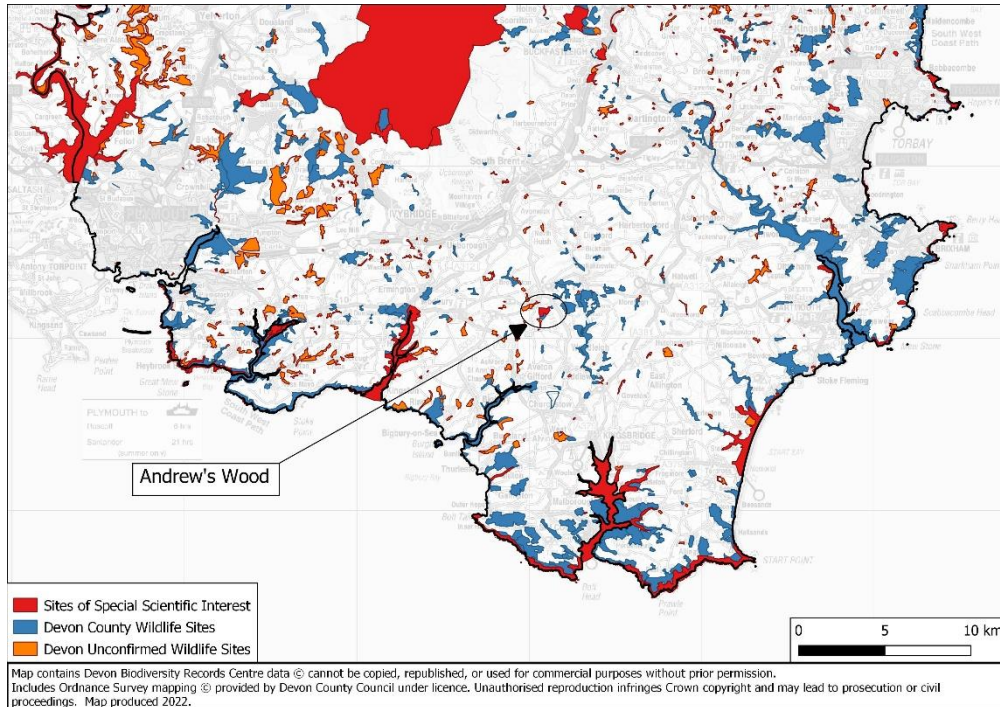
Map 4 (below) adds County Wildlife Sites (blue). This reveals their role as vital building blocks in the landscape, with many forming wildlife rich networks, helping to connect SSSIs, or acting as stepping-stones both along the coastline and further inland. However, many isolated and fragmented habitats are still present, which must remain targets for future conservation effort to rebuild ecological coherence and resilience.

Map 4: CWS and SSSI in the South Hams.



The inclusion of Unconfirmed Wildlife Sites (orange) in Map 5 (below) adds further potential steppingstones between known areas of important habitat. Many of these sites are likely to be confirmed to be important wildlife refuges.

Map 5: Devon's CWS, SSSI and Unconfirmed Wildlife Sites in the South Hams.



5. The critical role County Wildlife Sites play in Nature Recovery Networks

Under the 2021 Environment Act there is a requirement to produce a Devon Local Nature Recovery Strategy. This will set out the priorities and actions required to achieve the Devon Nature Recovery Network. [Devon's NRN Map](#) will act as a crucial strategic guide for concerted nature recovery activity here at a county level and is being developed currently, within a broad partnership. This is likely to take several years to refine as we build capacity, generate key data, and gain user input.

The NRN is an interconnected system of habitats on land and at sea. It will provide the conditions that wildlife needs to feed, breed, rest and disperse from place to place. Critically it will allow the natural world to adapt to change. It will also bring a range of other critical benefits such as carbon sequestration, flood control, clean and reliable water supplies, healthy soils, and recreational opportunities.

County Wildlife Sites will be critical to the success of the NRN in restoring wildlife and wild spaces in Devon.

6. Monitoring County Wildlife Sites

To realise the full potential of County Wildlife Sites in restoring Devon's nature, their health and condition require regular monitoring.

The Biodiversity Monitoring Framework (BMF) is one of the UK's largest habitat monitoring projects. It was established in 2009 by Devon Wildlife Trust, Devon County Council, and Devon Biodiversity Records Centre, to determine patterns of change in priority habitat condition. It is the vital tool in maintaining the CWS dataset. It does this by re-surveying County Wildlife Sites, many of which had not been revisited since their designations as far back as the early 1990s.

