Exmoor National Park State of the Park Report

Draft, June 2023

Woody bay today

Woody Bay from Martinhoe Common by A.R. Quinton. c.1923. Image courtesy: Salmon's

Contents

National Park designation

Exmoor was designated as a national park in 1954, the seventh UK National Park to be designated

Exmoor National Park is an area of 267 square miles and is the fourth smallest UK National Park

The Environment Act 1995 defines the role of national parks in England and Wales as being:

- to conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park, and
- to promote opportunities for the understanding and enjoyment of the special qualities of the National Parks by the public.

In pursuing these purposes, the National Park Authority has a duty to promote the economic and social well-being of Exmoor's communities

Purpose of the State of Park Report

To provide an overview of the National Park

To identify the positive or negative trends and the issues affecting the National Park

To measure whether work that is being done is having a positive effect

To identify any new issues or priorities

To feed into the Partnership Plan review

Exmoor National Park profile

- Exmoor National Park area: 267 miles^2 / 693 km^2
- Around 10,300 people live on Exmoor
- 3 settlements with over 1,500 people
- 43 parishes
- 19% of the housing stock is second homes and holiday homes
- 1,277 businesses operate from the National Park
- 9 distinctive landscape character types
- 18,768 ha of moorland
- 3,333 ha of peatland
- 60% farmland
- 55 km of coast
- 63 local geology sites
- 4,000km of hedgerows and boundary features
- 1,600 ancient (veteran) trees
- 15 sites of Special Scientific Interest (SSSIs)
- 42% of the National Park is designated for nature
- 38% is a UK priority habitat
- 13.6% of the National Park area is woodland (9,411 ha)
- 5 million trees
- 200 Scheduled Monuments
- 747 Listed Buildings (comprising c992 separate structures)
- 2 Registered Historic Parks and Gardens
- 16 Conservation Areas
- First International Dark Sky Reserve in Europe
- A total of 1,325 km of public rights of way and permitted paths
- 25% of the National Park is open access land
- 97% of rights of way are considered to be ‘easy to use’
- 1.46 million visitors / 2.31 million visitor days
- 90% of visitors are attracted by the landscape and 84% by tranquillity
- 99% of visitors surveyed rate their experience as “good” or “very good”
- £133 million value of tourism to the local economy

Key forces for change

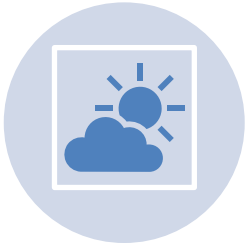
There are many forces for change affecting Exmoor's landscapes, some of them global or national, others very localised in effect. The UK faces a period of unprecedented change following it's exit from the European Union; the impacts of the Covid pandemic are still being felt; and the country is currently facing a cost of living crisis sparked by the war in Ukraine. Changes in government mean that the future direction of national policy and funding has also been in flux. This brings uncertainty but also provides great opportunities.

While we may not have control over all of these impacts, we need to understand and be aware of these changes so that we can respond and adapt to them for the future:

- *The nature and climate emergencies*
- *Changes in farming, forestry and land management*
- *Development-led change*
- *Tourism and recreation-led change*
- *Growth and development outside the National Park*
- *Incremental and cumulative change*
- *Understanding and valuing Exmoor's natural and cultural capital*

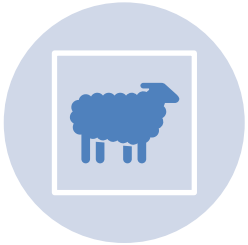
Strategic Challenges (1)

The State of Park report highlights a number of strategic challenges that face Exmoor National Park and will influence the preparation of the next Partnership Plan for 2024-2029



Climate change: Urgent actions to reduce carbon emissions are required. The impacts of climate change are evident now and will impact all aspects of the Park so there also needs to be more focus on adapting to a changing climate and increasing resilience

Nature recovery: Urgent action is required to enable nature recovery at scale. Statutory Local Nature Recovery Strategies are being prepared and will need to feed into the Plan along with targets from Exmoor's Nature Recovery Vision and those cascaded down from the Government's 25 Year Environmental Plan



Farming and land management: The transition to the environmental land management scheme is ongoing but still holds much uncertainty over the details of how this will be implemented and the funding that will be available. The viability of upland hill farming remains of concern

Changing landscapes: The national park designation means that Exmoor has not seen the same level of development as in other areas, but it is not immune to other changes arising from climate change and changing land management. Landscape monitoring has shown incremental but evident change in the nature of the land cover and vegetation and the occurrence of man-made features

Local communities: There are ongoing concerns over the viability of local communities with pressures on affordable housing and local services particularly from an ageing population and high levels of second homes / holiday lets

Local economy: Exmoor's economy is dominated by the tourism sector and is primarily made up of micro-businesses. New technologies are changing the way markets and sectors work, and digital connectivity is more important than ever. The need to change, adapt and learn new skills will be essential for business and economic growth. Exmoor needs to retain and attract young people to visit, live and work here

Strategic Challenges (2)

Natural and cultural capital: The next few years are likely to see a growing trade in natural capital assets such as biodiversity, clean water and stored carbon. These potentially provide new sources of income for land owners and managers on Exmoor who can provide a supply of these assets but there is uncertainty over the long-term value and credibility of some of these schemes

Policy: There is ongoing political uncertainty over future Government policy for the environment, farming and planning, plus Government's response to the Landscapes Review, which will all influence priorities for the National Park and how these can be delivered

Health & wellbeing: the impact of the covid pandemic is still being felt, and has had a significant impact on people's physical and mental well-being. Rural communities and particularly farming communities feel the impact of loneliness and isolation. The health and well-being benefits of connecting with nature and the outdoors are now widely recognised and provide an opportunity for increased engagement with the National Park

Finance and delivery: Action to address these strategic challenges will require resources and partnership working, at a time of severe budgetary challenges. New sources of investment and funding will need to be found, including from the private sector

Visitor management and experience: Visitors bring economic benefit but pressures from visitor numbers need to be managed. Travel to and around the National Park has a high carbon footprint, so developing sustainable transport, and access and recreation opportunities will be essential for the health and wellbeing of our residents and visitors, as well as helping to reduce carbon and support a better visitor experience

Equality, Diversity and Inclusion: Inequality in the UK is at the highest level for over 50 years and within Exmoor there are many pockets of rural poverty. Many minority ethnic and other under-respresented communities do not visit or engage with the National Park and a proactive approach is needed to reach out to them and work with people within those communities to provide greater opportunities and awareness

Exmoor's special qualities

The State of the Park Report is organised around the nine special qualities identified for the National Park:

- Open moorland, remoteness, wildness and tranquillity
- Distinct and diverse landscapes
- Timeless landscapes and dark skies
- A mosaic of habitats and diversity of wildlife
- A complex and rich historic landscape
- A deeply rural community and local traditions
- A farmed landscape
- An exceptional rights of way network
- A landscape that provides inspiration and enjoyment

Information is also provided on natural capital and climate change

Dunkery beacon by Frederick J. Widgery. 1898. Watercolour. Courtesy: Bridgeman Images

***Special Quality:** Large areas of open moorland providing a sense of remoteness, wildness and tranquillity rare in southern Britain*

Exmoor's moorland:

- 27% of the National Park is moorland (18,768 ha)
- The majority is designated as Section 3 moor and heath (16,591 ha) which are areas of natural beauty considered particularly important to conserve
- 83% of moorland is designated as nationally important Sites of Special Scientific Interest (15,548 ha)
- 57% of moorland is internationally important and designated as Exmoor Heaths Special Area of Conservation (10,705 ha)
- 37 moorland Principal Archaeological Landscapes (4,434ha) have been designated covering 24% of moorland
- 94% of moorland is access land giving people a right of access on foot (17,595 ha)

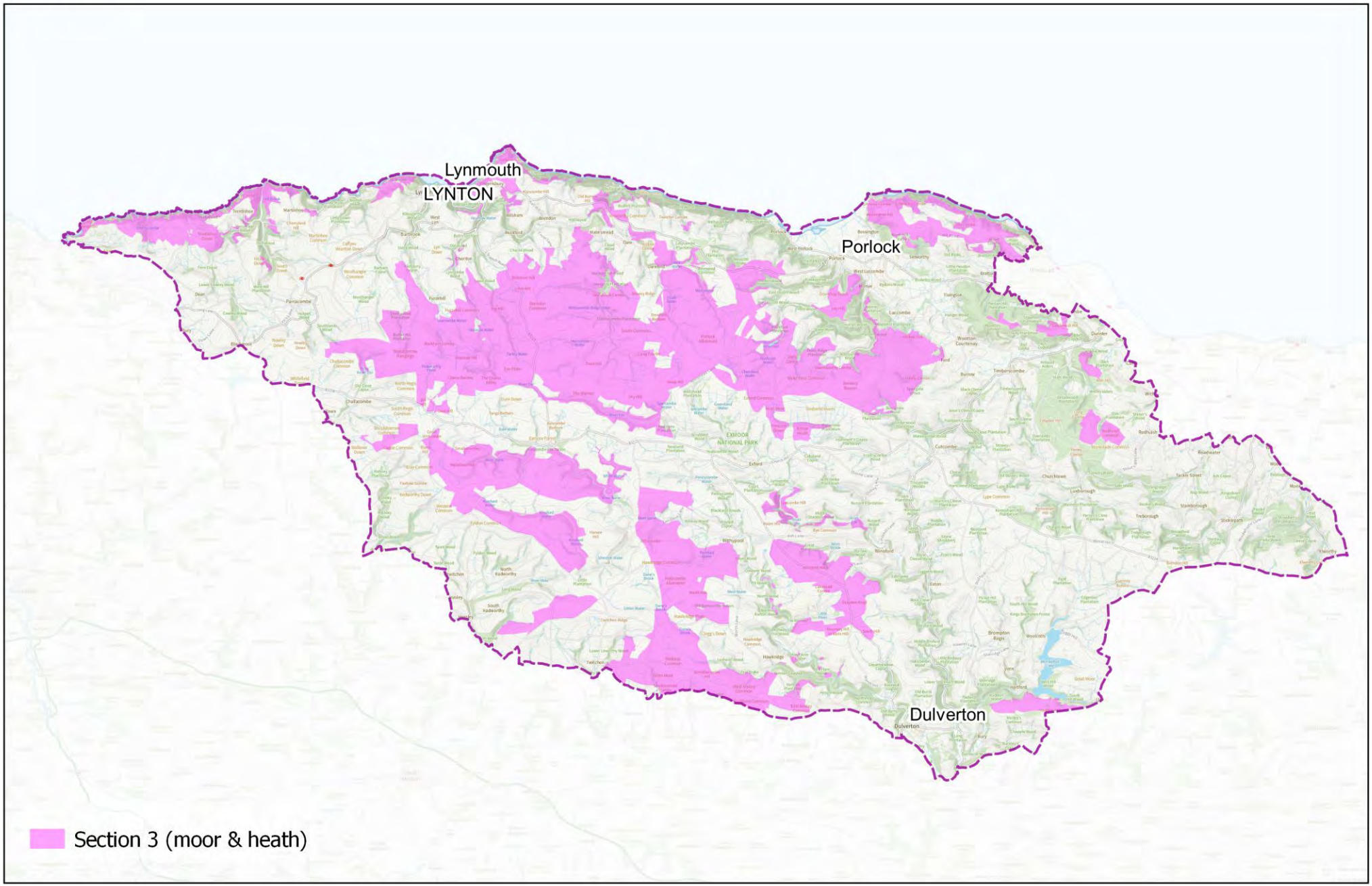
Moorland summary

- There has been significant vegetation change on the moors over the last 40 years with less heather (declines ranging from 20-65%); more gorse, bracken and purple moor grass. Mosaics of vegetation have been replaced by one dominant species
- The cause of these changes are complex but are linked to changes in management particularly grazing and swaling; heather beetle damage; climate change; and increased nitrogen deposition from air pollution
- Swaling was a common management tool but is now rare. Increasingly, it is seen as contrary to meeting carbon emission targets especially on deep peat where this is damaging to biodiversity and long term carbon storage. However the lack of swaling has led to more gorse, scrub and bracken and increased height of vegetation which impacts on other management objectives such as grazing, as well as impeding access and potentially increases the risk of wild fires
- There have been very few illegal burns and wildfires over the last few years but in 2022 there were a number of wildfires affecting over 300ha of moorland
- Projects such as Graze the Moor are trailing different management methods and have resulted in heather restoration and an increase in breeding bird populations
- Tick burdens and levels of tick borne diseases are an ongoing concern. Studies across all Protected Landscapes in England and Wales indicate that concentrations are highest in Southern England, although levels on Exmoor were lower (c2% compared to up to 10% infected ticks). The Graze the Moor project found that the population of sheep ticks carrying a wide range of diseases was higher than expected. On restored peatland sites tick levels were lower

Moorland summary (cont)

- Peatlands are important carbon stores and essential to meeting targets for responding to climate change. They are important habitats, help to regulate water quality and flows, and preserve historic records of past human activity and vegetation change
- Peatland habitats are sensitive to climatic change and hydrological disturbance. Centuries of moorland reclamation, agricultural drainage and domestic peat-cutting, historical overgrazing and swaling have modified the habitat and dried out the peat resulting in it becoming dominated by moorland grasses and much of the interesting wildlife being lost. Future climate change is likely to increase the drying effect on damaged peatlands
- Around 11% of Exmoor's peatlands are estimated to be in healthy condition, based on research on the effectiveness of ditch blocking as part of the Exmoor Mires restoration
- Levels of atmospheric nitrogen deposition on Exmoor's moorland Special Areas of Conservation are exceeding critical loads which is likely to be impacting on vegetation and wildlife
- Peatland restoration over the last 20 years has aimed to reverse some of these negative impacts. Over 2,600ha of peatland has been restored. Monitoring indicates that restoration on deep peat has been more successful than on shallow peat regarding increasing water levels, reducing runoff and greenhouse gas emissions, and returning the peatland to more natural functioning in the longer term
- Vegetation monitoring shows an expansion of Sphagnum moss after 3-7 years but purple moor grass showed no sign of reduction until at least 11 years after restoration. Breeding snipe have returned and restored sites have become the best sites in Somerset for black darter and common hawker dragonflies
- Palaeoenvironmental studies, geophysical and earthwork surveys, excavations and watching briefs carried out by South West Peatland Partnership have identified over 300 previously unrecorded archaeological features and sites, ranging from around 6000BC to the 20th century. This includes prehistoric standing stones and cairns, nineteenth-century mining works, networks of medieval trackways and Second World War military training features

Moorland



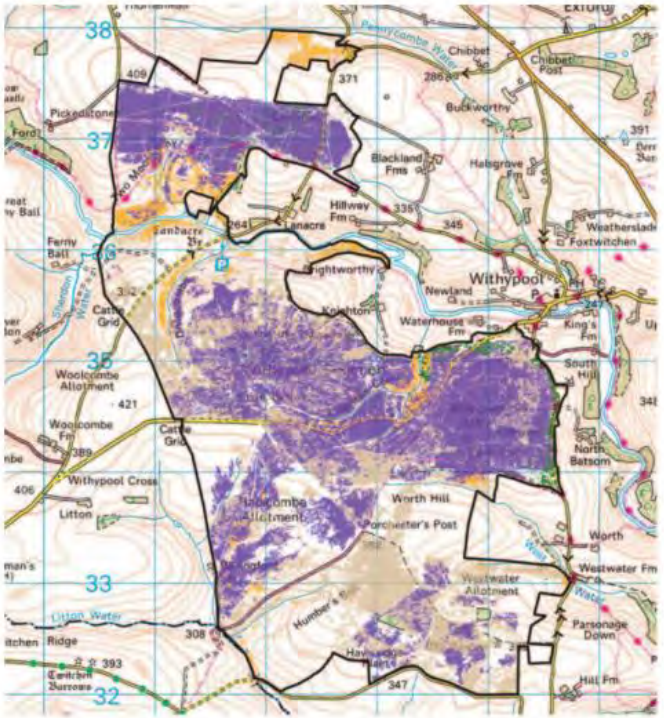
Compiled by Matt Sully on 12/10/2022

Moorland vegetation change

There has been a historic loss of 29% of moorland since 1940, primarily in the 1960s

Landscape Monitoring carried out by ENPA has identified significant vegetation change on the moors over the last 40 years. Across all moorland areas studied, the trend in recent years was found to be:

- Heather has reduced in all areas (ranging from 20-65%) and become more fragmented.
- Gorse, bracken and purple moor grass (Molinia) have expanded into areas previously dominated by heather.
- Changes occur frequently in the combes, with bracken becoming more dominant.
- Where previously there were mosaics of vegetation, this has often been replaced by one dominant species.



Vegetation change Withypool 1977 (left) and 2015 (right)

Graze the Moor

- Molland Moor is one of Exmoor's Principal Archaeological Landscapes and is designated as a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC)
- A 5 year project tested different approaches to management on Molland Moor following a steep decline in heather (over 50%) and large increases in purple moorgrass and acid grassland
- These changes are largely due to heather beetle; invasive species, especially Molinia; possibly wetter weather and nitrogen deposition, and changes in management
- Changes in management included testing different grazing pressures, allowing stock to over-winter on the moor; swaling larger areas; trialing different control methods for Molinia, gorse and bracken; and monitoring impacts on livestock health, farm economics, vegetation and wildlife
- As a result of the project, there is evidence of heather regeneration over 75 hectares of the moor, and signs of an increase in breeding bird populations, including large, wintering flocks of golden plover
- The study of farm economics was limited but provides some evidence that "low input, low output" sustainable farming might be a viable option with no loss of farm profitability compared with conventional upland beef and sheep farming

Cow and Calf on the Molland Estate – Photo credit Christina Williams

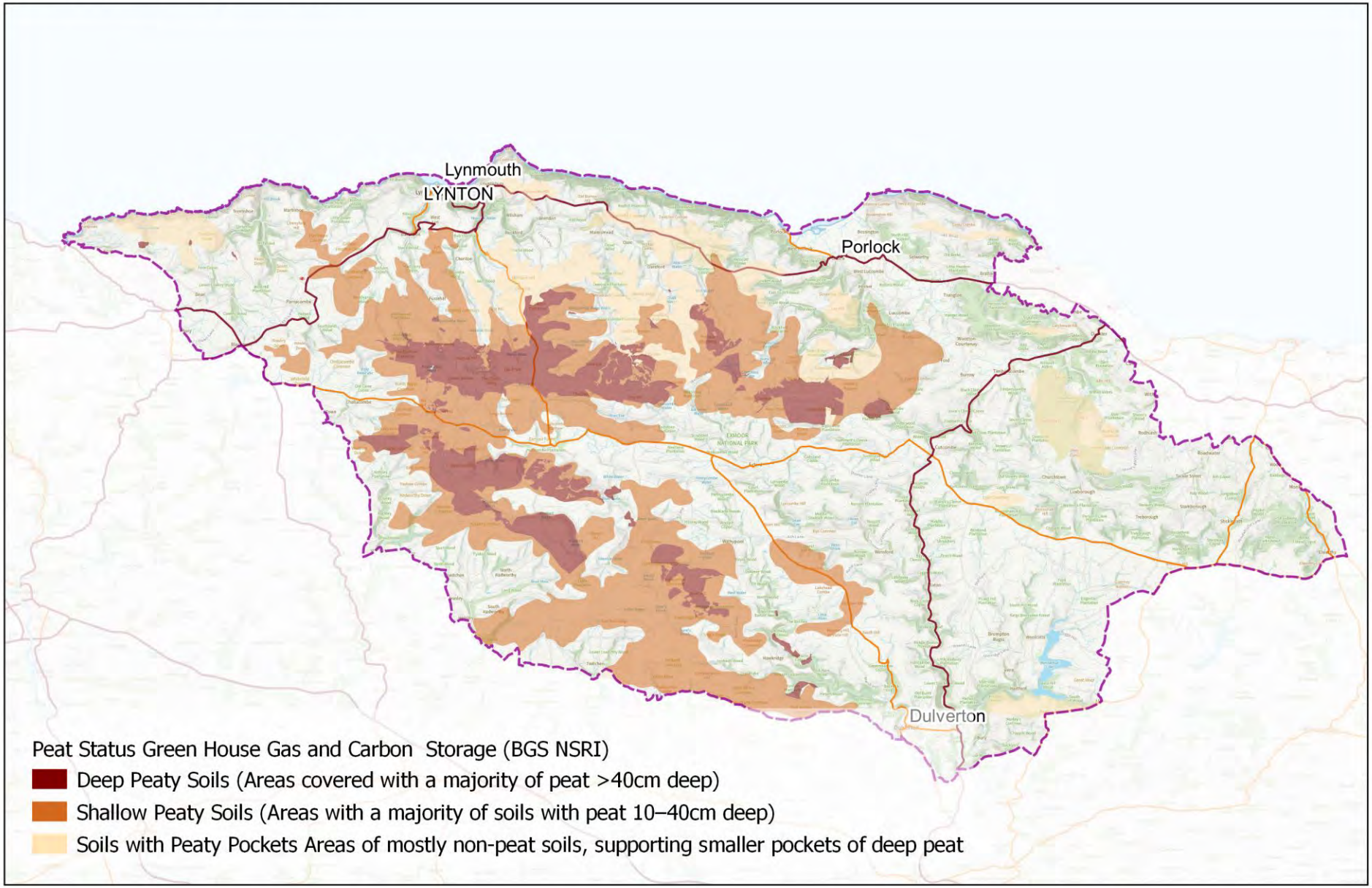
Exmoor's Peatlands

Exeter University, Mires on the Moors Report 2020

- Exmoor has 3,333 ha of peatlands (NE Living England data), formed over the last 3,000-8,000 years by peat-accumulating mire habitats, the most common being the globally scarce blanket bog, as well as valley bogs and fens. The peatlands are designated as Sites of Special Scientific Interest due to their unique association of plants and animals and importance nationally and internationally on the south-west climatic edge of the blanket bog area in the UK. They are also a qualifying feature of the Exmoor Heaths Special Area of Conservation
- Peatlands are important carbon stores and essential to meeting targets for responding to climate change. They are important habitats, help to regulate water quality and flows, and preserve historic records of past human activity and vegetation change
- Peatland habitats are sensitive to climatic change and hydrological disturbance. Future climate change is likely to increase the drying effect on damaged peatlands resulting in further loss of carbon into the atmosphere, drying out of archaeology and palaeo-ecology on the moors, and damage to moorland river hydrology and ecology. This brings associated problems of erosion, drying out in summer, flooding, and loss of key species and diversity
- Around 11% of Exmoor's peatlands are estimated to be in healthy condition, based on research on the effectiveness of ditch blocking as part of the Exmoor Mires restoration
- Restoration works are estimated to save around 4,000 tonnes of carbon per year

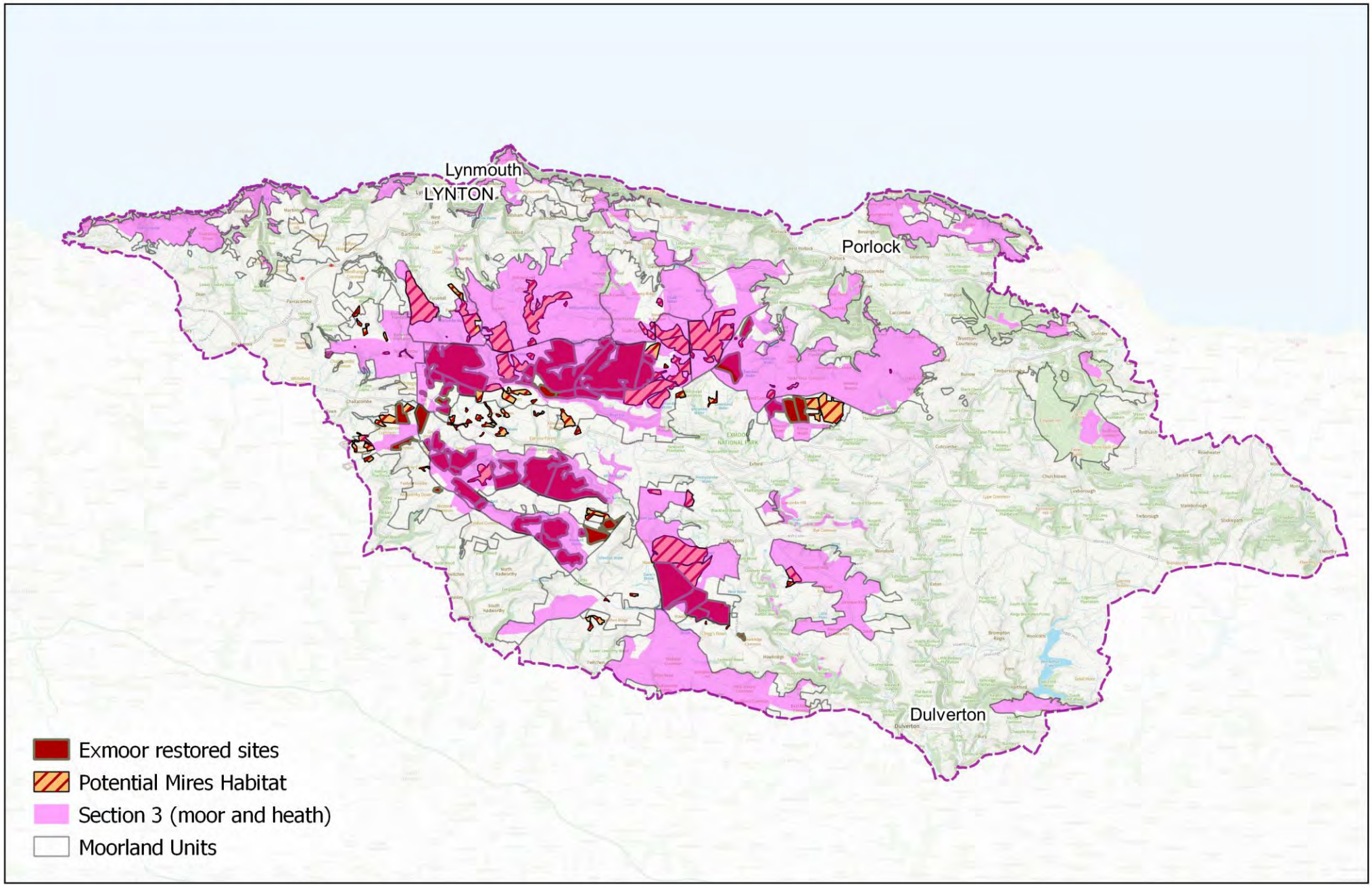
Source: Mires on the Moors Science and Evidence Report 2020, Exeter University

Existing Peat depth Sites



Compiled by Matt Sully on 112/10/2022

Restored Peat Sites



Compiled by Matt Sully on 23/2/2021

Exmoor Peatland Restoration

- Centuries of moorland reclamation, agricultural drainage and domestic peat-cutting, historical overgrazing and practices such as burning or moorland swaling to regenerate vegetation for grazing have modified the habitat and dried out the peat and led to moorland grasses dominating, resulting in the loss of many interesting plants, animals and birds
- The SW Peatlands Project is restoring blanket bog by rewetting the peat in areas where it has been degraded from past land use. From 1998 to early 2020, over 2,603 ha of damaged peatland has had initial ditch blocking works carried out on Exmoor – a total of 25,607 blocks installed in 250 km of drainage ditches. A further 760 ha is considered unsuitable for restoration.
- Monitoring indicates that restoration of deep peat has been more successful in returning the peatlands to a more naturally functioning state than shallow peat
- Restoration has reduced peak rainfall run-off by 21% and up to 32% of overall run-off.
- Greater improvements to the ecohydrological function, particularly vegetation change are needed before significant changes in water quality can be detected following restoration, such as the reduction in carbon loads which are only just becoming evident
- In the short-term (4-5 years) ditch blocking has not resulted in the high enough or stable enough water tables needed to promote the spread of Sphagnum mosses required to restore carbon sequestration.

	Deeper peats	Shallower peats
Water storage	2.45cm average increase up to 7cm	Complex response but overall no change Driest areas 4cm increase
Rainfall runoff	66% reduction in gully flows	Complex response with up to 32% reduction
Water quality	No significant change	No significant change
Heterotrophic respiration	Significant reduction with initial increase in methane emissions	No significant change

Source: Mires on the Moors Science and Evidence Report 2020, Exeter University

Exmoor Peatlands - historic environment

Exmoor's moorland contains a wide range of historic sites and features which survive due to low intensity farming and lack of development pressure. Organic materials and environmental evidence are preserved in the peat providing information about the moors and how they were used going back millenia

Palaeoenvironmental studies, geophysical and earthwork surveys, excavations and watching briefs carried out by Exmoor Mires Partnership have identified over 300 previously unrecorded archaeological features and sites, ranging from around 6,000BC to the 20th century. This includes prehistoric standing stones and cairns, nineteenth-century mining works, networks of medieval trackways and Second World War military training features.

Palaeo-environmental analysis of a 'forest floor' deposit at Alderman's Barrow Allotment and of a survey of a deserted medieval settlement at Mansley Combe are being carried out

New research into aspects of the historic environment that may be impacted by mire restoration includes investigations into domestic and industrial peat cutting, the form and dating of deserted field systems on Codsend Moor (right) and the soils of Exmoor before the formation of peat

Source: Mires on the Moors Science and Evidence Report 2020, Exeter University

Exmoor Peatlands - landscape

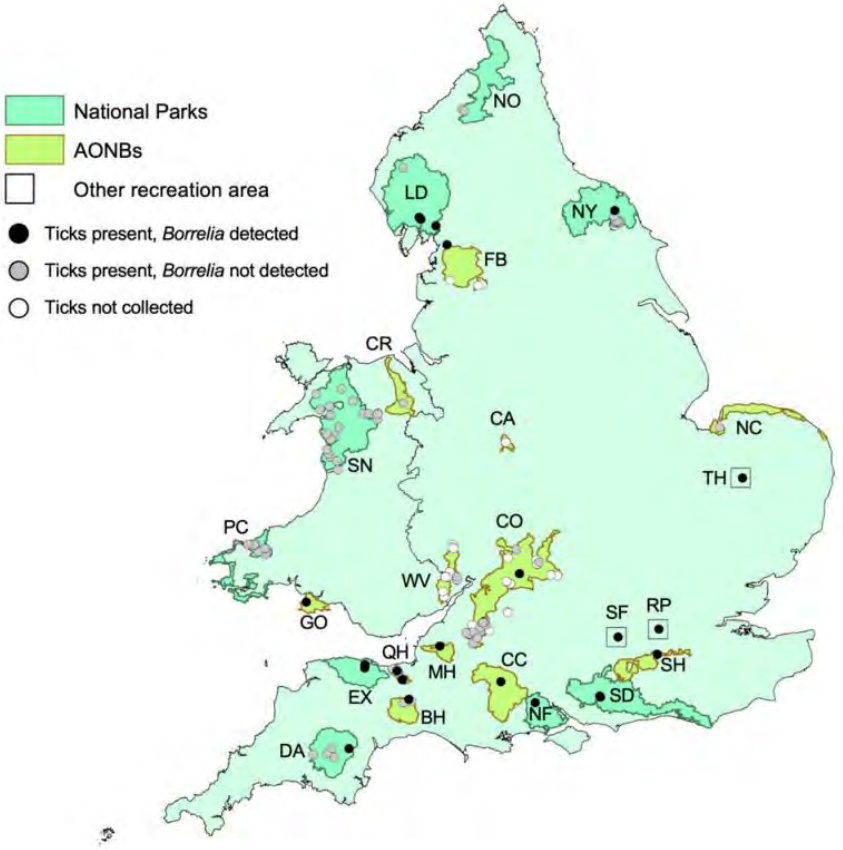
Peatland restoration aims to bring about landscape change. In order to demonstrate and monitor landscape change associated with restoration fixed point photography is used (Figure 10). There are now over 60 pre- and post-restoration locations across Exmoor and Dartmoor

Figure 10 Fixed point photography from Roostichen, Exmoor; pre-restoration (2006), immediately post-restoration (2006) and 13 years post-restoration (2019).

Source: Mires on the Moors Science and Evidence Report 2020, Exeter University

EXMOOR NATIONAL PARK

Ticks



- A 6 year study of tick borne diseases in Protected Landscapes was carried out by Public Health England & Wales
- The highest infection rates were recorded in ticks from sites in southern England, specifically in ticks collected from the South Downs National Park, Surrey Hills AONB and Cranborne Chase AONB (average of over 10%)
- Tick infestations were lower on Exmoor (Dunkery Beacon, Horner Wood, Luccombe, Webbers Post) with an average of under 2% infected ticks)
- A study carried out on Molland Moor as part of the Graze the Moor project found that the population of sheep ticks which are carrying a wide range of diseases, is higher than expected
- Exmoor Mires monitoring found that population densities of the sheep tick are significantly lower in mires than in drier habitats on the same sites

Swaling

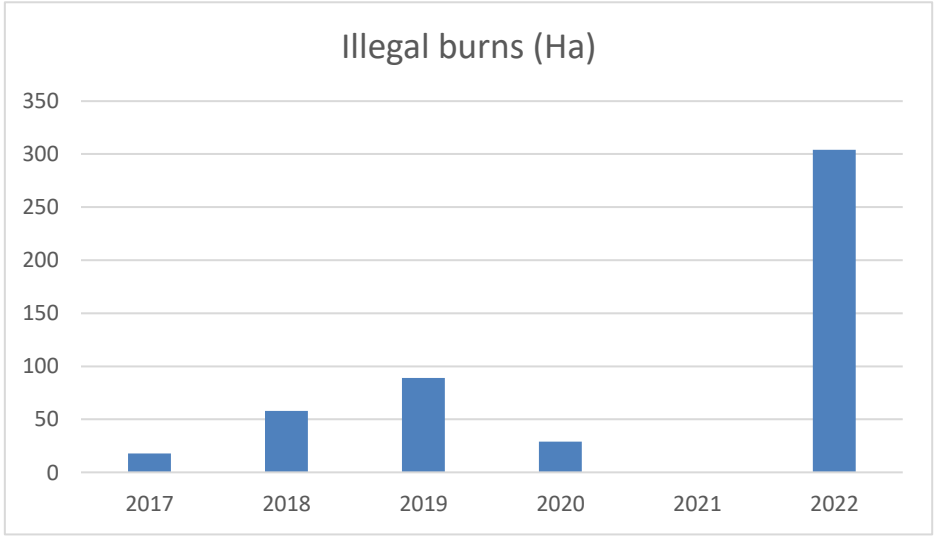
- Controlled burning (swaling) has traditionally been practised on Exmoor as part of moorland management but is now rare; with a few small burns in recent years, including at Molland, Winsford Hill and Holnicote. In the past, large areas were swaled each year (1,674 ha in 1997) but this has declined steadily since
- Exmoor has around 3,000 ha of Blanket bog (deep peat over 40cm depth), a habitat of international importance, with the UK having 13% of the world's resource. Following scientific evidence that the burning of vegetation on Blanket bog is detrimental to biodiversity, peat formation, habitat condition, water quality and carbon storage, the Government introduced new legislation in 2021 prohibiting the burning of areas of deep peat in SSSIs and Special Areas of Conservation, except under license
- The balance of benefits and disbenefits is less clear around swaling on areas of upland health (with less than 40cm peat depth). Excessive burning is one of the factors considered to have contributed to a decline in habitat condition and species diversity, and to water quality issues including water discolouration and elevated dissolved organic carbon concentrations. Controlled burning can however play a part in diversifying heather age structure and reducing the fuel load from vegetation, which reduces the risk of wildfires. There is no conclusive evidence on the impact of burning on shallow peat on carbon storage
- The lack of swaling has led to more gorse, scrub and bracken and increased height of vegetation. This can impact on other management objectives such as grazing, as well as impeding access and potentially increases the risk of wild fires

Illegal burns and wildfires

Over the last 5 years there has been a noticeable increase in wildfires globally and in other parts of the UK. 2019 has seen the most damage from wildfires in the UK to date - totaling 28,754 hectares of burned area (Source: European Wildfire Report, Utility Bidder)

In comparison on Exmoor there have been very few illegal burns and wildfires over the last few years, although there was an increase in 2022.
Areas such as West Anstey, Ilkerton ridge and Brendon common have historically been the most likely places for arson, and this has been the case in 2022.

It is very rare to have the classic 'accidental' fire from a discarded cigarette or BBQ, although a large accidental fire on Brendon Common (141 ha) was caused by a vehicle out following the hunt. Nearly all the uncontrolled fires are deliberately lit. The most likely incentive for setting light to moorland without permission is to gain grazing for stock, or to encourage deer onto a particular piece of land



Valley of Rocks near Lynton by Alfred Robert Quinton. 1825. Watercolour.
Image courtesy Salmon's.

Special Quality: A distinct and diverse landscape of softly rounded hills and ridges, with heather and grass moors, spectacular coast, deeply incised wooded valleys, high sea cliffs, fast flowing streams, traditional upland farms and characteristic beech hedgebanks

Exmoor's landscape character:

- The majority of visitors to Exmoor are attracted by the landscape (90%) and tranquillity (84%)
- Projects to enhance landscape character include the restoration of White Rock Cottage and it's surrounding Picturesque garden at Ashcombe; undergrounding schemes at Cloud Farm; and improvements to ENPA's car park at the Valley of Rocks
- Overall, landscape character is being maintained and there are no major threats but there is evidence of incremental changes especially in vegetation cover

Diverse landscapes summary

Landscape monitoring shows incremental but evident change in the nature of the land cover and vegetation and the occurrence of man-made features. The key trends identified were:

- An increase of scrub cover and woodland on valley floors
- A reduction of open moorland vegetation
- Conifer plantation planting
- Changes and improvements to pasture
- The spread of vigorous species such as rhododendron, gorse and bracken
- Loss of boundary features such as hedgebanks
- Loss of common tree species due to disease particularly Ash dieback
- In some areas, more intensive, large-scale game bird shoots are impacting on the landscape, with significant change to the character, condition and visual quality of the landscape from planting of cover crops, a reduction in ground cover vegetation and the introduction of infrastructure such as fencing, tracks, feeders and pens

A recent review of Exmoor's geological sites confirmed 63 Local Geology Sites (LGS) in the National Park, 49 in Somerset and 14 in Devon. Exmoor also has 8 Sites of Special Scientific Interest (SSSIs) which include geology as part of their designation. 94% of these SSSIs are in favourable condition, 2% in unfavourable recovering, and 4% in unfavourable no change condition, although there have been no recent SSSI condition surveys undertaken

A number of landscape enhancements have taken place including:

- Restoration White Rock Cottage and the designed gardens at Ashcombe
- The Farming in Protected Landscapes programme is funding measures to support enhancements to landscape features including orchards and hedgerows
- Valley of Rocks car park improvements
- Cloud farm undergrounding

Exmoor's Landscape Character Types and Seascape Character Areas

Exmoor has 9 distinct landscape character types and 26 character areas. This diversity of landscape is part of Exmoor's character.

There are also 10 seascape character areas along Exmoor's coast

Landscape Character Types

A: High Coastal Heaths

B: High Wooded Coast, Combes and Cleaves

C: Low Farmed Coast and Marsh

D: Open Moorland

E: Farmed and Settled Vale

F: Enclosed Farmed Hills with Commons

G: Incised Wooded Valleys

H: Plantation (with Heathland) Hills

H: Wooded and Farmed Hills with Combes

Seascape Character Areas

Only those identified along the Exmoor Coast

01: Minehead Harbour to Hurlstone Point

02: Porlock Bay

03: Central Bristol Channel

04: Gore Point to Countisbury Cove

05: The Foreland and Lynmouth Bay

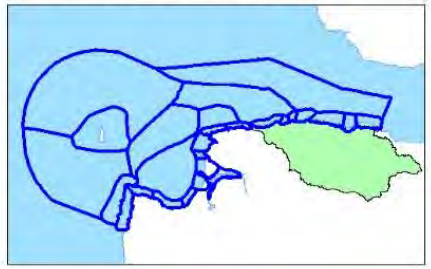
06: Valley of Rocks

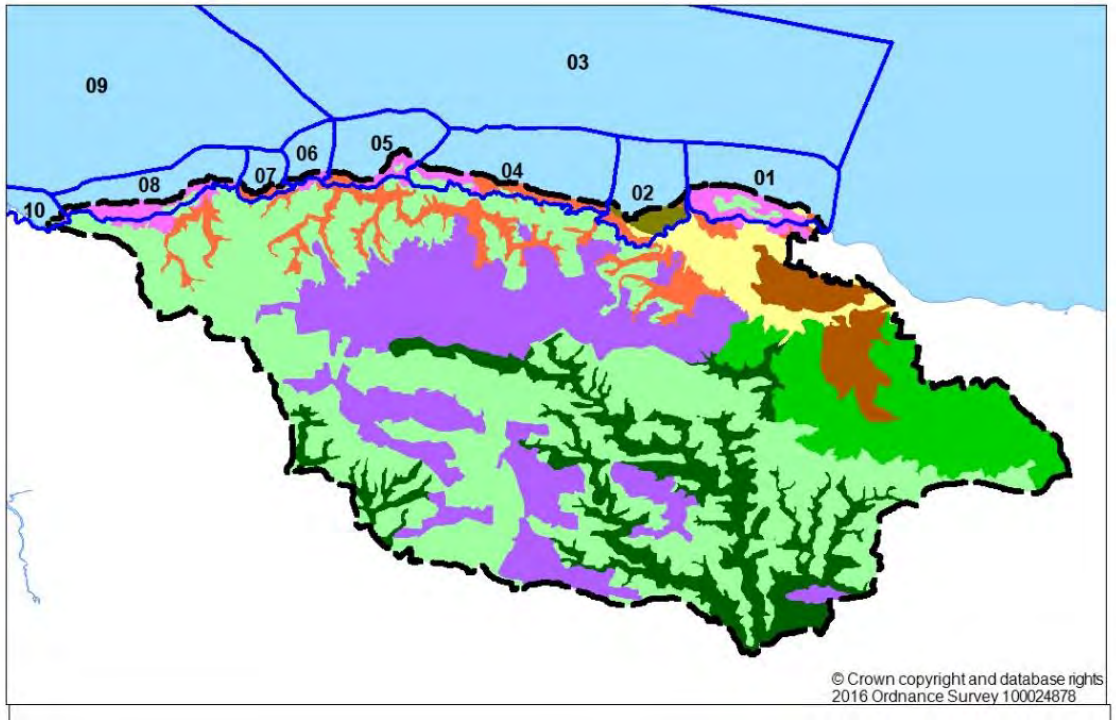
07: Lee and Woody Bays

08: Woody Bay to Little Hangman

09: Lower Bristol Channel

10: Ilfracombe and Combe Martin Bays





Monitoring landscape change

Landscape monitoring carried out by ENPA compared historic photographs (from the 1920s-1950s) to present day equivalents. This showed incremental but evident change in the nature of the land cover and vegetation and the occurrence of man-made features. The key trends identified were:

- An increase of shrub cover and woodland on valley floors
- A reduction of open moorland vegetation
- Conifer plantation planting
- Changes and improvements to pasture
- The spread of vigorous species such as rhododendron, gorse and bracken
- Loss of boundary features such as railings and hedgebanks
- Loss of common tree species due to disease particularly Ash dieback

Top pair: Sloe Combe, Wotton Courtenay - from mid 1950s and recent times showing the reduction in open moorland and increase in conifer plantations
Bottom pair: Heale Brake, Parracombe - Photos from 1950 and recent times showing the expansion of woodland in the valley

Monitoring landscape change: Game Bird Shoots

Pheasant and partridge rearing and shooting takes place over about one third of the National Park. This supports jobs, cultural connectivity and the local economy and can bring environmental benefits, such as cover for overwintering farmland birds.

However more intensive, large-scale shoots can have detrimental environmental impacts such as significant change to the character, condition and visual quality of the landscapes and people's enjoyment of them, particularly in areas of cultural and historic sensitivity or where it is adjacent to the moorland line or open access land and public rights of way

The physical changes to the landscape include planting of cover crops, a reduction in ground cover vegetation and the introduction of infrastructure such as fencing, tracks, feeders and pens

There are other potential impacts relating to noise, soil run off and nutrification, as well as impacts on other recreational users though these can be managed with care, planning and local communication

Aerial photos showing the landscape impact of game cover crops

Some of the negative impacts of game shoot infrastructure

Periglacial knoll at Short Combe Rocks

Exmoor’s geology

There are 4 Sites of Special Scientific Interest (SSSIs) designated for their geology and another 4 which include geology as part of their designation, comprising a total of 50 geological features: Glenthorne; Hele, Samson's and Combe Martin Bays; North Exmoor; Porlock Ridge and Saltmarsh; River Lyn; Watersmeet; West Exmoor Coast and Woods; Dean Steep.

Of the 4 designated for their geology, 94% are in favourable condition, 2% in unfavourable recovering, and 4% in unfavourable no change condition

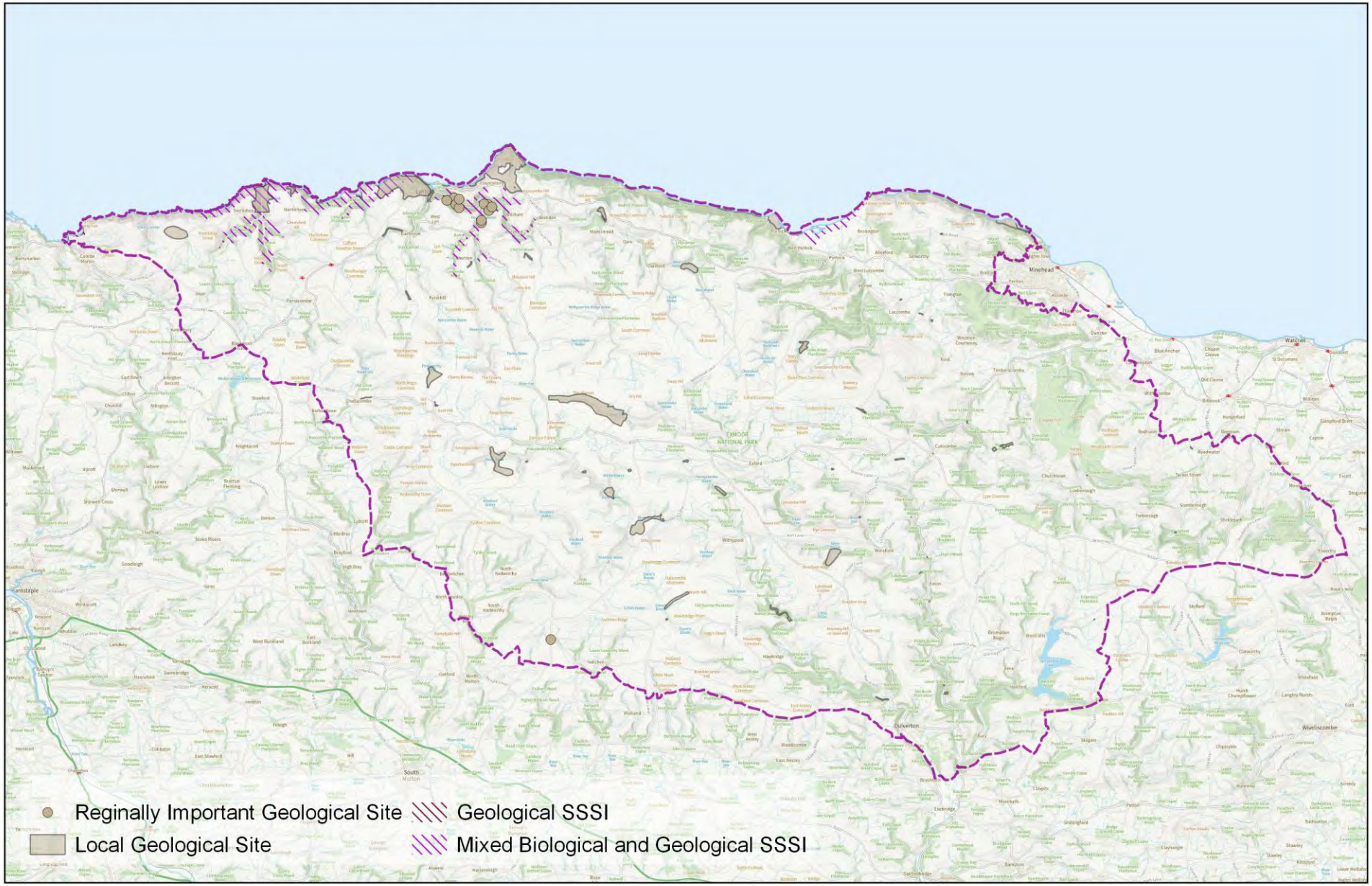
For the sites recorded as in good or favourable condition this was attributed to grazing or active natural processes, such as coastal or stream erosion

For the sites recorded as less favourable or declining, the most frequent issue related to overgrown vegetation, either obscuring access or the rock exposures themselves. Occasionally some sites (or parts of) were recorded as virtually inaccessible through dense overgrown vegetation

There are 63 Local Geology Sites (LGS) in the National Park, 49 in Somerset and 14 in Devon. As part of an LGS review across Somerset, the report for Exmoor, published in 2021, reconfirmed most of the original LGS (adopted in 1993), with a few relatively minor adjustments to site boundaries or amalgamation. Due to variations in recording condition, extracting percentages or categorizing the LGS was not possible

21 of the LGS are located on the coast and tend to have the best rock exposures. These often complement the geological SSSIs

Geological SSSI and Local Geological Sites



Compiled by Matt Sully on 24/11/2022

Landscape enhancements: White Rock Cottage and Ashcombe Gardens

- Exmoor NPA has been restoring White Rock Cottage in Simonsbath, a rare survival dating back to the 19th century when the entrepreneurial Knight family owned Exmoor Forest and set out to tame its wilderness. Works to repair the building have revealed what is thought to be the original appearance of the building, once again linking it to the designed landscape in which it sits
- Works to open up the associated historic Picturesque garden landscape in Ashcombe have progressed steadily with a group of dedicated volunteers and forestry contractors. In 2020 around 30% of the tree cover in the valley was removed due to ash dieback. Replanting in response to that, and to re-establish the planting scheme of the historic garden was begun in March 2021. Together, the buildings and gardens are helping to reveal the human story of how this moorland community shaped the face of Exmoor

Landscape enhancements: Cloud Farm overhead line removal

Malmsmead is one of the honey pots of the National Park, the centre of Lorna Doone country and the overhead cables and poles were very intrusive. The removal of the lines significantly improved the visual appearance of the valley for users of the public footpath leading up to Cloud Farm, for visitors to the camp site and those on the bridleway and trail of the Coleridge Way. In total, 1,050m of 11kv overhead line were put under the track to Cloud Farm, avoiding any need for trenching on adjacent land.

Valley of Rocks enhancements

This much-loved landscape attracts many visitors for its dramatic coastal scenery and feral goats. The picnic area at the eastern end is popular and the parking surfaces were becoming potholed and muddy. To improve visitor experience, the track was resurfaced and more defined gravel parking bays created to increase the amount of parking whilst retaining the central grass area for summer parking and picnicking. The drystone wall at the entrance was repaired and new signage added

Photos of the parking areas and boundary wall repair

Distinctive landscape features

- Hedgerows are a strong landscape feature on Exmoor, particularly the ancient mixed species hedge banks and the typical beech hedge banks on the farmed hills and vale. Exmoor has around 4,000km of hedgerows and boundary features.
- There are over 1,600 ancient (veteran) trees, found throughout Exmoor, often in more formally designed parkland and wood pasture landscapes.
- Traditionally orchards would have surrounded farmsteads and villages, but over the last century 80% of Exmoor's orchards have been lost due to development, neglect or change in land use.
- The Farming in Protected Landscapes programme supports enhancements to landscape features. Since the scheme began in July 2021, it has funded:
  - Planting 2567m of new hedgerows
  - Restoration of 4534m of hedgerow
  - Planting of 135 fruit trees

Luccombe, by Alfred Heaton Cooper, 1927. Watercolour. Image Courtesy:

Special Quality: *A timeless landscape mostly free from intrusive development, with striking views inside and out of the National Park, and where the natural beauty of Exmoor and its dark skies can be appreciated*

Exmoor's timeless landscape:

- Exmoor remains one of the most tranquil areas in England
- There are relatively few developments that detract from the landscape despite significant numbers of new developments
- There is potential for cumulative impacts in some areas
- There has been significant increase in certain types of development such as telecommunications masts and agricultural barns
- Inappropriate scale and massing of developments also potentially impact the landscape
- There is increasing development outside Exmoor which can impact on views to and from the National Park and its setting

Timeless landscapes summary

- There are many current threats to Exmoor's landscapes, particularly inappropriate development, climate change and changes in management
- Many of these potential threats are carefully managed through the planning system to enable necessary development without eroding landscape character but this does lead to incremental small scale change
- Since 2000, 495 agricultural buildings have been permitted, totalling 152,011m2. This is important to support modern farming systems, but needs to be carefully managed to avoid impacts on Exmoor's special qualities
- 26 telecommunications masts, antennae, poles or associated equipment have been installed since 2017 to improve broadband speeds and coverage
- A number of commercial renewable energy proposals have come forward for wind and solar farms in areas which are visible from the National Park. ENPA comments on these applications to avoid harm to the setting of the National Park and views into and out of the Park
- 418 lighting conditions have been attached to planning permissions since 2017 to avoid light pollution within the Dark Sky Reserve. Monitoring demonstrates that there is no obvious trend to suggest that light pollution is on the increase over the last 4 years

Threat's to Exmoor's landscape character

The greatest current threats to Exmoor's landscapes include:

- the loss of extensive areas of open space and key views through changes in vegetation
- the continuing loss of heather and grass moorland to bracken, gorse and trees
- the damage to buried archaeology by encroaching bracken and trees
- loss of trees through pests, disease and climate change
- changing farming practices and uncertainty over future agricultural and woodland grant funding
- loss of landscape pattern as field boundaries deteriorate
- new large scale farm buildings
- equine land uses and skyline development (particularly telecommunications masts)

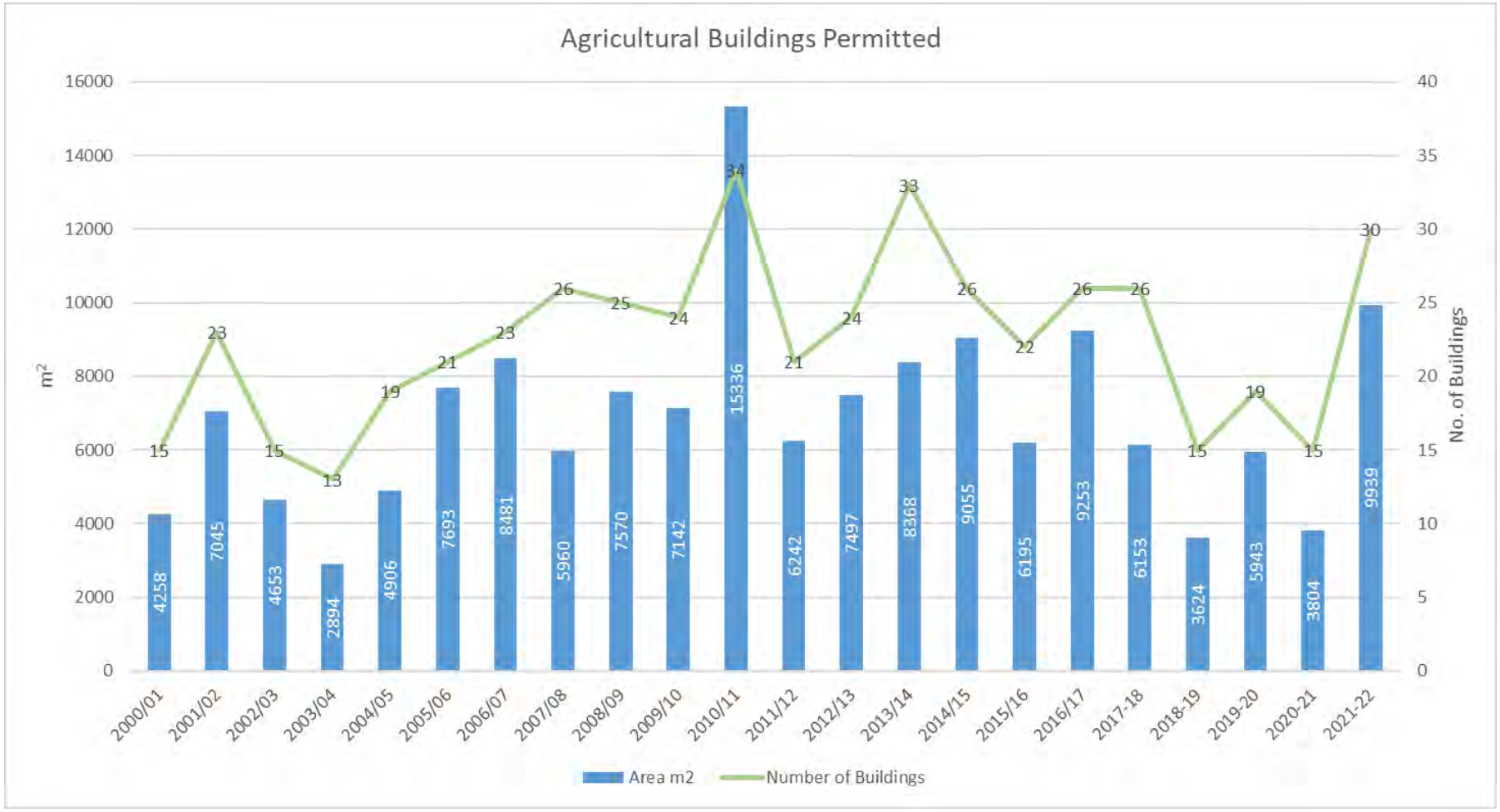
Other ongoing changes to the landscape include:

- intensification of game shooting
- tree felling as plantations reach maturity
- decline in traditional woodland management
- loss of small hay meadows and pasture due to agricultural intensification
- catchment-based flood amelioration schemes
- coastal change
- large scale renewables
- the proliferation of non-native species
- poor sewage management and climate change affecting rivers and streams, and
- recreational impacts

Source: Exmoor National Park Landscape Character Assessment, 2018

Agricultural Development

Since 2000, 495 agricultural buildings have been permitted, totalling 113,295m^2 including 105 totalling 29,463m2 in the last five years. This is important to support modern farming systems, but needs to be carefully managed to avoid impacts on Exmoor's special qualities.

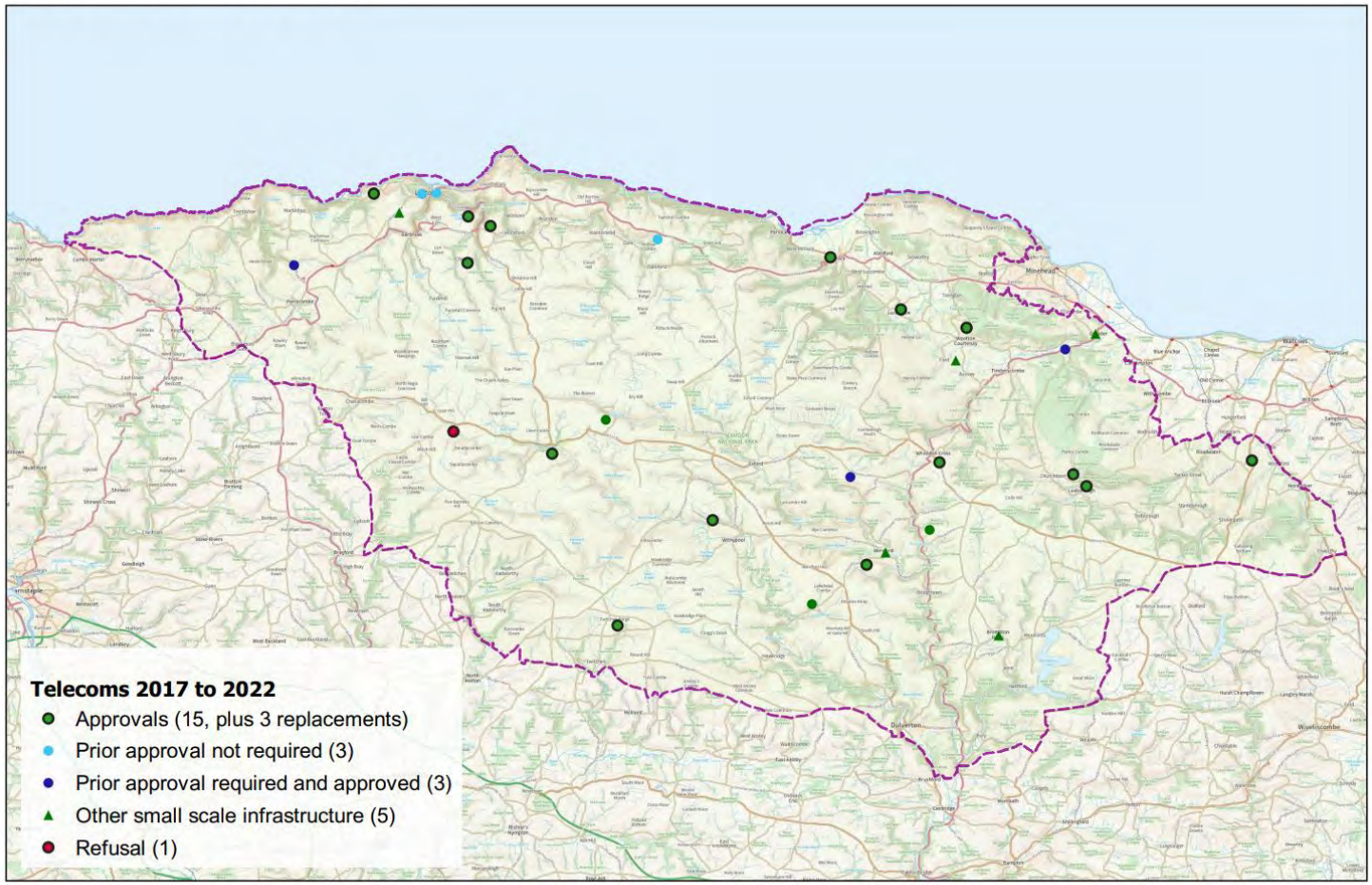


Source: Exmoor National Park Authority Local Plan Monitoring

Vertical structures

26 telecommunications masts, antennae, poles or associated equipment since 2017 have been installed since 2017 to improve broadband speeds and mobile signal coverage

Telecommunications Masts



Compiled by Matt Sully on 27/02/2023

Elworthy phone mast

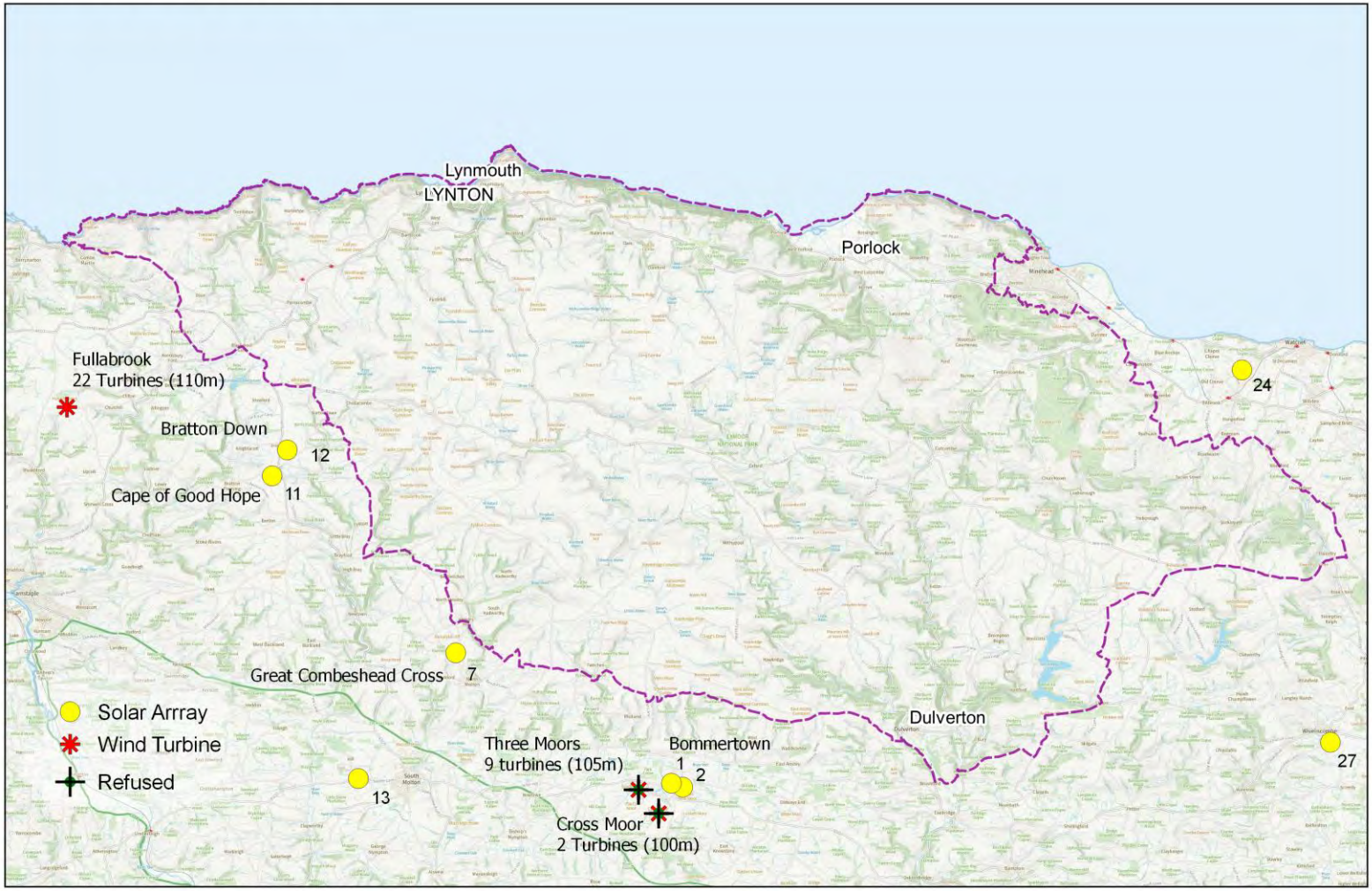
Landscape enhancements - Telecommunications

A discrete telecoms installation providing 4G coverage for Brompton Regis. The only noticeable external change to the building is the installation of a small box antenna to the top of each elevation of the church tower

Development affecting National Park views and setting

A number of commercial renewable energy proposals have come forward for wind and solar farms in areas which are visible from the National Park. ENPA comments on these applications to avoid harm to the setting of the National Park and views into and out of the Park.

Commercial Renewables



Compiled by Matt Sully on 14/10/2022

Local authorities determining these applications have a duty to have regard to the statutory purposes of the National Park when making their decisions

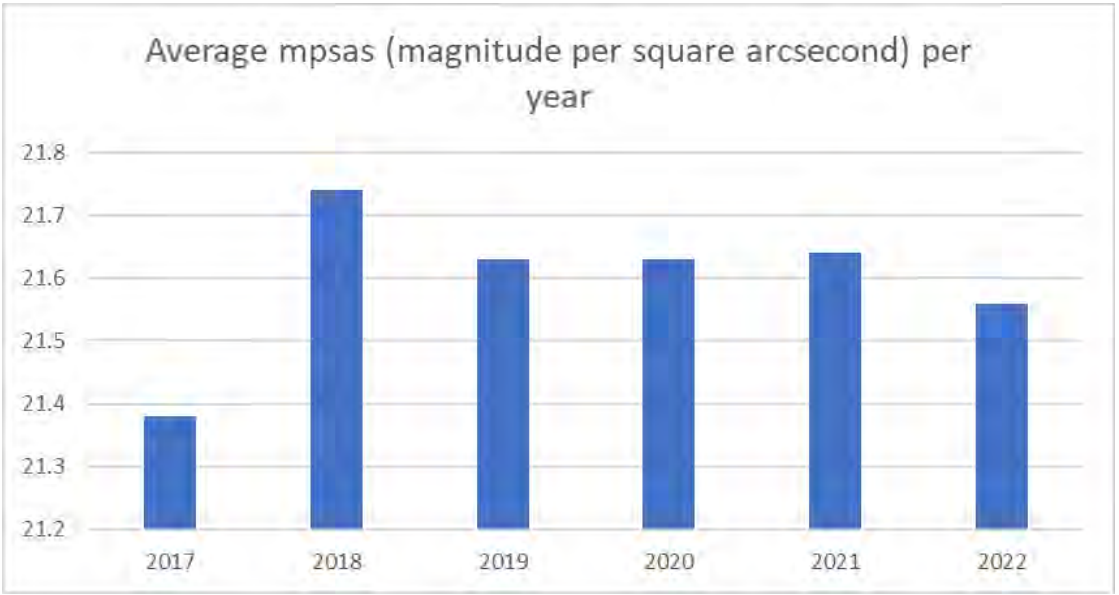
Exmoor's Dark Sky Reserve

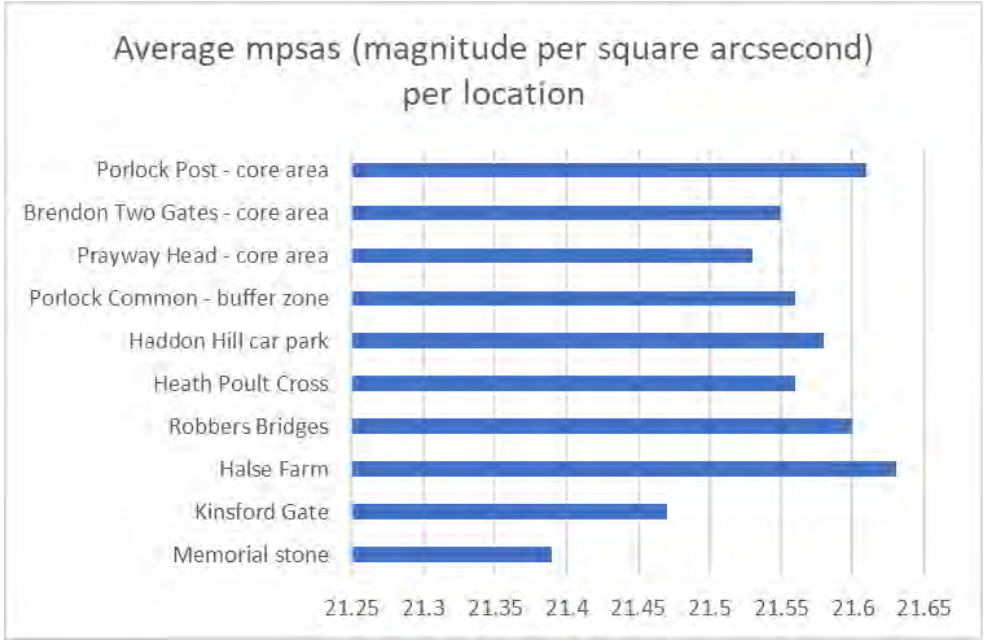
Exmoor was the first International Dark Sky Reserve in Europe, accredited by the International Dark-Sky Association in 2011

The highest average readings leading up to 2022, and therefore having the most consistently dark sky, have been at Halse Farm and Robbers Bridge.

The highest individual annual recording of darkness within the core area was at Porlock Post at 21.80 mpsa, indicating a very dark sky.

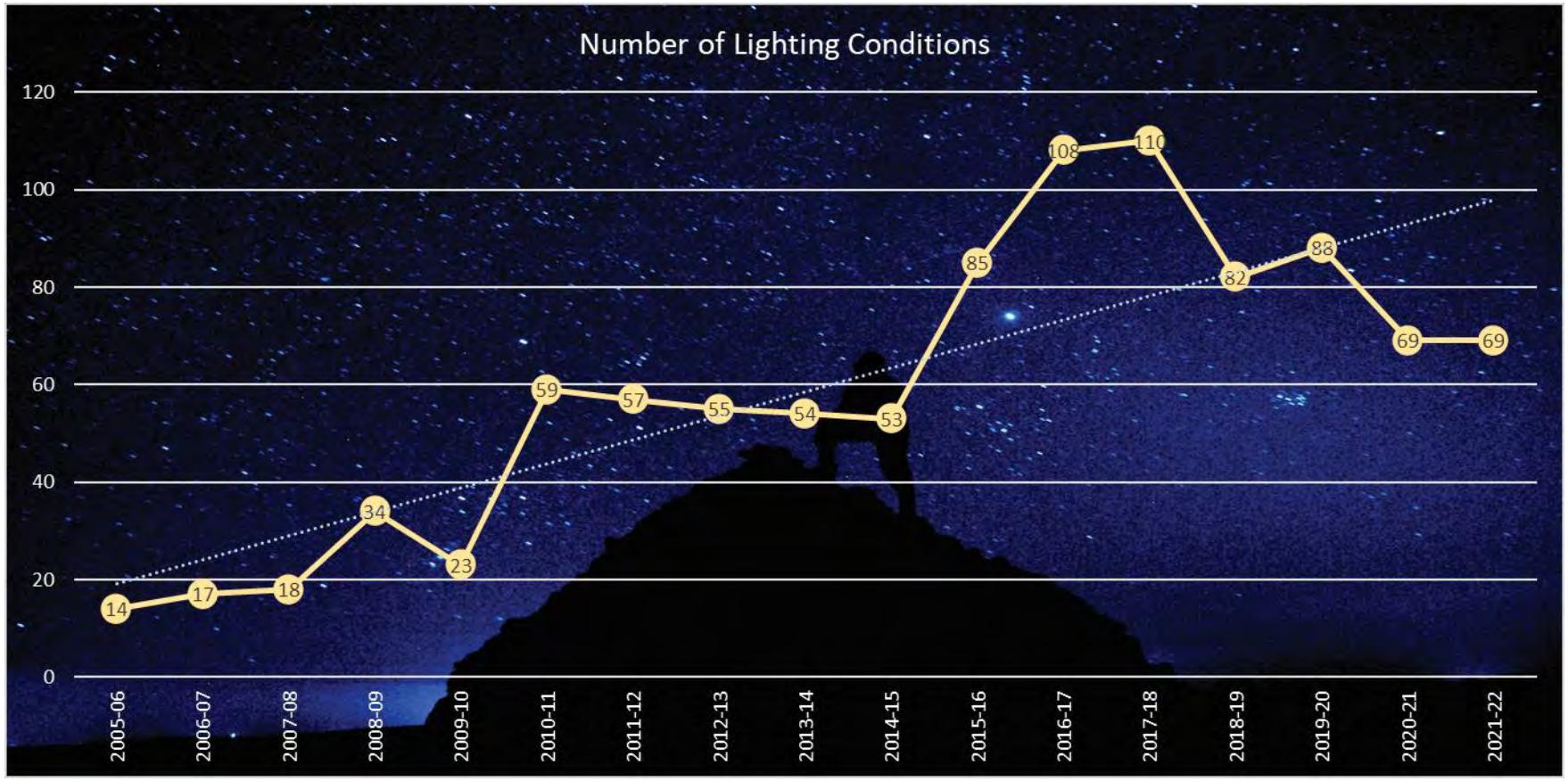
There is no obvious trend to suggest that light pollution is on the increase in the locations annually measured, with results relatively consistent over the last 4 years





Light pollution

The number of lighting conditions attached to planning permissions has increased significantly since designation of the Dark Sky Reserve in 2011. This helps to avoid light pollution within the National Park



Source: Exmoor National Park Authority Local Plan Monitoring

The River Barle, by Hope Bourne 1920-2010. Watercolour
Image courtesy The Exmoor Society

Special Quality: A mosaic of habitats supporting a great diversity of wildlife including herds of wild red deer; rich lichen communities, rare fritillary butterflies, bats and other species uncommon in southern Britain

Exmoor's Natural Environment assets:

- 2 Special Areas of Conservation (SACs) – 18% of the National Park
- 15 Sites of Special Scientific Interest (SSSIs) – 28% of the National Park
- 3 National Nature Reserves (NNRs) – 2% of the National Park
- 519 Local Wildlife Sites over 7,230 ha or 12% of the National Park
- Exmoor has 29 Priority Habitats and over 200 Priority Species
- In total SSSIs, SACs & LWSs cover 42% of the National Park

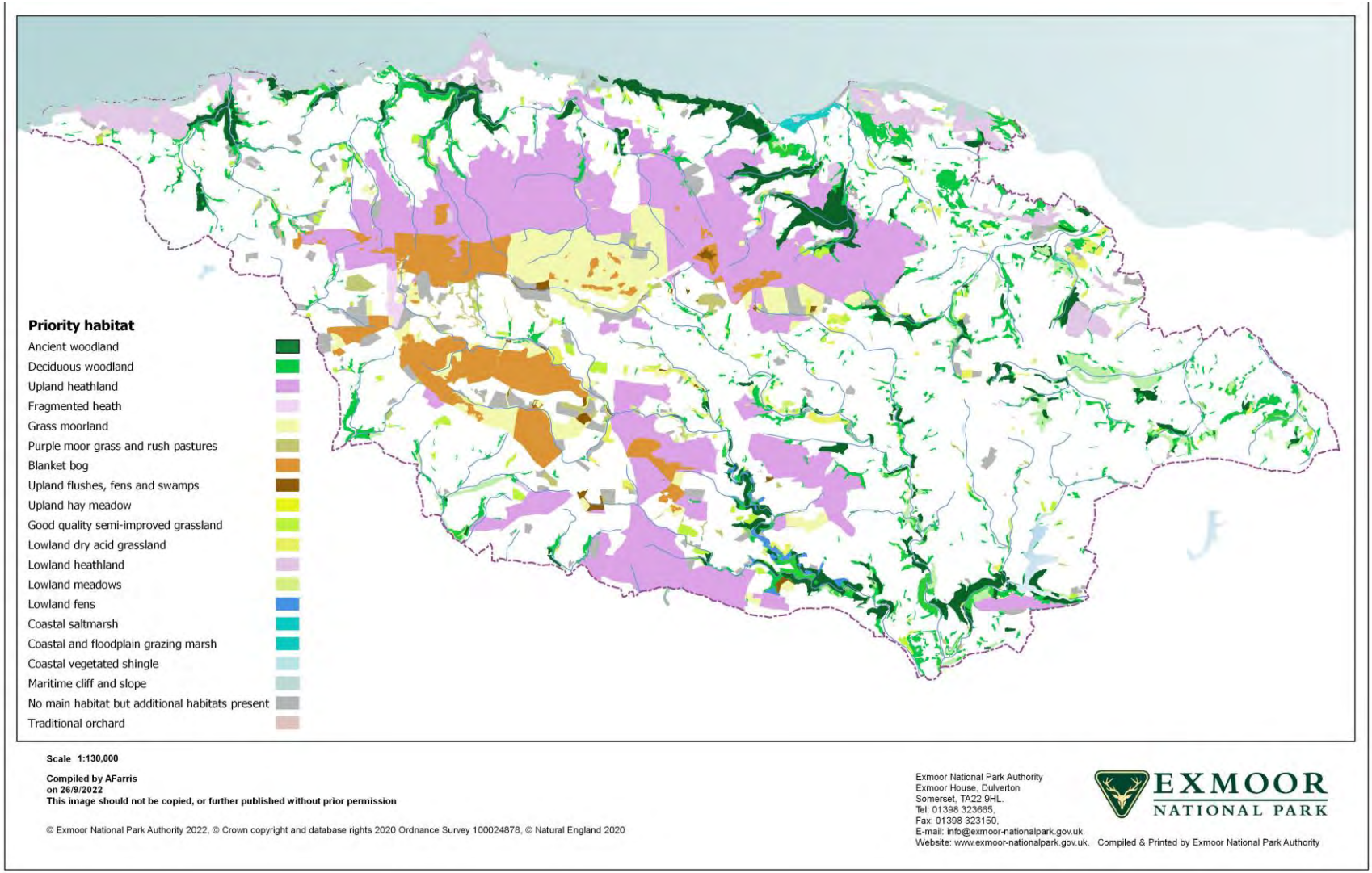
Some of these designations overlap

Wildlife summary

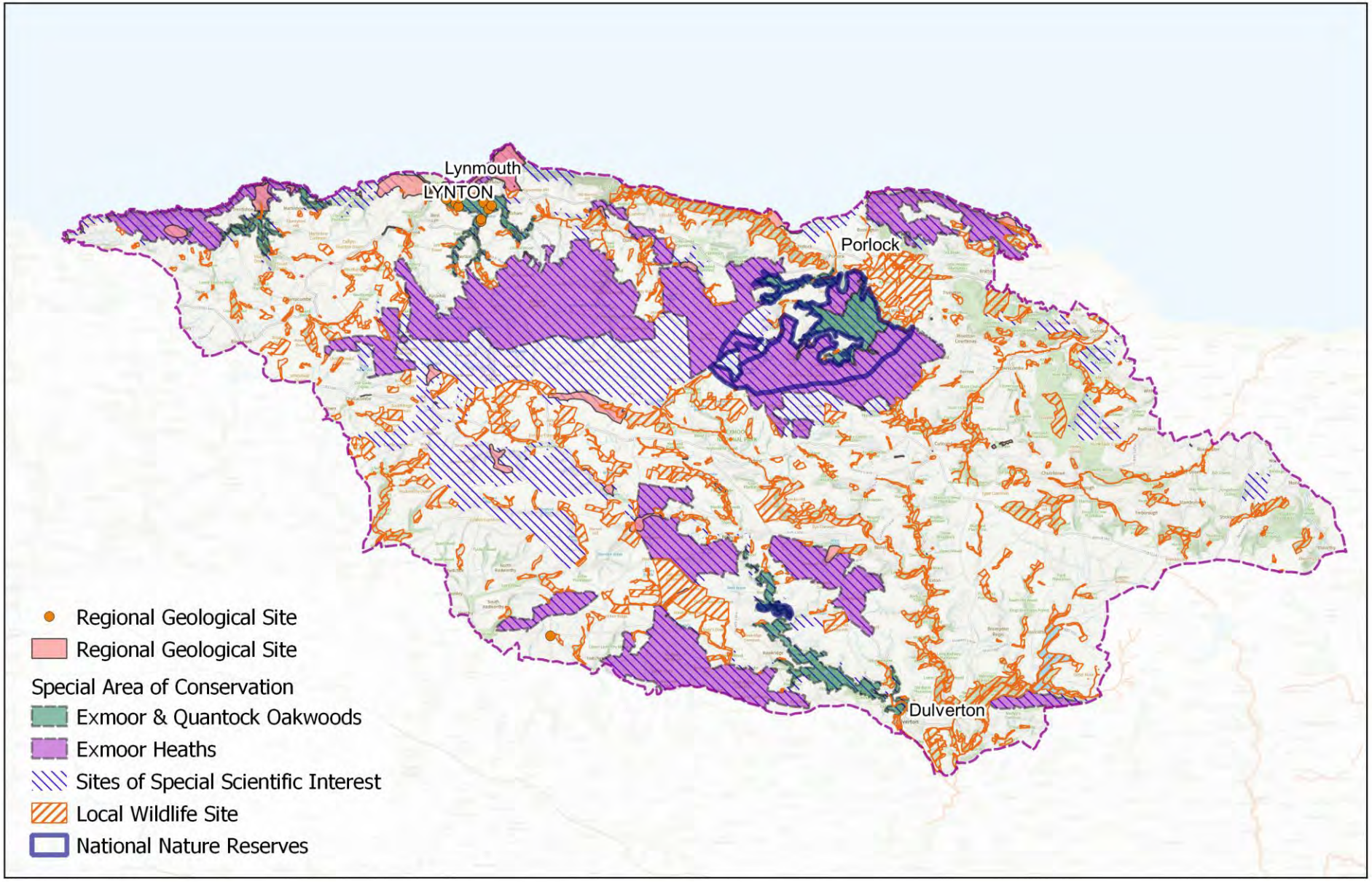
- Around 38% of Exmoor is estimated to be UK priority habitat and the National Park holds a range of habitats including internationally rare including areas of heath, blanket bog, and western oak woods, and rivers and streams designated for their wildlife importance. These habitats support 207 Priority Species
- Exmoor has not been immune to the wider declines in wildlife seen over the last few decades although some species are faring better in the National Park
- Only 15% of SSSIs are in favourable condition, with 81% in unfavourable recovering condition (compared with average of 61% across England). 51% of rivers and streams are in high or good ecological status
- There are many challenges to Exmoor's wildlife including climate change, with monitoring showing bud-burst and leaf emergence occurring 2 weeks earlier than in 2006; intensive land management practices; lack of active management for some woodlands; damage to young trees from deer and squirrels; loss of unimproved meadows, pastures and hedgerows; only half of monitored rivers and designated coastal or transitional water bodies are achieving 'high' or ‘good’ status; and we still know relatively little about the state of our coastal and marine wildlife
- Invasive non-native species continue to be a threat and the number of species is increasing, but ongoing control programmes are proving successful on sites where treatment is possible

Priority habitats

- Around 38% of Exmoor is estimated to be UK priority habitat including internationally rare areas of upland and lowland heath, blanket bog, and western oak woods, alongside species-rich grassland, and high quality freshwater, saltmarsh and marine habitats

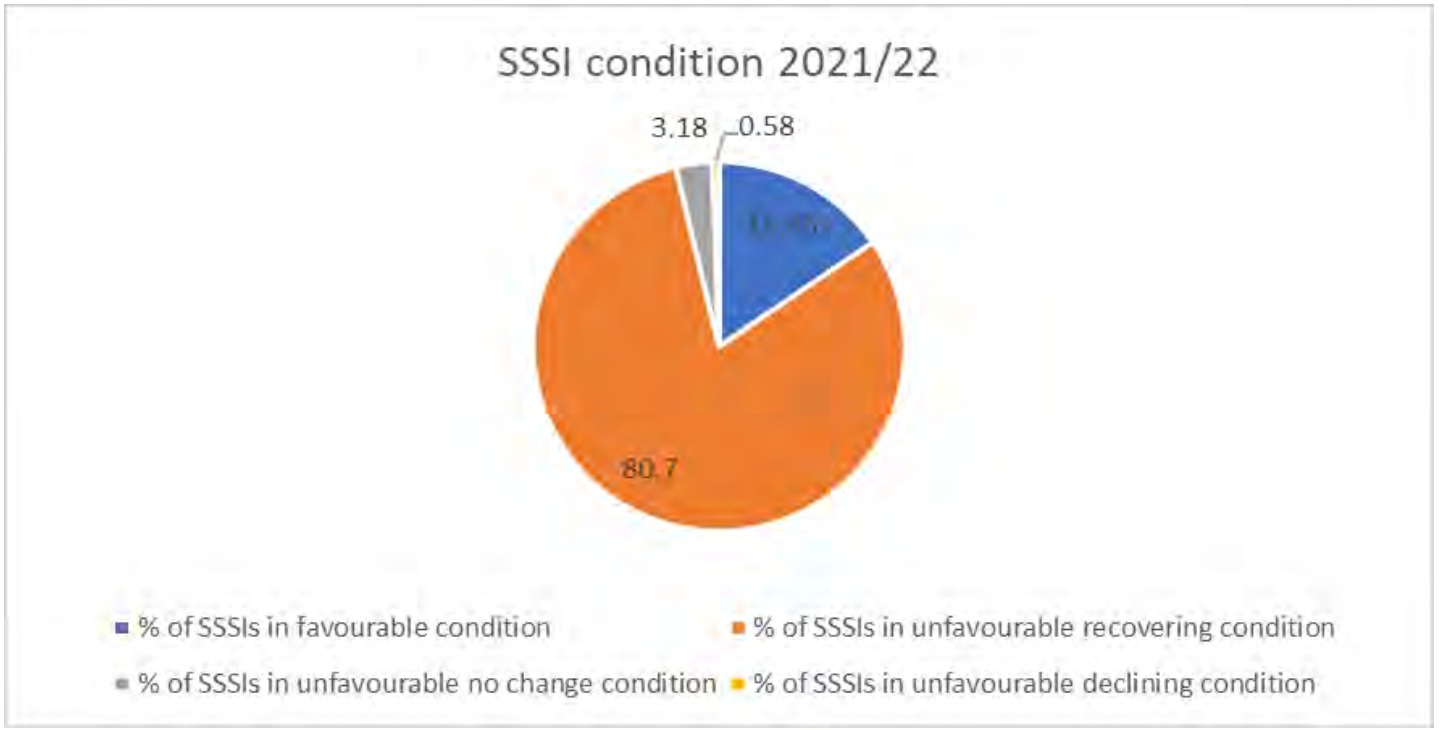


Exmoor National Park Wildlife Designations



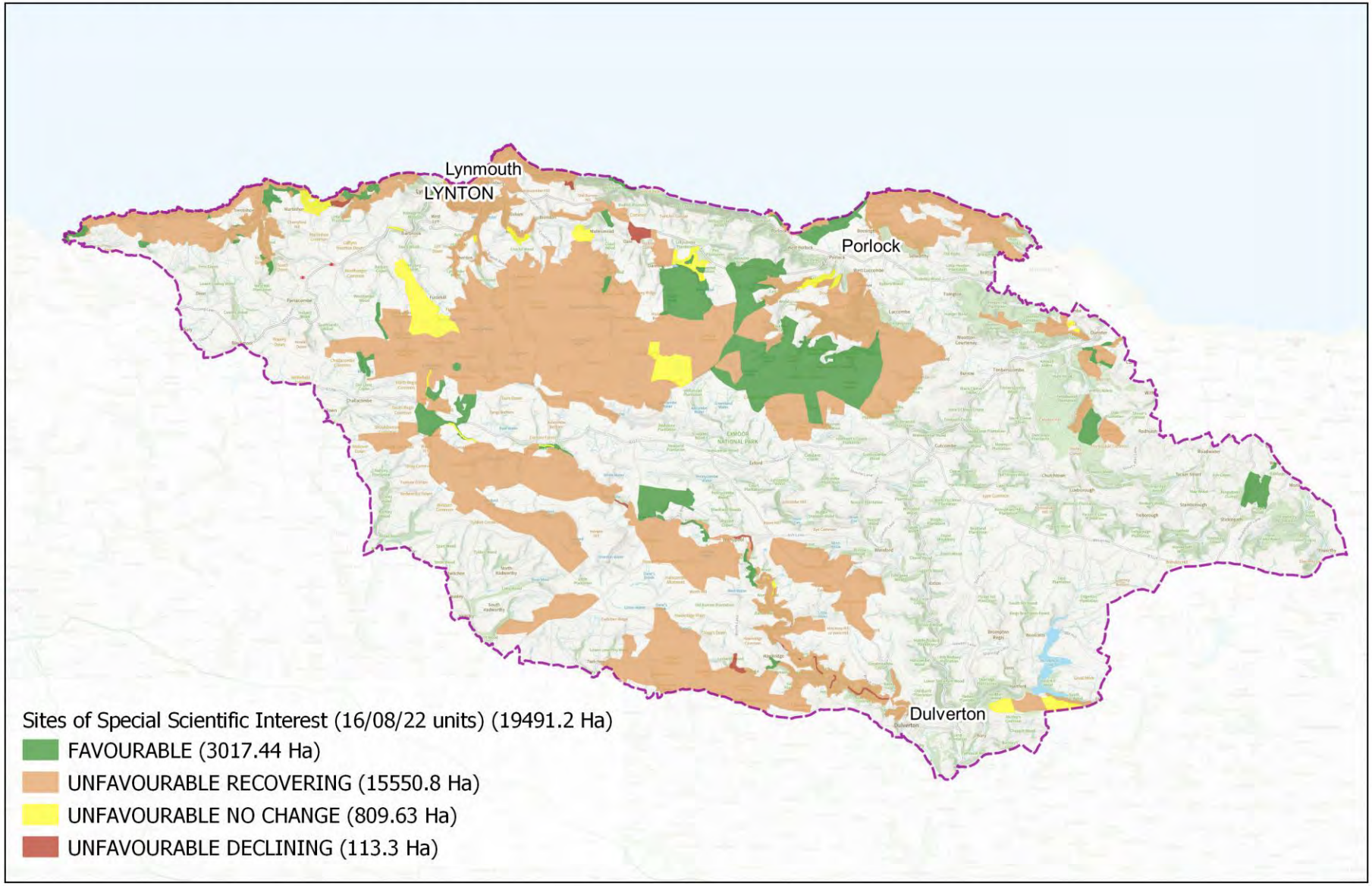
Habitat condition

- Exmoor has 15 SSSIs, including one new site designated on the ENPA Estate at Pinkworthy and Driver farm for its nationally important assemblage of grassland fungi and for its species-rich lowland dry acid grassland and rush pasture
- There is no reported change in the condition of SSSIs as the monitoring programme was discontinued due to budget cuts at Natural England. The latest figures are given in the pie chart below
- No updated monitoring of Local (County) Wildlife Sites is available. The last surveys indicated that 81% have remained unchanged since the 1990s but 2% have been lost



Source: Natural England

Sites of Special Scientific Units Status 2022



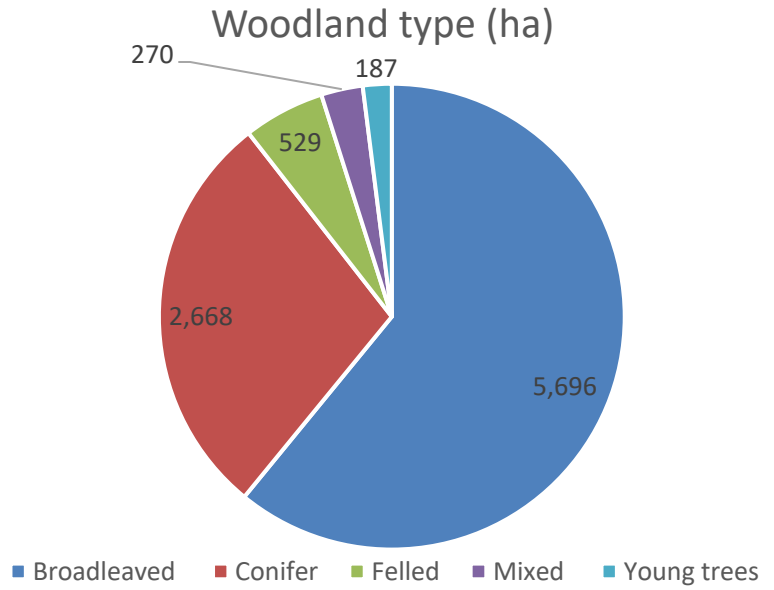
Compiled by Matt Sully on 12/10/2022

Moorland habitats

- Exmoor's moor and heath represents 23 out of the 82 nationally recognised moor and heath vegetation types
- It includes roughly 7,000 ha of upland heath, 4,600 ha of upland grass moor, 3,900 ha of bracken, 1,500 ha of lowland heath (including coastal heath) and 3,000 ha of blanket bog
- About 83% of Exmoor's moor and heath is legally protected through SSSI status and a large area of this is included within the Exmoor Heaths Special Area of Conservation
- It is nationally important within England and Wales for the presence of a wide combination of upland heath types, including two rare types of heathland - bristle bent (Agrostis curtisii) / western gorse (Ulex gallii) heath and ling (Calluna vulgaris) / western gorse heath - which are of international importance
- It is also is at least regionally important for the extent of its upland and coastal heaths, upland grass moor and blanket bog, with the second largest area of moorland in southern Britain
- Exmoor's moors and heaths support nationally important populations of whinchat, stonechat, Dartford warbler, cuckoo and heath fritillary butterfly

Trees and Woodland

- 13.6% of the National Park area is woodland (9,411 ha) (National Forestry Invention 2019)
- 3,206 ha is ancient woodland, including 1,228 ha that is Plantations on Ancient and semi-natural woodland (PAWS)
- 4,772 ha is section 3 woodland designated as areas of natural beauty that are considered particularly important to conserve
- 45 Tree Preservation Order (TPO) areas have been designated, covering 589 ha, and 249 individual TPOs
- The ancient sessile oak woodlands contain rare lichens and one of the densest collections of veteran trees in Europe, with a total of 1,649 veteran trees (ENPA data)
- ENPA is creating a new 12ha woodland at Bye Wood



Source: Forestry Commission

National Tree Map

Exmoor has 5 million trees

The total canopy cover of trees outside woodlands (over 2ha) is 2,469 ha

Challenges to woodland

67% of woodland is considered to be in active management (National Forestry Inventory).
BUT:

- 8% of broadleaf and 60% of conifer woods show evidence of thinning. However only 3% and 29% respectively show subsequent interventions
- 53% of conifer and 54% of standing broadleaf volume is beyond the age of Maximum Mean Annual Increment (MMAI) at which trees would normally be harvested (ie they have gone beyond their optimum growth potential)
- The MMAI figures mean that there's overstocking, woods are too dense and are moving to a more uniform age structure, with little open space and room for new trees to grow
- There is damage to young trees from deer and squirrels
- Climate change has positive implications for using species that are better adapted to future climate but also negative implications for native species, tree disease, stress, loss of productivity, local extinctions of certain species
- There is limited availability of skilled workforce, having to manage small isolated parcels of wood and difficult terrain that is difficult to access, distance to markets, and a lot of local wood is poor quality

Plant Health – tree diseases

A number of diseases are present on Exmoor and are causing serious impact

Tree disease	Prevalence on Exmoor
Ash dieback	Widespread. The fungus causes leaf loss and crown dieback and once infected a tree will usually die, often as a result of the infection weakening the tree so that it becomes more susceptible to attack by other pests and diseases
Dutch elm disease	The fungus is spread from tree to tree by elm bark beetles. It has killed tens of millions of elm trees in the United Kingdom since it was accidentally introduced, probably during the 1960s
Phytophthora ramorum	Larch die-back – tens of thousands of trees lost. Also affects sweet chestnut
Great spruce bark beetle	The great spruce bark beetle is a non-native pest of spruce and pine trees, they weaken, and in some cases can kill, the tree

Another 11 diseases are known to be present on Exmoor but presently causing low impact, and a further 11 diseases are not known to be present but are in southern England so could be an emerging threat

There is no updated data on rhododendron but as there are currently no coordinated efforts to remove it, it is likely to have spread in some areas, although grants are available to remove it, and owners may be obliged to remove it under Statutory Plant Health Notice

Ash dieback

Farmland

- Exmoor’s less-intensively used farmland is valuable for wildlife
- The remaining small areas of unimproved meadows and pastures support a great variety of wild plants including the scarce mountain pansy and adder's tongue and moonwort ferns. Recent work undertaken by the Devon Biodiversity Records Centre as part of the Sowing the Seeds Project suggests that the amount of unimproved/semi-improved grassland could be just over 5,000 ha.
- Unploughed grassland supports ant hills of the yellow meadow ant, butterflies, the scarce hornet robber fly and rare waxcap fungi, plus bats, which feed on the insects
- An important habitat in farmland is provided by boundary features such field margins, hedgerows, hedgebanks and verges, providing refuges for wild plants and shelter and nest sites for birds, mammals and invertebrates
- These farmland habitats are often un-designated, or landowners are unaware of the local designations, and are consequently under greater threat of being lost or damaged

Rivers and streams

- Exmoor’s clean, fast flowing waters support a rich and varied community of wild plants and animals including luxuriant growth of algae, aquatic mosses and lichens, such as the rare river jelly lichen. There are also several internationally rare mosses and liverworts
- The river Barle is a SSSI because it is considered the best example in Britain of an acidic upland stream grading into a richer river on sandstone
- The East Lyn, Exe and Barle rivers are very important for the spawning of migratory Atlantic salmon and sea trout
- 51% of monitored rivers are achieving 'high' or ‘good’ status
- There are 3 groundwater bodies designated under the Water Framework Directive, 100% of these are assessed as being in 'high' or 'good' status. There are also 2 designated coastal or transitional water bodies, 50% of these are in 'high' or 'good' status
- Water quality sampling 2021- 2022 found moderate levels of phosphate and very low ammonia in all catchments. Nitrates were found at moderate levels in the Barle, and relatively high levels in the Haddeo (although lower than the previous year) and Little Exe. The Riverfly Partnership monitoring on the River Exe recorded counts of indicator species including caddisflies, up-wing flies, stoneflies and freshwater shrimp, at levels indicating good water quality on all sampling sites, including the Haddeo which currently has the poorest water quality within the Headwaters of the Exe catchment area (Upstream Thinking)
- Many of Exmoor’s bird species are found along river valleys, as well as the characteristic species of fast flowing rivers such as the dipper, grey wagtail and kingfisher
- Otters are generally faring well on Exmoor

Coast and foreshore

- Much less is known about the condition of Exmoor's coastal and foreshore wildlife, although recently there has been an upsurge in interest in coastal and marine survey and monitoring
- The Shoresearch project funded by Exmoor National Park Authority recorded 15 out of 22 indicator species across eight sites
- Much of the coast is designated as Sites of Special Scientific Interest (SSSI) including coastal heath and woodlands which are also Special Areas of Conservation.
- The saltmarsh establishing at Porlock Marsh following the breach in the shingle ridge in 1996 is also a SSSI, designated for its active coastal geomorphological processes, saltmarsh and coastal vegetated shingle habitats
- The whole of Exmoor's coastline was defined as Heritage Coast in 1991. Nearly 8km is designated as Section 3 Coast and Foreshore areas of natural beauty that are considered particularly important to conserve
- The coast off the western part of the National Park from Foreland Point is part of a Marine Conservation Zone protecting a wide range of habitats including beaches of inter-tidal sand to sub-tidal sediment and rock habitats

Coast and foreshore

The Somerset Seawatch Project has carried out some extensive monitoring at key sites such as Hurlstone Point which support good numbers of cetaceans. Harbour porpoise was the most frequently sighted species at Hurlstone Point. They were sighted all year except in February and March, with peaks in sightings during July and October 2014-2018. Hurlstone Point appears to be an important area for harbour porpoise and with continued effort surveys both here and at other locations along the Somerset coast more can be learnt about their behaviour and distribution.