Fieldwork, recording and reporting for the Biodiversity Monitoring Framework are led by Devon Biodiversity Records Centre (DBRC). Additional contributions are made by the staff of partner organisations and complementary projects and initiatives.

Initially funded through a broad partnership comprising of DWT, DCC, DBRC, and a number of Local Authorities and protected landscapes, many of those sources of financial support have dropped away during the last decade. Whilst partners remain committed to the importance of the framework, their ability to fund it has become increasingly difficult. Today only DWT and DCC remain partners alongside DBRC in this critical venture. This report is published to a backdrop of government cuts to local budgets, and a risk that future funding for the monitoring and designation of CWS will shrink further.

While the BMF puts us in the privileged position of having acquired a good understanding of the extent and health of our CWS, many gaps in our knowledge remain. Monitoring of CWS provides a barometer of change within the Devon landscape. However, we must evolve the processes and partnerships through which this information is gathered, and positive conservation action taken. If this does not happen, then the future effectiveness of CWS in the restoration of Devon's nature will be placed at jeopardy.

7. Biodiversity Monitoring Framework achievements

Each year the Biodiversity Monitoring Framework project carries out condition surveys of a sample of Devon's 2,000+ County Wildlife Sites. A red/amber/green rating (based on both management and condition) is given to each priority habitat within the CWS and well as to the site as a whole.

RAG condition assessments

Red = condition and management are both unfavourable. In a worst-case scenario, if it is found that its nature conservation interest has deteriorated to such an extent that it is no longer of CWS standard, the site will be proposed for de-designation.

Amber = site is in favourable condition, but in unfavourable management; or site is in unfavourable condition, but in favourable management.

Green = site is in favourable condition and is being managed well.

After each County Wildlife Site monitoring visit the land manager receives a detailed report. This provides information on the habitats and species present together with tailored management recommendations, and (where possible) links to sources of further advice and/or funding.

As well as assessing existing County Wildlife Sites' condition and management, the Biodiversity Monitoring Framework provides an important platform through which DBRC and partners can raise awareness of their importance amongst local organisations, landowners and the wider public. That there is a monitoring programme provides opportunity for DBRC to contact several hundred landowners annually in relation to survey permissions. Some of these landowners would not have been aware of the importance of their site before this contact. Project development with partners allows us to incorporate survey of CWS and designation of new sites as a strategic target, include it within project communications to external audiences, and provide in-field workshops for landowners and volunteer surveyors who may be able to help with local contacts or as a direct survey resource. This engagement at community level often leads to previously unknown areas of priority habitat being drawn to DBRC's attention, and sometimes the designation of new additions to the CWS network.

During the 12 years of monitoring effort the following achievements have been made:

- 1,156 County Wildlife Sites surveyed.
- Over 13,000 hectares of habitat surveyed.
- Over 95,000 species records generated, from over 1,600 separate taxa.
- Significantly improved geographical accuracy of priority habitat presence.
- Increased intelligence on the condition of priority habitats.
- Extensions to many County Wildlife Sites mapped, in response to previously unknown priority habitat being discovered via surveys.
- Over 340 new County Wildlife Sites designated.

As of December 2022, Devon has 2,191 County Wildlife Sites (see Table 5, below). Since the Biodiversity Monitoring Framework was launched in 2009, 1,156 CWS

monitoring visits have been carried out. Meanwhile 18% of the monitoring effort has been provided by partner organisations such as the National Park Authorities, and through complementary initiatives including Blackdown Hills Natural Futures, Devon Greater Horseshoe Bat Project, North Devon Nature Improvement Area, and Working Wetlands. There are many other organisations and individual land advisors operating within the landscape and visiting landholdings, that could be supported further to provide CWS data.

DBRC typically contacts around 200 landowners annually, to enable the required access permissions to conduct CWS surveys. Of these an average of 150 receive no response, often due to incorrect contact details or lack of time on the part of the landowner. In addition, a small number of landowners (2-5 per year) may refuse access altogether.

In recent years, as the monitoring programme has also started to dedicate time to surveying Unconfirmed Wildlife Sites as well. The percentage of responses broadly equals that of the CWS access requests each year, with many landowners being highly enthusiastic to have their site recognised. However, finding the precise location, landownership details, and securing access required for visits often requires more time than a CWS survey.

Table 5: Number of CWS monitoring surveys.

Year	DBRC	Partners	Total
2009-10	60	11	71
2010-11	81	23	104
2011-12	95	66	161
2012-13	86	46	132
2013-14	88	16	104
2014-15	84	13	97
2015-16	63	14	77
2016-17	60	8	68
2017-18	137	1	138
2018-19	53	8	61
2019-20	62	2	64
2020-21	30	2	32
2021-22	46	1	47
TOTALS	945	211	1,156
	82%	18%	100%

From 2009 to 2022 more than 13,000 hectares of CWS-designated land were surveyed, generating more than 95,000 records of at least 1,600 separate taxa. This has greatly increased our knowledge regarding the location, extent and condition of priority habitats lying outside of Devon's protected SSSI network and the wildlife that they support.

The number of sites surveyed each year has varied (see Table 5, above). A major contributing factor is that the level of funding available for DBRC surveys. There are also variances annually on the number of sites visited due to their size, location, habitat types and accessibility.

In 2017/18 DBRC trialled a different approach using public access, footpaths, and roads to allow for a lighter touch rapid assessment, allowing for double the number of sites to be visited. However, the lower level of detail and often limited view of the sites was considered, on reflection, to be a weakness which was insurmountable using this methodology.

2020/21 saw Covid take hold, and DBRC reduced its surveying efforts accordingly, with only 30 sites surveyed.

In 2021/22 DBRC introduced a UWS element to the project, at scale. While only 46 CWS were monitored that year, more than 20 UWS were also surveyed directly through the project.

The number of reports submitted by partners has seen more significant variations. Factors here include the natural ebb and flow of their projects, competing priorities and the departure of key staff.

Where a relationship with the CWS monitoring programme has been built into a project and its operation from inception, for example within the DWT-led Devon Greater Horseshoe Bat Project, it often makes a real difference. DWT looks for these opportunities when developing landscape scale projects, and DBRC independently develops partnerships with other NGOs, to influence the inclusion of CWS. Several new CWS have been surveyed and designated through cooperation with projects such as Plantlife's Building Resilience in South West Woodlands, and through projects run by Blackdown Hills and North Devon AONBs.

Whilst many new sites have been designated, many existing County Wildlife Sites have also had their boundaries extended as previously unknown priority habitat has been discovered through the BMF programme. However, the reality is that CWS status has also been partially removed at many other sites where sections no longer meet the scheme's quality criteria; and 25 sites have been found in such an ecologically degraded condition that they have been removed from the CWS register.

8. The condition of Devon's County Wildlife Sites

Table 6 (below) reveals the percentage of sites surveyed which fall into Red, Amber or Green Status.

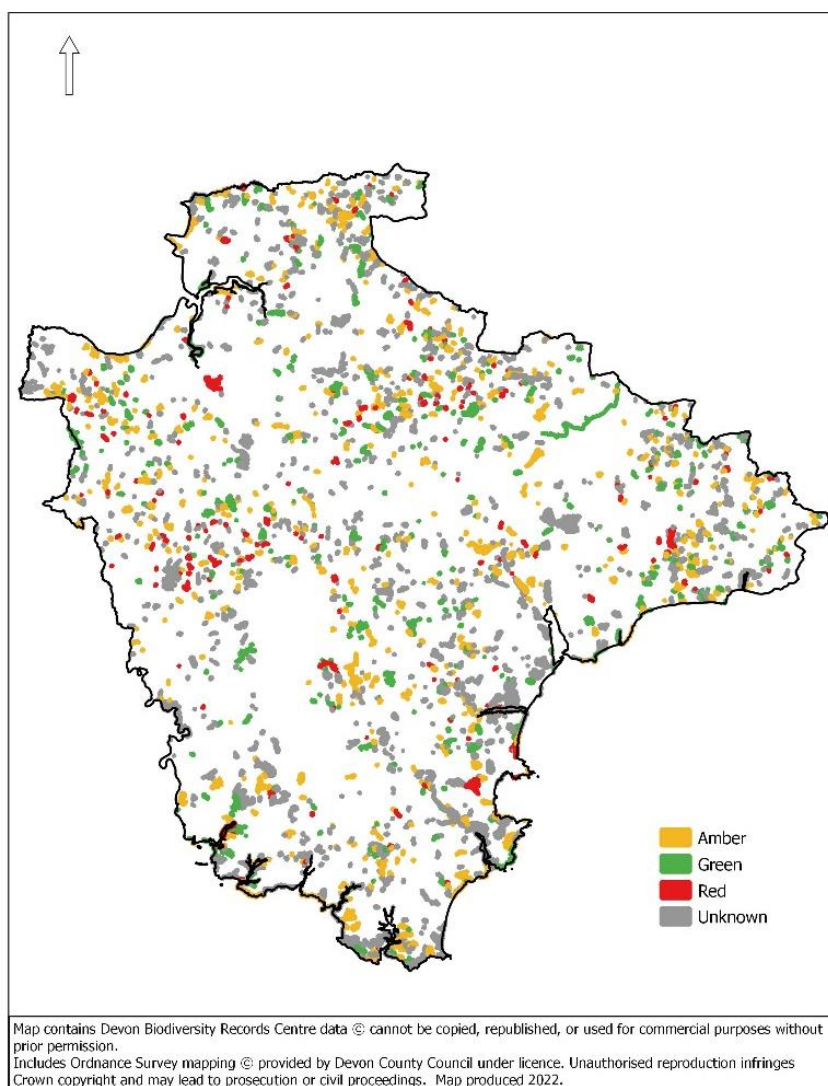
Table 6: Habitat condition assessments by numbers of sites surveyed.