Year	No. of surveys	Sightings rate per hour %	No. of species seen	Species
2014	21	31	4	Harbour porpoise, bottlenose dolphin, barrel jellyfish, grey seal
2015	17	21	2	Harbour porpoise, grey seal
2016	21	31	2	Harbour porpoise, short-beaked common dolphin
2017	14	54	2	Harbour porpoise, grey seal
2018	11	54	2	Harbour porpoise, grey seal

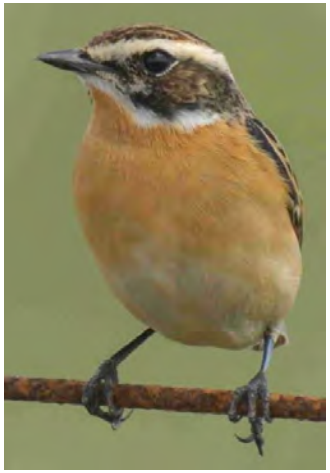
Table 1. Quantitative description of effort surveys per year at Hurlstone Point

Source: Seawatch Foundation

Harbour porpoise

Priority species

- Exmoor supports an important wealth of species including over 200 Exmoor Priority Species.
- Notable species include 16 of the 17 breeding British bat species found in the UK.
- A wide range of birds can also be seen on Exmoor, both common and rare species, many of which are national conservation priorities. Exmoor is still an important stronghold for birds like whinchat and cuckoo which are declining nationally. However, birds such as the curlew are now at the edge of extinction on Exmoor and other species such as yellowhammer, willow tit and greenfinch have seen a big drop in numbers across the National Park
- Targeted management has helped populations of high brown and heath fritillaries to stabilise. However Pearl-bordered and marsh fritillary butterflies are now extinct within the National Park
- There is less than 2,500 ha of species-rich unimproved grassland left, covering just 3.6% of the National Park. This has seen the decline of species such as the hornet robber-fly and butterflies like the marbled white
- The red squirrel was once a common sight in Exmoor's woodlands but has not been seen since 1947 as grey squirrels began to increase rapidly in numbers. A grey squirrel control programme has begun, and the reintroduction of pine martens is being investigated, with long term aspirations for red squirrels to also be reintroduced
- Numbers of red deer have grown to around 3,500 and deer health is generally good, although there are concerns about Tb in deer
- Exmoor has seen the welcome return of the otter across all parts of the National Park over the last few decades, and more recently, Eurasian beaver have been reintroduced to restricted areas on a trial basis
- Salmon numbers have plummeted due to the loss of spawning habitat, barriers to fish passage, the impact of invasive species plus issues affecting them further downstream and further out to sea



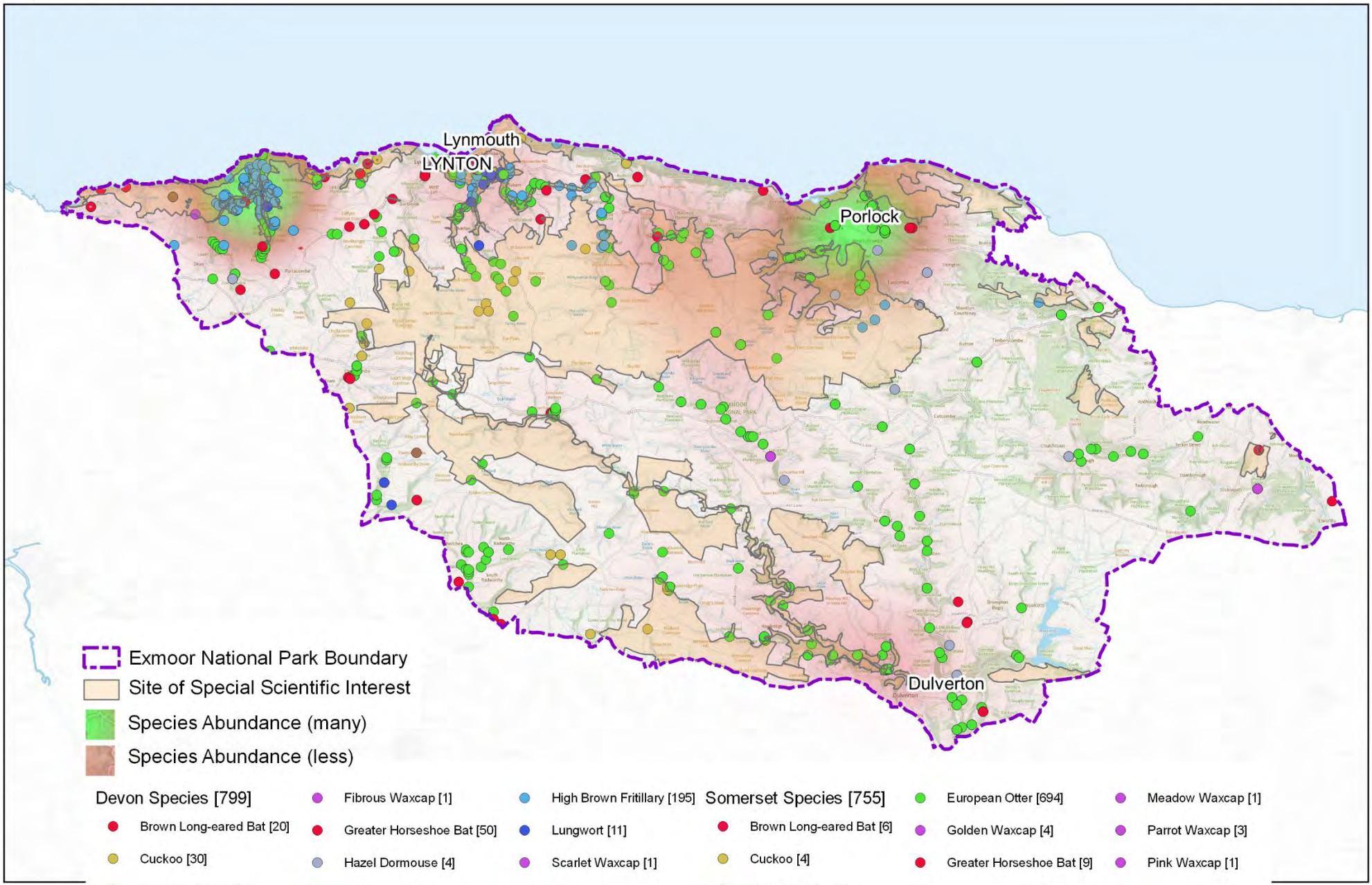
Whinchat

High brown fritillary

Otter

Species hotspots

2018 to 2022



Devon Species [799]

- Brown Long-eared Bat [20]
- Cuckoo [30]
- Eurasian Otter [475]
- Fibrous Waxcap [1]
- Greater Horseshoe Bat [50]
- Hazel Dormouse [4]
- Heath Fritillary [10]
- High Brown Fritillary [195]
- Lungwort [11]
- Scarlet Waxcap [1]
- Whinchat [2]

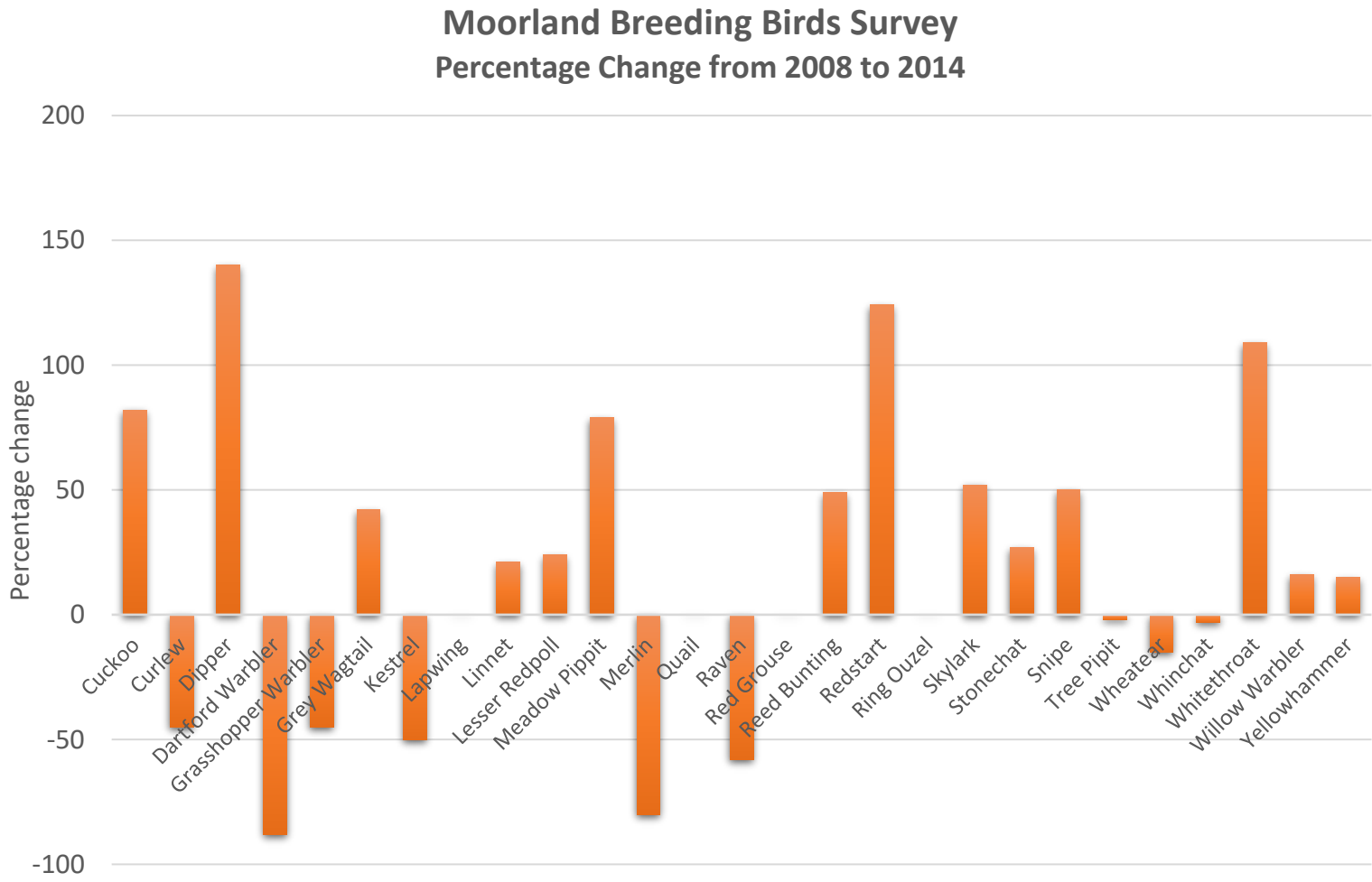
Somerset Species [755]

- Brown Long-eared Bat [6]
- Cuckoo [4]
- Eurasian Otter [6]
- European Otter [694]
- Golden Waxcap [4]
- Greater Horseshoe Bat [9]
- Hazel Dormouse [18]
- Heath Fritillary [4]
- Meadow Waxcap [1]
- Parrot Waxcap [3]
- Pink Waxcap [1]
- Scarlet Waxcap [5]

Compiled by Matt Sully on 13/10/2022

Moorland birds

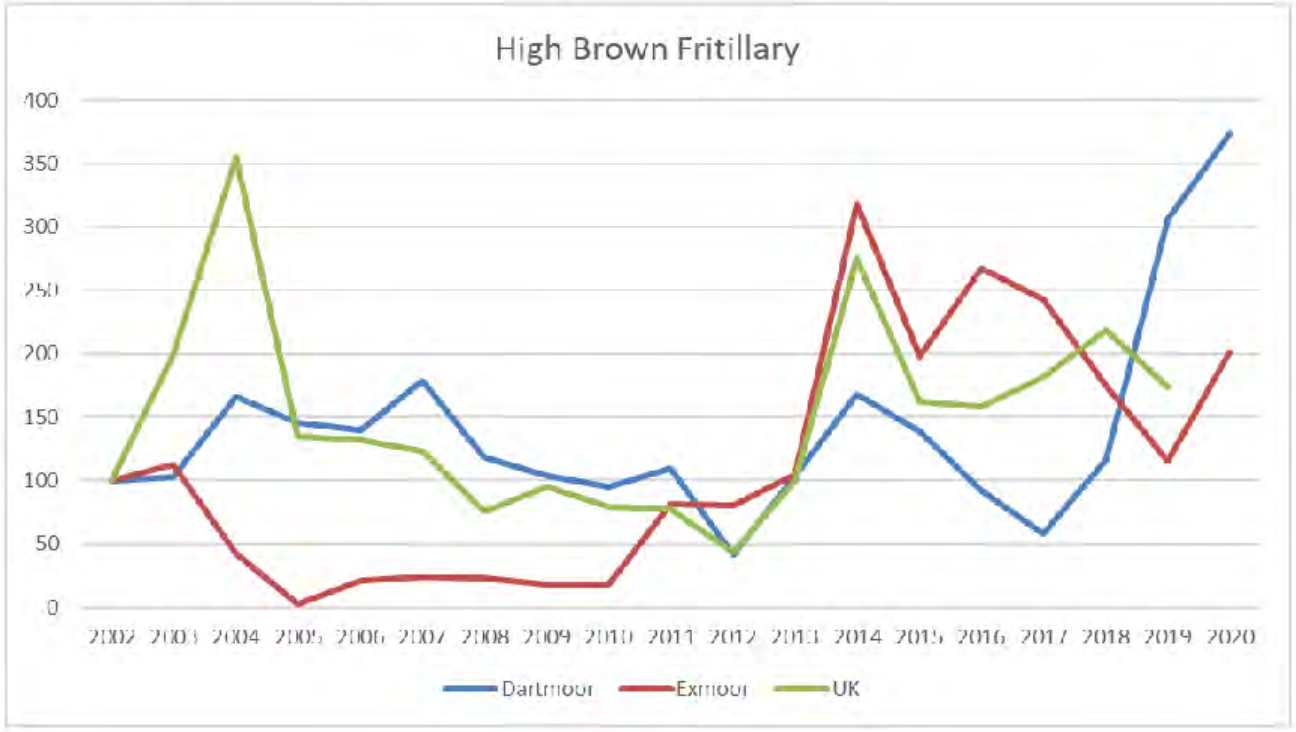
Many species of moorland birds are faring well such as cuckoo, dipper and whitethroat, with noticeable increases in populations of 14 out of the 27 target species, many of which are declining nationally. Nine other species are declining on Exmoor, and four species are no longer found at all: lapwing, quail, ring ouzel and red grouse. Species typically associated with lowland areas are increasing on Exmoor including linnet, reed bunting and yellowhammer



Butterflies (1)

Exmoor is an important area for heath and high brown fritillaries.
High brown fritillary - In the Heddon Valley, the butterfly had a good year in 2020, increasing on the 2019 abundance, and doing reasonably well following the declines seen in the first half of the monitoring period. Over the full 18 year monitoring period, the butterfly has seen a 1021%

High Brown Fritillary



Population trend over the period 2002-2020

Dartmoor STABLE

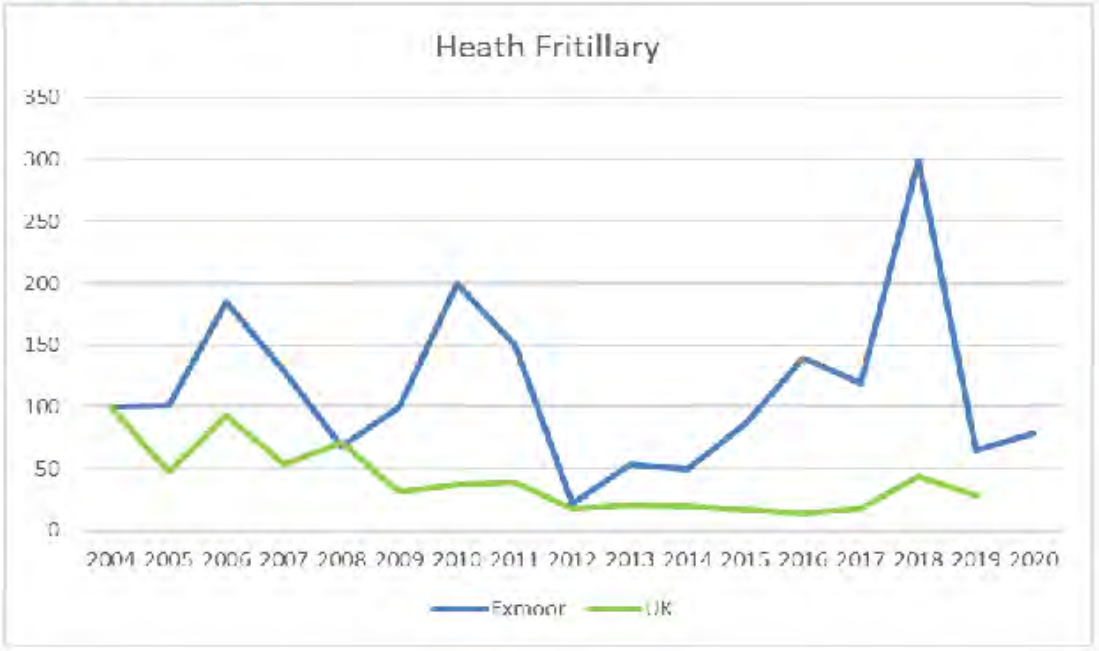
Exmoor 1021% increase

Population trend of high brown fritillary on Exmoor, Dartmoor and the UK. Source: Butterfly Conservation

Butterflies (2)

Heath fritillary - the Exmoor population trend for the butterfly during the monitoring period 2004-2020 is stable, set against a declining trend for the UK as a whole (see Figure below). The Holnicote Estate sites did well overall, with Heath Fritillary recolonising two sites, Nutscale Reservoir and Mansley Combe (the former site being extinct since the early 1990s), and strong numbers were recorded at core sites.

Heath Fritillary



Population trend over the period 2004-2020

Exmoor STABLE

Population trend of heath fritillary on Exmoor and the UK 2005 – 2020. Source: Butterfly Conservation

Dormice

- In the 5 nest box schemes that are monitored by ENPA, dormice numbers have halved over the last 20 years
- The highest number of dormouse recorded in the early 2000s was around 30 and over 20 were regularly counted. However, for the last 10 years only 8-10 are counted each year
- The causes of these declines are varied. Habitat fragmentation is a key factor, with local extinctions made permanent by lack of habitat connectivity for dormice to move back in. Climate change also exacerbates this, with dormice coming out of hibernation during warm winter periods but not surviving due to lack of food

Red deer

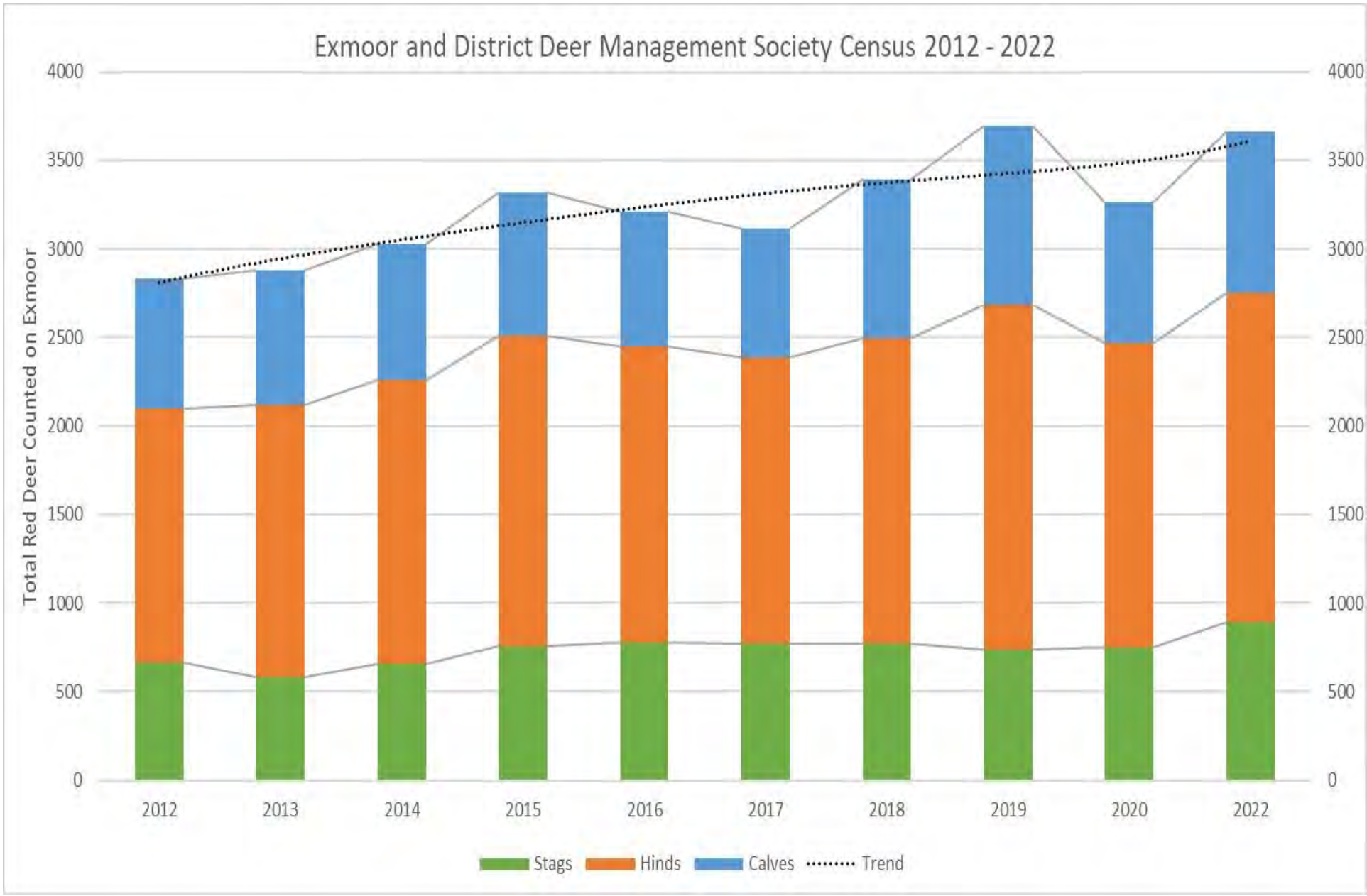
Exmoor National Park has the highest density of wild Red Deer in England

Deer numbers have been growing over the period that data is available for, since 1994. Numbers are now around 3,500 compared to around 2,000 in 1994.

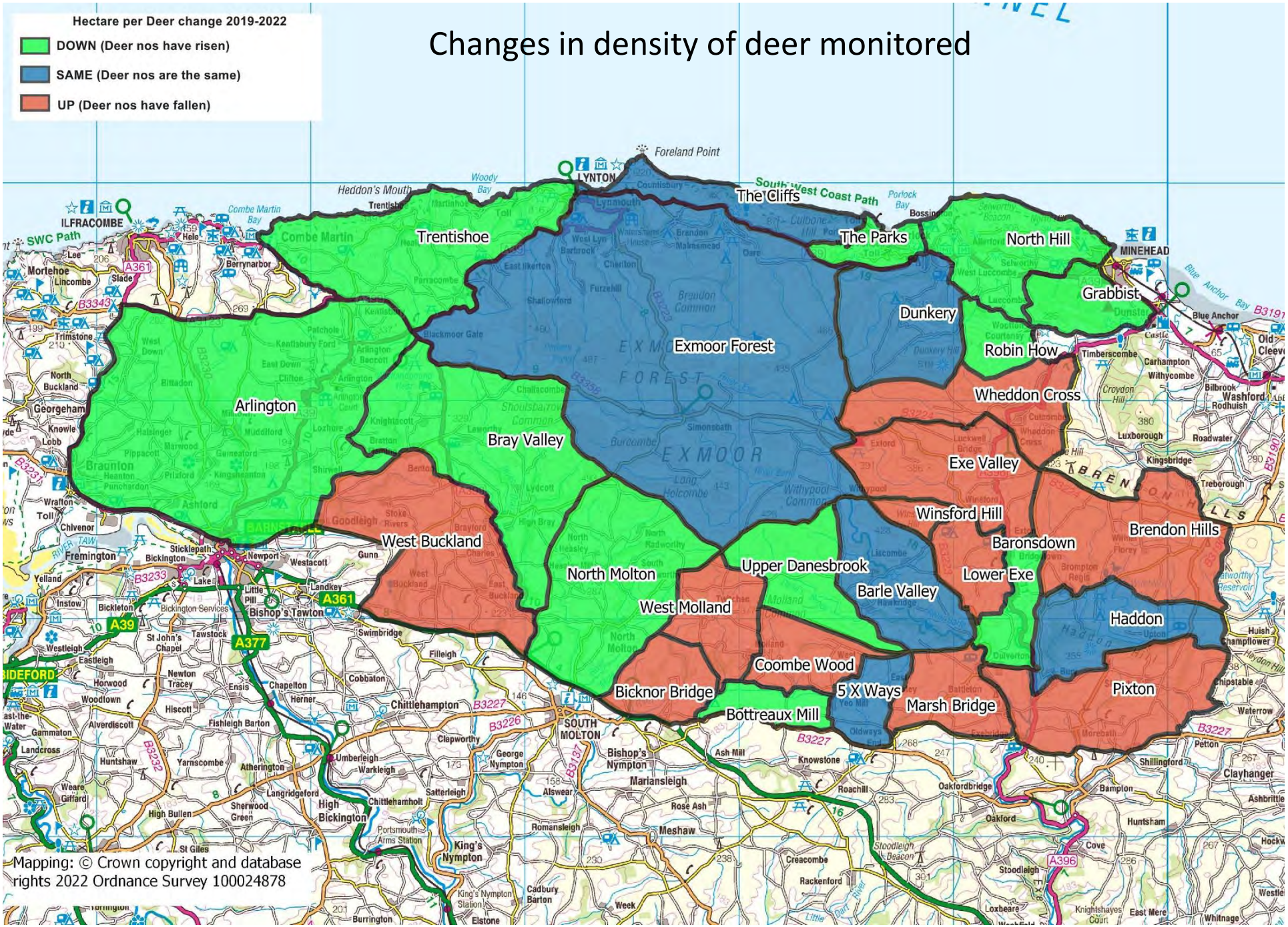
A study of the health of wild red deer on Exmoor concluded that the herd is generally very healthy with remarkably low incidences of disease across the moor. However there are concerns over tB in deer

The density of deer in different parts of Exmoor has changed, with deer numbers falling in southern and eastern parts of the National Park, and rising in central, northern and western areas. The reasons for these changes are not known but there could be some correlation between areas of game shoots and falling deer numbers

Graph showing last 10 years of red deer counted on Exmoor



Changes in density of deer monitored

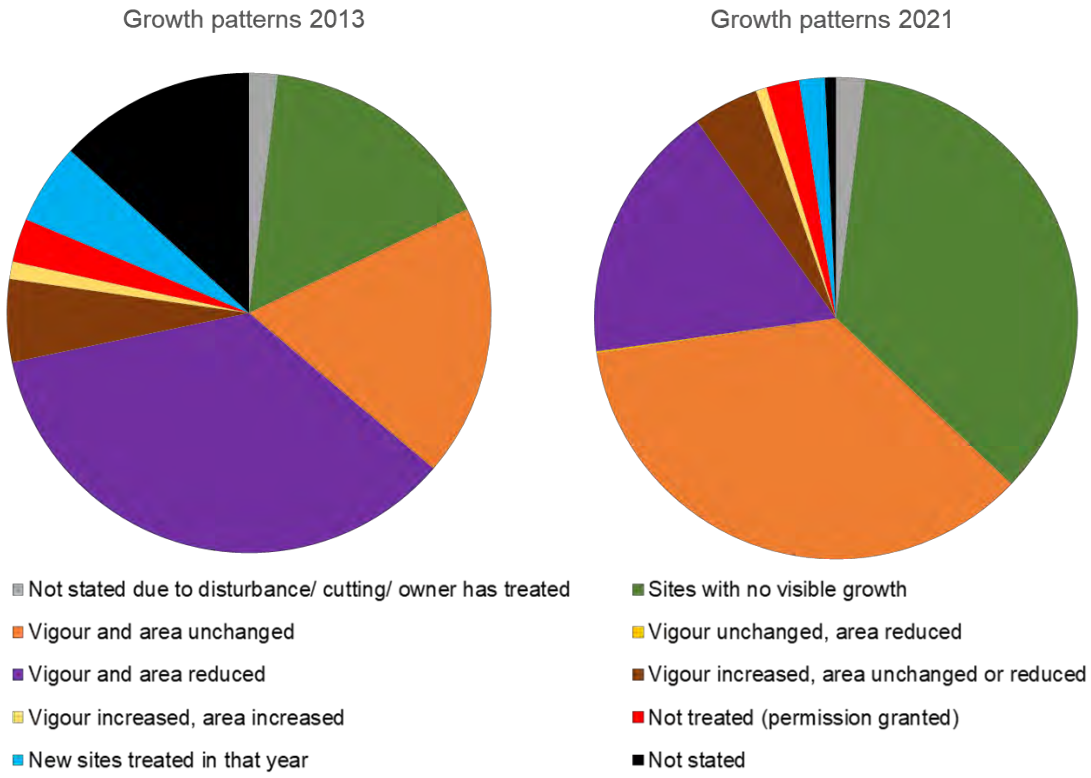


Invasive Species

Invasive non-native species such as knotweed, Himalayan balsam, skunk cabbage, montbretia, signal crayfish and rhododendron continue to be a threat but ongoing control programmes are proving successful on sites where treatment is possible.

From March 2019 work to control invasive species has been co-ordinated under the Exmoor Non-Native Invasive Species Project which received funding through a Water Environment Grant for 3 years and is currently funded under the Farming in Protected Landscapes programme and with match funding from partners.

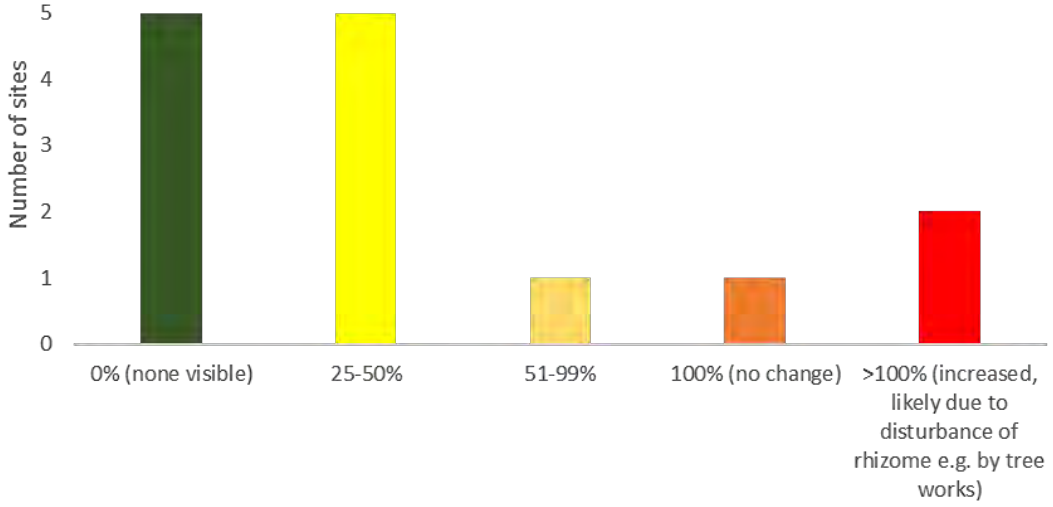
Exmoor Knotweed Control Programme
Aware of c1200 sites historically in the National Park, c850 of which can be treated with herbicide.
200 landowners contacted every year to ask for permission to visit. Between 2019-21, permission obtained for 70-95% of the sites included in the programme



Source: Exmoor National Park Authority

American skunk cabbage control programme

Currently 27 skunk cabbage sites have been identified (up from 8 sites in 2019 when the ENNIS Project began). 18 sites treated with herbicide in 2022. Most received two treatments (in May and August/September). 4 sites treated using Rootwave.



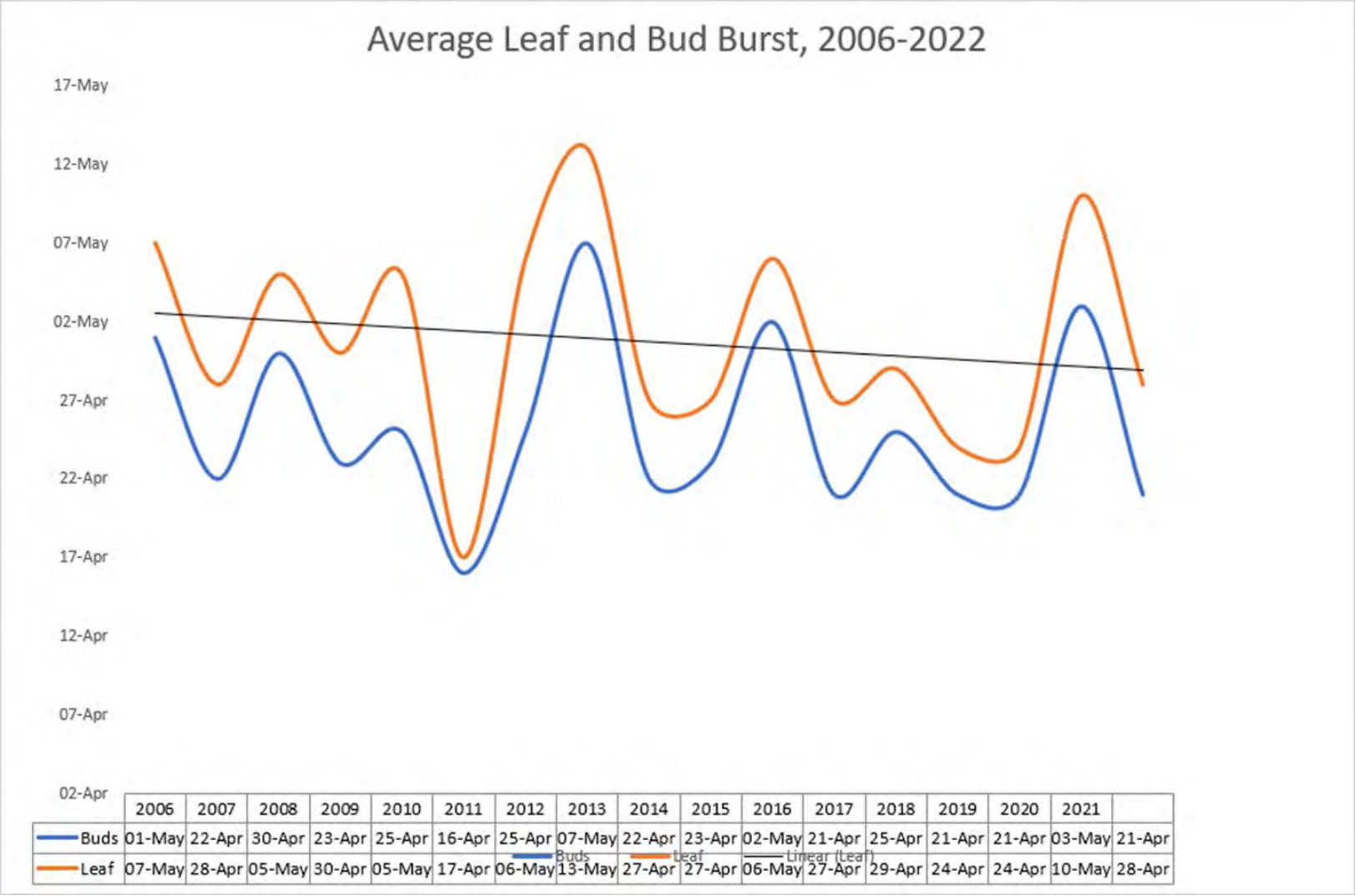
Frost damaged beech trees

Climate change implications for nature

- As a consequence of climate change we are experiencing hotter, drier summers, and warmer, wetter winters. An increase in the incidence of extreme weather events such as severe flooding and drought is also occurring, and sea levels will rise.
- Drier summers may cause mires to dry out leading to the erosion and shrinkage of peat stores which will have knock-on impacts on wildlife and carbon storage.
- There will also be a decline in soil health and the loss of critical habitats and species including as a result of a rise in pests and diseases.
- Reduced rainfall and higher temperatures significantly limit tree growth. Earlier bud-burst and leaf emergence also increases the risk of frost damage. Different tree species may be needed to adapt to changes in climate
- As a result of climate change we may have to accept some change in species composition with the possible loss of some species but potential gain of others

Climate Change - phenology

Monitoring has shown bud-burst and leaf emergence of trees on Exmoor occurring 2 weeks earlier than when the survey began in 2006



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Buds	01-May	22-Apr	30-Apr	23-Apr	25-Apr	16-Apr	25-Apr	07-May	22-Apr	23-Apr	02-May	21-Apr	25-Apr	21-Apr	21-Apr	03-May	21-Apr
Leaf	07-May	28-Apr	05-May	30-Apr	05-May	17-Apr	06-May	13-May	27-Apr	27-Apr	06-May	27-Apr	29-Apr	24-Apr	24-Apr	10-May	28-Apr

Increased understanding and engagement with Exmoor's wildlife

- Exmoor's wildlife is one of the key attractions for people visiting the National Park, and is also highly valued by people living & working here
- Volunteers contribute a huge amount of time and effort to help monitor Exmoor's wildlife. Between 2018-22, 1,085 volunteers gave 11,475 hours to support wildlife surveys and engagement activities organise by ENPA
- 65% of visitors say that their understanding of Exmoor's wildlife has increased as a result of their visit (ENPA Visitor Survey 2021)

Volunteers taking part in a lichens, mosses and ferns training event

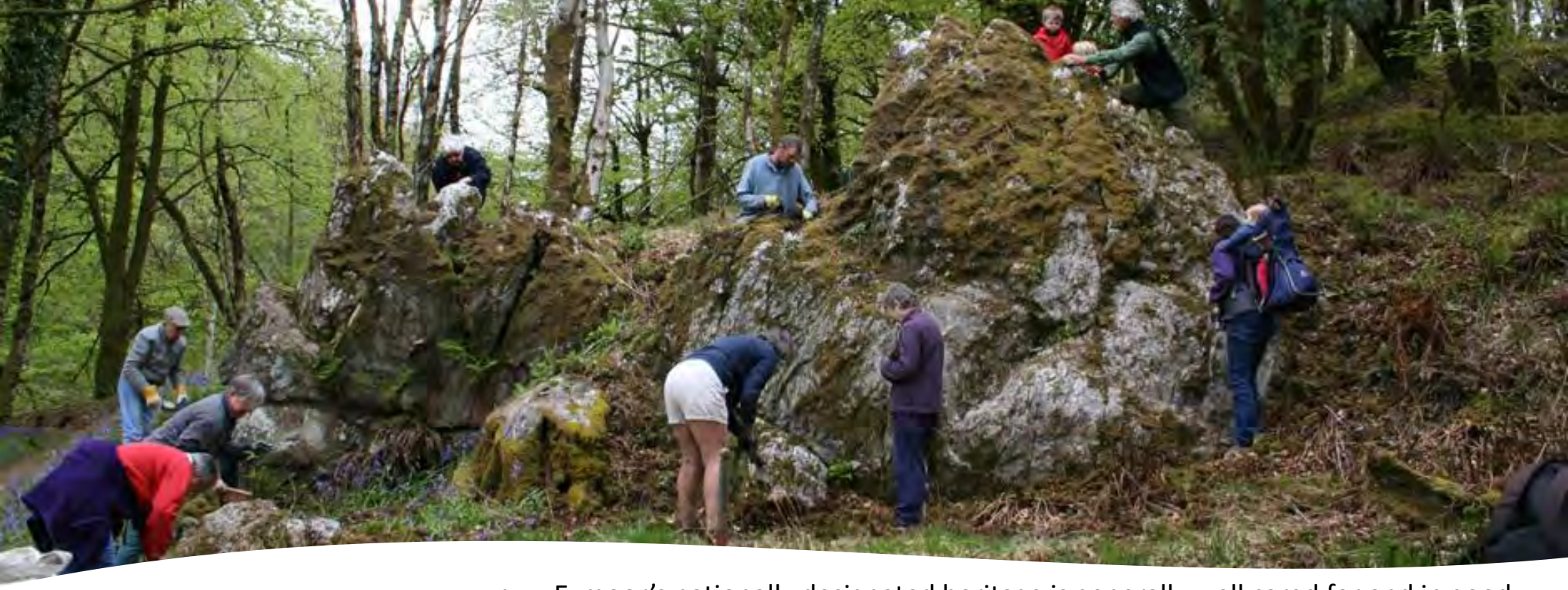
Volunteers taking part in otter survey training before undertaking a two-day otter survey covering the whole of Exmoor National Park

Cow Castle, Simonsbath by George Cumberland c1800. Watercolour
Image courtesy Bristol Culture (Bristol Museum & Art Gallery)

Special Quality: A complex and rich historic landscape that reflects how people have lived in, exploited and enjoyed Exmoor over the past 8000 years, including burial mounds on ridges, discrete stone settings, ancient farmsteads and settlements, picturesque villages and historic estates

Exmoor's Historic Environment assets:

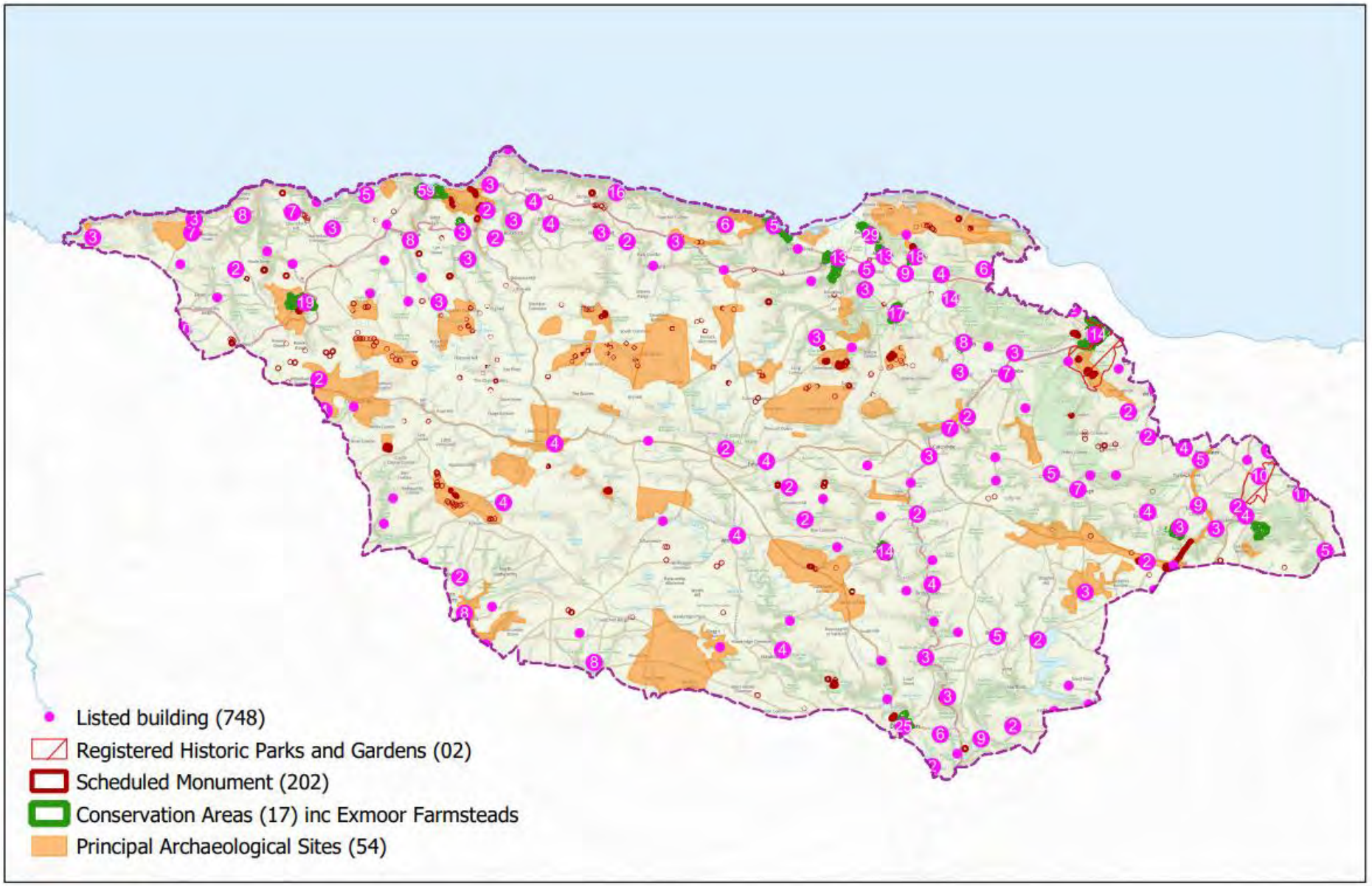
- 200 Scheduled Monuments
- 747 Listed Buildings (comprising c992 separate structures)
- 19 are Grade I listed, 55 Grade II* and 673 Grade II
- 2 Registered Parks and Gardens
- 17 Conservation Areas
- 54 Principal Archaeological Landscapes covering 7,247 hectares
- 9,795 entries on the Historic Environment Record



Historic environment summary

- Exmoor's nationally designated heritage is generally well cared for and in good condition
- There has been an increase in Listed buildings at risk, many of these are difficult to address as the majority are structures that are not occupied and consequently are not well maintained. A significant proportion of ecclesiastical buildings are at risk
- Damage from livestock, vehicles and vegetation encroachment remain the key risks for scheduled monuments and PALs
- Many assets remain undesignated and lack protection
- Climate and coastal change bring risks to heritage assets
- Action to respond to the climate and nature emergencies also bring risks to heritage assets, particularly woodland planting and peatland restoration
- Positive work has been undertaken to protect and enhance heritage assets through funding schemes, volunteering, surveys and monitoring but there is much more that needs to be done
- Public engagement with and understanding of the historic environment has been maintained, despite the covid pandemic

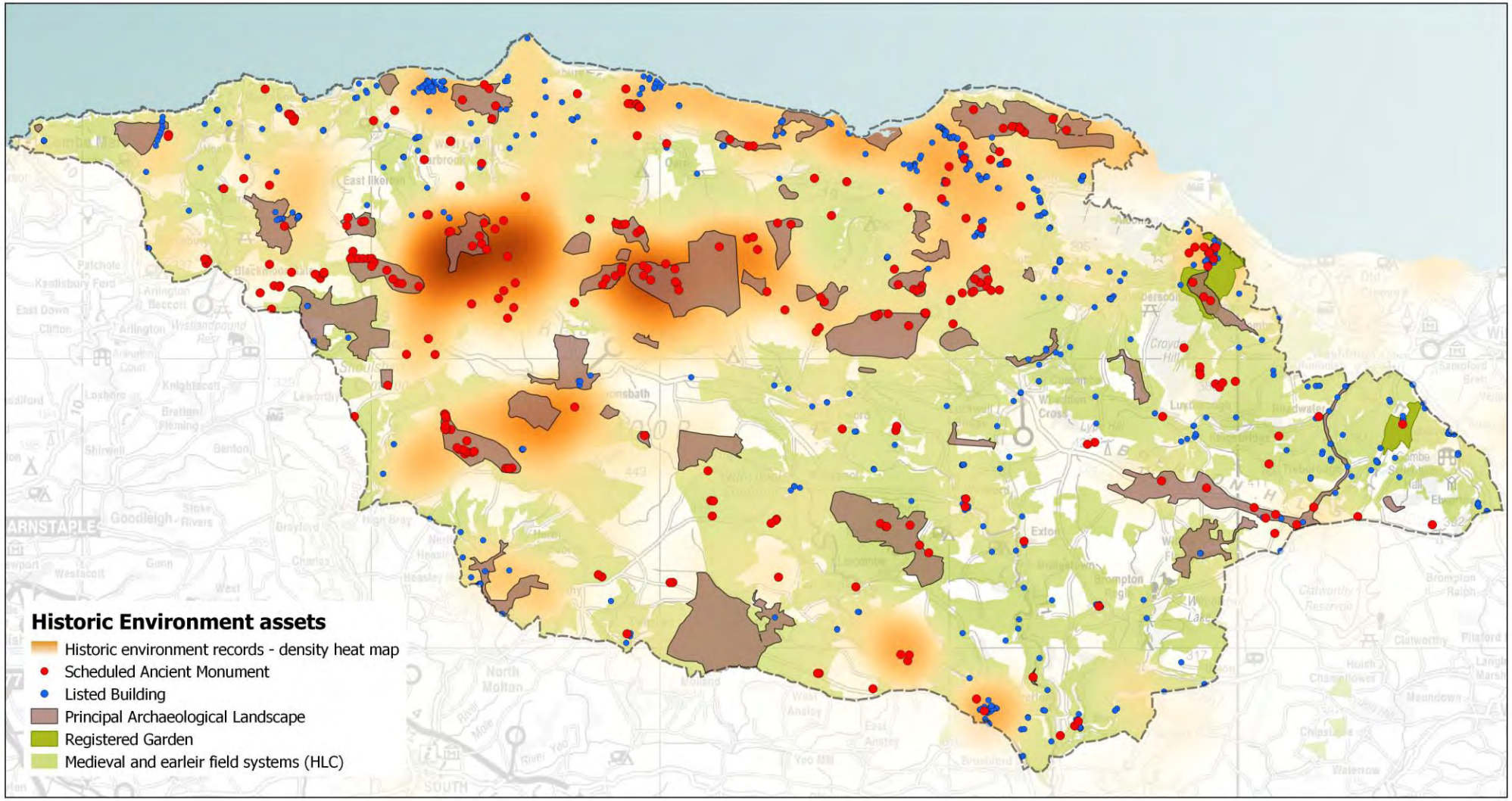
Exmoor's Designated Historic Environment Assets



Compiled by Matt Sully on 30/6/2023

Exmoor National Park Authority

Historic Environment designations and known features



Scale 1:129,806.588184

Compiled by A Farris
on 6/10/2022
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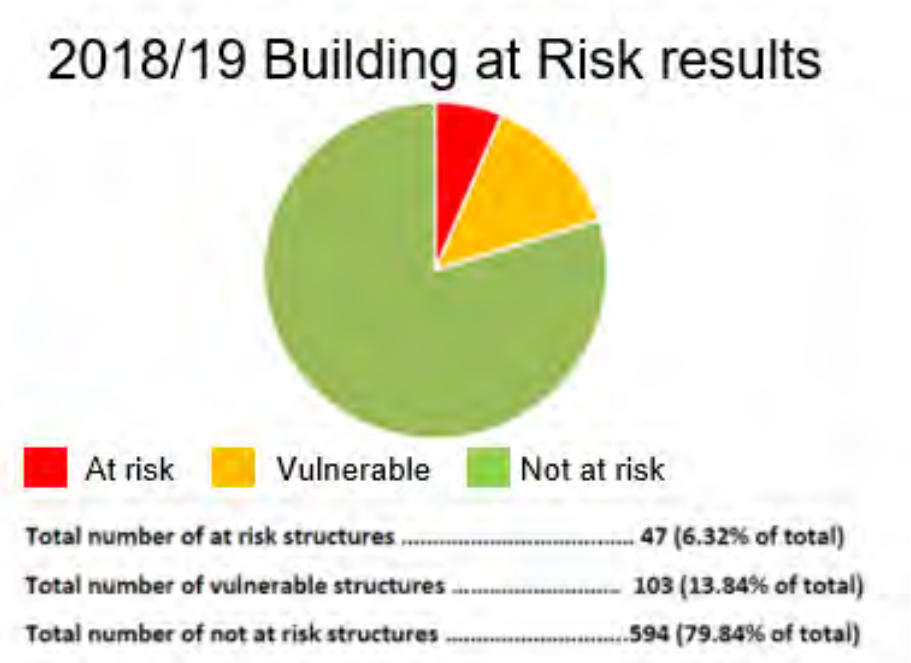
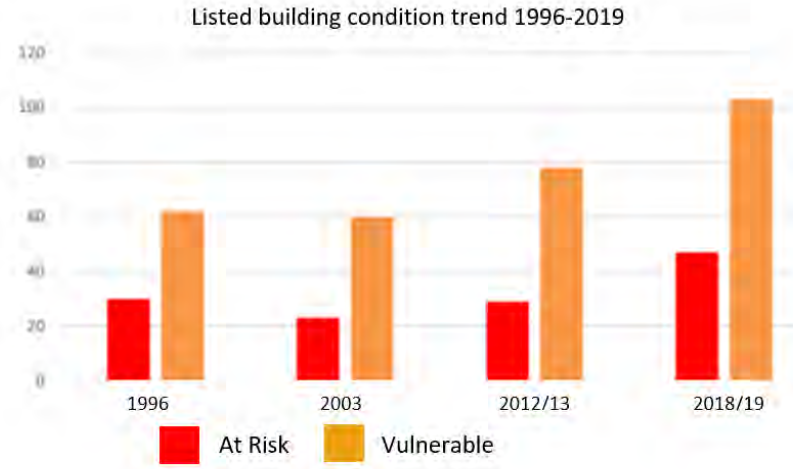
EXMOOR NATIONAL PARK

Compiled & Printed by Exmoor National Park Authority

Heritage at Risk – Listed Buildings

- Listed buildings condition survey 2018/19 found that the majority of listed structures were in good condition
- There is a noticeable decline in condition compared to the last survey of 2012/13 and the number of at risk structures (47) has doubled since 2003
- 6 listed structures are on the National Heritage at Risk Register (3 of these are also Scheduled Ancient Monuments)
- No Conservation Areas are considered to be 'at risk'

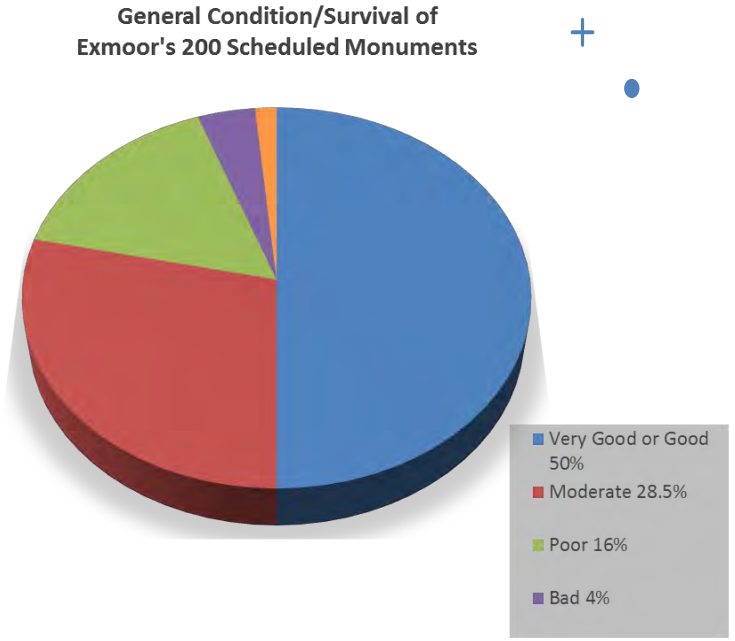




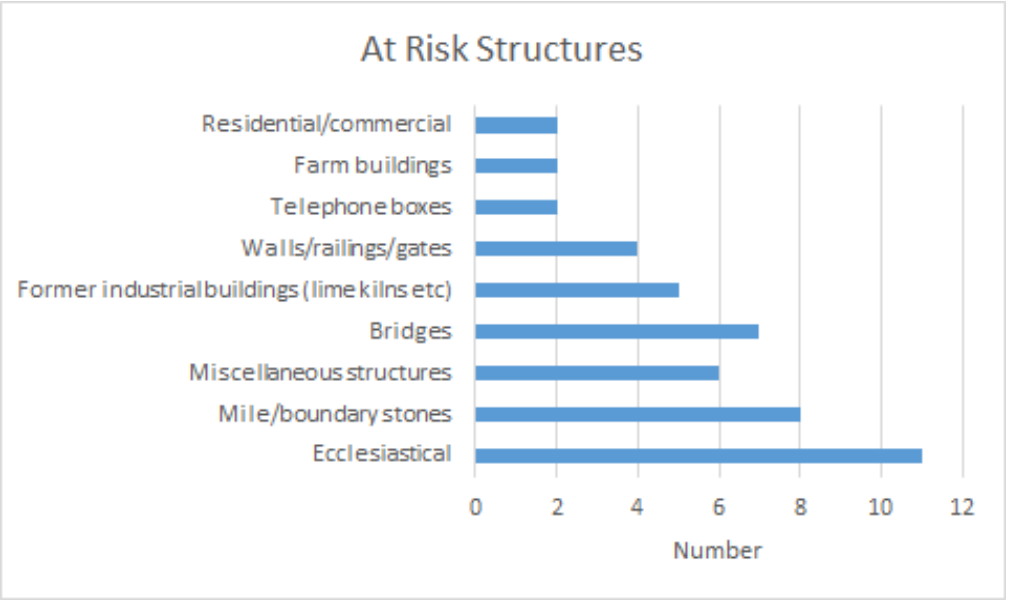
Heritage at Risk – Scheduled Monuments

- There are 24 Scheduled Monuments (12.5%) at risk on the National Heritage At Risk Register
- A new survey is in progress on a rolling programme working with volunteers
- Many Scheduled Monuments are currently under positive management due to being in agri-environment schemes but the transition to the new environmental land management schemes brings uncertainty over whether funding for positive management of heritage assets will continue, particularly for undesignated assets

- Exmoor's two Registered Parks and Gardens are in Countryside Stewardship and considered to be in positive management
- New owner at Dunster has undertaken surveys and prepared a conservation management plan for the Registered Park & Garden and historic deer park as part of the Countryside Stewardship scheme



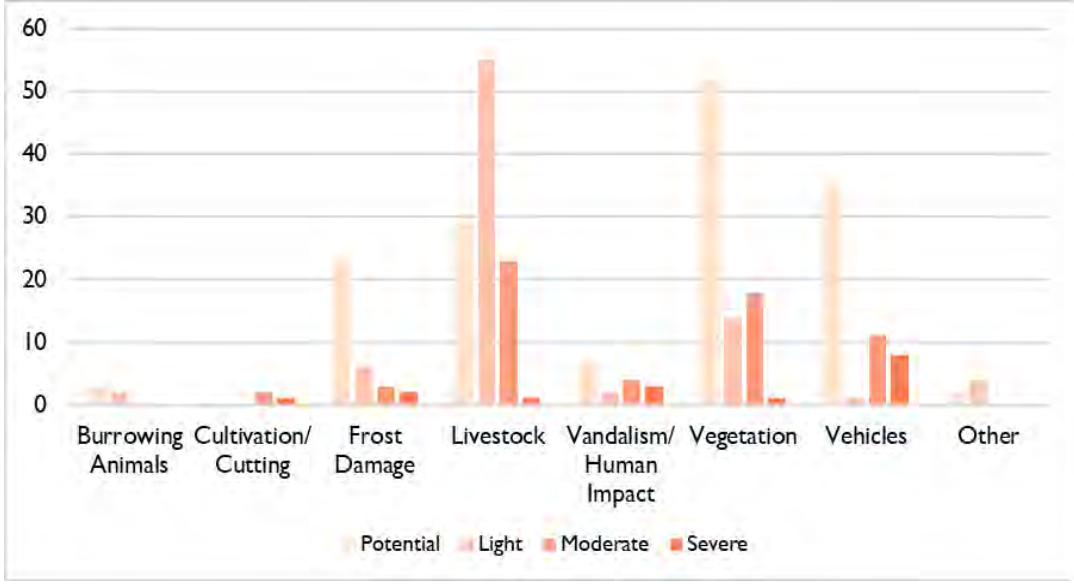
Threats to Exmoor's historic buildings



- Buildings not capable of occupation are at the greatest risk. When large buildings (such as Dulverton Laundry (right) fall into disuse finding new uses is a challenge
- The structures most likely to be at risk are those which are not capable of occupation, such as bridges, milestones, chest tombs and walls. Each of these have unique vulnerabilities and do not appear to be monitored effectively by those responsible for their upkeep. Only 5 of the 47 at risk structures have potential for occupation
- Ecclesiastical buildings, including churches, chapels, gravestones, chest tombs and churchyard crosses account for 23% of at risk structures despite being only 14% of the total number of listed buildings
- Climate change and the extreme weather that brings is an ongoing threat to many historic structures across Exmoor. The current push to retrofit older buildings for energy efficiency is also resulting in the loss of historic fabric

Dulverton Laundry

Threats to Exmoor's historic environment



The deterioration agents affecting Exmoor's standing stones and stone settings.

- Vegetation encroachment is the main threat to Scheduled Monuments and Principal Archaeological Landscapes
- This is confirmed in the condition assessment of 142 Standing Stones in 2018 which highlighted the main threats from livestock and vegetation as well as damage from vehicles
  - *70% of standing stones have not deteriorated in their condition*
  - *62% of sites will most-likely survive in their current state*
  - *Whilst most sites are stable, few are improving and 30% of sites are deteriorating with 7% deteriorating rapidly. Three sites could also be considered to be destroyed*
  - *However, these figures are a significant improvement when compared with the last park-wide survey in 1989-1991, and they suggest that the rate of deterioration is reducing*

Following a wildfire on Ilkerton Ridge in 2022 a survey located over 100 previously unrecorded archaeological features, including a Bronze Age burnt mound, several standing stones, cairns, a stone row and a large area of military training from WWII

Exmoor pony rubbing on a stone in a setting on Pig Hill

Monuments Management Scheme

- Historic England provided £60,000 funding to carry out works to 16 scheduled or listed sites across the National Park
- Repairs to Barlynch Priory, north of Dulverton removed ivy that was causing significant damage to the structure and carried out major consolidation works, repointing masonry and stabilising loose stonework. The walls were topped with a turf capping to protect them from the weather. Open days have been held with the help of volunteers and new interpretation panels and a leaflet have been produced for visitors
- Removal of damaging vegetation was also undertaken at Berry Castle Luccombe, St Leonard's Well Dunster, a prehistoric stone setting on Porlock Hill, Lyncombe Packhorse Bridge, Timberscombe Drinking Trough and Old Berry Castle Dulverton. Measured and condition surveys were undertaken at Brightworthy Barrows and three prehistoric stone settings at Chains Valley, Wilmersham and Lanacombe. Fallen prehistoric stones were reset at Chains Valley, Wilmersham and Halscombe.

An unlisted 16th century cottage

White Rock Cottage from Ashcombe gardens

Wildfire over burial mounds on Ilkerton ridge

Undesignated heritage assets

- There are many sites and buildings on Exmoor that meet the criteria for national designation but remain undesignated. These are vulnerable to negatively impacting change or loss
- Exmoor has 53 locally designated Principal Archaeological Landscapes (PALs). These are a material consideration in planning but have no statutory protection
- Exmoor has a number of buildings of significance that are not designated and so do not receive protection including many traditional farmsteads
- The development of a list of locally significant buildings and sites is being compiled of significant buildings and sites that meet agreed criteria, but are not nationally designated
- Following a wildfire at Ilkerton Ridge a survey located over 100 previously unrecorded archaeological features including a Bronze Age burnt mound, several standing stones, cairns and a stone row. A large area of WW2 military training was also located
- Exmoor has at least 25 estates and designed landscapes and all require further survey and understanding. Work to enhance these landscapes and increase understanding includes tree clearance in Ashley Coombe. Surveys around Glenthorne as part of the new England Coast Path are revealing more about the designed landscape including a bath house, pathways, rides and linhays. Volunteers are helping to restore the Picturesque Ashcombe garden around White Rock Cottage in Simonsbath

Climate and coastal change

Climate change	Impacts on historic environment
Warmer, wetter winters	• Longer growing season and increased vegetation encroachment on sites • Reduction in visibility of sites
More extreme weather events	• Erosion and damage to heritage assets • Coastal erosion loss of heritage assets
Hotter, drier summers	• Drying out of peatland, damage to archaeology • Increased risk of moorland fires

An assessment of coastal heritage at risk identified a number of assets within the coastal zone. Areas at greatest risk are:

- Low-lying areas of Lynmouth and Porlock and to the east of Combe Martin which contain the greatest concentration of assets at risk
- 4 Conservation Areas: Porlock Weir, Porlock, Allerford, Bossington and West Lynch
- 6 PALs: Holdstone Down, Little Hangman, Countisbury and Lyn Gorge, Porlock Beach/ Marsh, and Selworthy WWII complex
- Deposits associated with submerged forests and palaeochannels of prehistoric date within Porlock Bay
- Assets within the intertidal areas including at Greenaleigh Point and Selworthy Sand, Porlock Bay, Gore Point
- Some relict field systems ranging in date from the prehistoric to post-medieval periods
- Assets associated within mining and quarrying on the Exmoor coast
- Coastal industry including a number of the surviving coastal lime kilns and the charcoal platforms within Culbone Woods
- Military Sites including a number of pillboxes

All require further study and funding for recording assets likely to suffer loss in the next 50-100 years

South West Peatland Partnership

- Exmoor's moorland contains a wide range of historic sites and features which survive due to low intensity farming and lack of development pressure. Organic materials and environmental evidence are preserved in the peat providing information about the moors and how they were used going back millennia
- Palaeoenvironmental studies, geophysical and earthwork surveys, excavations and watching briefs carried out by Exmoor Mires Partnership have identified over 300 previously unrecorded archaeological features and sites, ranging from around 6000BC to the 20th century. This includes prehistoric standing stones and cairns, nineteenth-century mining works, networks of medieval trackways and Second World War military training features. [Note this covers the period from 2000-2020]
- New research into aspects of the historic environment that may be impacted by mire restoration includes investigations into domestic and industrial peat cutting, the form and dating of deserted field systems on Codsend Moor (Exmoor) and the soils of Exmoor before the formation of peat
- Since 2018 the Partnership has undertaken surveys and assessments at South Regis Common, Codsend, Hoar Moor, Horsen, Castle Common, Blackpitts and Wester Emmets
- In 2019 a drone survey across Humber's Ball, Halscombe Allotment and Hawkridge Plain created a 3-D record of the archaeological features including extensive peat cuttings, and found a row of stones on the edge of Humber's Ball
- Research Projects included a study of the impact of the Knight's 19th century 'Improvements' on Exmoor by Hazel Riley and excavations of prehistoric field system at Codsend with University of Brighton
- A Leverhulme funded project 'Reclaiming Exmoor' combined expertise in palaeoecology and environmental archaeology (University of Plymouth) and history (University of Exeter) in a 2-year project assessing the relationships between human activities and motivations, and ecological processes and legacies on Exmoor, focusing on this 19th century period of agricultural 'improvement'. The project explored how nature responded during periods of population contraction and has found that the vegetation and wildlife that appear differ from those that were seen before periods of more intense human activity

Trench excavation of stony bank on Codsend Moor

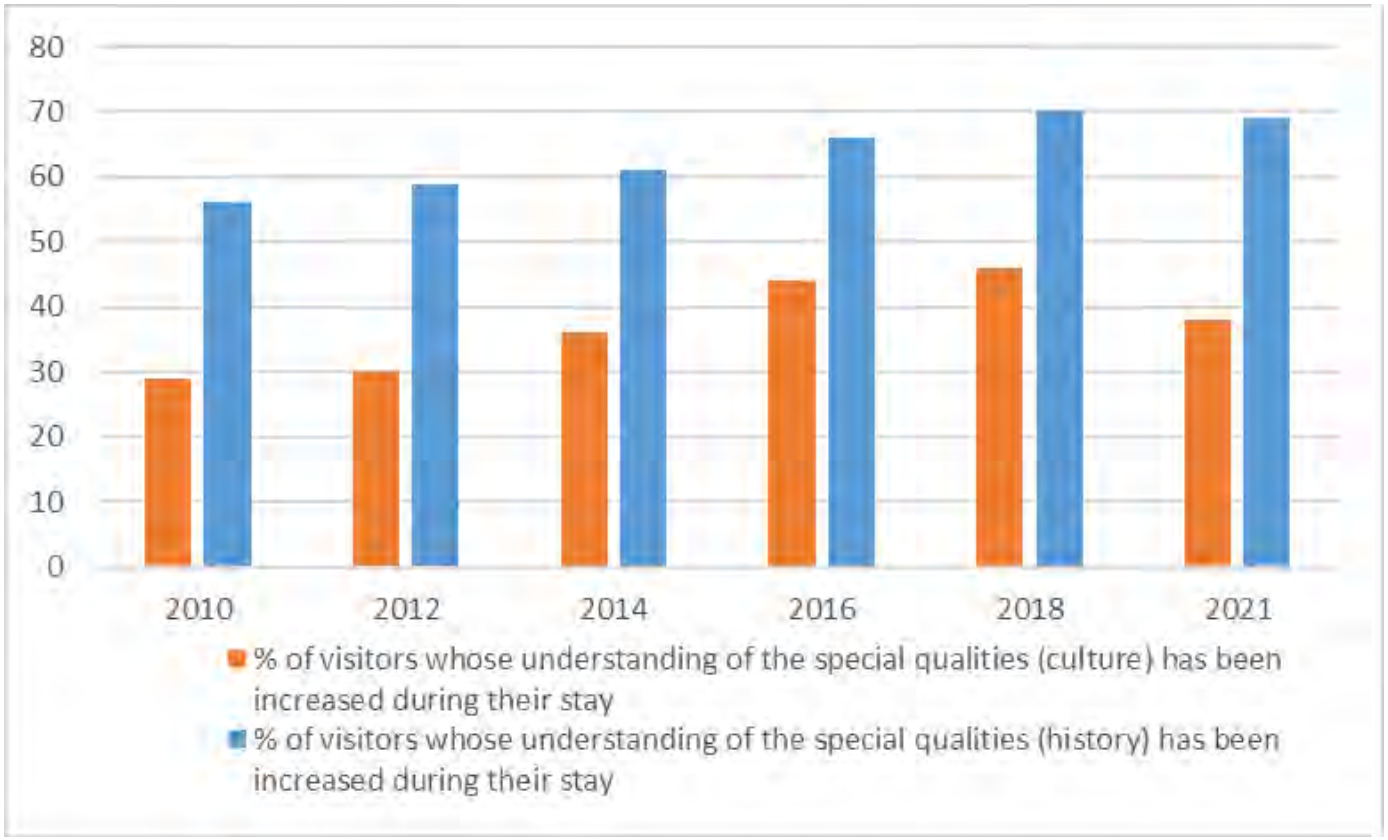
courtesy of Exmoor Mires Partnership

Climate and nature recovery

- The need to respond urgently to the climate and nature crises brings increased risks to heritage assets
- If not planned sensitively, woodland creation (for carbon and wildlife) can damage archaeology and obscure features
- Retrofitting traditional and listed buildings to improve energy efficiency and the installation of renewable energy can also cause damage if not carefully done
- Work is underway to avoid or mitigate impacts on heritage assets and to support resilience to climate change

Increased understanding and enjoyment of the historic environment

There has been a steady increase in the number of visitors reporting that their understanding of Exmoor's culture and history has increased as a result of their visit



Source Exmoor Visitor Survey

Increased engagement with the historic environment

- Between 2018-2022, over 4,705 volunteer hours were recorded by 120 volunteers in activities related to historic environment surveys, monitoring, guided walks and engagement
- Around 300 people engaged with heritage open days and guided walks, although overall numbers were affected by covid restrictions

Historic Signposts project

- The two-year project was funded by the National Lottery Heritage Fund and ran until May 2019
- More than 200 signposts were successfully restored and recorded
- Over 100 volunteers contributed around 2,300 hours of their time through condition surveys, refurbishment work and historic research
- Very little was known about their history or origins prior to the project.
- Since 2019, a number of volunteers have continued to monitor, clean and paint and generally care for the signposts in their area, supported by a steering group, funding by CareMoor for Exmoor
- It was not possible to train, and therefore recruit, new volunteers during the pandemic but enthusiasm for the project from the community led to 28 volunteers undertaking Highway Safety Awareness training funded by SCC in 2022

A Corner of Dulverton, by Stanley Roy Badwin 1906-1989. Watercolour
Image courtesy : Chris Beetles Gallery, London.

Special Quality: A deeply rural community closely linked to the land with strong local traditions and ways of life

Exmoor's local communities:

- 10,284 people live on Exmoor
- The number of people living on Exmoor is declining, and ageing
- The majority of Exmoor is a sparse rural area – defined as 'rural hamlets or isolated dwellings in a sparse setting', or 'rural village in a sparse setting'.
- All of the 44 parishes within or partly within the National Park have a population of less than 1,500 people
- Only 3 settlements have populations of over 1,000 people (Dulverton, Porlock, Lynton & Lynmouth). These fulfil an important role as local service and tourism centres, serving a large catchment area

Photo credit Paul Waby

Deeply rural communities summary (1)

- Exmoor is one of the smallest National Parks in the UK, both in area and in population. It is remote from major centres of population, with no major road or rail access to the National Park
- Exmoor has an ageing population, with the number of people aged 59 and below declining and those aged 75+ increasing
- Exmoor house prices are substantially higher than regional and national averages, and wage levels are low, which means there is an affordability gap with the ratio of lower quartile house price to household income being 9:1. It also has one of the highest levels in the country of second homes and holiday homes (19% of the housing stock). 83 local needs affordable dwellings have been completed since 2011
- For the size of its communities Exmoor still retains a relatively wide range of services and facilities, However, there are few public transport links and the high cost of vehicle fuel impacts disproportionately on rural areas such as Exmoor
- The Index of Multiple Deprivation rankings for Exmoor's communities have fallen since 2015, reflecting a worsening in the relative deprivation of Exmoor's communities compared to other areas of the country. 28% of households have at least one person with a long-term health problem or disability

Photo credit Paul Waby

Deeply rural communities summary (2)

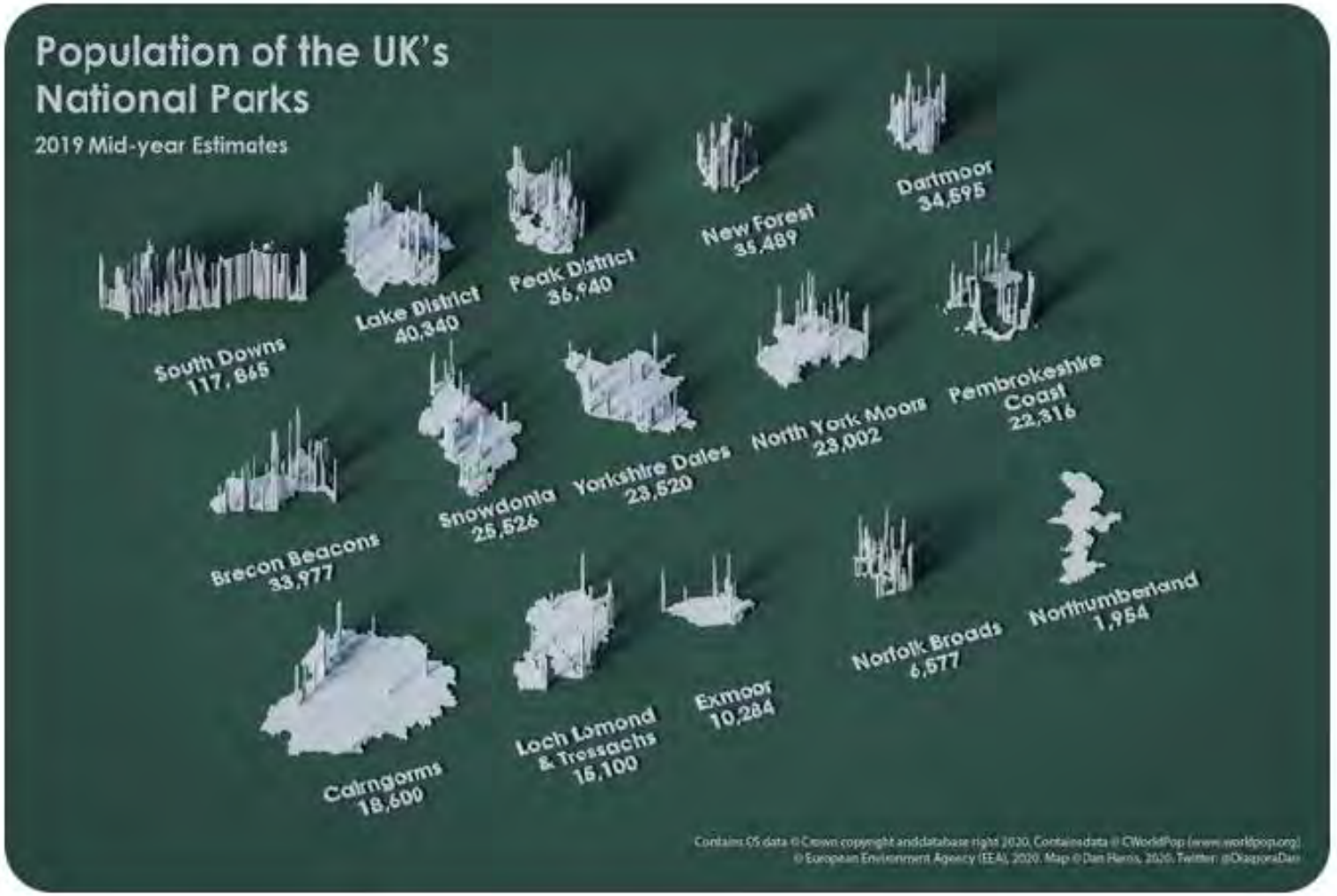
- Most businesses are micro (0-9 employees) with the mean average number of paid workers 3.8 per business. Self-employment rates are significantly higher on Exmoor at 26.8%, than in the South West (12.7%) and UK (10.8%). Output, measured by Gross Value Added, is estimated to be almost £113 million. GVA per capita is low compared to Devon and Somerset and other deeply rural areas in England. This is partly due to the low number of younger economically active people and the low productivity in key sectors such as tourism
- Local businesses value the high quality environment of the National Park. There are high level of home based businesses and strong connections with local suppliers, which improves sustainability. However transport and broadband connectivity challenges are key barriers for local businesses alongside the availability of services such as childcare
- The impact of covid on many local businesses was severe, particularly amongst the visitor and hospitality sector, but there has been good recovery since then

Location and remoteness

Exmoor is a remote rural area, with no major road or rail access to the National Park. It is also remote from major centres of population

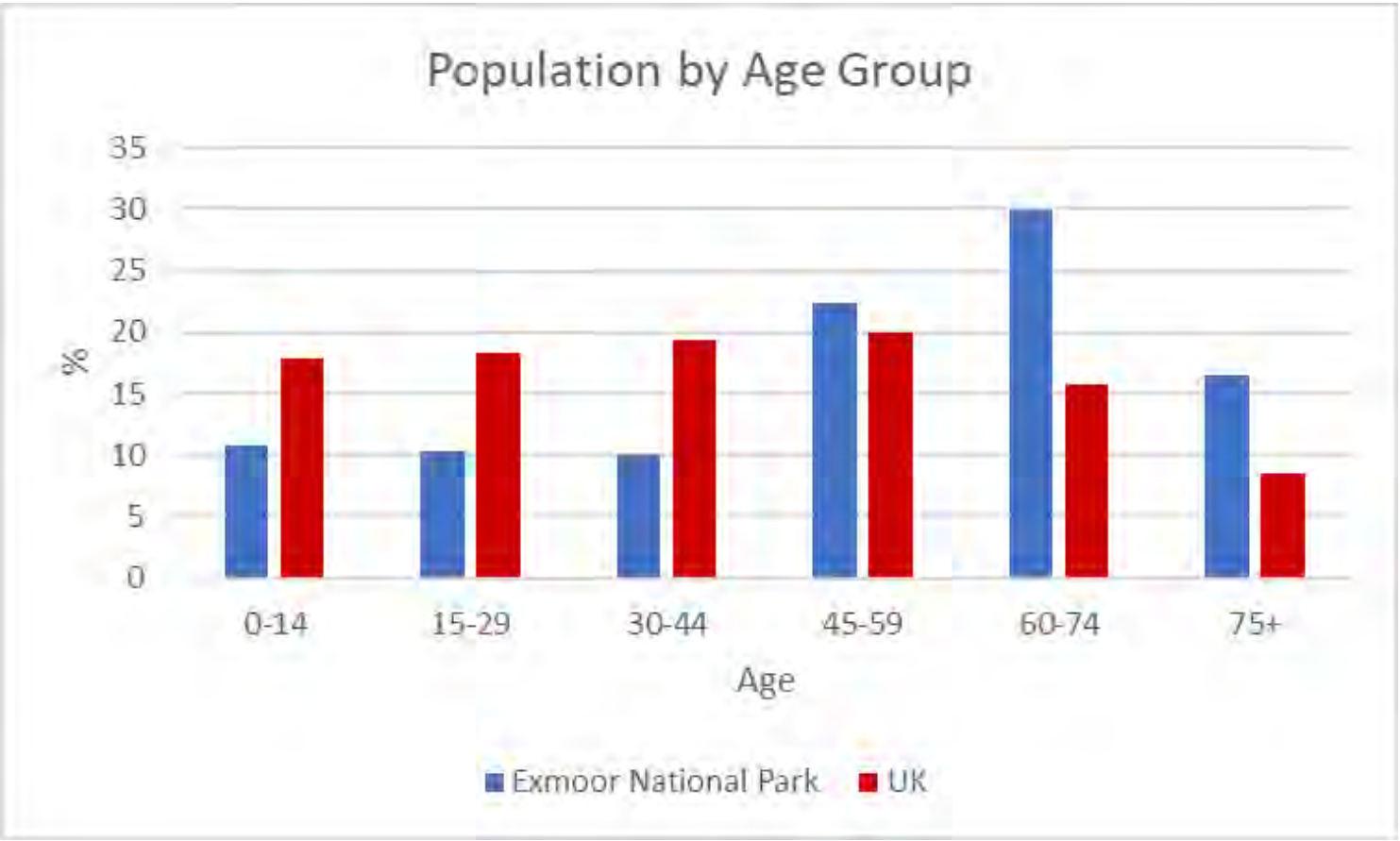
Comparison with other UK National Parks

Exmoor is one of the smallest National Parks in the UK, both in area and in population



Population

- Exmoor has an ageing population and since 2011 the number of people aged 59 and below has decreased
- The age bracket with the biggest increase is those aged 75+ which increased by more than 3% since 2011



Source: Census Mid-Year Estimates 2020

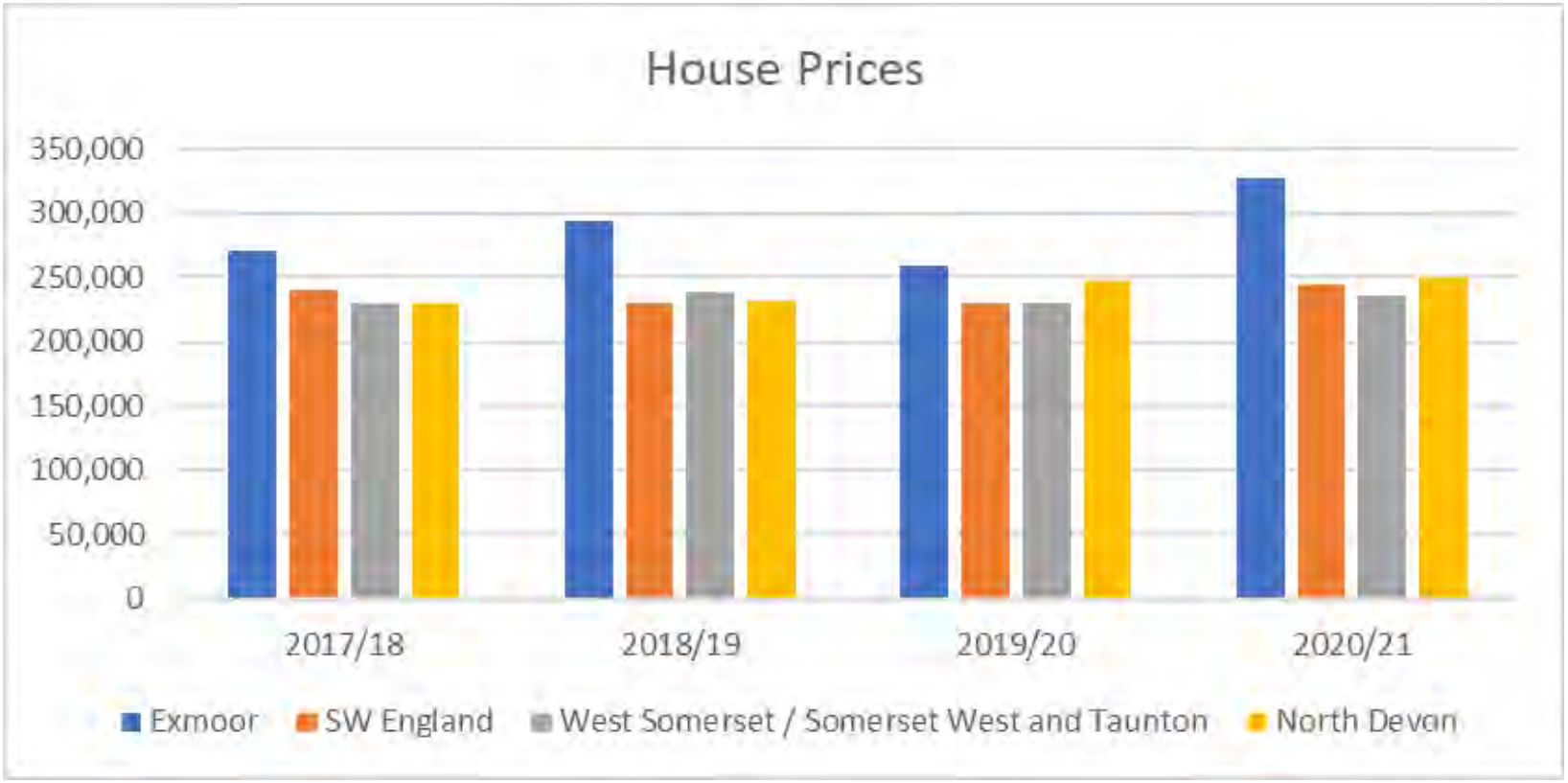
Housing and local services

- The deeply rural nature of Exmoor's communities brings particular challenges including housing affordability, low wages, fuel poverty, and difficulty retaining local services and community facilities
- Exmoor's house prices are substantially higher than regional and national averages, driven by demand from in-migration & second home ownership.
- The disparity between household incomes and house prices means there is an affordability gap with the ratio of lower quartile house price to lower quartile income being 9:1
- Exmoor has one of the highest levels in the country of second homes and holiday homes (19% of the housing stock)
- Consequently, the majority of properties is well beyond the means of many local people in housing need, especially first-time buyers and families needing larger accommodation
- 83 local need affordable homes have been completed since 2011, 26 between 2017-22
- A large numbers of rural properties are off-grid and there is the high cost of vehicle fuel impacting on rural areas with few public transport links. These factors impact on access to services including health, education and employment. The impact of cost-of-living rises are greater. All these put rural areas at a disadvantage. (Rural Services Network)

House Prices and Income

House prices have fluctuated but are higher on Exmoor than outside the National Park.