Years	No. Sites surveyed	Red	Amber	Green
2009-10	71	13%	38%	48%
2010-11	104	19%	60%	16%
2011-12	161	12%	57%	31%
2012-13	132	14%	57%	29%
2013-14	104	22%	64%	14%
2014-15	97	15%	54%	31%
2015-16	77	15%	64%	21%
2016-17	68	15%	63%	18%
2017-18	138	20%	49%	20%
2018-19	61	10%	39%	49%
2019-20	64	2%	17%	78%
2020-21	32	20%	37%	43%
2021-22	47	9%	59%	32%
Total	1189	14%*	52%*	34%*

* Average figure over timespan 2009-22

Map 6 (below) reveals the condition of Devon's County Wildlife Sites (as of 30 May 2022). The grey areas are sites where the condition of the CWSs is currently unknown and therefore represent priorities for survey.

Map 6: Habitat condition of County Wildlife Sites.



9. Lost sites and habitat decline

29 former County Wildlife Sites have been de-designated since 2009. 24 of which had been fully destroyed, or sufficiently degraded to warrant deletion. The remainder were removed due to errors in criteria assessment when originally designated in the 1990's. Many other sites have had boundary and area changes as habitats have been lost and/or failed to meet designation criteria.

The primary causes of lost CWS are:

Agricultural improvement

Agricultural improvement is the principal cause of County Wildlife Site habitat loss, especially in open habitats such as grasslands, mires, and fens. Most often this involves ploughing and re-seeding with agriculturally productive grasses for the purposes of improving intensive grazing productivity. In addition, fields then often receive fertiliser and / or lime applications, and associated wildlife-rich hedgerows may be damaged or removed to create larger field units. Wetlands are lost through drainage to improve access and/or grazing conditions, or conversion to arable cropping.

These actions have widespread ecosystem impacts. By further fragmenting the landscape they reduce connectivity between habitat remnants, leaving many less-mobile species isolated and vulnerable to local extinction.

Remaining semi-natural habitat adjacent to productive high-input farmland is also at risk from intensive farming practices nearby including fertiliser run-off and atmospheric pollution. Eutrophication from high levels of nutrient enrichment on adjacent land is particularly damaging, creating grassland monocultures, outcompeting smaller, stress-tolerant or specialist species.

The Environmental Impact Assessment Regulations provide a level of protection for uncultivated and semi-natural habitats. However, these regulations are not commonly understood by land managers or by members of the public who may witness damaging land management change.

Neglect and abandonment

The most wildlife-rich areas of farm holdings are often the most marginal to modern agricultural practices, making them a challenge to integrate into conventional land management systems. As a result, many areas are at risk from neglect and abandonment.

Most open wetland, grassland and heathland habitats are classed as semi-natural. This means that although they are made up of naturally occurring vegetation, they have evolved from millennia of low impact human use – for example extensive grazing of pastures, coppicing, rush cutting in wetlands, harvesting of gorse for wood fuel, and bracken for animal bedding. Without active management these sensitive

habitats can be lost as the most competitive plants take over at the expense of more specialist or delicate species. Ultimately, open habitats eventually succeed to scrub and secondary woodland.