The average house price from sales between 2017-22 was £297,250 (ARC4)

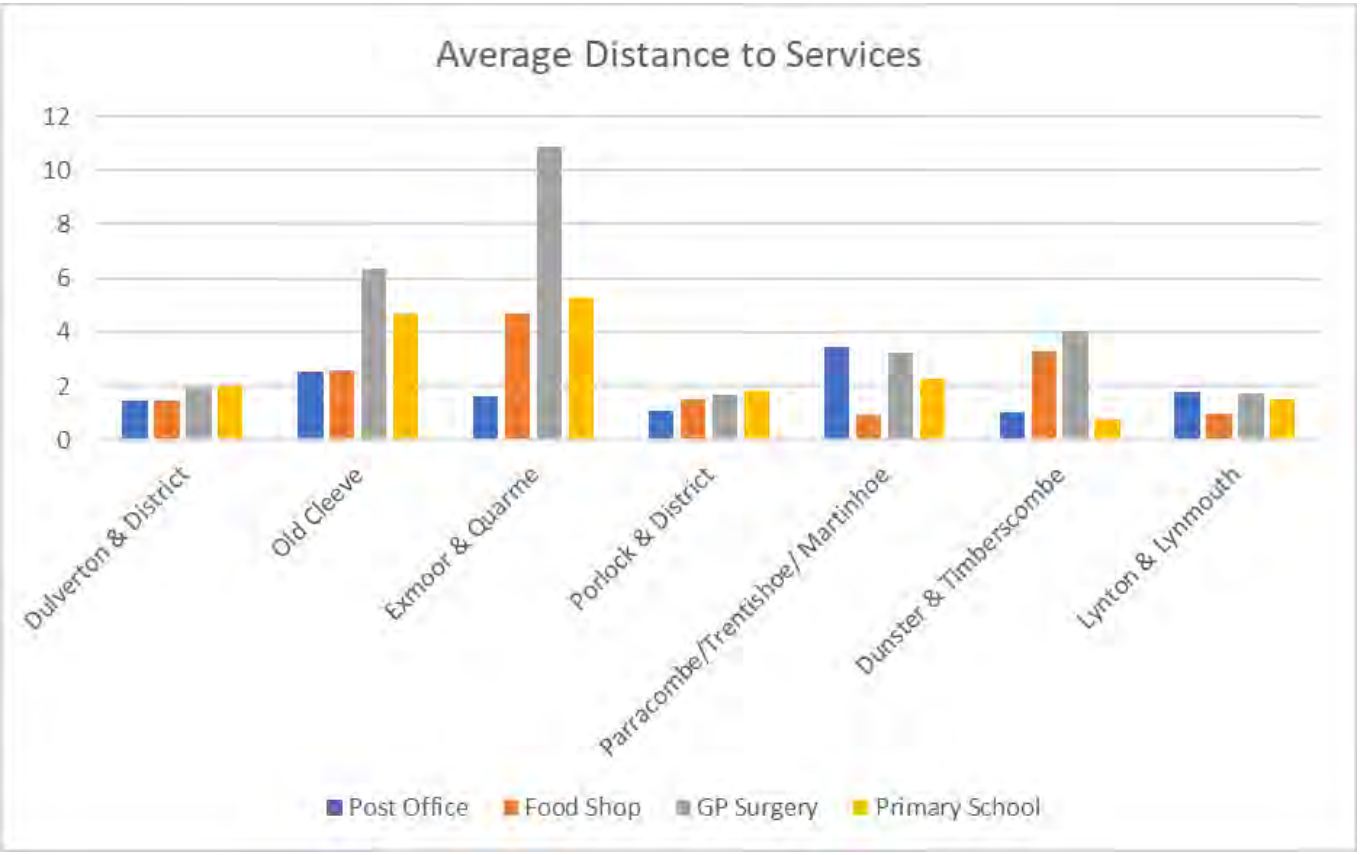


New Housing

- A total of 82 new homes have been completed since 2017/18
- Of these, 26 were affordable homes
- The 56 market houses completed included 5 extended family dwellings, 4 rural worker dwellings and 1 succession farm dwelling

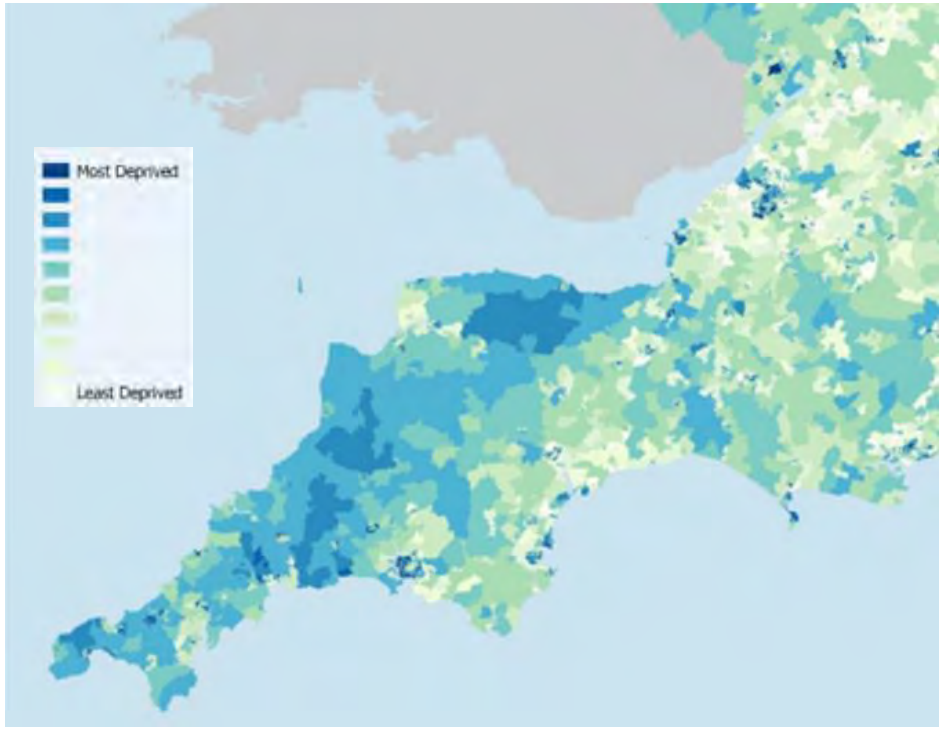
Community Facilities and Services

- For the size of its communities Exmoor still retains a relatively wide range of services and facilities
- However, there are few public transport links and the high cost of vehicle fuel impacts disproportionately on rural areas such as Exmoor

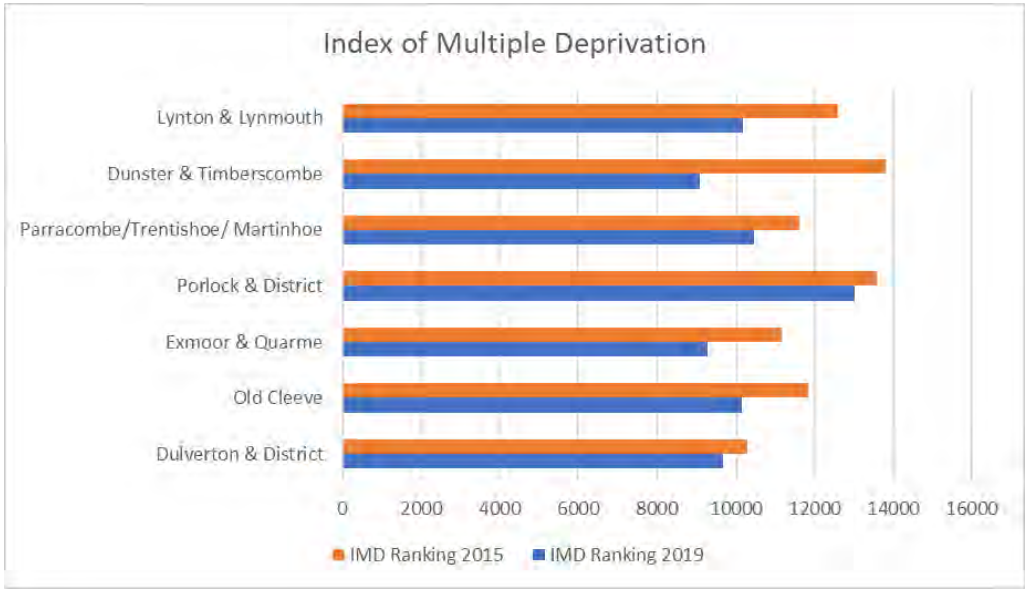


Community Well-being

Index of Multiple Deprivation 2019



- The IMD is a national measure of community wellbeing based on Income, Employment, Health Deprivation and Disability, Education, Skills Training, Crime, Barriers to Housing and Services, and Living Environment
- The IMD ranking for Exmoor's communities is around 9,000 to 13,000 with 1 being the most deprived and 32,844 the least deprived
- All the rankings have fallen since 2015, reflecting a worsening in the relative deprivation of Exmoor's communities compared to other areas of the country. The reasons behind this vary but include health deprivation and income deprivation affecting children
- 28% of households have at least one person with a long-term health problem or disability (2011 Census)



Employment

Data from the 2011 census highlights the following (data from 2021 census not available for ENP):

- Exmoor has a 'working age' population of approximately 7,721 people
- There are high levels of part-time workers (13%)
- Rates of economically inactivity are slightly higher than average as a result of high numbers of retired people
- Given the deeply rural nature of local communities, there are high levels of people working at or from home (37%)
- Around 91% of working age people both live and work within the National Park, representing a high degree of self-containment
- Levels of unemployment are c5% (ONS/Nomis 2021), higher than the national average 3.7% (ONS 2022)

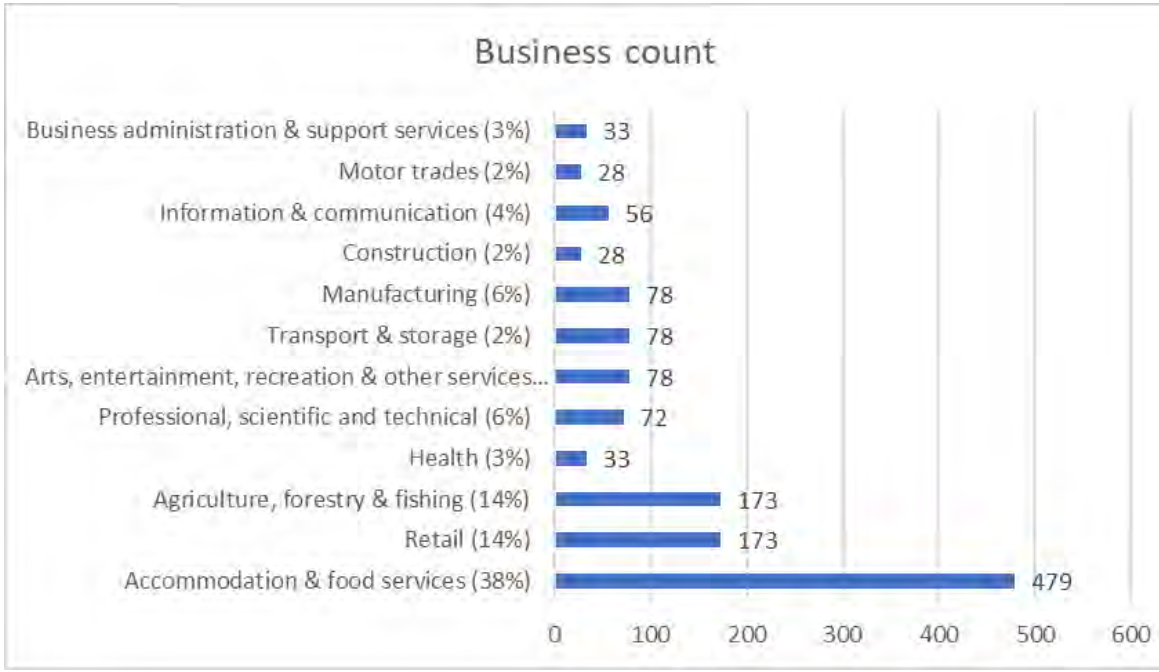
Percentage of people in employment working at or from home (2011):	
Exmoor National Park	37.0%
England	10.3%
South West	12.7%
North Devon	16.9%
West Somerset	25.3%

Businesses on Exmoor

- Research carried out for ENPA in 2019/20 identified 1,277 businesses operating from the National Park, including smaller companies that are not included in national statistics which only cover larger businesses that are PAYE or VAT registered
- The latest national figures from 2021 identify 1,020 businesses which are PAYE or VAT registered
- Overall, there are an estimated 5,042 Full Time Equivalent (FTE) jobs
- The largest sector is Accommodation and Food, with 44% of the jobs and 38% of the businesses, accounting for much of the tourism related industry on which the Exmoor economy is highly dependent. These proportions are far higher than in other areas in the South West

	Number	Employment	Turnover (£'000s)
0-9 Micro	955	2,284	142,111
10-49 Small	60	1,071	49,932
50-249 Medium	5	357	19,733
250+ Large	0	0	0
Total Exmoor	**1,020**	**3,712**	**211,776**

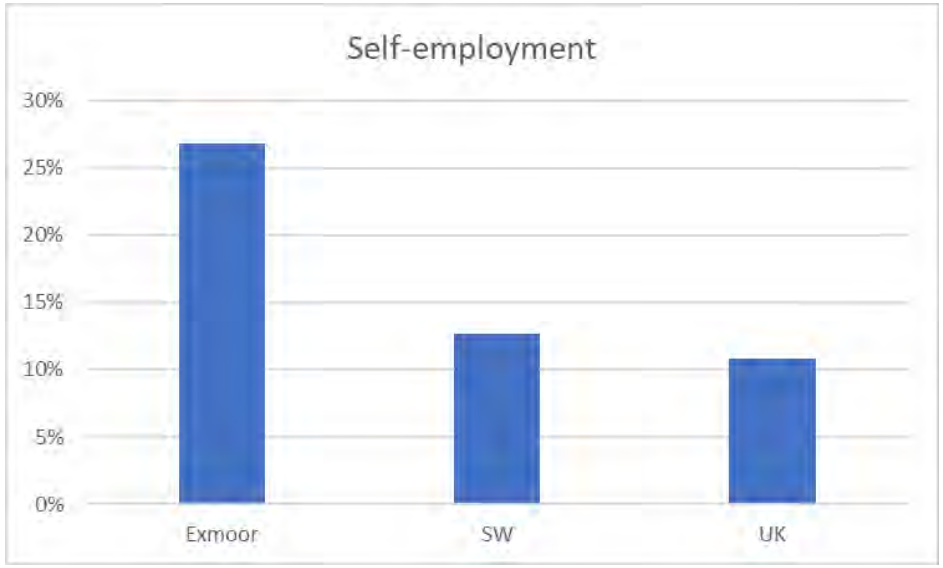
Analysis showing the number of businesses, employment and turnover of VAT and/or PAYE based enterprises in Exmoor National Park by employment size band. Source ONS March 2021

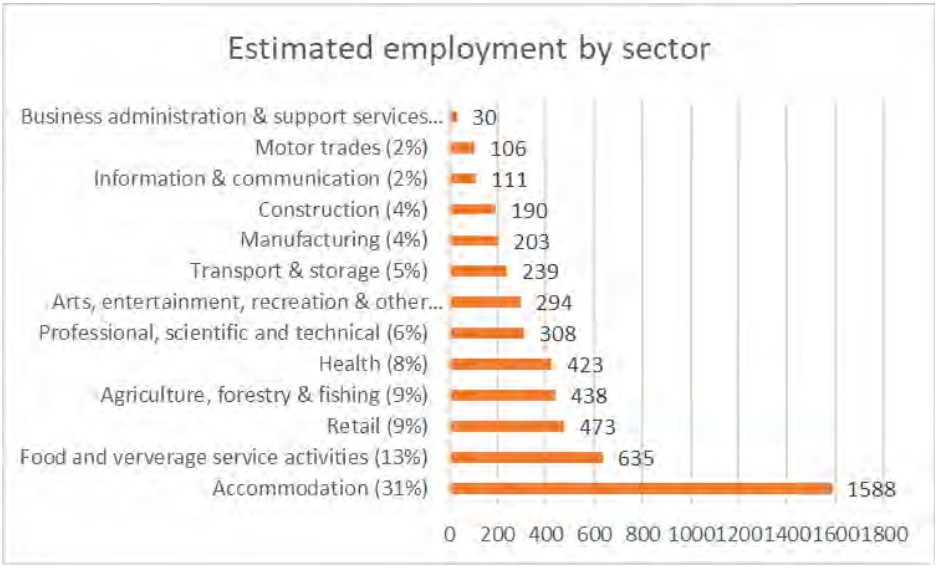


Source: Rural Enterprise Exmoor Research Report June 2020

Employment

- Most businesses are micro (0-9 employees) with the mean average number of paid workers 3.8 per business
- Self-employment rates are significantly higher on Exmoor at 26.8%, than in the South West (12.7%) and UK (10.8%)

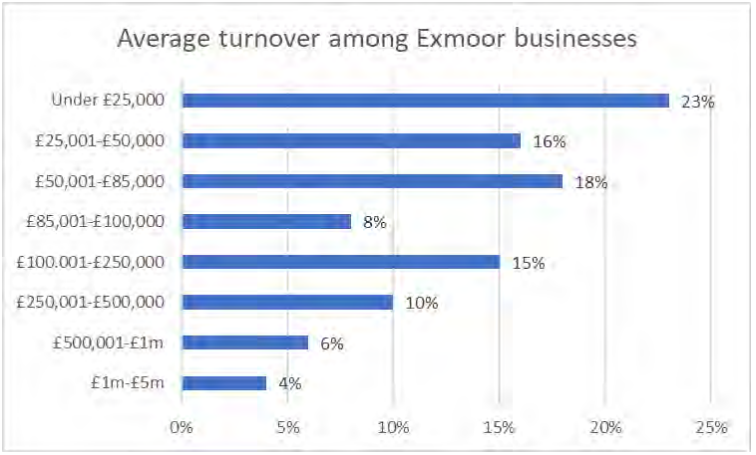




Source: Rural Enterprise Exmoor Research Report June 2020

Business turnover and GVA

- The size of businesses affects average turnover levels which are lower in Exmoor than in Devon, Somerset and the South West
- Output, measured by Gross Value Added, is estimated to be almost £113 million
- GVA per capita is low compared to Devon and Somerset. Even when compared with other deeply rural areas in England such as in the Lake District and Northumberland, Exmoor's GVA per capita figures are still between 45% and 70% of their comparators
- Population demographics may be in part responsible for this disparity in GVA per capita with fewer younger people of working age (11% compared to 18.9% in England) and more older people of retirement age (35% are over 65 compared to 18.3% in England)
- The productivity of the key sectors such as tourism is also a factor in the low GVA per capita recorded, and there are similar disparities in GVA per job which are half the regional average



Exmoor business survey

A survey of local businesses as part of the Rural Enterprise Exmoor research identified the following strengths and weaknesses

Strengths

- Natural beauty of the National Park was a benefit for 60% of firms
- 52% of businesses reported wellbeing and lifestyle as important to their business
- Strong job density of 0.91 demonstrating good availability of employment for a remote rural setting
- 63% of respondents were home-based, and few employees (18%) travelled into Exmoor for work, improving sustainability and avoiding transportation barriers
- 62% of businesses used suppliers within the National Park, shortening supply chains and increasing local multiplier effects

Weaknesses

- 61% of businesses report transport connectivity challenges, which impacts on recruitment and retention (particularly of young people)
- 39% of businesses report broadband connectivity challenges
- 26% of businesses reported a lack of available labour
- 35% of respondents did not have the childcare they needed
- Large number of micro size firms and self-employed with low turnover
- Low levels of productivity

Economic impact of Covid

- ENPA carried out a business survey in May-June 2020 to assess the impact of the initial Covid lockdown
- Almost two thirds of businesses had to cease trading and less than twenty per cent continued to trade as usual
- 2/3 of businesses assessed the impact as severe, and over 1/5 rated the impact as negative
- 1/3 of businesses could resume trading within a month, a further third within 3 months and the remaining third suggesting it could be 3 months and in some cases over 6 months to resume trading
- The impacts have been strongest within the visitor and hospitality sector – especially accommodation and food and drink providers
- Some businesses were able to identify positive opportunities to take forward in recovery
- Increased promotion and enhanced digital connectivity were the biggest issues businesses wanted addressing in the longer term
- STEAM data for Exmoor National Park suggests that compared to 2019 (pre pandemic baseline) the value of tourism to the area was down 48% in 2020 and 13% in 2021. Visitor numbers fell less (34% and 3% respectively) due to the popularity of domestic countryside visits outside of lockdown periods – however there was a higher proportion of day visitors and significantly lower spending (with businesses still closed by law when access for recreation was first restored)
- Recovery has been hampered by a lack of staff and increasing costs for businesses coupled with the impact of the cost of living crisis on consumers

Dunster Castle, by R. Pocock, c.1840. Lithograph
Image courtesy:

Special Quality: A farmed landscape with locally distinctive breeds such as Red Devon cattle; Devon Closewool, and Exmoor Horn sheep, and herds of free living Exmoor ponies

Exmoor's farmed landscape:

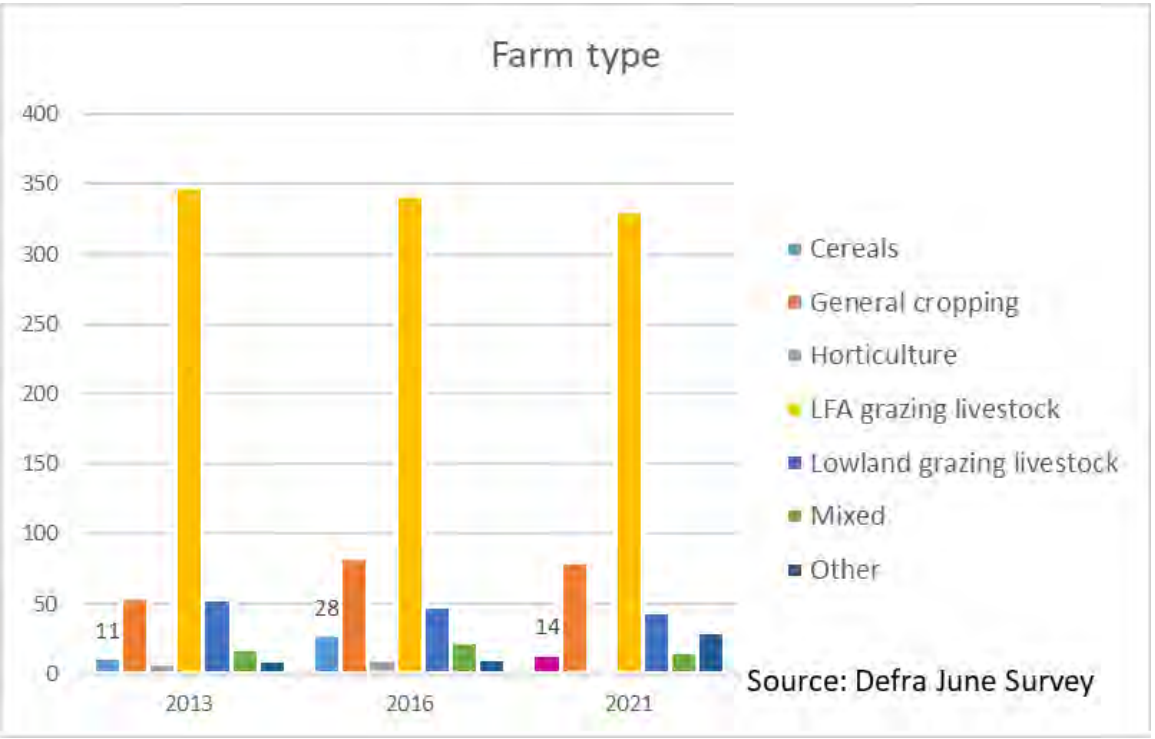
- Utilisable agricultural area is 59,336ha
- Farming is dominated by hill and upland farms. Most farms operate extensive grazing livestock production systems, with a high proportion of permanent pasture and semi-natural habitat and a relatively small area of land which is cropped. Sheep and beef systems predominate
- There are 534 commercial farm holdings on Exmoor, average size 101 ha, with c147 farms above 100ha
- Around 1,183 people work in agriculture
- Exmoor's landscape character derives from this long history of livestock farming which has produced a patchwork of fields enclosed by traditional field boundaries (hedgerows and high Devon hedge banks) surrounding the higher moor, and which is distinguished by larger enclosures and some common rough grazing

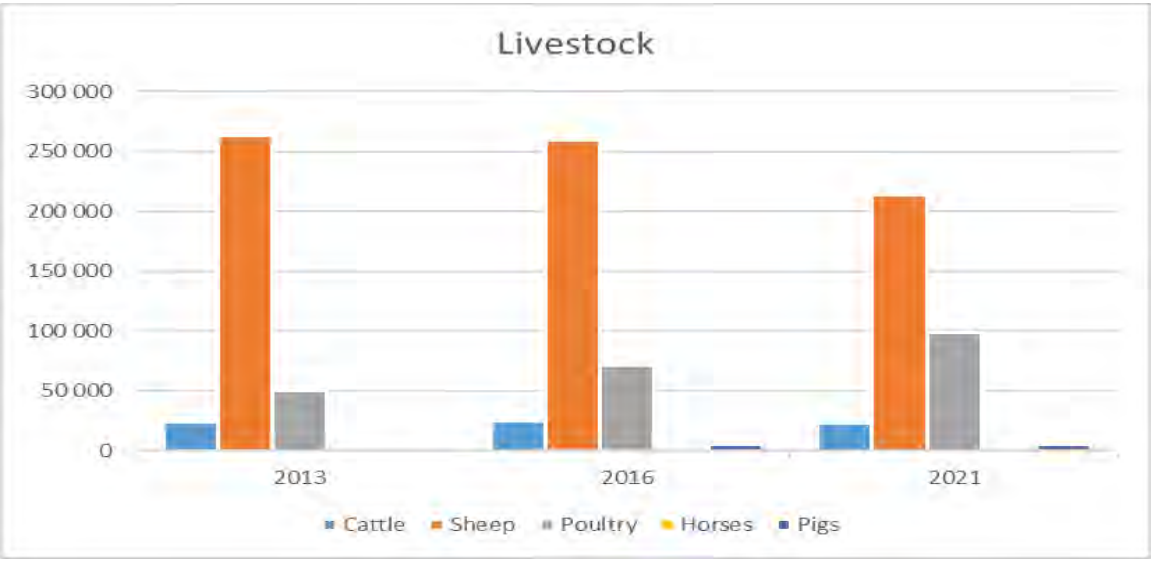
Farmed landscape summary

- Extensive livestock grazing is the primary farm type on Exmoor with cattle and sheep as the main livestock kept
- There is a mix of farm sizes on Exmoor. Around a third of commercial farms (28%) are over 100 ha, with a third (29%) between 5-20 ha. The trend towards larger commercial holdings seen in recent years has fallen. There are slightly higher levels of owned land and shared common grazing on Exmoor compared to the rest of the South West and England
- The number of farmer workers on Exmoor has remained relatively static over the last 10 years, at around 1,200. There has been a fall in numbers of casual workers. The age structure among farmers appears healthy and there is a cohort of younger farmers with larger holdings and an innovative and market-focused outlook
- Average income on LFA grazing livestock farms has increased over the last few years from a low point in 2018/19 due to higher agricultural output, although costs have also risen. The majority of upland farms are in the £0-50k income bands. Average income is expected to fall by two thirds
- Upland grazing farms are more dependent on farm support compared to all farm types. Around 62% of average farm income is from the basic payment scheme, 28% from agri-environment schemes and 9% from diversification. Net income from agricultural production is negligible at around 0.5% or £200. Overall farm income for upland farms is about half of the average for all farm types
- The amount of agri-environment funding and areas covered are changing as the transition to the new environmental land management schemes progress
- Distinctive local breeds are still an important element of the farmed landscape, and breed numbers are generally stable

Farming on Exmoor

Extensive livestock grazing is the primary farm type on Exmoor with cattle and
sheep as the main livestock kept

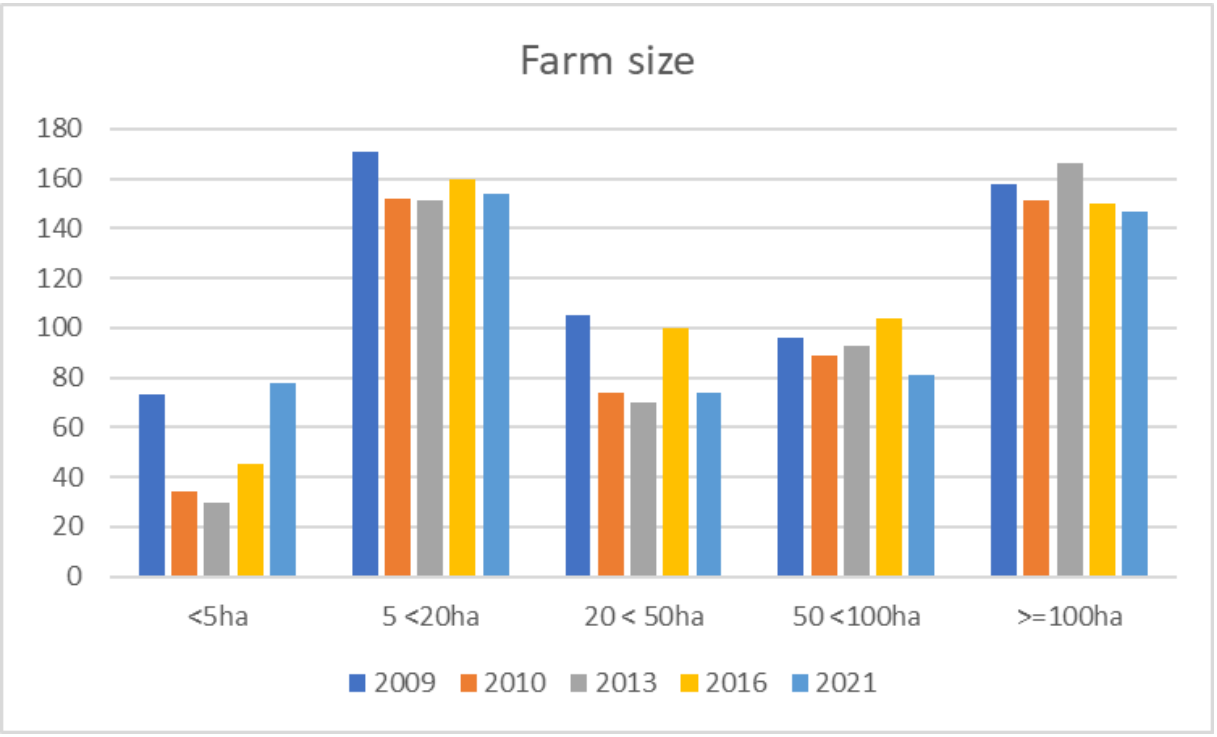


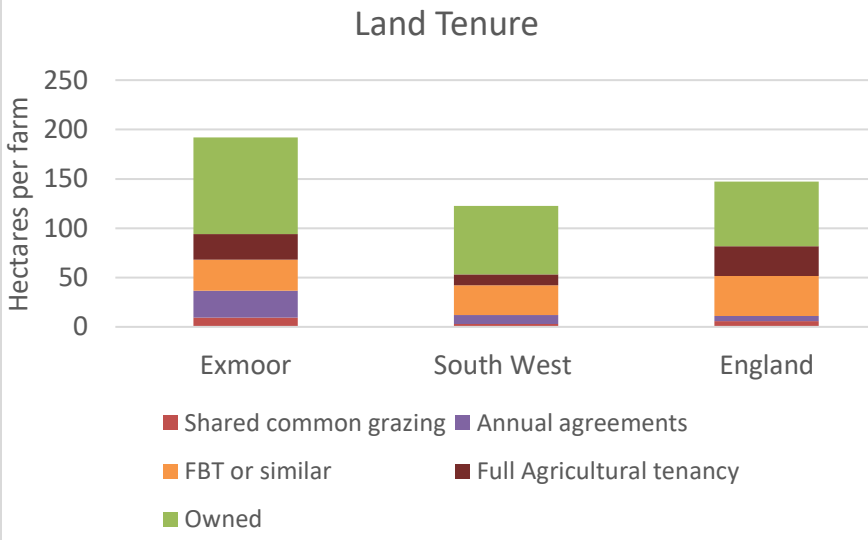


Source: Defra June Survey 2022

Farm size and tenure

There are a mix of farm sizes on Exmoor. Around a third of commercial farms (28%) are over 100 ha, with a third (29%) between 5-20 ha. The trend towards larger commercial holdings seen in recent years has fallen. There are slightly higher levels of owned land and shared common grazing on Exmoor compared to the rest of the South West and England

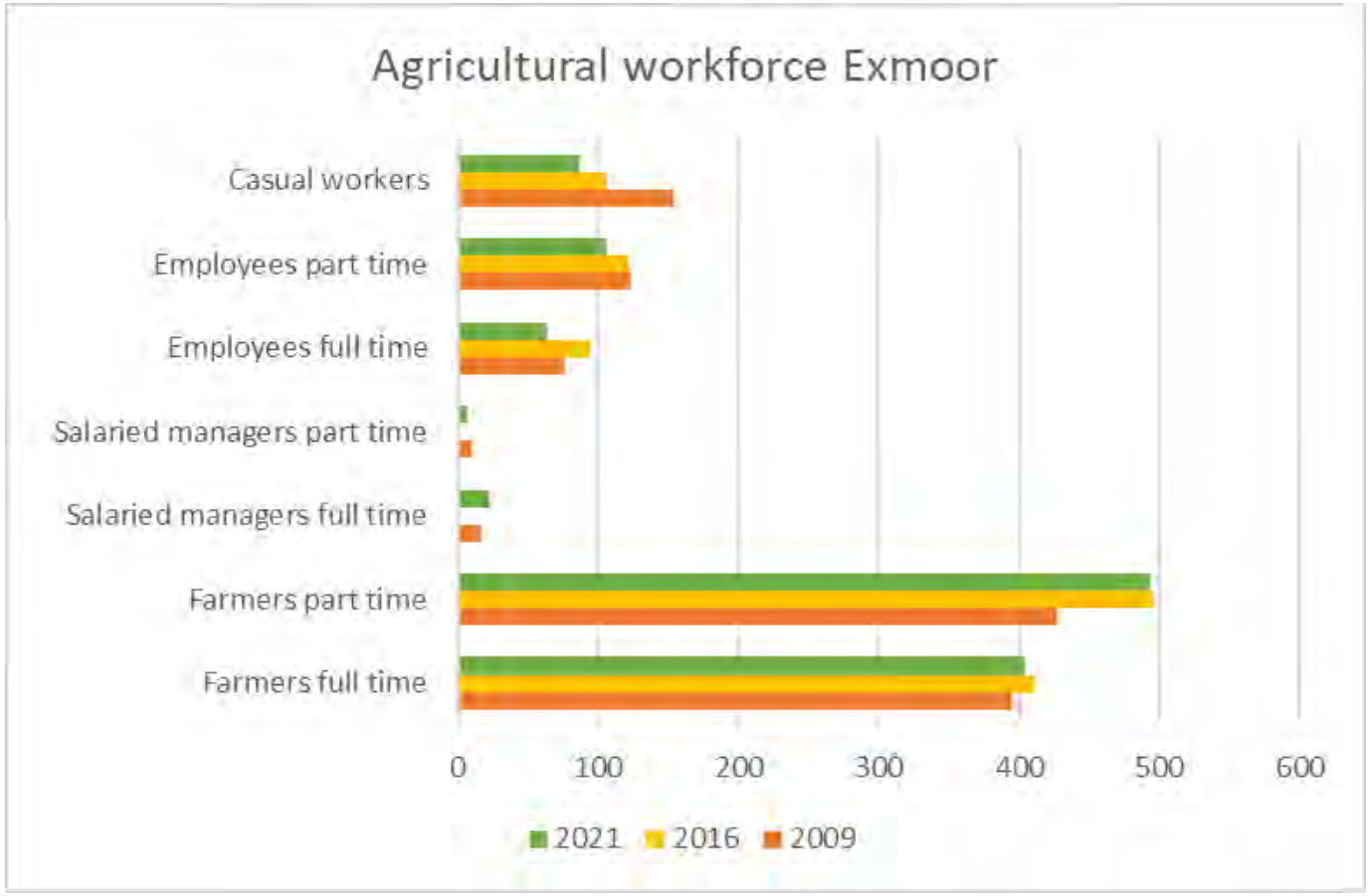




Source: Defra June Farm Survey National Parks, 2022

Farm employment

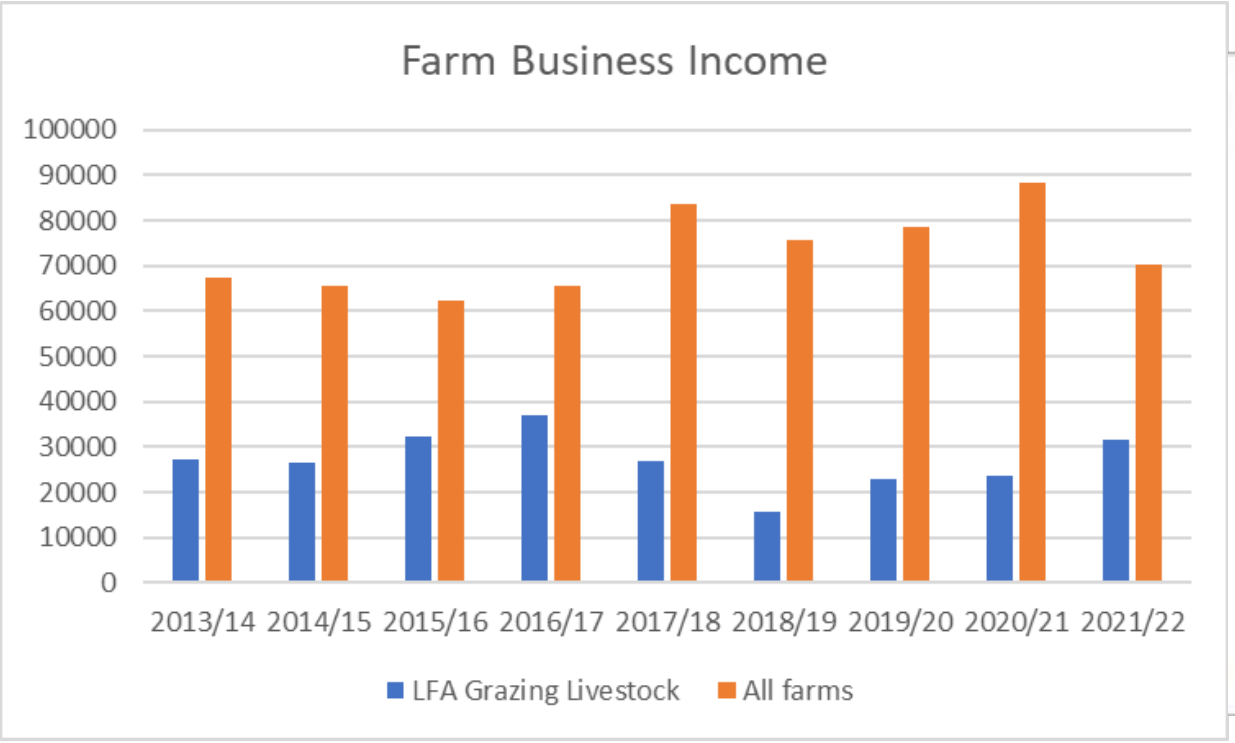
The number of farmer workers on Exmoor has remained relatively static over the last 10 years, at around 1,200. There has been a fall in numbers of casual workers.

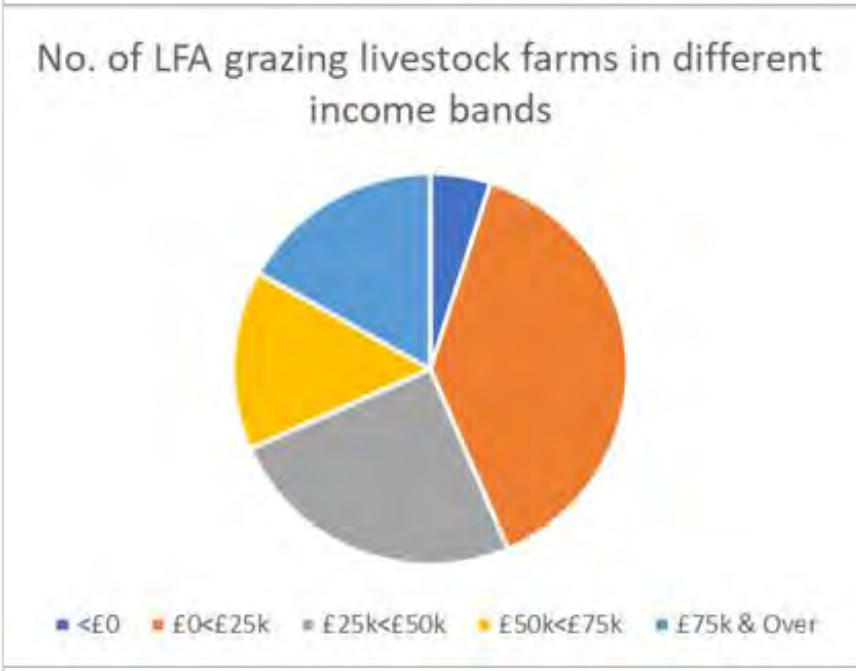


Source: Defra June Survey 2022

Farm Business Income

Average income on LFA grazing livestock farms has increased over the last few years from a low point in 2018/19. The rise in 2021/22 was largely due to higher agricultural output which resulted in a positive (albeit very small) return on agricultural activities for the first time since 2011/12. Enterprise output from sheep was a key driver, increasing by a quarter. Cattle output also rose by 12 percent. At the same time, variable and fixed costs went up by 16 percent and 9 percent respectively, notably for animal feed, fertilisers, machinery running costs and rent. The majority of upland farms are in the £0-50k income bands. However, on LFA grazing livestock farms average income is expected to fall by two thirds to £16,000 due to increasing costs (primarily fertiliser, machinery and feed) while output is expected to be lower, with lower livestock prices (ONS 2023)





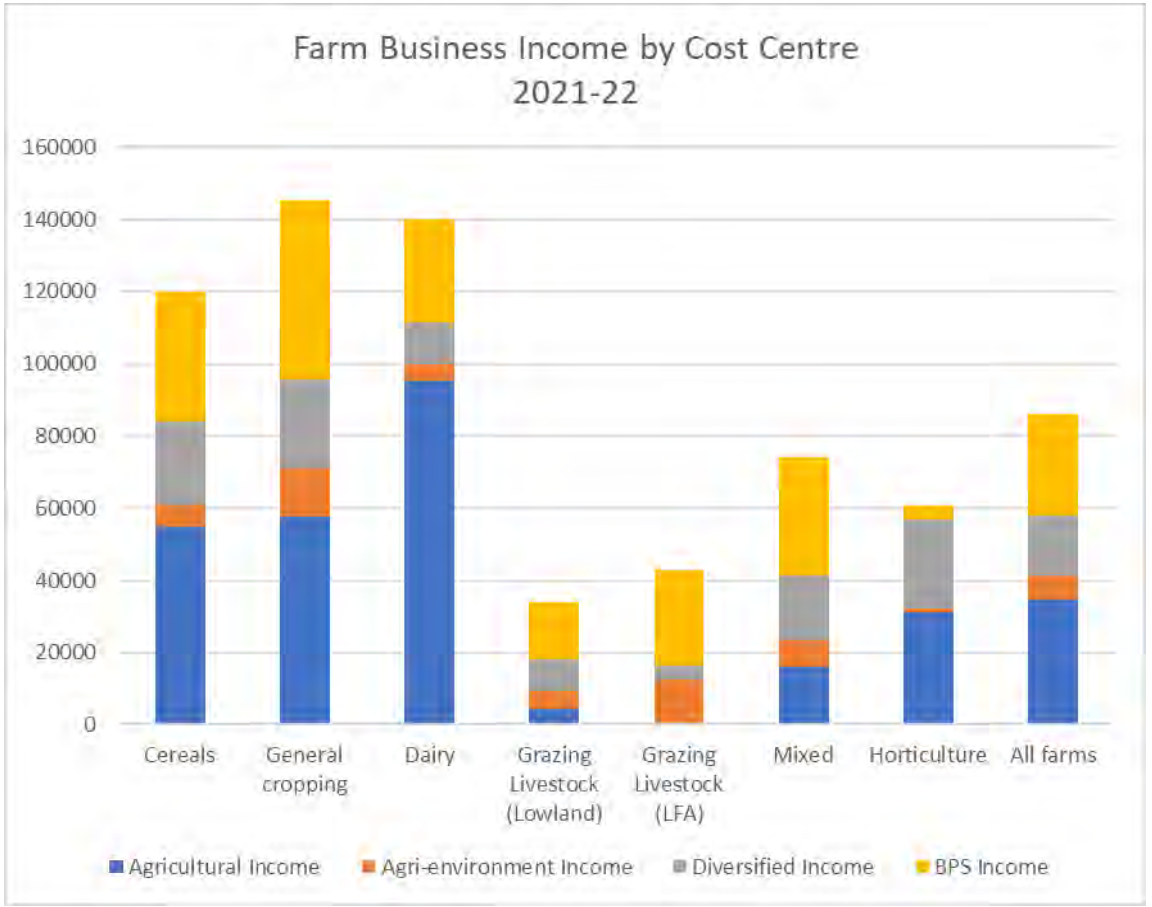
Source: Farm Business Income 2022, ONS

Farm support

For upland grazing farms, around 62% of average farm income is from the basic payment scheme (double what it is for all farm types), 28% from agri-environment schemes (compared to 8% for all farm types) and 9% from diversification (19% for all farm types).

Net income from agricultural production is negligible at around 0.5% or £200.

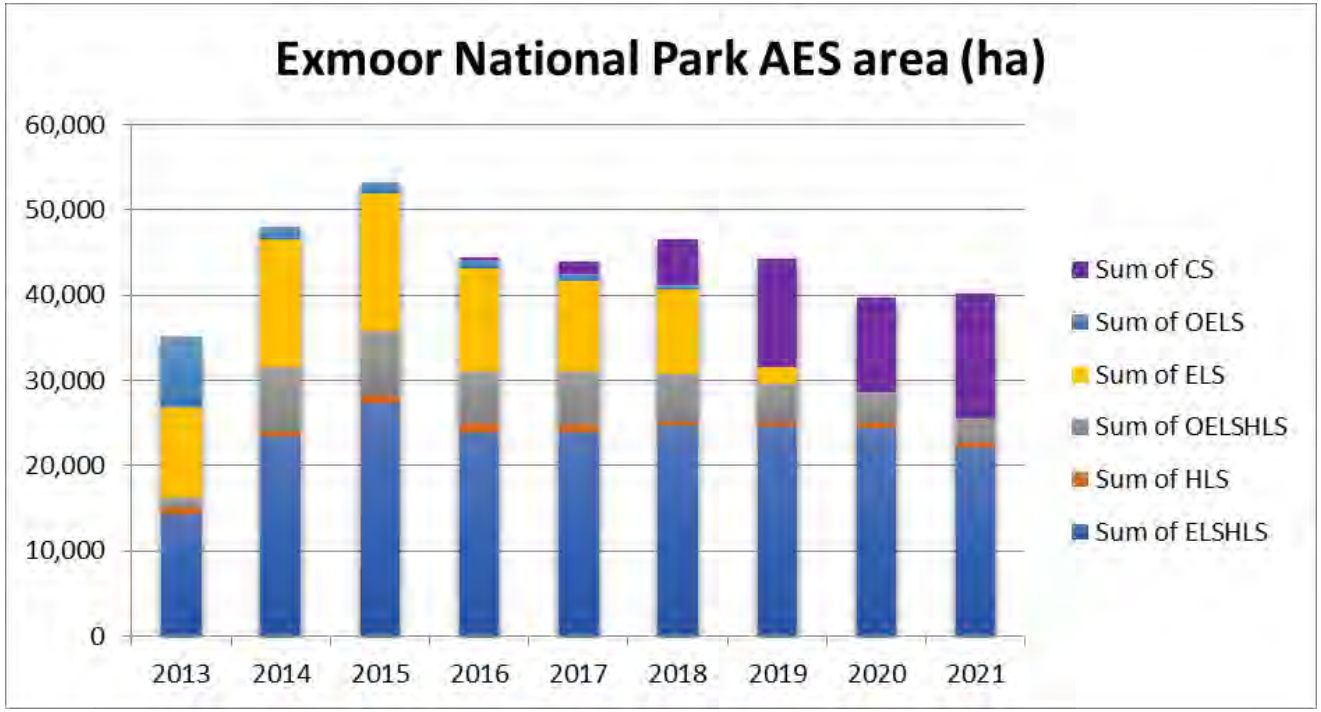
Overall farm income for upland farms is about half of the average for all farm types.



Source: Farm Business Income 2022, ONS

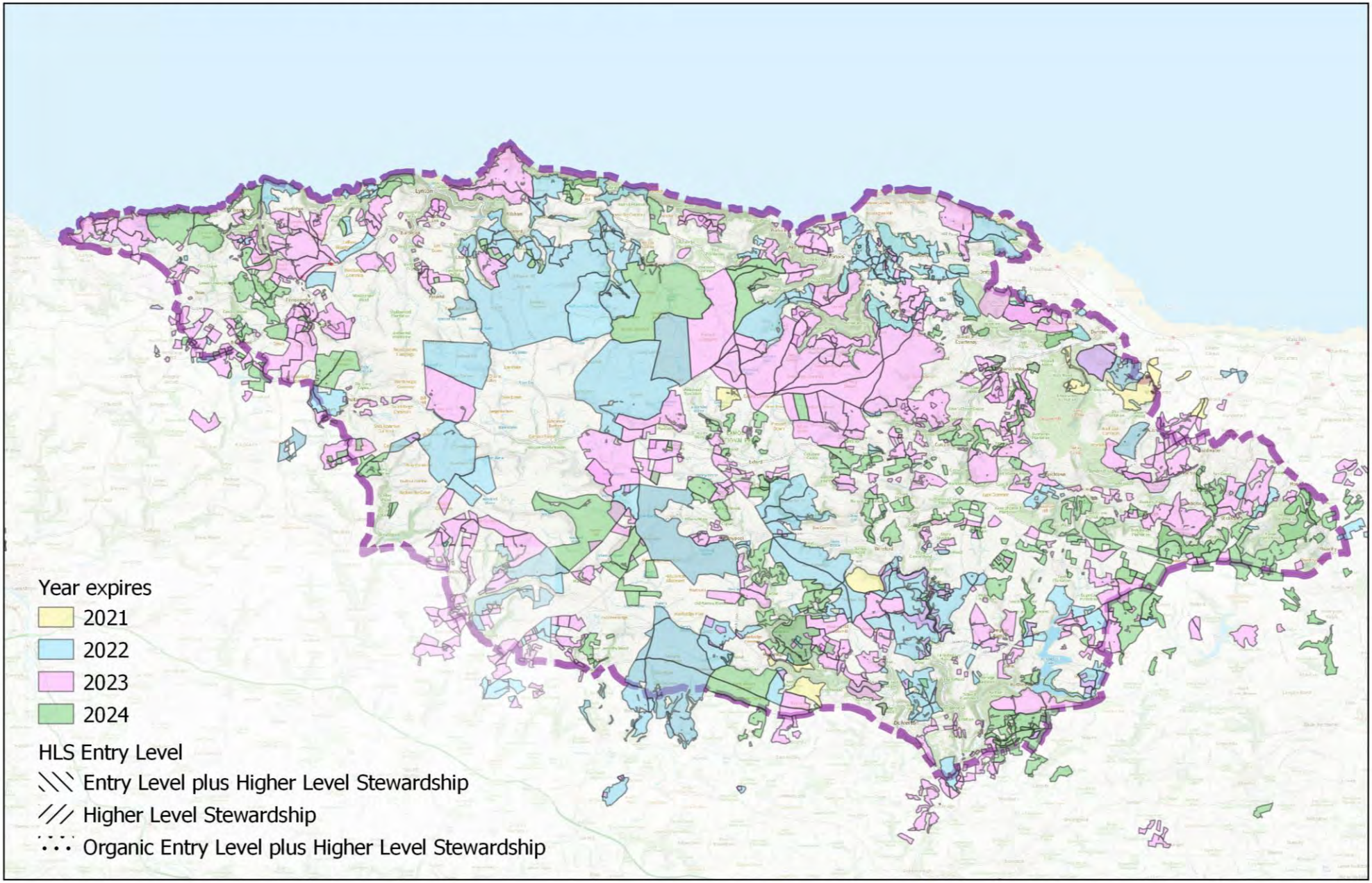
Agri-environment funding

- Agri-environment agreements are an important part of ensuring the viability of hill farming on Exmoor. Exmoor's farmers currently receive around £5 million from AES. Following the UK's exit from the European Union, these payments are being replaced by new Environmental Land Management Schemes (ELMS). These are intended to reward farmers for delivering environmental outcomes such as thriving wildlife, natural beauty and clean water
- The value of the Basic Payment Scheme under the previous funding schemes was £8.7 million on Exmoor in 2020. This will reduce to £1.2m in 2027 (CCRI Agricultural Transition report 2022), with other funding coming through the ELMS over the transition period
- Around 68% of farmland and moorland on Exmoor (the Utilisable Agricultural Area) is covered by agri-environment agreements (AES). This has fallen from c 73% in 2018 (2021 MEOPL data, Natural England) and will continue to change as the transition to new schemes progresses



Source: Natural England, MEOPL Data 2021

Environmental Stewarship Scheme 2021 to 2024



Compiled by Matt Sully on 14/10/2022

Distinctive local breeds

- The sight of distinctive local breeds such as Exmoor horn and Devon Closewool sheep, Devon Red Ruby cattle and herds of free-roaming Exmoor ponies is an iconic part of the Exmoor experience. These hardy breeds are able to withstand the harsh conditions on the moors, and are also important for conservation grazing

- Numbers of Devon Red Ruby cattle remain static, which is positive in light of significant factors such as bovine TB
- Overall numbers of Exmoor Closewool sheep have declined in recent years as breeders retire. There are currently in the region of 2,500 breeding ewes nationwide with approximately 1,800 directly within the National Park (2022)
- Exmoor horn sheep numbers are stable at around 10,390 adult ewes (2021), the majority of these are kept in the greater Exmoor area
- Exmoor pony numbers have increased from a historic low of just 50 after WW2, due to the conservation efforts of many pony enthusiasts and organisations. There are now around 4,000 registered Exmoor ponies worldwide with 500 living freely on the moors. The Exmoor Pony is on the Rare Breed Survival Trust's Watchlist in Category 2
- A project to characterise the full genome of the Exmoor pony was published and is available for further research. This may prove to be a valuable tool in developing a test for whether animals are true to the breed, helping to preserve genetic diversity and inform long term management of the ponies

The Doone Glen, Lynmouth by A. R. Quinton. Image courtesy: Salmon's

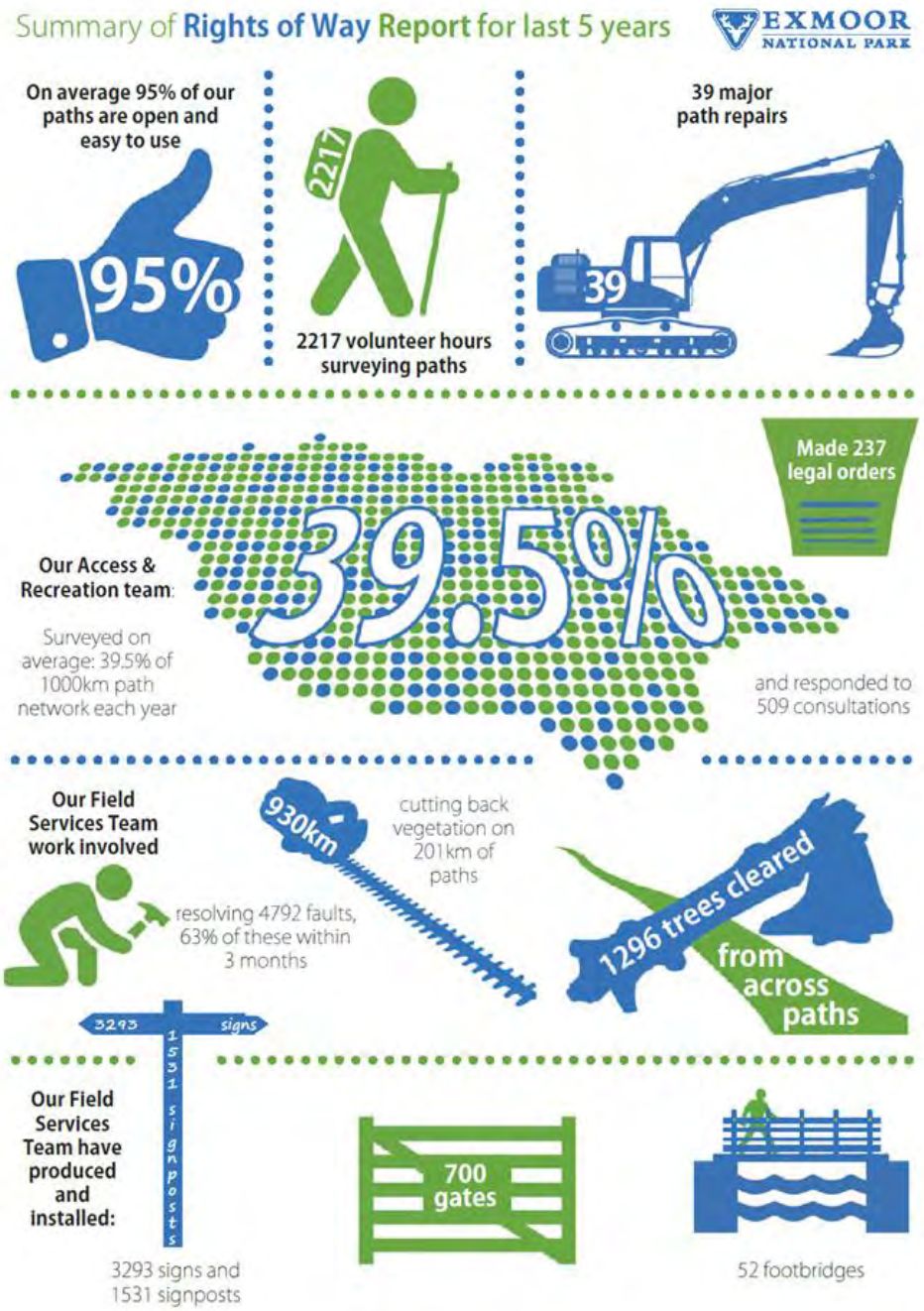
Special Quality: An exceptional rights of way network, with paths that are often rugged and narrow in character, along with extensive areas of open country and permitted access, providing superb opportunities for walking, riding and cycling

Exmoor's rights of way and access network:

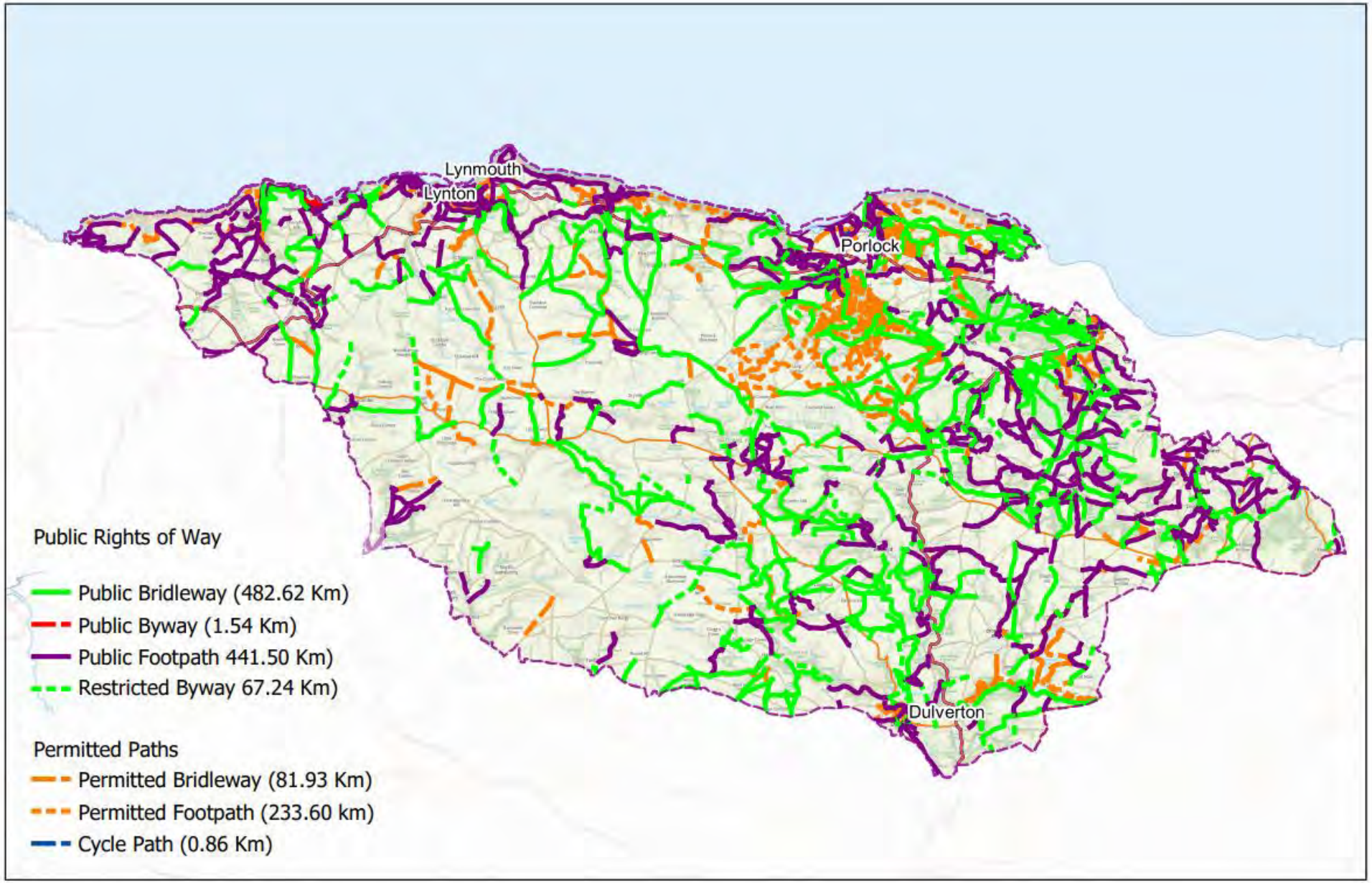
- A total of 1,325 km of public rights of way and permitted paths, many of them wild and rugged, comprising:
  - 441 km footpaths
  - 489 km bridleways
  - 333 km of permitted paths
  - 62 km other rights of way
- 17,595 hectares of open access land
- 97% of rights of way are considered to be 'easy to use'

Access & recreation summary

- On average over the last 5 years, 95% of rights of way are considered to be ‘easy to use’ and Exmoor scores the highest of all National Parks for this measure
- Visitor satisfaction with the rights of way is generally very high, with over 90% of visitors consistently rating it as 'good' or 'very good
- General sightseeing and short walks remain the top activities undertaken by visitors using the rights of way network, followed by long walks (over 2 hours)
- 90% of the rights of way network are free of stiles. In the last 5 years, 39 stiles have been changed to a gap or gate along with many other surface improvements
- Milder weather and a longer growing season has made it harder to keep the access open and paths free of undergrowth. Increase in vegatation also impacts on people’s enjoyment of access land, however most popular routes remain open and useableThere is increasing incidence of extreme weather events damaging the RoW network, with more frequent flash flood events which cause path surfaces to wash out, and more trees to clear from paths following storms
- Over the last 5 years 39 major works were carried out to improve or repair surfaces, and 21 path orders made to permanently move paths onto better routes
- Several path alignment works are underway to create the new the England Coast Path
- Ongoing management at popular countryside visitor sites deal with issues including litter and dog mess
- Large organised recreational encourage people to visit Exmoor, contribute to the local economy, and whilst they may cause some local disruption, their impact is not considered to be significant
- Illegal use of vehicles and other antisocial activities has not changed significantly in recent years and is not considered to be a major issue
- Wild swimming has increased in popularity since 2017 on Exmoor and across the UK

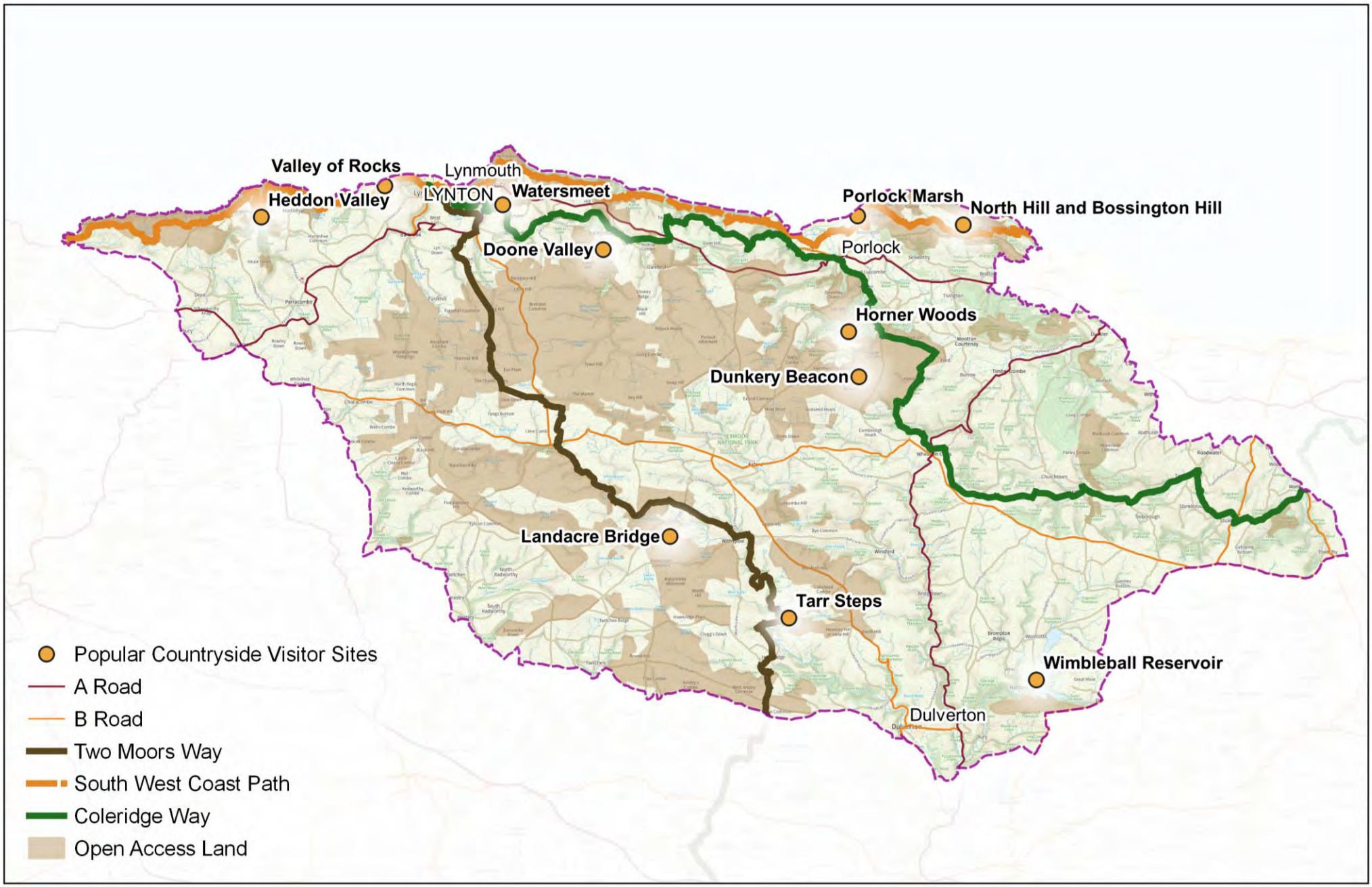

Summary of Rights of Way Report for last 5 years
EXMOOR NATIONAL PARK
On average 95% of our paths are open and easy to use
95%
2217
2217 volunteer hours surveying paths
39 major path repairs
39
Made 237 legal orders
Our Access & Recreation team:
39.5%
Surveyed on average: 39.5% of 1000km path network each year
and responded to 509 consultations
Our Field Services Team work involved
930km
cutting back vegetation on 201km of paths
resolving 4792 faults, 63% of these within 3 months
1296 trees cleared from across paths
3293 signs
1531 signposts
Our Field Services Team have produced and installed:
700 gates
3293 signs and 1531 signposts
52 footbridges

Rights of Way on Exmoor



Compiled by Matt Sully on 30/6/2023

Long distance paths and popular countryside visitor sites



Rights of Way Maintenance

- The rights of way network is managed and maintained by ENPA through delegated powers from Devon & Somerset County Councils
- ENPA maintains most of the rights of way furniture along with surfaces and vegetation
- The Rangers can't be everywhere, so Volunteer Path Parish Liaison Officers (PPLO) and Path Watcher volunteers help to ensure Exmoor's paths are well cared for and proactively report any issues to the Rangers.

Furniture	No.
Field Gates	1932
Hunting Gates	670
Pedestrian Gates	55
Bridges	316
Sets of Steps	257
Signposts	2947
Stiles	336
Boardwalks	19

Path Watcher Volunteers and PPLO induction training with Ranger Tim Parish

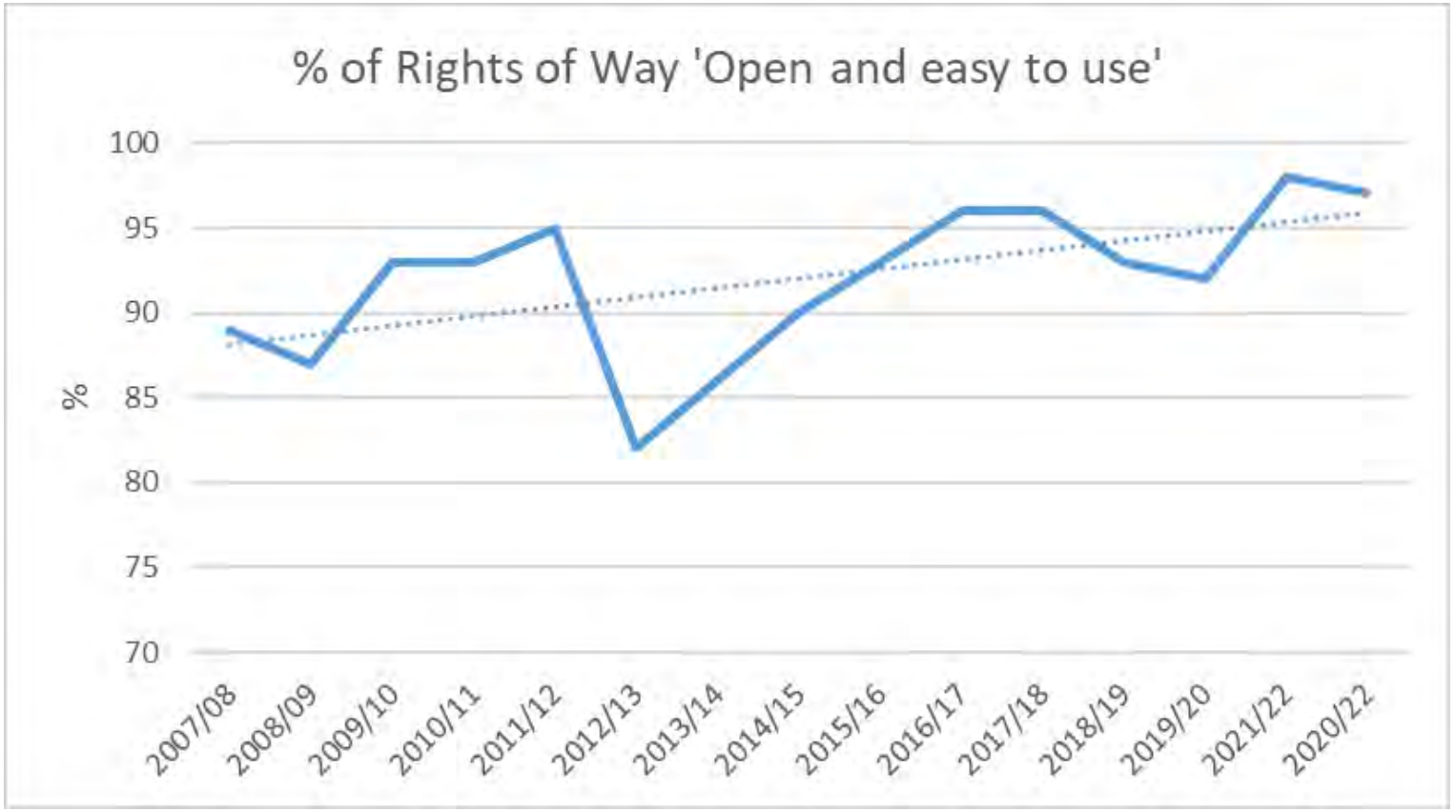
Rights of Way Maintenance

- Faults are reported via proactive Ranger path inspections, volunteers and members of the public, with a target of resolving 80% of faults within three months.
- **Paring:** ENPA is responsible for managing undergrowth on the RoW network and ensuring that overhanging vegetation and tree blockages are dealt with. Milder weather and a longer growing season has made it harder to keep the access open.
- ENPA maintain and install **drains** to reduce erosion on paths. However, heavy rainfall and flash flood events are becoming more frequent and can cause path surfaces to wash out.
- Drain maintenance remains a challenge due to resources and in 2021/22, only 78 drains were maintained due to the February storms impact on work priories (our Field Services Team had to clear 485 trees).

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Total faults resolved	1010	834	1048	950	950	**4792**
Faults resolved within 3 months (80% target)	84%	66%	56%	58%	56%	**64% (average)**
Paring – vegetation cleared	155km	200km	159km	215km	201km	**930km**
Drains – repaired or maintained	778	152	1023	727	74	**2754**
Trees cleared	205	186	233	187	485	**1296**

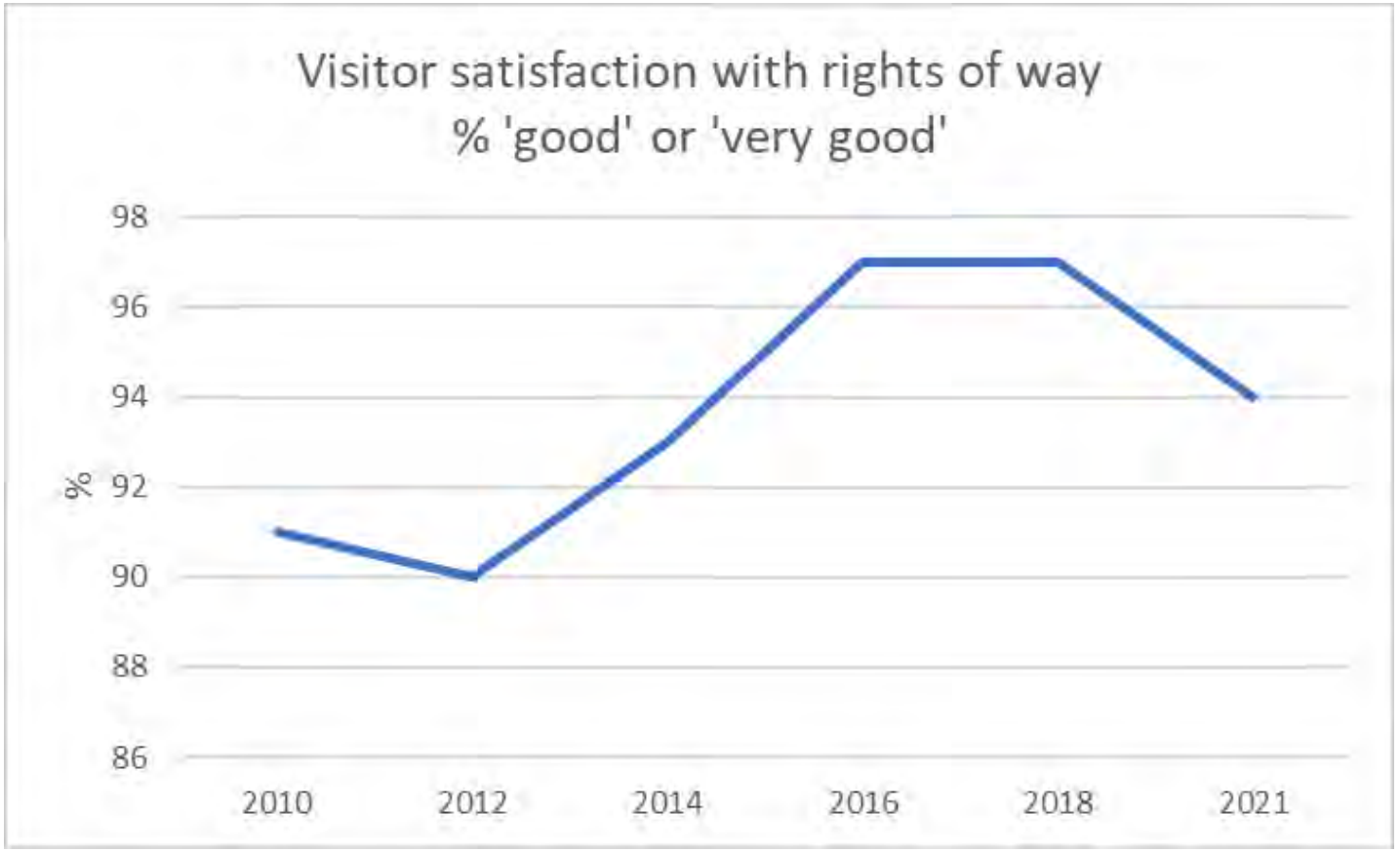
Rights of Way Condition

The % of Rights of Way that are considered open and easy to use, have been consistently high over the last 5 years, peaking at 98% in 2021/22, and an average of **95%** over that period. Exmoor scores the highest of all National Parks for this measure.



Visitor Satisfaction with Rights of Way

Visitor satisfaction with the rights of way is generally very high, with over 90% of visitors consistently rating it as 'good' or 'very good'



Visitors' use of Rights of Way

- A high-quality rights of way and access network are important parts of what attracts people to Exmoor
- General sightseeing and short walks remain the top activities undertaken by visitors. The third top activity in 2021 was long walks (over 2 hours) up from 5th place with a large increase from 34% (2018) to 60% (2021). This is likely due to the impact of Covid-19 on activity options.

Source: ENPA Visitor Survey 2021

Accessible Exmoor

- Exmoor has a range of easy access routes.
- 891km of rights of way routes are free of stiles comprising 90% of the rights of way network
- All-terrain trampers can used and hired at Heddon Valley, Wimbleball Lake and Dunster Castle
- Easy waymarked circular routes are in place at Tarr steps, County Gate & Haddon Hill.
- In the last 5 years, 39 stiles have been changed to a gap or gate along with many other surface improvements.
- Major accessibility improvements were also made to the Woodside Bridge circuit, Lynmouth
- Information on accessible routes is provided on ENPA's website

Path Watcher Volunteers at Heddon Valley

Woodside Bridge, credit Dan Barnett

Rights of Way Improvements

- Improvements to the paths network include making routes more accessible by changing stiles to gates, improving surfaces or even diverting rights of way onto better routes.
- Over the last 5 years **39 stiles** have been changed to gates or gaps and **39 major works** were carried out to improve or repair surfaces. **21 path orders** have also been carried out during this period to permanently move paths onto better routes.
- Long distance routes improvements include works to the South West Coast Path (SWCP) at Desolate, near Countisbury to remove long sections of steps.
- Several path alignment works are underway to create the new the England Coast Path. This includes realigning the route to be more seaward from the current route at North Hill (Minehead) along with an improved route with sea views at Combe Martin

Hurlstone Point, near Bossington

Stile replaced with a kissing gate near Bossington

Other recreational activities

Sightseeing is the most popular recreation activity on Exmoor with 78% of visitors participating. (Exmoor Visitor Survey, 2021). Taking in the view whilst travelling or at a view point; sitting and enjoying an outdoor picnic with family and friends; wildlife watching and visiting attractions remain very popular activities. Road sign information, informal and formal parking spots, toilet facilities, refreshments and information provide important support for these activities

Valley of the Rocks with Ranger, Charlotte Wray

Cliff Railway, Lynmouth

Recreational Activities and Pressures

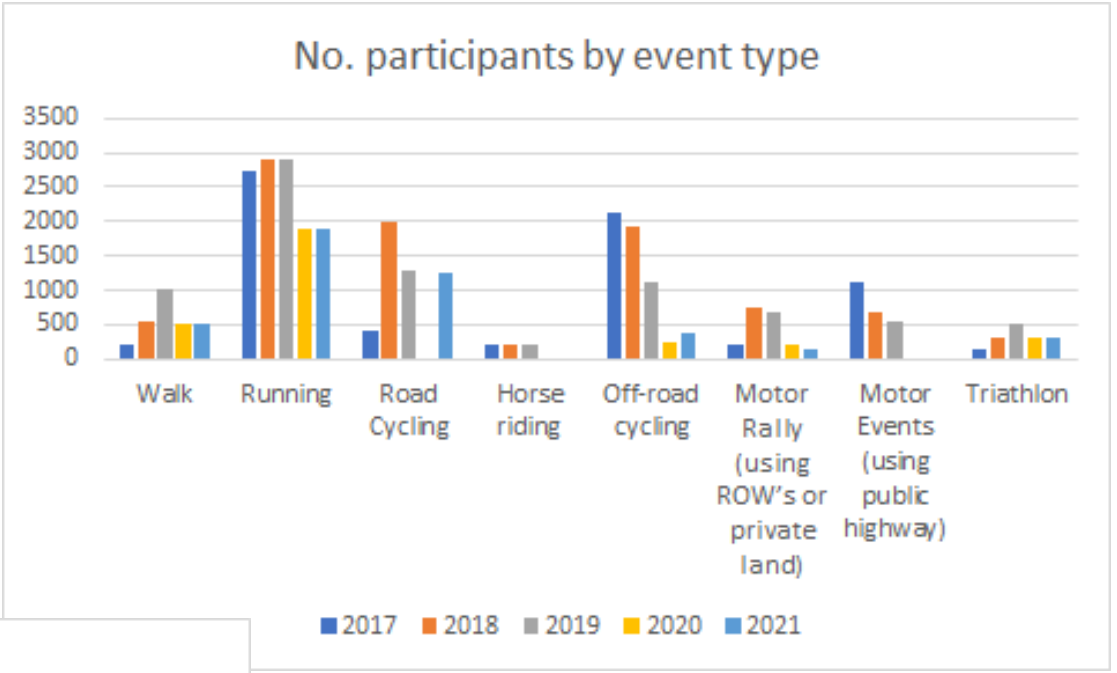
- Popular countryside visitor sites such as North Hill, Haddon Hill, Tarr Steps and Landacre have recreational management issues including litter and dog mess. These issues are addressed by weekly ranger visits, signage, leaflets and other interventions. Visitor levels increased during 2020 and 2021 due to government Covid travel restrictions but appear to have dropped back to pre 2020 levels in 2022
- Exmoor remains a popular location for large organised (corporate or charity) recreational events which can cause localised disruption while they take place. However, they encourage people to visit Exmoor, contribute to the local economy, and their impact is not considered to be significant

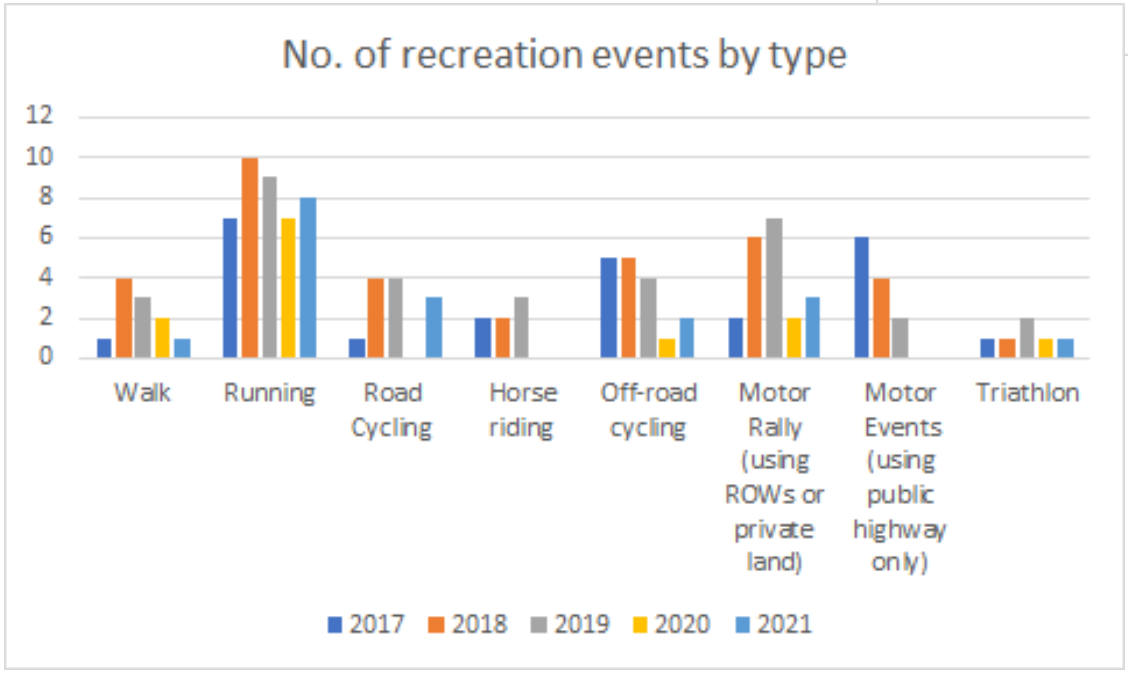
Litter left in Barbrook layby

Channel Events: Man Vs Moor Event – credit Stuart Lessels of 1000th Photography

Recreational Events on Exmoor

Organised recreational events encourage visitors to enjoy Exmoor and often raise funds for charitable causes. Complaints and issues remain low and are generally easy to manage.





Recreational Activities – Trends and Pressures

- Illegal use of vehicles and other antisocial activities has not changed significantly in recent years and is not considered to be a major issue. Off-road driving by 4x4 vehicles has required occasional action by landowners, Police and National Park rangers
- Wild swimming has increased in popularity since 2017 on Exmoor and across the UK
- Permitted access arrangements are in place on several rivers to allow canoeing at particular times of the year to reduce user conflicts and avoid impacts on wildlife. Levels of use remains fairly static
- The biggest impact on people's enjoyment of access land is probably the increase of shrubby and tall vegetation over large areas which can make access more difficult, however most popular routes remain open and useable
- Game shoot infrastructure and land management changes associated with shoots has not changed substantially since 2017. It continues to impact on public enjoyment in some locations but complaints are generally low

Canoeists on the river Barle

Families enjoying Lanacre Bridge in July

Near Watersmeet, Lynton by Henry Gastineau. c.1836. Courtesy: Birmingham Museums Trust

Special Quality: A landscape that provides inspiration and enjoyment to visitors and residents alike

Exmoor's visitors and volunteers:

- Exmoor welcomes more than 1.46 million visitors, equating to around 2.31 million visitor days (2019 figures)
- 99% of visitors surveyed rate their experience as "good" or "very good"
- The value of tourism to the local economy is up from previous figures to nearly £133 million
- Visitor numbers were impacted by the Covid pandemic but are returning
- 81% of visitors surveyed said their understanding of Exmoor's landscape had increased as a result of their visit
- There were 3,488 volunteer days organised by ENPA, around 11% of these involved attendance by 'under-represented' groups

Inspiration & enjoyment summary (1)

- Visitor numbers grew by 6% between 2009-2019, whilst visitor days grew by 15% indicating a growth in the average length of stay
- The economic value of visitors increased by 17% (above inflation) and average spend per head also increased
- The 2021 visitor survey shows that the age profile of visitors continues to be skewed towards older visitors, though there has been a slight upward trend in younger audiences. Around two-thirds of visitors surveyed are aged 45 or older.
- 12% have a disability. 7% are from minority ethnic communities, an increase from 3% in 2018
- Half of all visitors came from within the South West region (including the majority of day visits from home). The impact of covid travel restrictions was seen in the 2021 figures with only 1% of those surveyed travelling from overseas
- Overall visitor satisfaction remains high. Those stating their overall experience of holidaying on Exmoor as ‘Good’ or ‘Very good’ was 99%. 97% of visitors plan to visit again
- 96% use private car to visit Exmoor and 10% use public transport whilst in the National Park
- Visitors are primarily attracted by the scenery / landscape (90%), and tranquillity 84%. There is a noticeable increase in people being attracted by Exmoor's Dark Sky Reserve status. The impact of covid restrictions can also be seen in an increase in visitors being motivated to visit by opportunities for outdoor activities which increased from 53% in 2018, to 76% in 2021
- General sightseeing and short walks remain the top activities undertaken by visitors.
- Covid restrictions clearly had an impact on visitor numbers, although the longer term implications are less clear than may have been expected, with covid having little influence on people's intentions to visit Exmoor, and no evidence for an increase in visitor numbers that was anticipated from staycations

Summary findings from the **2021 Exmoor Visitor Survey**

EXMOOR NATIONAL PARK

Over 81% rated their visit as **'very good'**

18% 'good'

less than 1% rated it as **'fair'**

no one rated it as **'poor'** or **'very poor'**

Highest areas of satisfaction:

1. Accommodation
2. Visitor attractions
3. Rights of Way

1. Public Transport
2. Public toilets
3. Roads

Lowest areas of satisfaction:

A world-class Net Promoter Score (NPS) 86

Net Promoter Scores can be used to gauge overall satisfaction and loyalty to a brand.
Scores can range from -100 to 100.
Anything **over 50** is considered **good**, **over 70 - world class.**

Top 5 attractors:

1. Scenery / landscape
2. Tranquility / peace and quiet
3. Outdoor activities
4. Coastline
5. Wildlife

Top 5 activities:

1. General sightseeing
2. Walking
3. Eating out
4. Visiting attractions
5. Wildlife watching

- **96% agree that the National Park seems well managed and cared for**
- **96% were aware of Exmoor's designation as a National Park before a visit.**

- **Almost two thirds were positively influenced by Exmoor's designation as a National Park before visit**

Top sources of information used by new visitors prior to trip:

Top sources of information used by all visitors during a visit:

18% were on their first ever visit

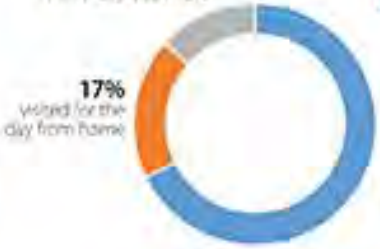
20% on their first visit in over 3 years

39% visit more than once a year

97% are planning to return
Remaining 3% unsure

96% arrived by private motor transport

10% were planning on using public transport whilst here



exmoor national park
dream · discover · explore

Over two thirds of visitors recognise the Exmoor tourism brand.

For full report and results, visit the research section at www.exmoor-nationalpark.gov.uk/tourism

Inspiration & enjoyment summary (2)

- Exmoor continues to provide health and well-being benefits for many people, including through projects such as Moor to Enjoy and Families United in Nature. Learning from these projects highlights that transport, and not having the confidence to plan a visit independently, remain the main barriers to accessing the National Park
- There are a large number of people who volunteer to help look after Exmoor, and help people enjoy and understand it. Between 2018-2022 there were 3,488 volunteer days organised by ENPA, undertaking practical conservation work, research, leading guided walks and undertaking wildlife surveys. Around 11% of these volunteer days involved attendance by ‘under-represented’ groups. There are many more voluntary activities for which data is not currently available

Visitor numbers
Trends 2009-2019

	2009	**2019**	**% change**
Economic Impact (m) – Historic Prices	£85.16m	**£133.62**	**57%**
Economic Impact (m) – 2019 Indexed	£114.7m	**£133.62m**	**17%**
Visitor Numbers (m) …	*1.38m*	***1.46m***	***6%***
Visitor Days (m)…	2.02m	**2.31m**	**15%**
Total Employment (FTE)…	2,056	**2,278**	**11%**

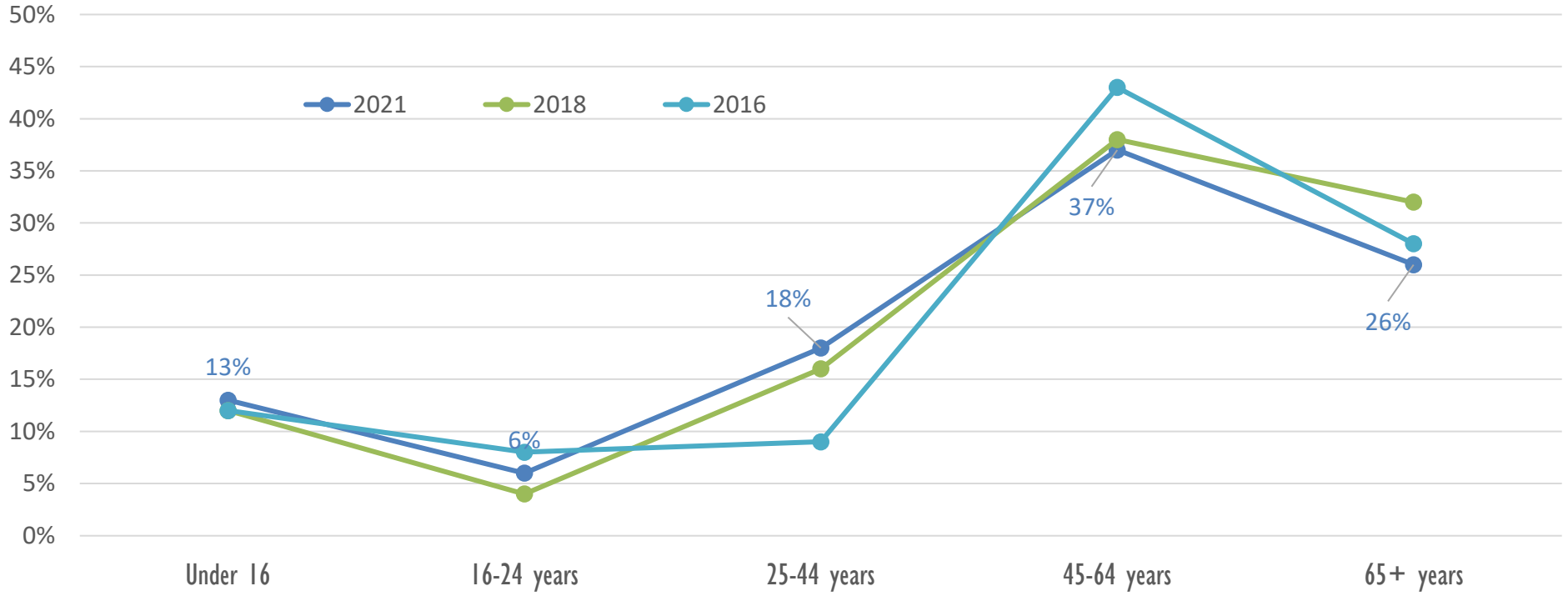
Volume

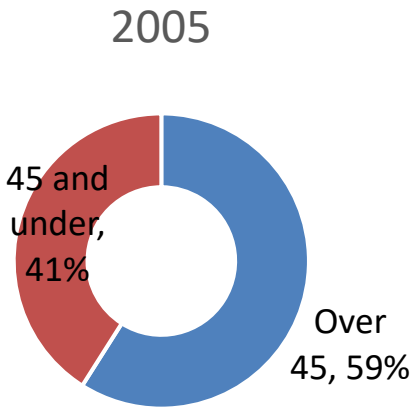
- Actual numbers grew by 6%, whilst visitor days grew by 15% indicating a growth in the average length of stay.

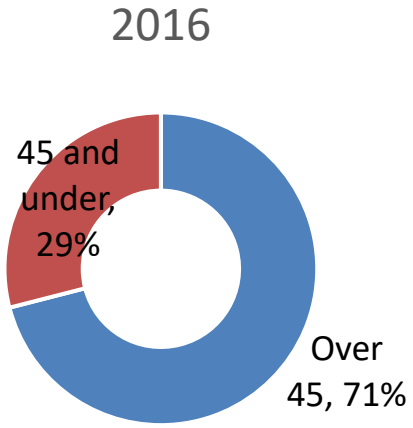
Value

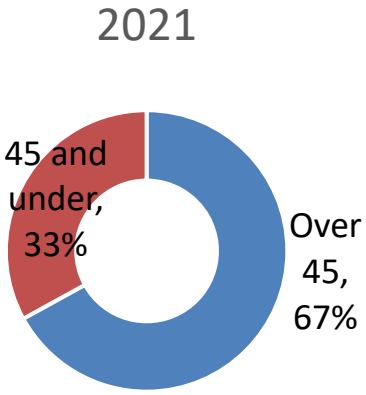
- Above inflation increase of 17%
- slightly above growth in visitor days indicating increase in average spend per head.