Devon's woodlands themselves are also at risk of abandonment. Many benefit from active management, replicating the historical roles played by large herbivores (such as bison, boar, and ponies). Abandoned woodlands can become dominated by bramble and other competitive species or cast under dense shade by vigorous species such as sycamore, beech, and holly. They often develop canopies with little structural diversity, and lack the glades and rides required by sun-loving plants, rare lichens, and insects such as fritillary butterflies.

Inappropriate tree planting on priority habitats

Significantly increasing the UK's woodland cover is essential if we are to tackle the climate and biodiversity crisis. However, inappropriate planting can have negative biodiversity impacts.

Historically, large areas of open, species-rich habitats have been lost to commercial coniferous forestry. More recently there have been examples of new native broadleaved planting schemes which have occurred on Priority Habitats, such as heathland and mire. At least 22 CWS have so far been recorded as being entirely or partially planted up with broadleaved trees, with subsequent loss or change of priority habitat at varying scales.

Partners promoting and funding tree planting are working to reduce this risk by providing advice and producing guidance such as Right Tree Right Place championed by Devon Local Nature Partnership.

Urban fringe

County Wildlife Sites in or close to urban areas are sometimes at risk from development expansion. This can lead to site loss and/or increased fragmentation from other habitats. However, during the last 12 years few urban sites have been lost in comparison to those in rural landscapes. This is likely to be due to a higher percentage being in public ownership, or more publicly visible, and are used and valued by local people. In addition, there are lower levels of agricultural pressure on these sites.

Urban green space can suffer from excessive disturbance, inappropriate lighting regimes and direct species impacts arising from pet dog and cat predation, fouling and disturbance. Other issues arise from trampling, littering, fly-tipping, and fires. Urban sites are also at particular risk from Invasive Non-Native Species arising from garden escapes and dumped green waste.

We must seek to enhance access to green space and nature-rich habitat. This needs to go hand in hand with careful planning and management to ensure carrying capacities are not exceeded.

Invasive Non-Native Species

Defra estimates that the most damaging Invasive Non-Native Species (INNS) cost the British economy some £2 billion a year through their impacts on native plants, animals, and local environments.

INNS present an ever-present threat to all habitats. For example, rhododendron and cherry laurel planted for game bird cover are particularly serious issues in woodland County Wildlife Sites. These species spread rapidly, obliterating ground flora through a combination of dense shading and soil contamination from the compounds leaching from their fallen leaves.

Our marine, aquatic and riparian environments are highly vulnerable to invasive species. Water is life, and intimately connects our ecosystems. Traveling through this liquid highway, animals, plants, seeds, spores, and associated diseases can move rapidly from place to place. The added challenge is that it is very hard to manage and eradicate species from water. The threats posed by INNS are greatly multiplied in sites suffering from neglect; it is essential to begin the process of eradication as early as possible to prevent the invaders from becoming uncontrollable and spreading to adjoining areas.

The smallest INNS can sometimes be the most destructive. Fungal diseases have heavily impacted the county's treescapes in the last 50 years. For example, Dutch elm disease led to the demise of 20 million mature trees in the UK, while currently ash dieback is in the process of killing over 90% of ash trees.

10. 2035 Action Plan: our vision for County Wildlife Sites

The County Wildlife Site resource extends to approximately 5% of the terrestrial land area of Devon. It plays a pivotal role in supporting wildlife now, and in its future recovery.

To strategically target action for nature recovery we need to reinforce and extend our knowledge of the CWS resource. To support this imperative our goal is to double the number and area of County Wildlife Sites and secure unrivalled knowledge regarding the resource by 2035.

In order to achieve this ambitious goal, we have identified the following targets:

1. CWS are monitored at least once in every ten years
2. At least 50% of registered Unconfirmed Wildlife Sites are surveyed by 2035
3. 1,000 new wildlife rich sites are proactively identified, and their CWS status assessed

Each target is summarised below:

1: County Wildlife Site Monitoring

Currently, approximately 60 CWS sites are monitored each year by DBRC and partner organisations. Our target is to at least double the number of sites which are surveyed by 2035.

The outcome will be that we have unrivalled knowledge about the state of the resource, habitat extent and condition, and how this is changing over time.

This will enable strategic conservation land management programmes and interventions to be accurately targeted.