Age profile of visitors



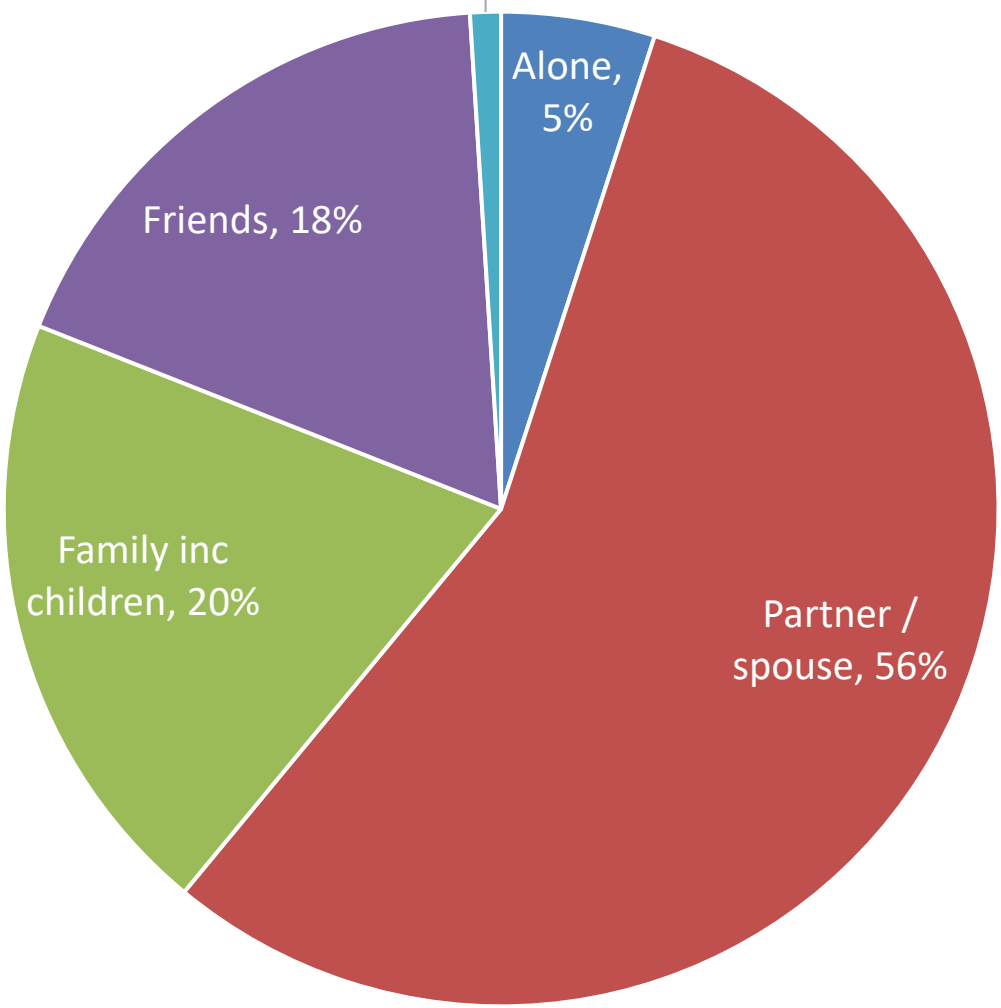






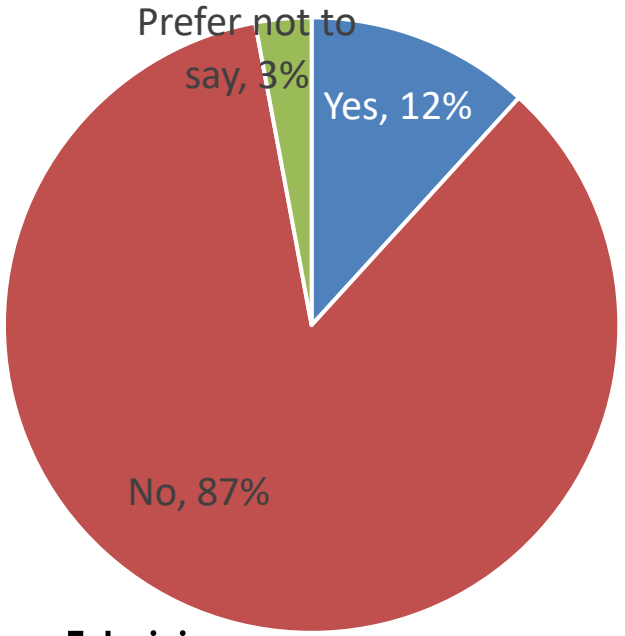
Demographics of visitors

Party type



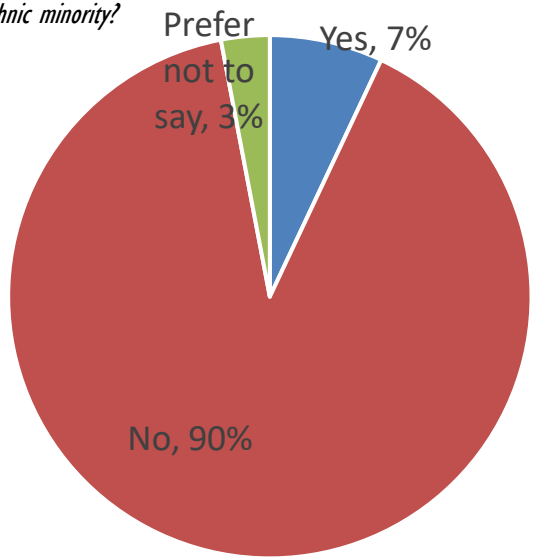
Disability

Do you have any longstanding health issues or disabilities that limit your daily activity?



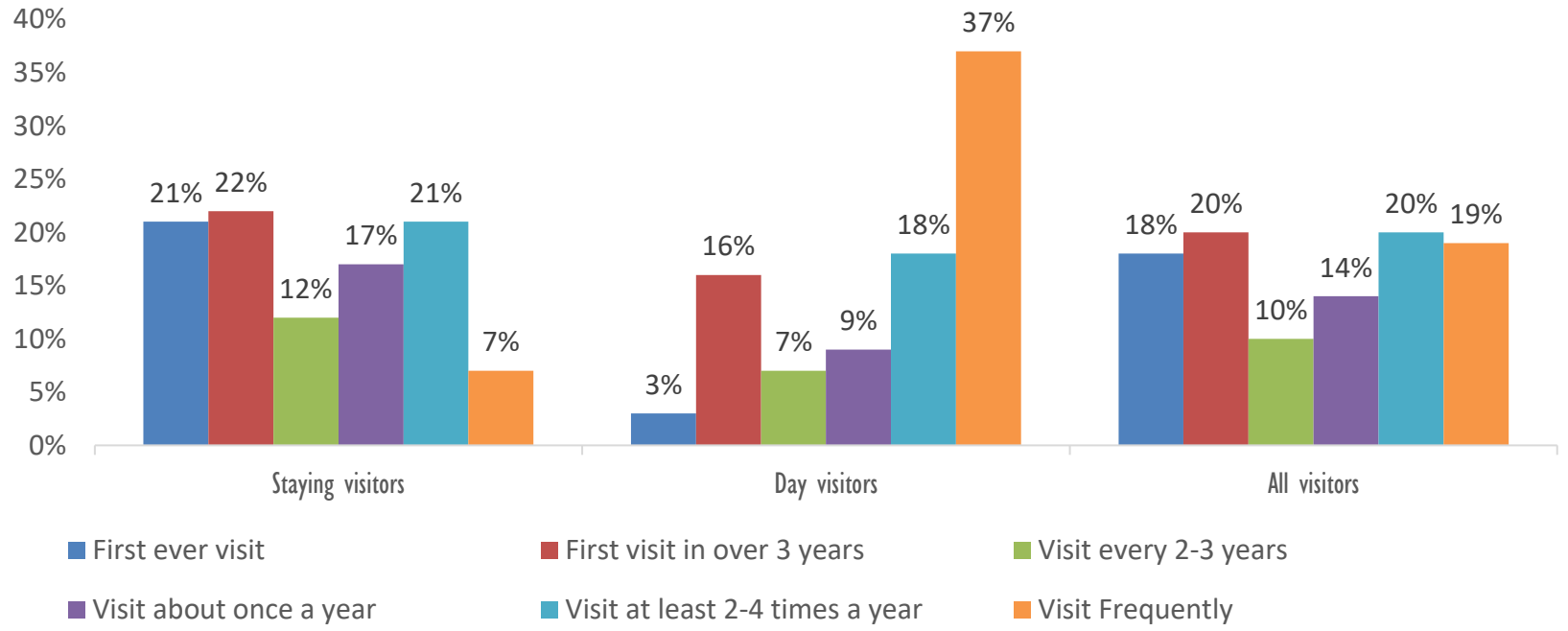
Ethnicity

Do you consider yourself to be a member of an ethnic minority?



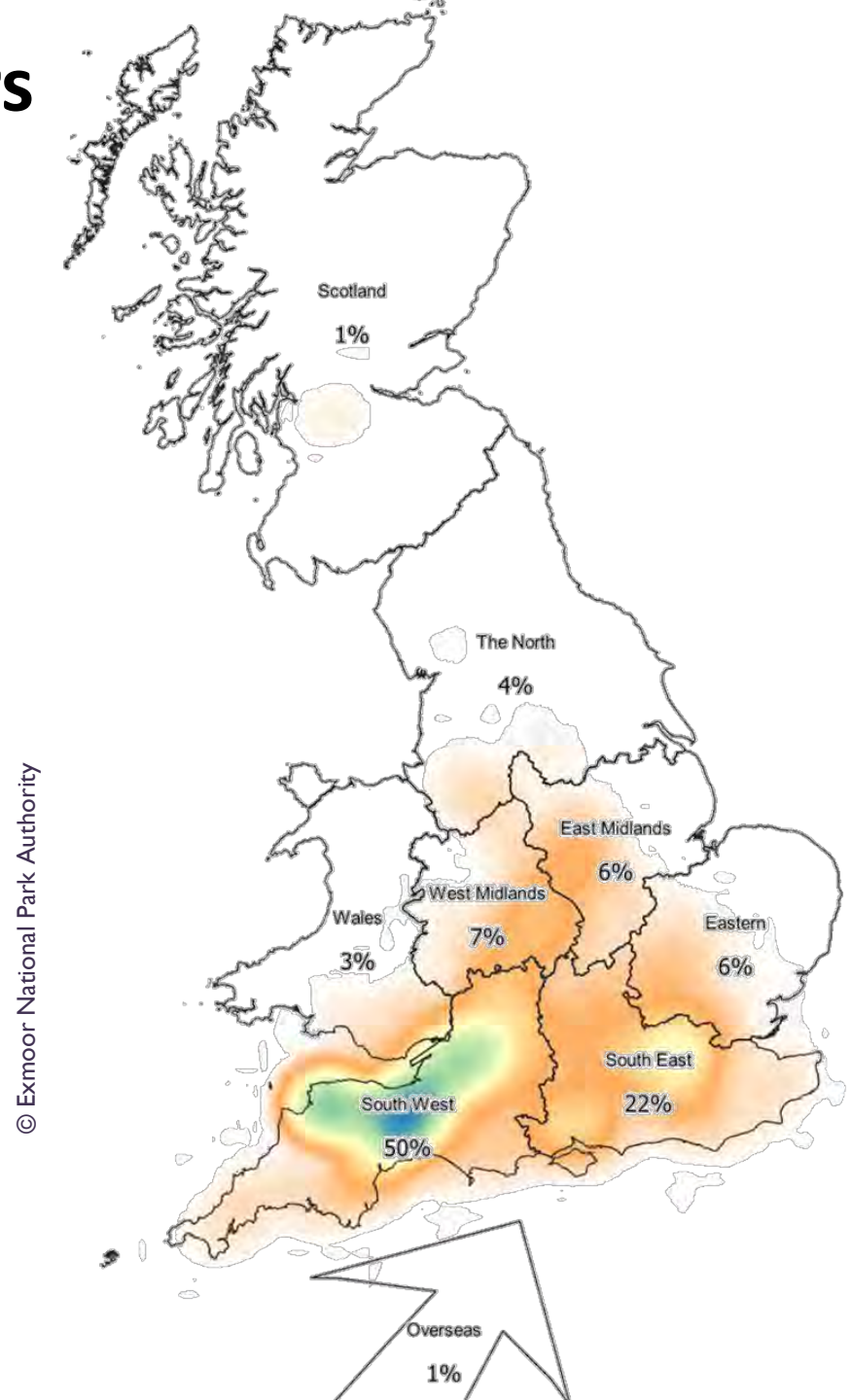
Repeat visitation

Have you been to Exmoor before?



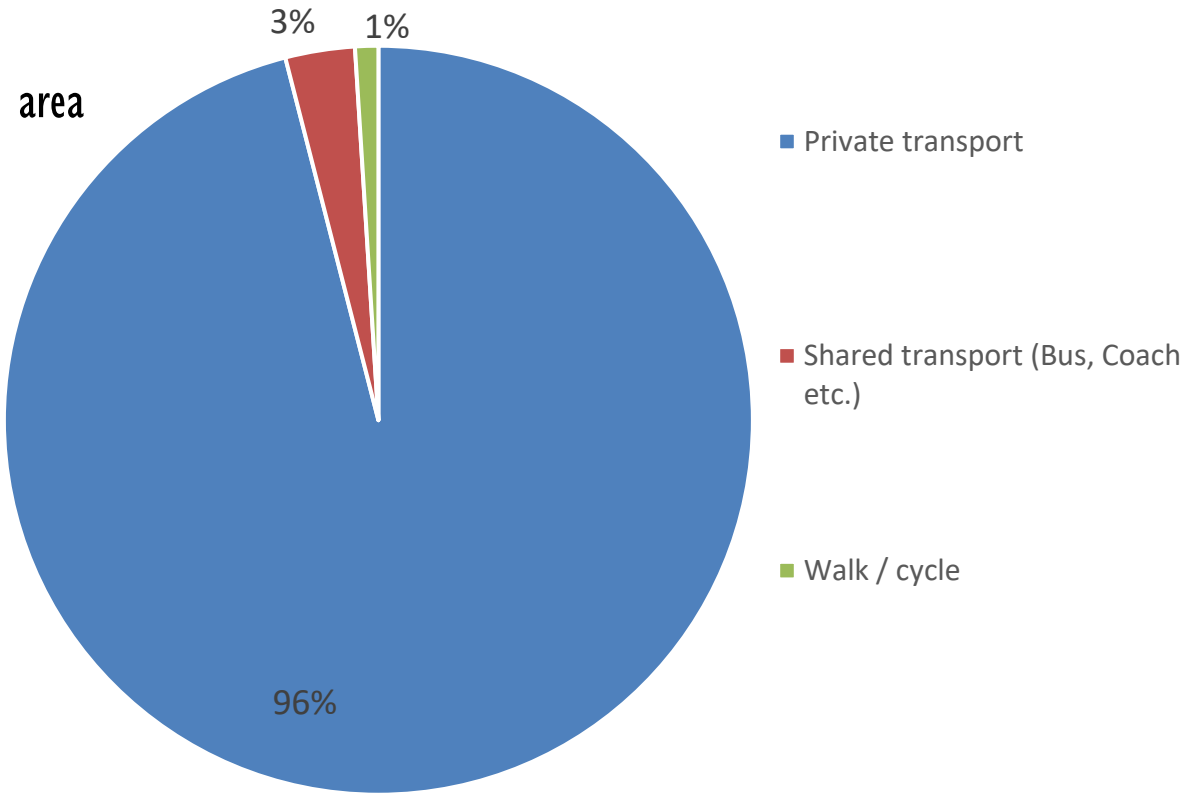
Are you planning to Visit Exmoor again?

Origin of visitors

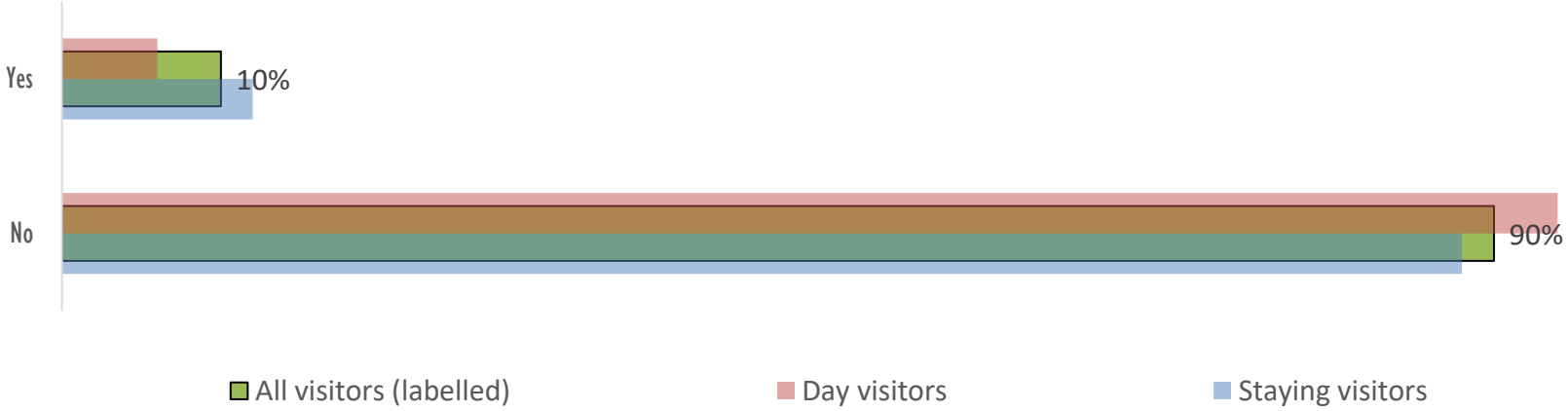


Travel choices

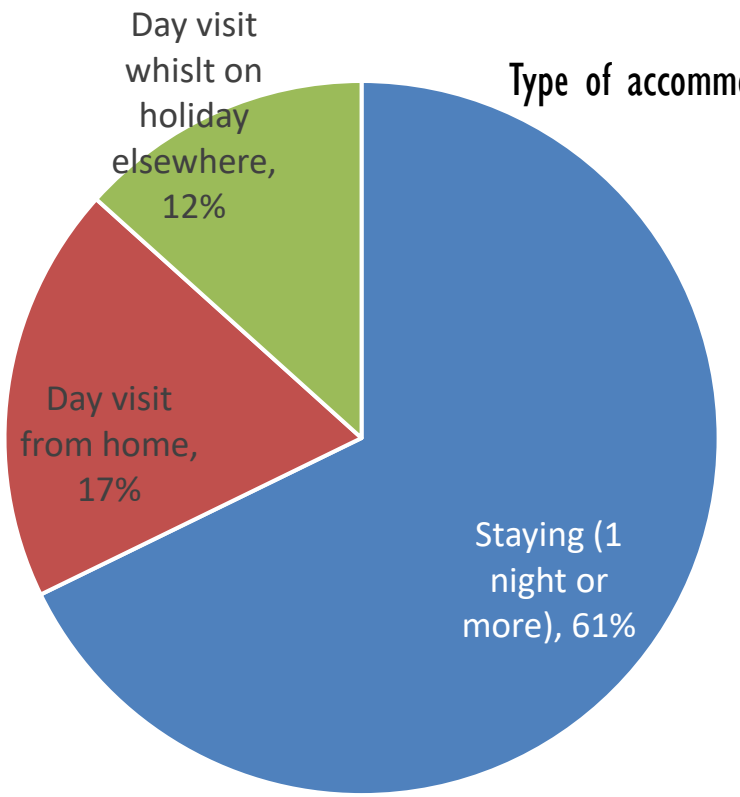
Travel mode to the area



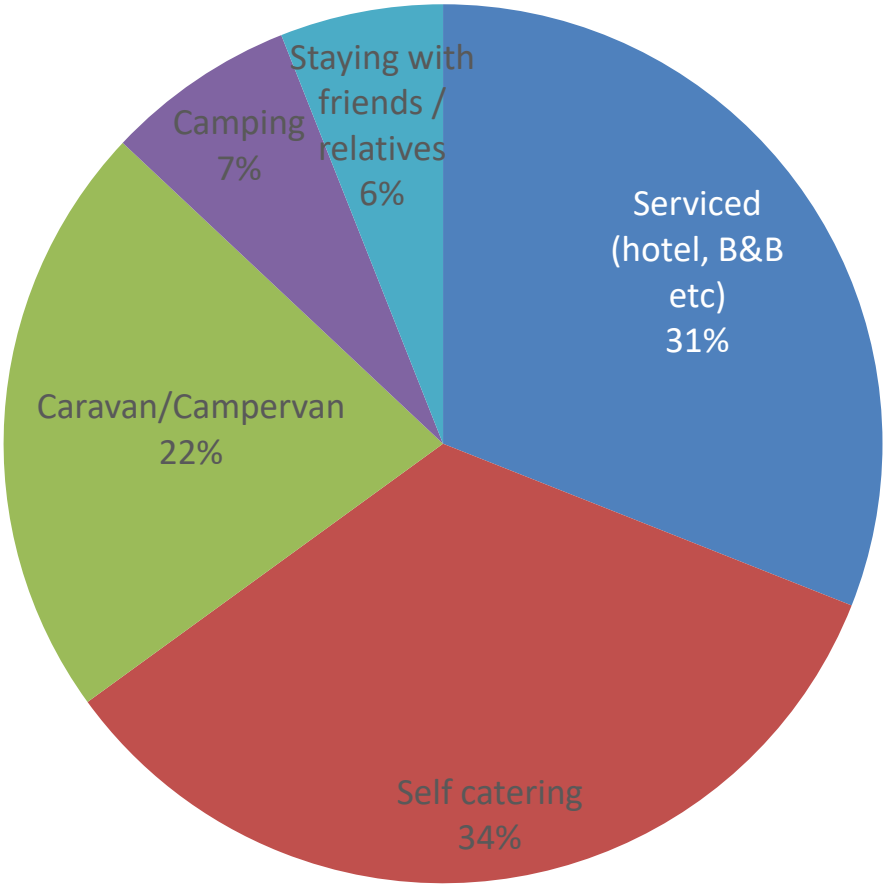
Have you used, or are you planning to use, public transport during your visit?



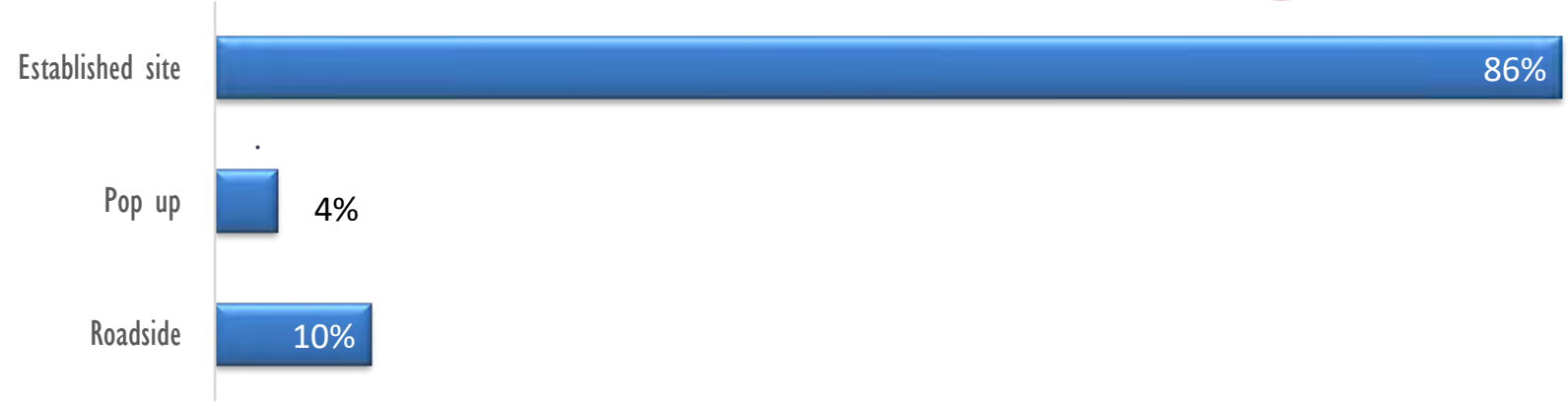
Day vs staying visitors



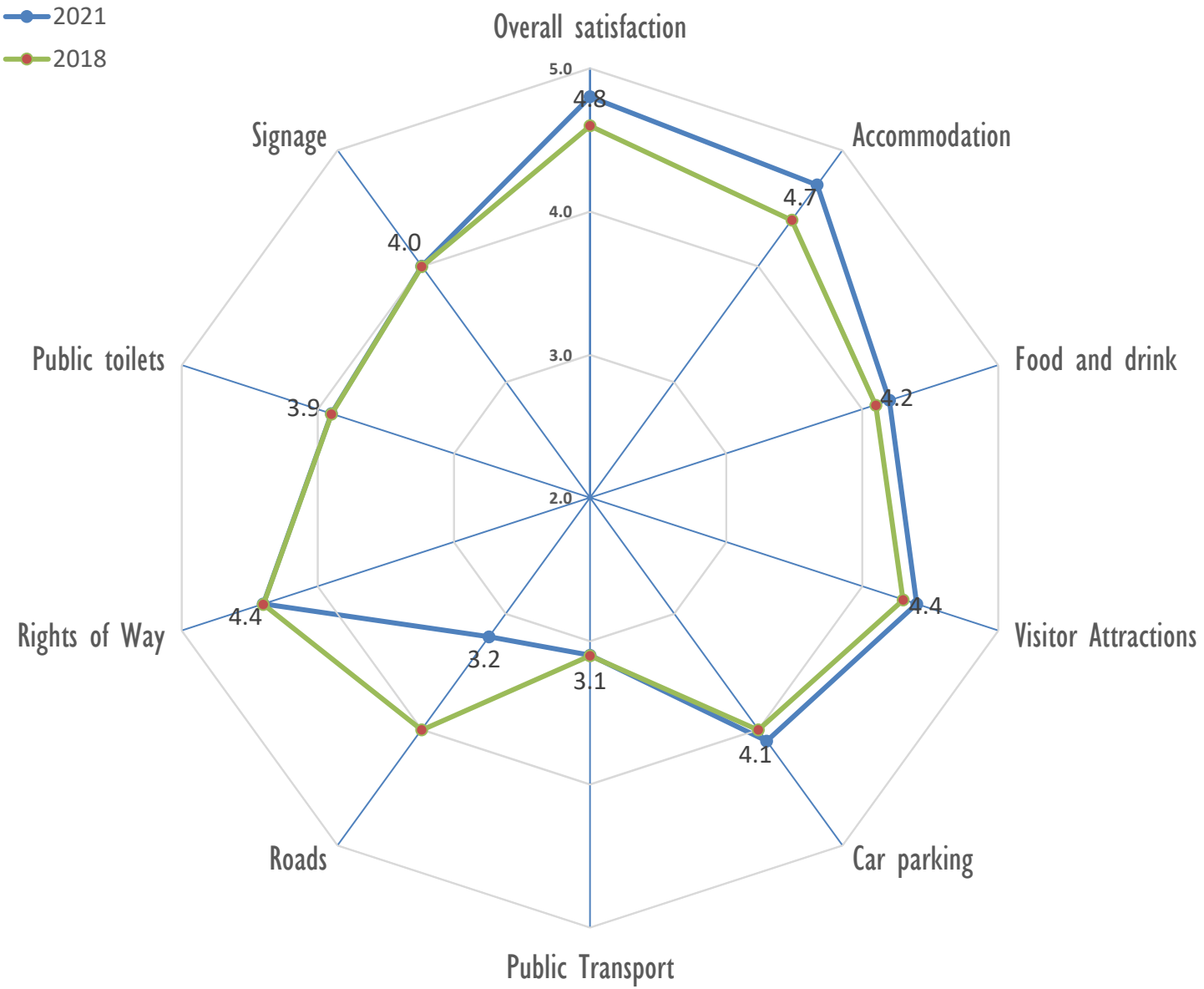
Type of accommodation



Type of site used for camping / caravanning



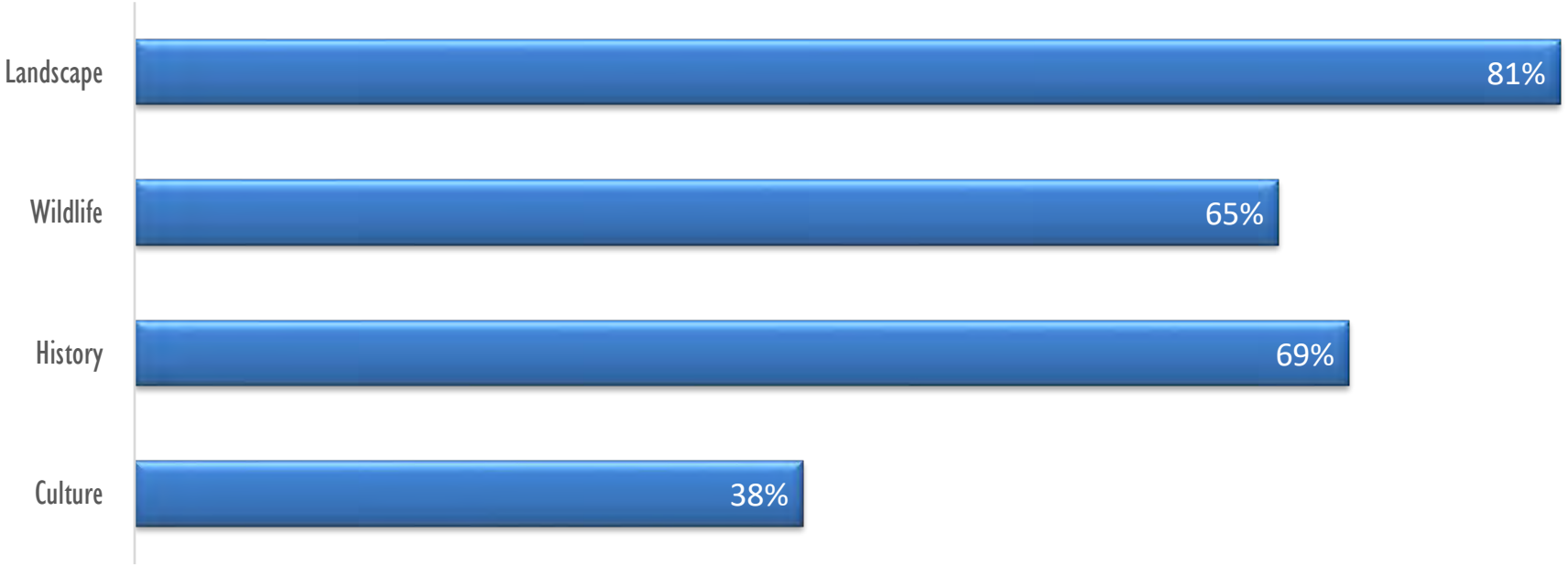
Visitor Satisfaction



Information and Interpretation

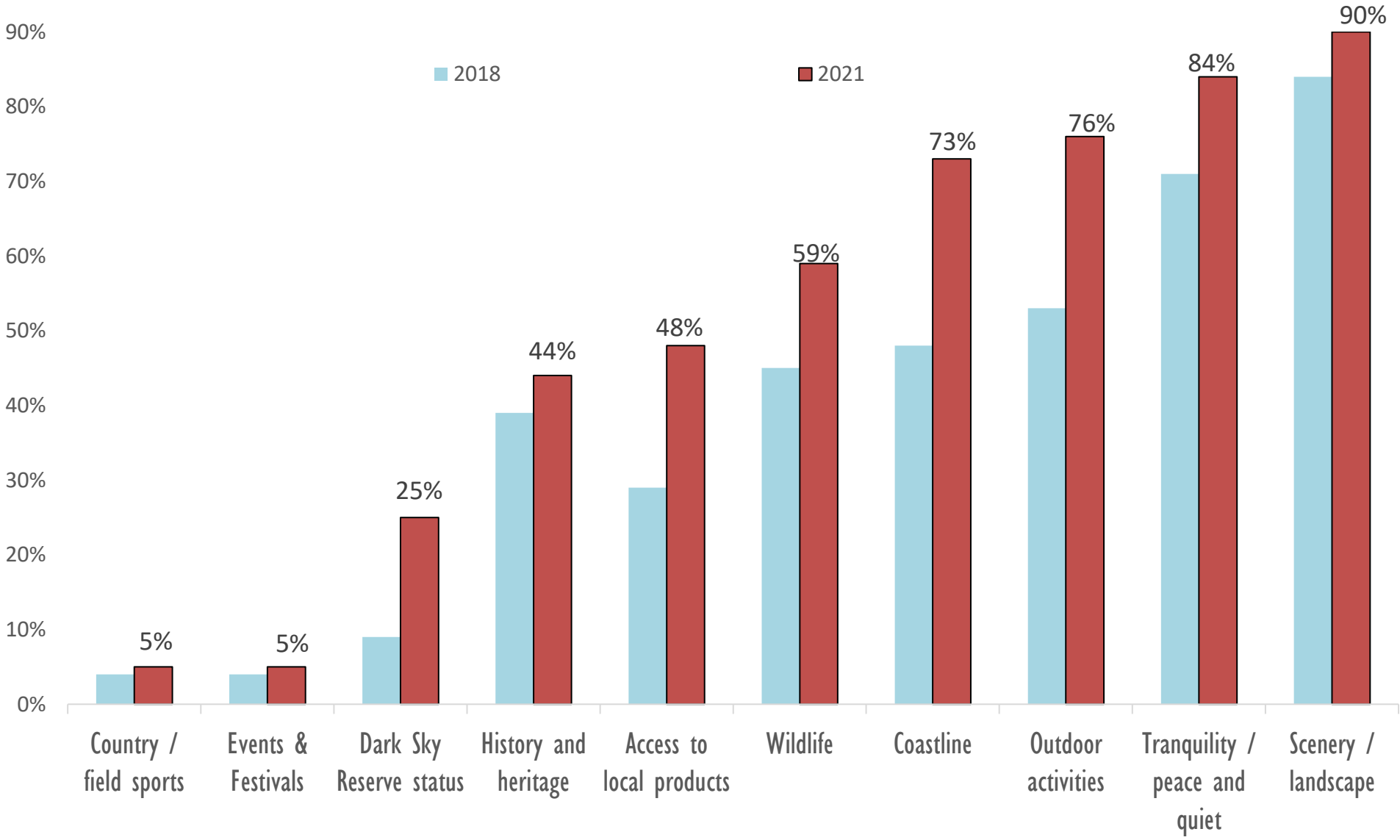
Understanding of the 'Special Qualities' of Exmoor

Has your understanding of any of the following issues increased during your visit?



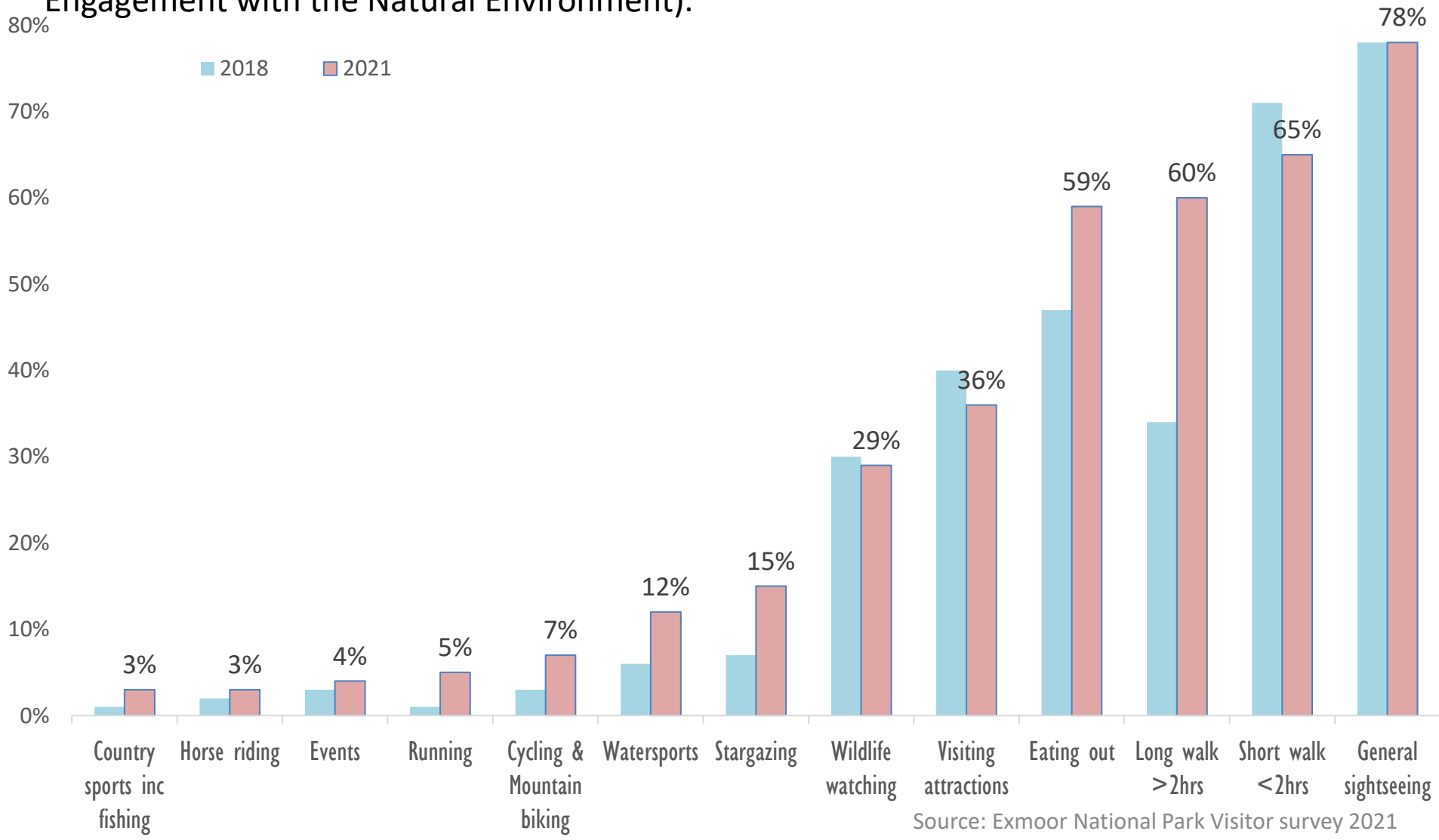
Exmoor National Park Visitor survey 2021

Primary attractors



Health and well-being

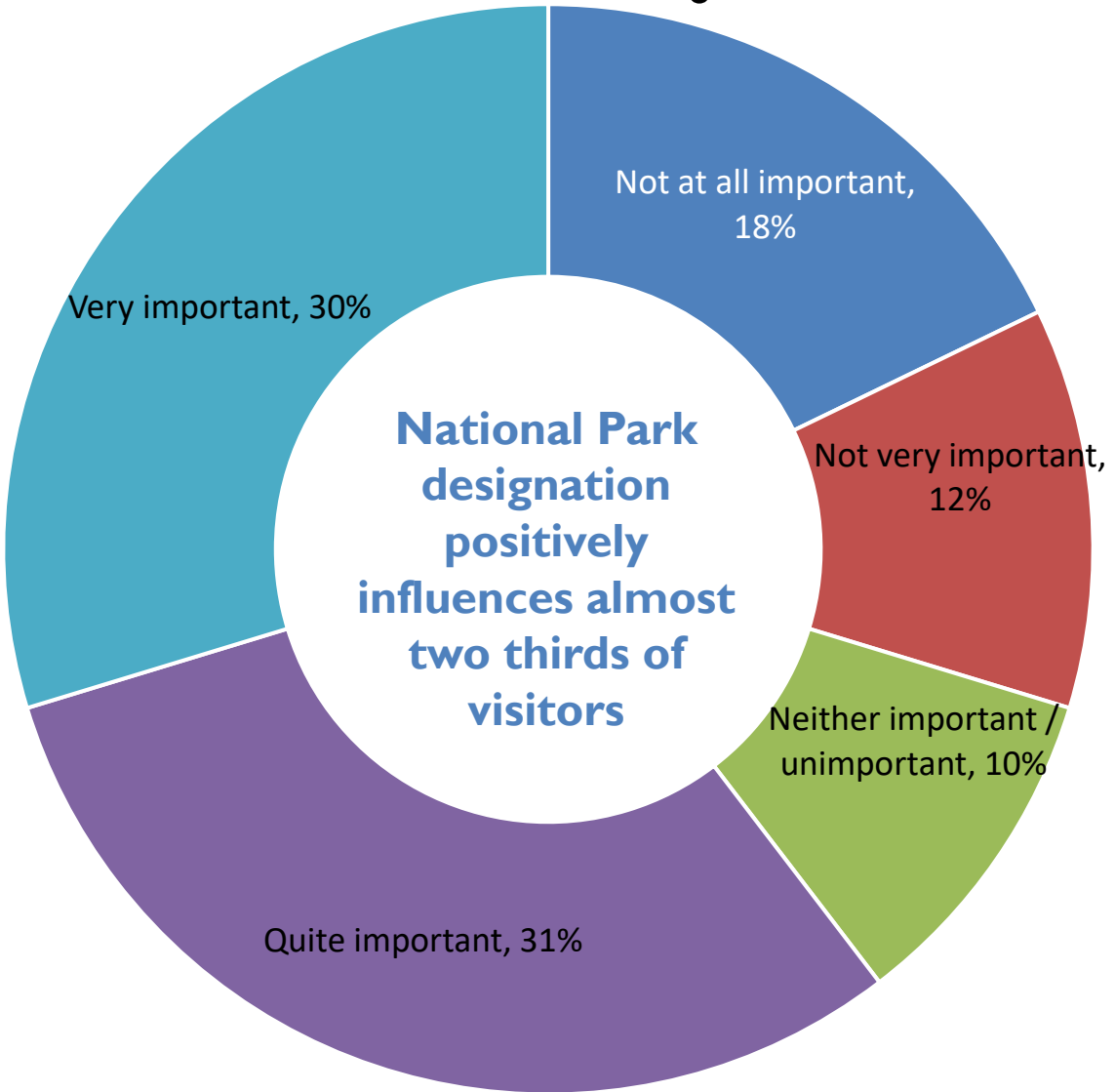
Walking is the most commonly activity undertaken on visits. This corresponds with national surveys which show that health and exercise continued to be one of the most frequently cited motivations for visiting the outdoors (Natural England Monitoring Engagement with the Natural Environment).

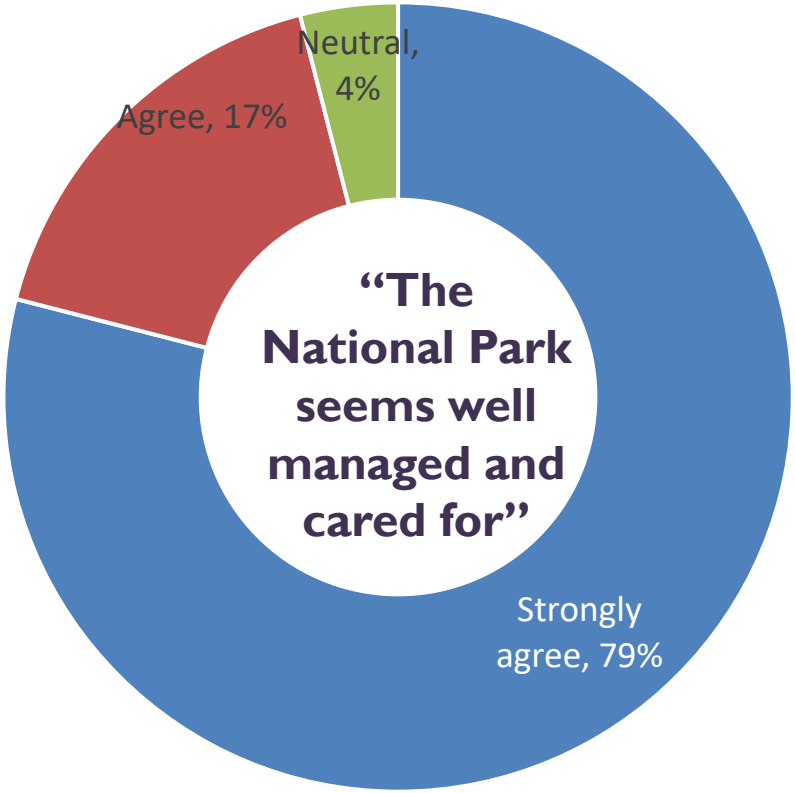


Source: Exmoor National Park Visitor survey 2021

National Park designation: awareness & influence

Importance of Exmoor's designation as a National Park in choosing to visit





Impact of Covid-19 on visitor trends

- A slight increase in younger visitors, a more diverse audience and a decrease in organised tours
- A significant drop in inbound visitors
- An increase in private transport usage
- An increase in the proportion of visitors coming for the first time, or the first time in over 3 years
- Increased use of the internet to obtain up to date information in a period of rapid change
- A more significant growth in key attractors to the area and activities undertaken in relation to the great outdoors
- A greater proportion of staying visitors vs day visits

The 2021 visitor survey also asked **whether visitors were likely to have been in Exmoor if it wasn't for the impact of the pandemic**. Just 8% stated they were visiting as a result of Covid-19 impacts. Of these 79% reported that they would otherwise have undertaken an overseas trip, and 21% a visit elsewhere in the UK.

Associations with Exmoor

Descriptions of visitors experience of Exmoor in one word

Health And Wellbeing

Moor to Enjoy Project (2014 - 2018) - funded by the Health and Wellbeing Boards in Devon & Somerset and Exmoor National Park Authority.

Key findings

- Identifying and working with established groups and building good relationships with group leaders leads to sustainable relationships with groups.
- Established groups with identified leaders are more likely to undertake unsupported repeat visits.
- Working with individuals with a common interest or common challenges *without* an identified group leader is less successful and requires a lot of resource.
- Meet groups where they are and really understand their needs, aspirations and limitations (perceived or actual) – do not make assumptions.
- Transport, and not having the confidence to plan a visit independently, remain the main barriers to accessing the National Park.
- Green prescription/social prescribing schemes work best with a dedicated individual/community connector.
- The Exmoor health and wellbeing 'experience' now embedded as part of the core service offer.
- Feedback from participants indicates that on the day of the visit:
  - 38% of participants are more physically active than on an average day
  - 77% reported having been more sociable than on an average day
  - 74% said they were more relaxed after visiting Exmoor National Park, and
  - 87% said visiting Exmoor National Park had lifted their spirits

Moor to Enjoy Project
A Health and Wellbeing Partnership

Families United in Nature (FUN) Project

- This was set up to support families with young children to engage with the environment. It provided a range of targeted and supported activities including family activity sessions providing opportunities for families who need support, confidence building and ideas to get outdoors with their children to benefit from the health and wellbeing opportunities of the natural environment.
- The Project broadened out to work more widely with groups in both Somerset and Devon. This included a programme of "Welcome to Exmoor Days" which provide supported visits to Exmoor for vulnerable older people from Ilfracombe and again highlighted the benefit that people get from simple interventions such as provision of transport and a consistent supportive welcome. Participant reported improvement in physical and mental health and increase in confidence and social interaction.

"It has been everything and more. It has given me something to look forward to each week and got me out of the house as I have no transport."