2: Surveying Unconfirmed Wildlife Sites

DBRC has 4,331 Unconfirmed Wildlife Sites on record. The partnerships' target should be to visit and survey at least 50% of these sites by 2035.

The outcome will be that at least 1,000 new County Wildlife Sites are designated.

3: New Wildlife Rich Sites are Identified and Surveyed

There are many wildlife rich sites in the county which are not recognised as either CWS or UWS.

The conservation sector needs to act in a concerted manner to proactively identify new wildlife rich sites which will be surveyed, and their conservation status verified.

The outcome will be a further 1,000 new County Wildlife Sites are designated by 2035.

11. What you can do to help realise this vision

We recognise the scale of challenge in meeting our 2035 targets. It will require a five-fold increase in sites surveyed, and two-fold increase in the designated CWS resource.

However, nature's recovery in Devon hinges upon our ability to build a solid foundation of County Wildlife Sites to stand alongside statutorily protected and other wildlife rich land.

The Biodiversity Monitoring Partnership has identified the need to employ a new role dedicated to championing CWS, building support throughout the Local Nature Partnership to generate new, high-quality data.

The CWS Champion will work alongside DBRC and partners to:

- build a new recording system and;
- provide supporting advice and guidance.

Enabling widespread community and partner support to secure:

- efficient and accurate survey, verification, and site designation.

This will, in turn, lead to advocacy and engagement programmes to ensure public and private financing is available to enhance their condition, increase extent, and boost resilience.

The CWS Champion will exploit new remote sensing technologies to prioritise sites for survey and build the support of partner organisations, projects, and citizen scientists to assist in survey.

In addition, new funding will be sought to increase the staff time available to develop volunteer and trainee roles, establishing skilled teams able to support site surveys.

We are now urgently seeking partners to make this vision become a reality. If you think you, your community, business, or organisation can help us in this essential work for the nature of Devon get in touch. Contact:

Ian Egerton, Manager, Devon Biodiversity Records Centre

email iegerton@devonwildlifetrust.org

tel 01392 274128

Thank you!

12. Case studies: where County Wildlife Sites are making a difference in Devon

Case study 1: CWS designation inspires 26 years of favourable management for wildlife

Devon Biodiversity Records Centre visited a County Wildlife Site in Mid Devon's Creedy catchment in 2019. This was to be its first Biodiversity Monitoring Framework survey since designation in 1993.

Staff found its neutral to acid grassland was blooming with green-winged orchids (pictured below), a UK Red Data List "Near Threatened" and Devon "Notable" species. The diverse sward also supports common knapweed, agrimony, lady's mantle, early purple orchid, common twayblade, corky-fruited water-dropwort, lousewort, betony, and devil's-bit scabious. Damper rush pasture in the valley bottom was found to be hosting meadowsweet, bugle, marsh-marigold, water mint and wild angelica. Meanwhile a strip of alder-ash wet woodland and a drier oak-dominated area above boasted 28 Ancient Woodland Indicator species such as sanicle, moschatel, pignut, common cow-wheat, and bluebells.

The survey recorded that the features for which the site was designated are being managed well. The owner has been inspired by the farm's CWS status to sustain the traditional low-intensity management enabling its nationally declining priority habitats to continue to flourish.



Case study 2: CWS survey reveals and reverses grassland deterioration

In 2018 a tenanted farm within Devon Wildlife Trust's Working Wetlands project area was re-surveyed by the Biodiversity Monitoring Framework. As with many grassland County Wildlife Sites it was found to be deteriorating through low management levels, with the unchecked proliferation of more competitive plants reducing the diversity of both species and habitat structure. Here the root cause was access difficulties, which were preventing the elderly tenant farmer from carrying out the appropriate management.

BMF staff worked with Working Wetlands advisors, the National Trust, and a neighbouring farmer to facilitate and initiate a hay-cutting regime, reversing the encroachment of dominant grasses and at the same time providing winter feed for the tenant's stock.

Case study 3: BMF promotes better management for wildflowers and invertebrates

A Culm grassland County Wildlife Site in the Torridge catchment combined National Vegetation Classification communities M23 (with soft-rush, sharp-flowered rush, and jointed rush) and M24 (more acidic and supporting species such as heather, saw-wort, Devil's-bit scabious, and meadow thistle). Species notable for their Devon rarity include marsh cinquefoil, petty whin, and wavy St John's-wort.

When visited in 2015 the BMF surveyor found that the current grazing regime was preventing plants such as meadow thistle and Devil's-bit scabious from blooming and setting seed. A revised schedule was agreed with the landowner - brief early season grazing and then removing the cattle until late summer, to better conserve both the wildflowers and the invertebrates they support. In addition, it was agreed that an adjoining copse should be fenced off to prevent the cattle poaching that had been damaging the delicate woodland ground flora.

Case study 4: New survey site becomes exceptional County Wildlife Site

An exceptional site on a tributary of the River Creedy was unknown to DBRC until the landowners made contact in 2015, prompted by BMF activity at nearby farms (see case study 1). When they bought the holding in 2007 the fields were covered in dense bracken. Years of tireless management have re-created a living reminder of the wildlife-rich farmland common in Devon before the advent of intensive agriculture.



The meadows have swathes of betony together with several waxcap fungi species and Devil's fingers fungus. Tall herb fen and swamp in the valley bottom supports meadowsweet, yellow flag iris and marsh woundwort intermingled with tall greater tussock-sedge, branched burr-reed, and reed canary-grass. This is excellent habitat for a range of aquatic and semi-aquatic invertebrates and provides nectar and nesting opportunities for more terrestrial species.

A small but diverse woodland on the site graduates from wet alder and willow to oak further up slope. Several Ancient Woodland Indicator plants were identified by the survey. A clearing at the woodland edge was seen to attract numerous butterflies and a nearby hedgerow had been recently hand lain to attract more wildlife. The land has now been designated as a County Wildlife Site, and it is anticipated that further pockets of CWS-quality land will continue to be discovered through future BMF activity.

Case study 5: Biodiversity Monitoring Framework working in partnership

Moor Meadows is a volunteer initiative that aids and encourages the restoration, creation, and positive management of meadow habitats in and around Dartmoor National Park. The Biodiversity Monitoring Framework project has forged excellent relationships with Moor Meadows that has seen a number of previously unrecorded grasslands designated as County Wildlife Sites. In a recent instance, the owner of an upland farm near the headwaters of the River Bovey heard of the CWS scheme from fellow Moor Meadows members. An invitation to survey led to the discovery of areas of wet fen meadow and tall-herb fen, valley mire, acid grassland and upland oakwood. Several hectares of high-quality Dartmoor hay meadow provide the main attraction, hosting a variety of orchid species including the scarce greater butterfly orchid. Further management advice has been given and the farm has now received CWS designation.



Case study 6: The importance of corridor County Wildlife Sites

Windy Lane is a country road running through mixed commercial woodland near Dunchideock, in the hills west of Exeter. In 2017 DBRC recorded 31 Ancient Woodland Indicator plants on its banks including flowers such as pignut, moschatel, wood anemone, bluebell, sweet woodruff, common cow-wheat, yellow archangel, goldenrod, betony and our native aquilegia; grasses, namely wood melick and wood meadow-grass; and southern and greater wood-rush. This would be impressive tally even for a large semi-natural woodland.



Perhaps the site's greatest interest is a large population of bastard balm, a declining Nationally Scarce species listed as "Vulnerable" on the IUCN Red List. It is very localised in Devon, with remaining populations often limited to a few scattered plants. On Windy Lane more than 500 plants were recorded from 150 metres of bank, making this one of the best bastard balm sites in the county.

Windy Lane has been designated as a County Wildlife Site for its high vascular plant interest. It is also offers a reminder of the need to identify, protect and manage the species-rich verges and other corridor habitats that will be essential components of a robust and coherent Nature Recovery Network.

Case study 7: County Wildlife Sites and communities

CWS monitoring yields excellent opportunities for community engagement.

Within the last five years, DBRC has worked with Chudleigh Wild, a volunteer wildlife group, to identify and survey UWS, designating new CWS. We are currently partnering the Wildlife Wardens within the Action for Climate in Teignbridge initiative, training volunteers to undertake surveys, identify sites and help us to contact landowners. Most recently we have expanded that approach into Ashreigney Parish and also the Mid Devon Wildlife Warden pilot, within four parishes there.

Volunteers often live locally to CWS, so the importance of these sites resonates with them, and they understand the context within which they sit within their landscape. Clearly skill levels and the number of participants varies greatly parish to parish, and resources needed to train and support them are becoming more challenging to secure. But if links to landowners can be built in this way, and our number of volunteer surveys expands, we may get closer to our aspirations set out earlier in this report.