Volunteering on Exmoor

- There are a large number of people who volunteer to help look after Exmoor, and help people enjoy and understand it. This ranges from practical conservation, research, leading guided walks and undertaking wildlife surveys. In return, volunteers have access to support and training, and the chance to develop skills.
- Between 2018-2022 there were 3,488 volunteer days organised by ENPA, but there are many more voluntary activities for which data is not currently available
- Around 11% of these volunteer days involved attendance by 'under-represented' groups

Engaging with schools and new audiences

Between 2018-2022:

- Over 500 activities were organised by ENPA with schools located both within the National Park, and outside it. A total of nearly 19,000 children were involved
- 80 new audiences were engaged, with a total of 1,500 people
- A total of 13,743 people attended public events

Data is only available for engagement activities organised by ENPA so this does not reflect the wide range of other activities arranged by other organisations

Engaging with nature

A national Children's People and Nature Survey in 2021 found that:

- Most (96%) children and young people spent time outdoors at least once in the past week and this did not vary based on gender, ethnicity, or income. 86% also said they had spent time noticing nature at least once in the past week.

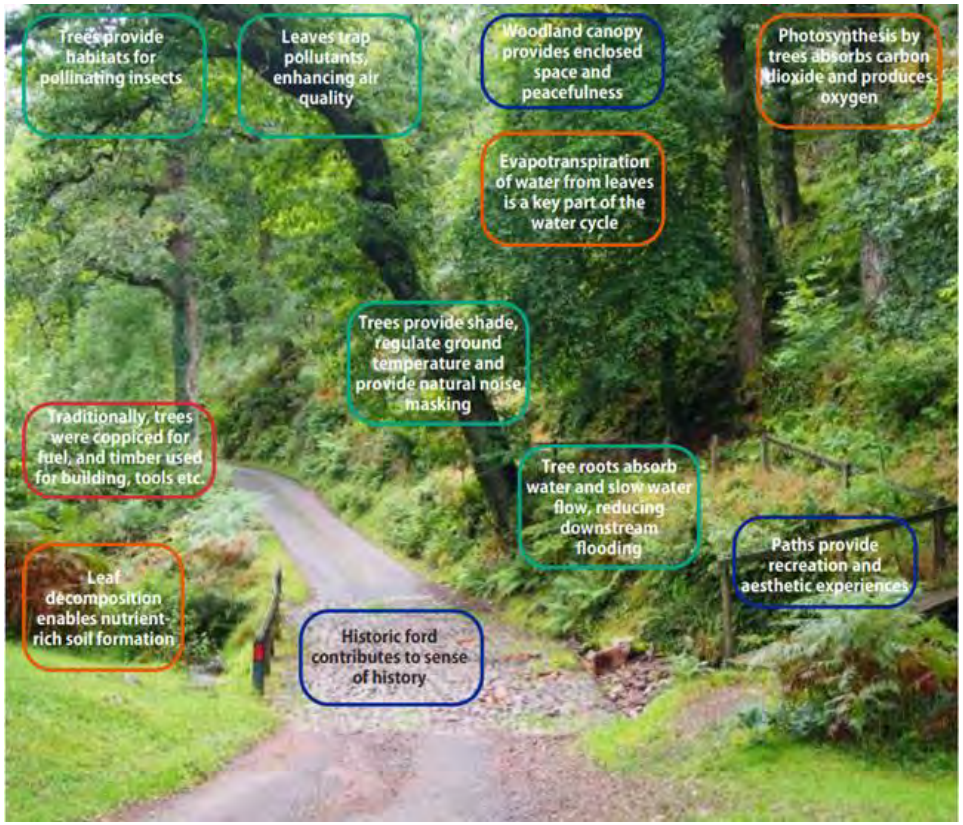
- More than eight in ten children and young people (85%) agreed that being in nature made them very happy. Those spending time outside at least once a week were more likely to report 'very high' levels of happiness, as were those who reported 'high' connection to nature.

- Concern for the environment was high across all demographic groups, with nearly eight in ten children and young people (78%) agreeing that looking after the environment was important to them. The number of children and young people saying they did not think adults were doing enough to protect the environment increased from 39% in 2020, to 46% in 2021, and 81% said that they wanted to do more to look after the environment.

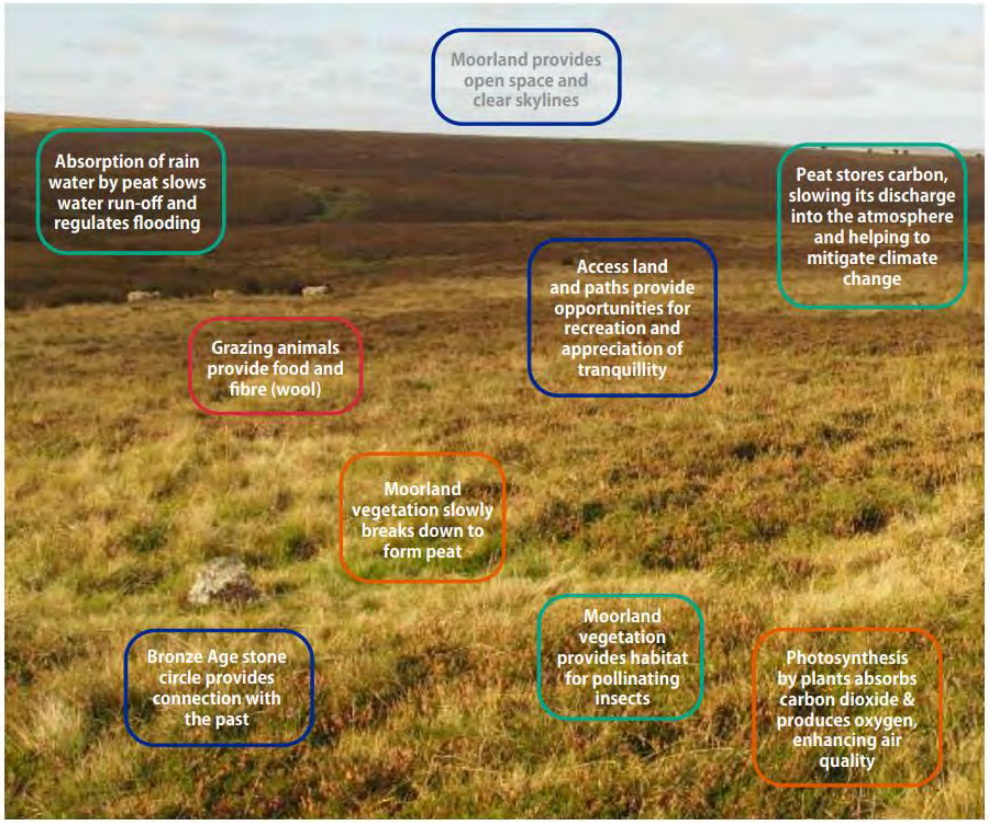
- A similar survey of adults showed an increase in the proportion of adults visiting the natural environment at least once a week, from 54% in 2009/2010 to 65% in 2018/2019

Natural and cultural capital

- Exmoor's natural and cultural assets such as the natural habitats, historic environment, and local traditions, provide a range of public goods and services.
- These are categorised as cultural services such as enjoying the scenic beauty, wildlife and heritage, recreation and health & well-being benefits; regulating services providing clean air and water, healthy soils, climate regulation, flood mitigation and pollination; and provisioning services including primary production, water supply and genetic diversity.



Examples of public goods provided by woodland



Examples of public goods provided by moorland

Source: Exmoor Landscape Character Assessment, Fiona Fyffe for ENPA, 2018

Exmoor's natural and cultural capital assets

An assessment carried out for the Exmoor Society sought to categorise Exmoor's natural and cultural capital and the range of public goods they provide

Figure 8. The matrix linking Exmoor's capital assets to the services provided by the National Park

Simplified asset categories / Ecosystem services		Cultural services						Regulating services					Provisioning services		
		Scenic beauty	Wildlife	Historic environm.	Recreation & wellbeing	Arts & culture	Educ. & knowl'dge	Clean water	Healthy soils	Climate regulation	Flood risk mitigation	Pollination	Primary produc'n	Water supply	Genetic diversity
Physical resources – Land Cover	Heather moorland	■	■	□	•	□	•	•	■	■	■	■	•	•	■
	Molinia moorland	■	■	□	•	□	•	•	■	■	■		•	•	
	Mire	■	■	□		•	•	■	■	■	■			■	■
	Coastal habitats	■	■	□	•	□	•			□	■	□			■
	Permanent pasture (5yrs+)	□	□	□	•		•	□	□	□	□	□	■	•	□
	Ley grassland (<5yrs)			□			•	•			•		■	•	
	Enclosed rough grazing	■	■	□	•		•	□	■	■	■	□	•	•	□
	Arable crops		□	□			•					□	■		•
	Broadleaved woodland	■	■	□	•	□	•	□	■	■	■	□	□	•	□
	Conifer woodland	•	□	□	•		•		•	■	■		□	•	•
	Scrub	□	■	□	•	•	•	•	•	•	•	•			•
Physical resources – Physical features	Species	•	■		•	•	■					•			■
	Landform - natural	■	•	•	•	•	•				□			□	
	Landform - man-made	□	□	■	•	□	■								
	Water bodies	□	•	□	•	□	•	■			■			■	•
	Soils	•		□			•	■	■	■	■				
	Boundaries - hedges	■	■	■	•	□	•			•	□	■	•		□
	Boundaries - banks & walls	■		■	•	□	•				□				
	Other features	□		□		□	•								
Attributes we apply to the resources – Designations	Landscape	■	•	•	•	•	•	•	•	•	•	•	•	•	•
	Nature and geology	■	■			□	■								■
	Hydrology						•	■						■	
	Historic environment	■		■		■	■								
	Common land	■		■	■	■	•						□		
	Public access			•	■	□	■								
Perceptual	Viewpoints and vistas	■		•	■	□	□								
	Culture and knowledge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Sensory elements	■	•		■	□	□								
	Perceptions	■	□	■	■	□	□								

Key: ■: Asset likely to have a significant role in delivering the service; □: Asset may have a significant role, depending on condition and location; •: Asset has a more minor role

Source: Exmoor Society, Towards a Register of Exmoor's Natural Capital

Estimate of Exmoor's Natural Capital Stocks and Ecosystem Services

A study carried out by Exeter University aimed to estimate the natural capital provided by Exmoor National Park and produce a set of accounts for the value of the ecosystem services or public goods provided. Whilst the data available was not good enough to provide accurate accounts, it did give an indication of the scale of public goods provided, with some examples provided in the table below. Please refer to the full report for further details and caveats in using this data.

Natural capital stock (ha)	**Recreation** (annual visitors)	**Climate regulation** (annual tonnes Co2e sequestered)	**Timber** (annual m3 overbark)	**Livestock** (total nos)	**Crops** (annual tonnes)	**Volunteering** (annual hours)	**Air quality** (annual PM10 absorbed)	**Pollination** (annual pollinator-dependent tonnes)
69,890	1,258,024	130,731	28,935	362,840	21,589	27,288	155,495	71

Source: Local Natural Capital Accounting, Exmoor and Dartmoor National Parks, 2020 SWEEP, Exeter University

Natural capital - peatlands

- Exmoor's peatlands are important carbon stores, wildlife habitats, natural providers of water regulation, and places for recreation and enjoyment
- Exmoor has 3,333 ha of peatlands (ENPA), and peaty soils account for around 47% of Exmoor's soils (SWC Carbon Footprint report)
- Much of this peatland is not in good condition due to historic drainage and so is emitting carbon as well as storing it
- The Exmoor Mires partnership has restored around 2,600ha of peatlands over the last 20 years. This is estimated to save around 4,000 tonnes of carbon emissions per year (Exmoor Mires partnership). However the effect of restoration on greenhouse gas emissions is complex and long term, and there are still areas likely to be net emitters of carbon
- Peatland restoration has reduced peak rainfall run-off by 21% and up to 32% of overall run-off, as water leaves the restored catchment more slowly, increasing catchment baseflow between rainfall events (Exeter University)
- The moorlands are open access land and include many footpaths and bridlepaths, enabling people to enjoy walking, riding, and cycling

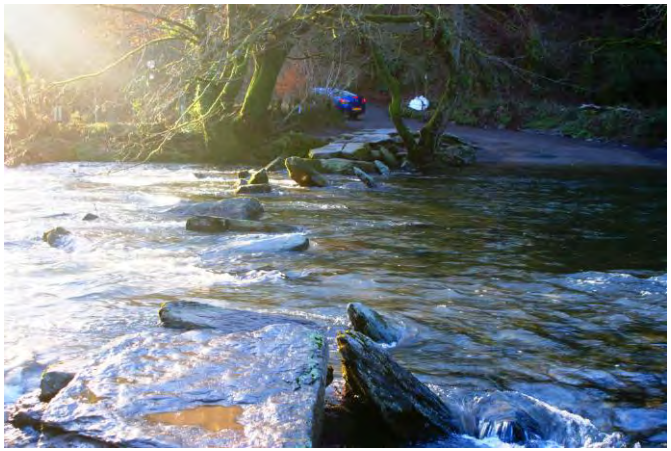
Natural capital - woodlands

- Exmoor has over 5 million trees. 13.6% (9,411 ha) of the National Park area is woodland (NFI) and other trees outside woodlands create an additional total canopy cover of 2,469 ha (National Tree Map)
- Exmoors woods, trees and hedgerows provide significant amounts of carbon storage and sequestration. They are also important wildlife habitats, and can be used to support natural flood management. Many woodlands have footpaths and bridlepaths through them providing public access
- There are 4,183,840 tCO_2(tonnes of CO_2) in the existing woodland resource on Exmoor with 18% in conifers and 82% in broadleaves. Most of the stored carbon in Exmoor's trees is stored within oak trees.
- In addition, there is another 1 million tonnes of CO_2 stored in hedgerow trees and free-standing, individual trees.
- The current sequestration rate is around 48,320 tCO_2, of which 52% is in conifers and 48% is in broadleaves.
- 25,750 tonnes of CO_2 are removed every year through harvesting of wood products.
- The net reduction in greenhouse gas emissions resulting from woodland in Exmoor National Park is estimated at 50,230 tCO_2 per annum. Of this, 55% comes from conifers and 45% from broadleaves.

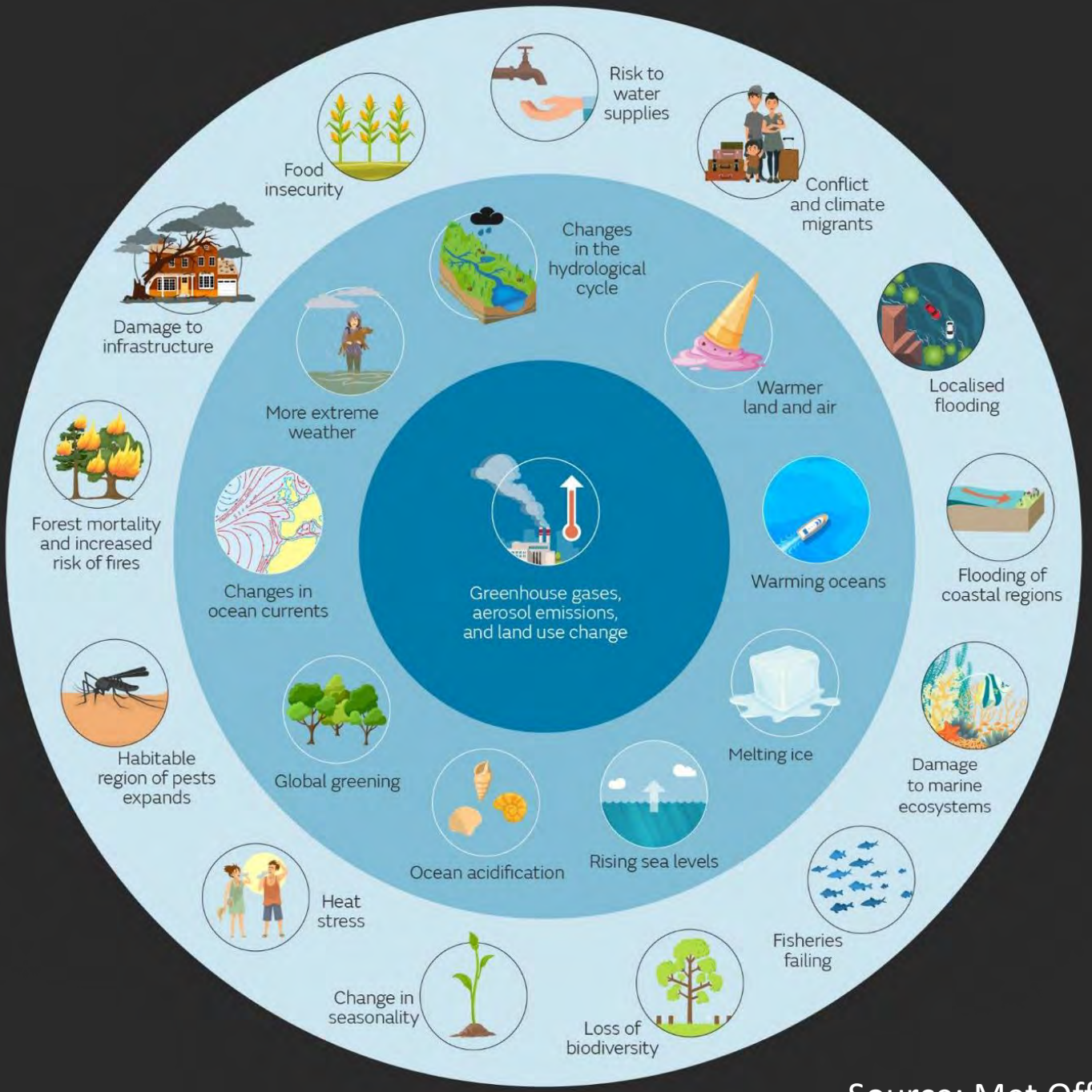
Source: Quantifying Carbon Storage and Sequestration in Woodlands in Exmoor National Park, Sandwood Enterprise for ENPA, 2013

Climate change

- The world has already experienced warming of around 1.1°C above pre-industrial levels (1850-1900), and further temperature changes are expected in the future (Met Office, 2022)
- Based on current levels of commitments worldwide, we are on track to experience in the order of 3°C of heating globally. This will lead to catastrophic changes in global climatic conditions including major sea level rise due to polar ice cap melt
- Limiting global heating to 1.5°C will significantly limit the impacts that will be experienced globally – this implies reaching global carbon neutrality in around 2050
- *"Without increased and urgent mitigation ambition in the coming years, leading to a sharp decline in greenhouse gas emissions by 2030, global warming will surpass 1.5°C in the following decades, leading to irreversible loss of the most fragile ecosystems, and crisis after crisis for the most vulnerable people and societies"* IPCC Special Report on Global Warming of 1.5°C , 2018
- The UK Government was the first to set a 2050 target for net zero carbon emission in legislation



Global drivers and impacts of climate change



Drivers of climate change

Changes to the climate system

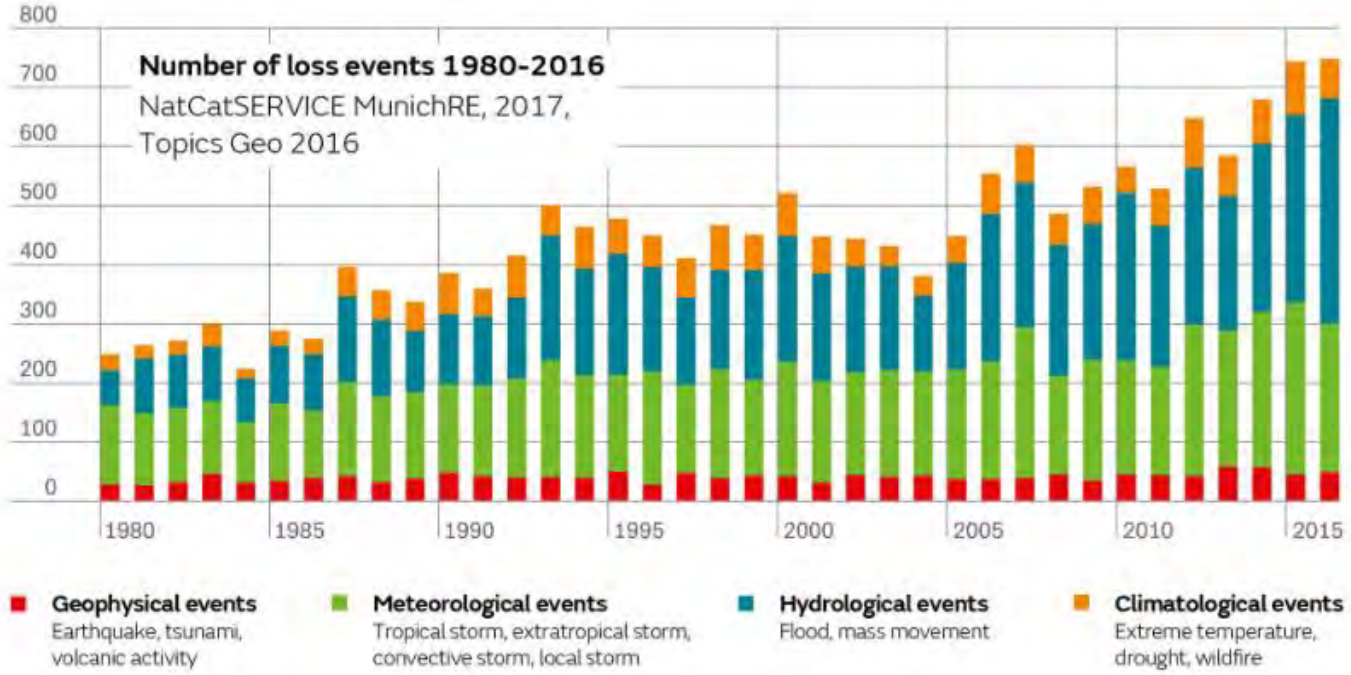
Impacts

Source: Met Office

Global warming and extreme events

Globally, the impacts of climate change include hotter, drier summers; milder, wetter winters; rising sea levels; and more extreme events

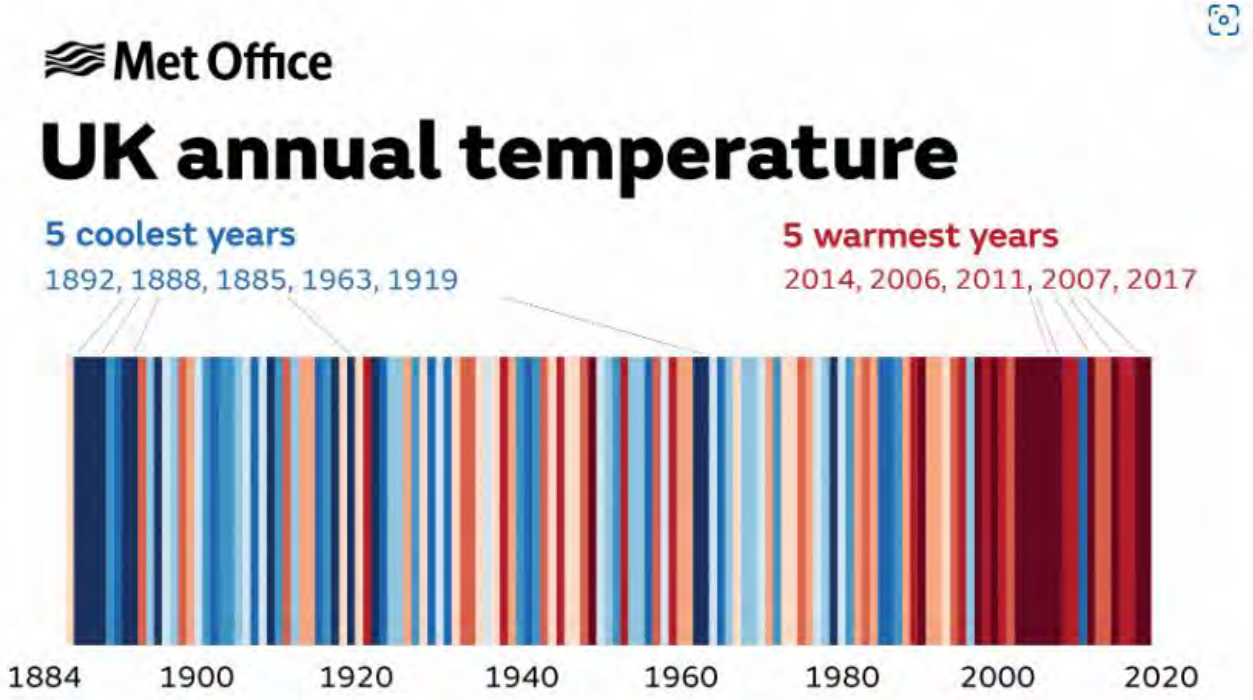
The graph below shows that globally, extreme events are becoming more frequent



Source: Met Office, data from Munich RE's Topics Geo Natural Catastrophes report

The UK's changing climate

The 21st century has so far been warmer than the past 3 centuries. The ten hottest years in the UK since 1884 have all happened since 2002. The UK has also been on average 6% wetter over the last 30 years (1991-2020) than the preceding 30 years (1961-1990). Six of the ten wettest years for the UK in a series from 1862 have occurred since 1998. Temperature, rainfall and sunshine for 2020 were all in the top ten highest on record, the first time this has happened in a single year



This image from the Met Office shows that the five warmest years have all occurred since 2006. Cooler years are blue and warmer years are red

Source: State of the UK Climate 2020

Climate projections

- By 2070, winters are projected to be wetter with a higher frequency of storms
- Summers are expected to be up to hotter, and drier, with a 50% higher risk of heatwaves (every other year) by 2050, and 90% (almost every year) by 2100

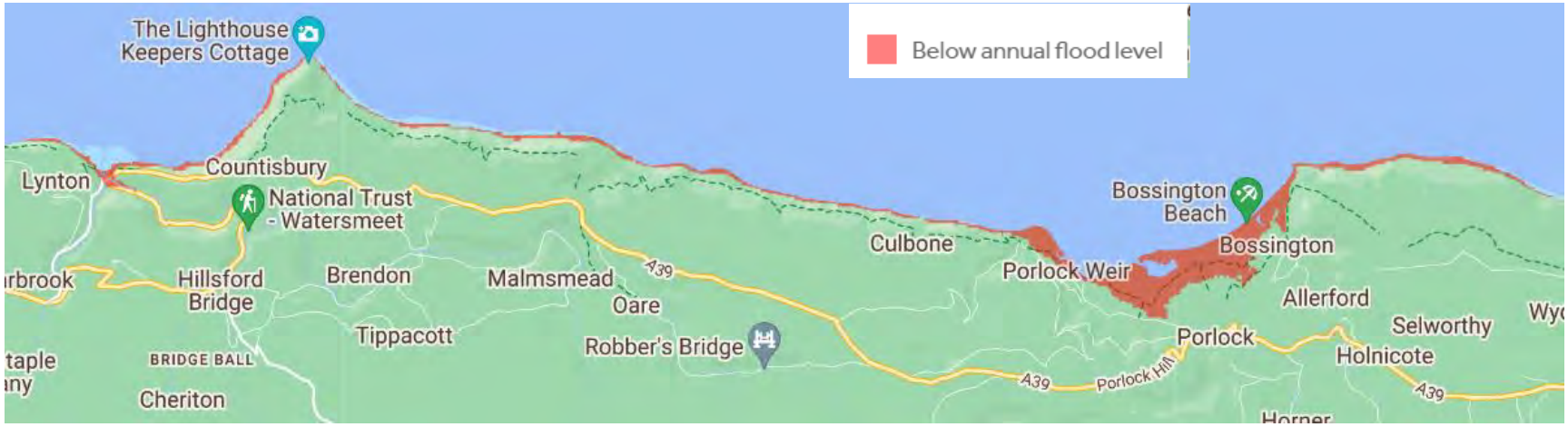
	2°C global warming	4°C global warming
Annual average temperature change	0°C to 3°C	2°C to 5°C
Average maximum temperature change	0°C to 5°C	2°C to 10°C
Summer precipitation change	-70% to +40%	-80% to +20%
Winter precipitation change	-80% to +20%	-20% to +70%
Sea Level Rise (Cardiff)	0.27-0.69m	0.51-1.13m*

* Note: this range reflects a 4.5°C warming as data is not available for 4°C warming

Source: Devon and Isles of Scilly Climate Adaptation Strategy 2023;
Met Office UKCP18 Fact Sheet Sea Level Rise and Storm Surge

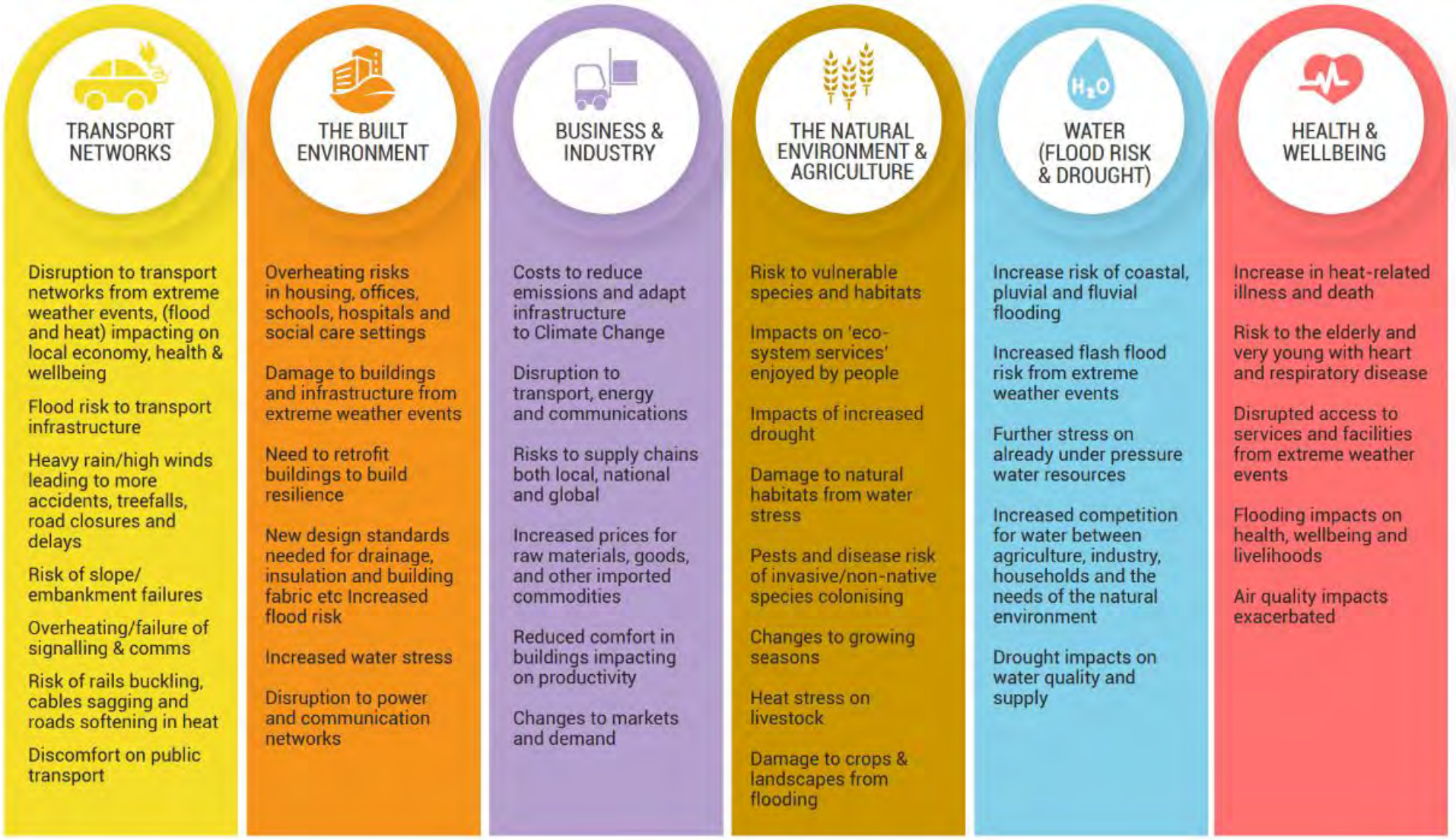
Sea Level Rise

- Sea-surface temperatures 2011-2020 have been 0.7°C warmer than the 1961–1990 average, and nine of the ten warmest years in near-coast sea-surface temperatures have occurred since 2002. Sea level rise has accelerated in the UK: over recent years UK sea level has risen by nearly 2 cm per decade over the 60 years to 2018. An immediate consequence will be higher extreme sea levels during high tides and storms which cause flooding (Source: State of the UK Climate 2020)
- Sea level rise and increased risk of coastal flooding puts low lying areas at risk. Sea levels are predicted to rise by 1.13m by 2100. On Exmoor, this primarily affects coastal settlements including Porlock Weir and Lynmouth. Coastal erosion of Exmoor's high cliffs also threatens heritage assets and access. The breach of the shingle ridge at Porlock Marsh in 1996 as a result of storm Lili has led to natural processes being left to take their course, and a dynamic coastal geomorphology with saltmarsh forming behind the shingle barrier



Source: Climate Central | Land projected to be below annual flood level in 2050

Summary of expected local impacts of climate change



Source: Somerset's Climate Emergency Strategy

Exmoor National Park Carbon Footprint

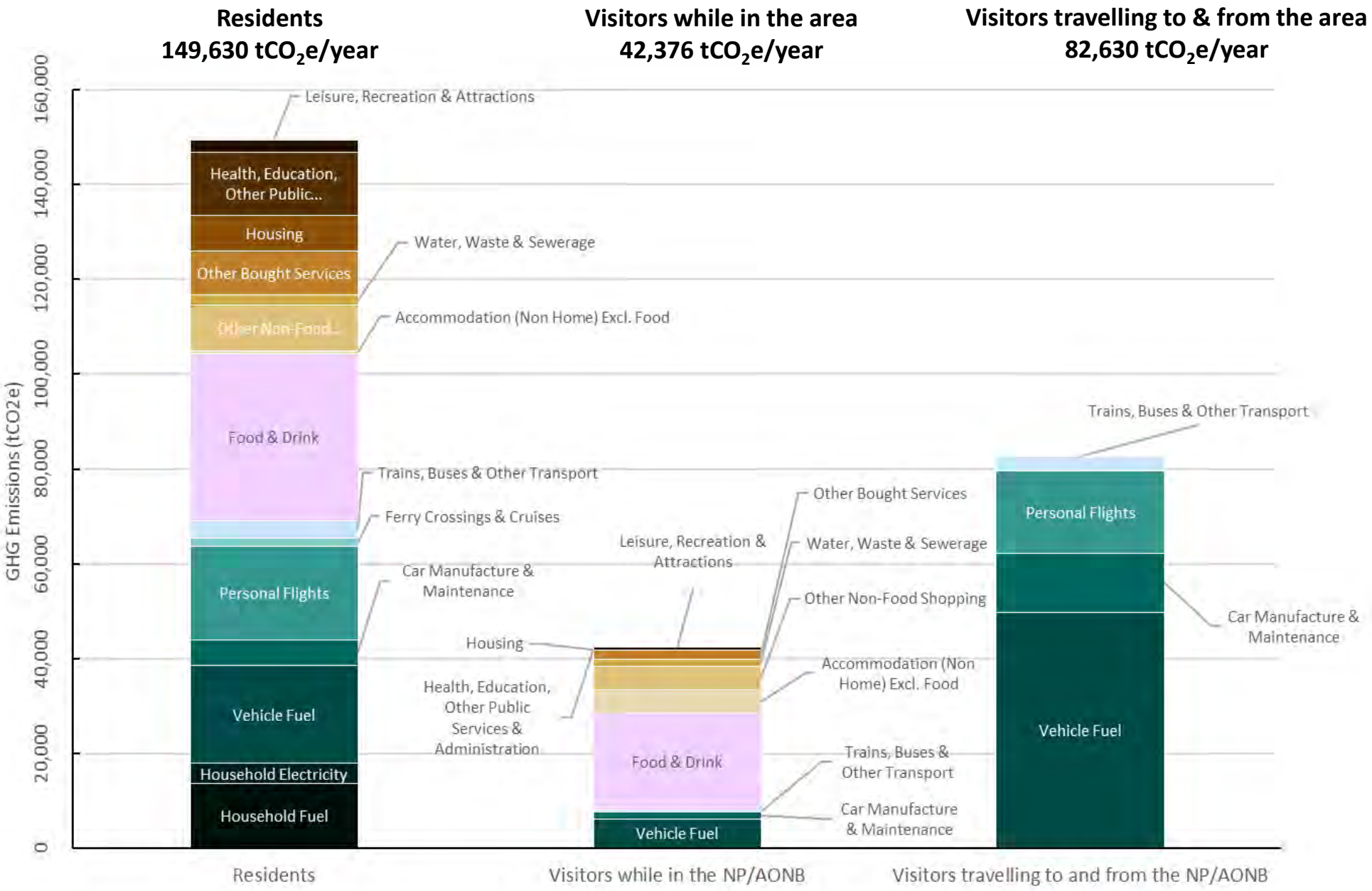
A baseline Greenhouse Gas (GHG) footprint assessment has been carried out for Exmoor National Park by Small World Consulting. It assesses GHG emissions relating to the consumption of all goods and services by local residents, businesses and visitors, in addition to land-based emissions. It therefore differs from production-based carbon footprint assessments which only look at the emissions directly produced within the National Park, plus those arising from production of the electricity used

By taking the consumption-based approach, this report also assesses indirect GHG emissions embedded in the supply chain of goods and services consumed, which better reflects the full climate impact of people's lifestyles. The most important of these are the impacts of food, of other purchased items (such as cars, clothes, IT equipment, household goods and furnishings), and of residents' and visitors' travel to and from the National Park

The headline annual emission figures for the Exmoor National Park are:

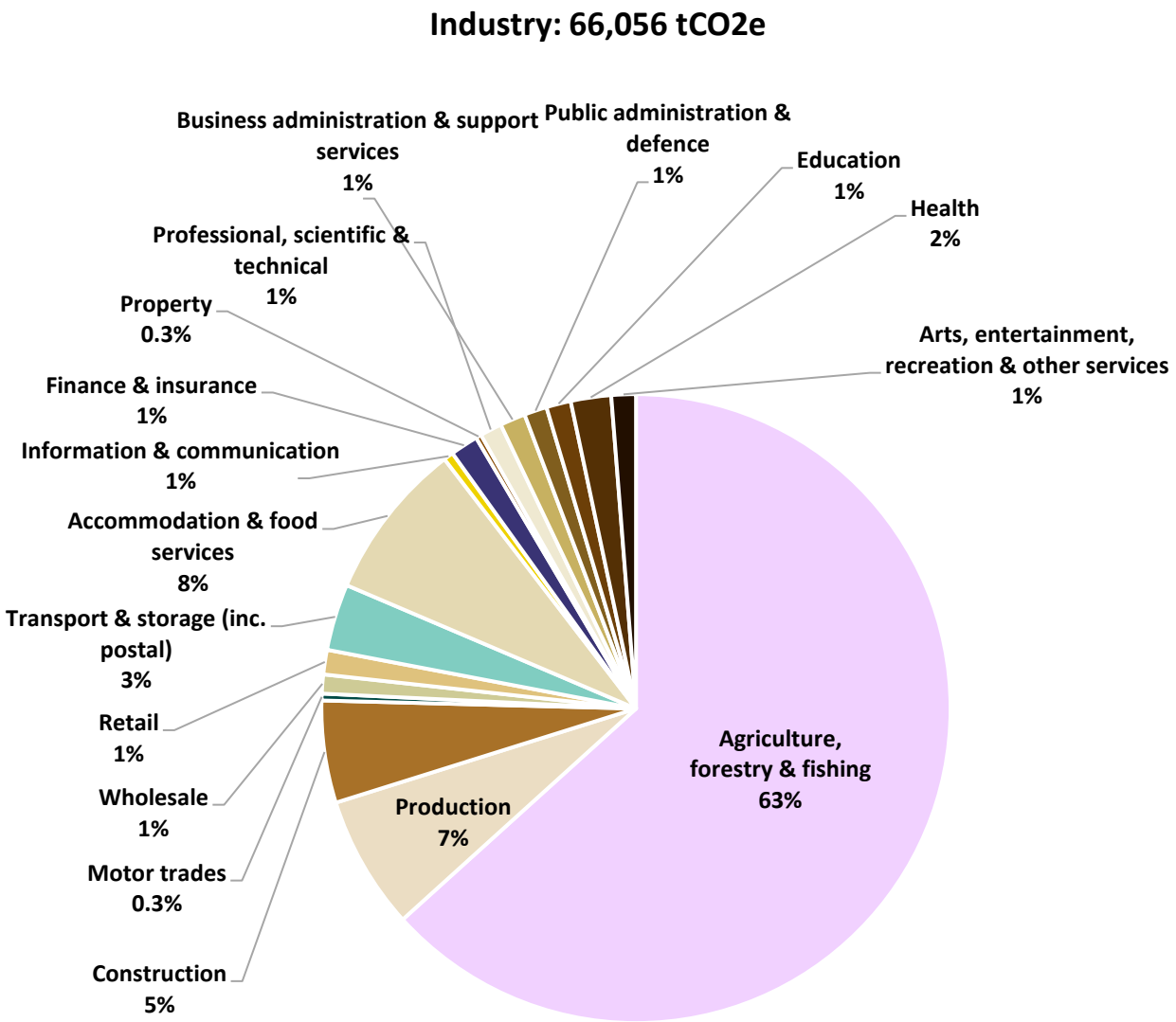
- Emissions from residents - **149,381 tCO_2e** (42.8 $kgCO_2e$ per resident per day; 15.6 tCO_2e per resident per year; the UK average is 12.4 tCO_2e per person per year)
- Emissions from visitors while in the National Park – **42,416 tCO_2e** (18.3 $kgCO_2e$ per visitor per day)
- Emissions from visitors travelling to/from the National Park – **82,630 tCO_2e** (56.5 $kgCO_2e$ per visit)
- Industry emissions – **66,056 tCO_2e**
- Land use emissions (non-CO2, including livestock and fertiliser) **119,889 tCO_2e**

Consumption-based GHG emissions for Residents and Visitors



Source: Exmoor National Park GHG Assessment, Small World Consulting 2023

Consumption-based GHG emissions for Industry



Source: Exmoor National Park GHG Assessment, Small World Consulting 2023

Key factors contributing to Exmoor's emissions

- The per capita footprint of Exmoor's residents is estimated to be around 26% higher than the UK average due to a number of factors including a high level of retired people and consequent higher levels of spending on health; greater levels of flying and driving; and higher household fuel consumption for heating and electricity
- Exmoor has around 1.5 million visitors annually. Visitors' footprint while in the National Park is dominated by food (48%), followed by driving (14%) and accommodation (12%)
- The visitors' footprint while travelling to and from the National Park is dominated by driving (62%), followed by flying (18%). This is more than twice the emissions attributed to their activities whilst in the National Park, in part due to the relative remoteness of Exmoor
- The industry footprint in the Exmoor National Park is dominated by agriculture, forestry and fishing (63%), followed by accommodation and food services (8%) and production (all types of manufacturing as well as mineral extraction and energy generation; 7%).
- The land use sector contains both carbon sources (e.g. emissions from livestock, synthetic fertiliser use, degrading peat soils) and sinks (including carbon sequestration in soils and biomass through woodland creation, peatland restoration and regenerative agriculture practices)

Source: Exmoor National Park GHG Assessment, Small World Consulting 2023

Emission reductions

The carbon footprint report highlights six priority areas for emission reductions:

Energy-only GHG
Residents, visitors, industry (incl. supply chain)

Food & drink
Residents, visitors

Non-food shopping
Residents + visitors (incl. car purchases)

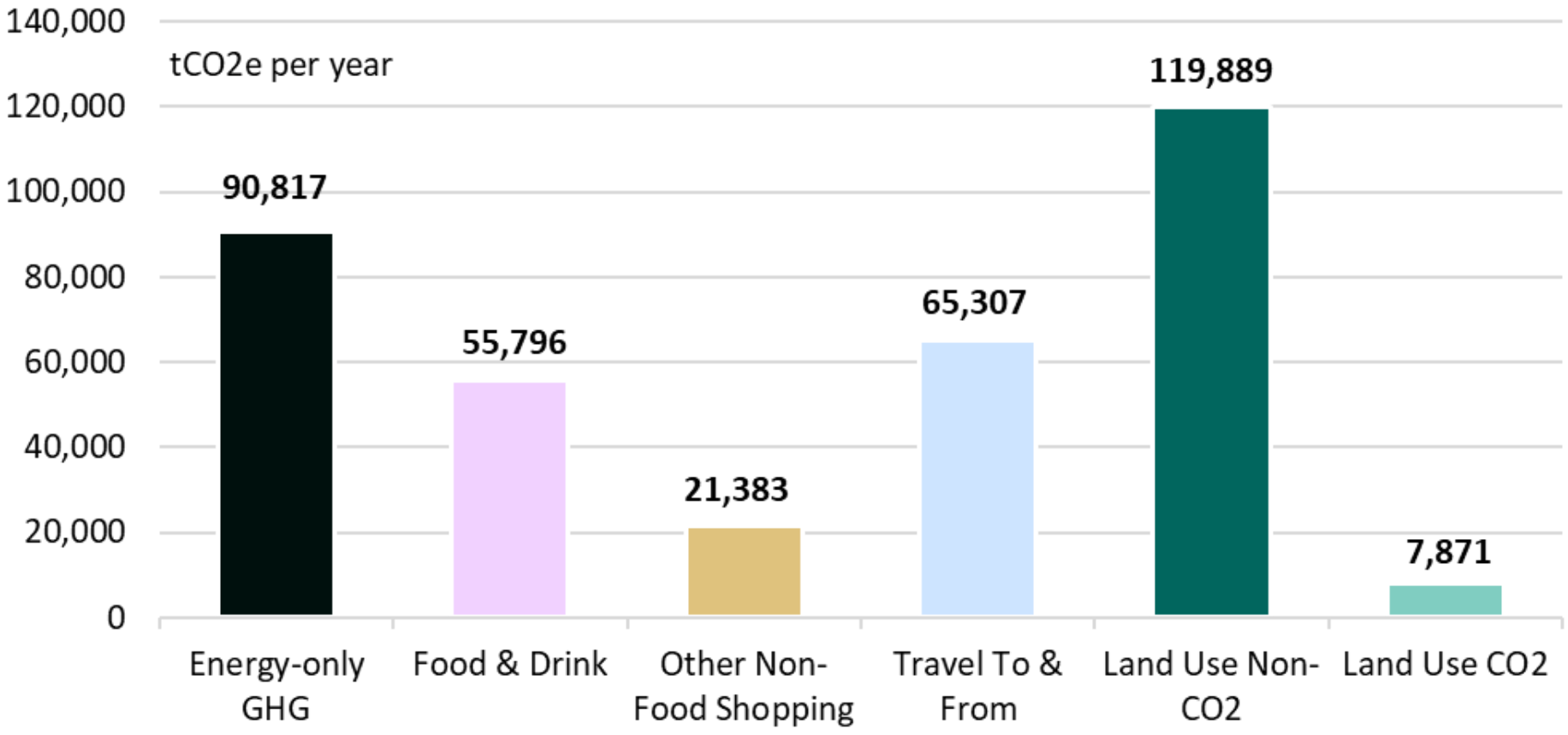
Travel to/from the area
Visitors (excl. flights, incl. car manufacturing)

Land-based non-CO_2
(e.g. livestock, fertiliser use)

Land-based CO_2
(e.g. sequestration, soil degradation)

Baseline Exmoor National Park carbon footprint 2019

Net GHG emissions based on the on the six priority areas = **361,063** tCO_2e per year



Source: Exmoor National Park GHG Assessment, Small World Consulting 2023

Net Zero Pathway for Exmoor National Park

- A net-zero pathway has been derived for Exmoor National Park in line with the international commitments made in the Paris Agreement to limit global temperature rises to 1.5 degrees, and the UK's targets for specific sectors

- In order to meet these ambitious, science-based commitments, the following emissions reduction targets have been identified for Exmoor National Park to 2050:

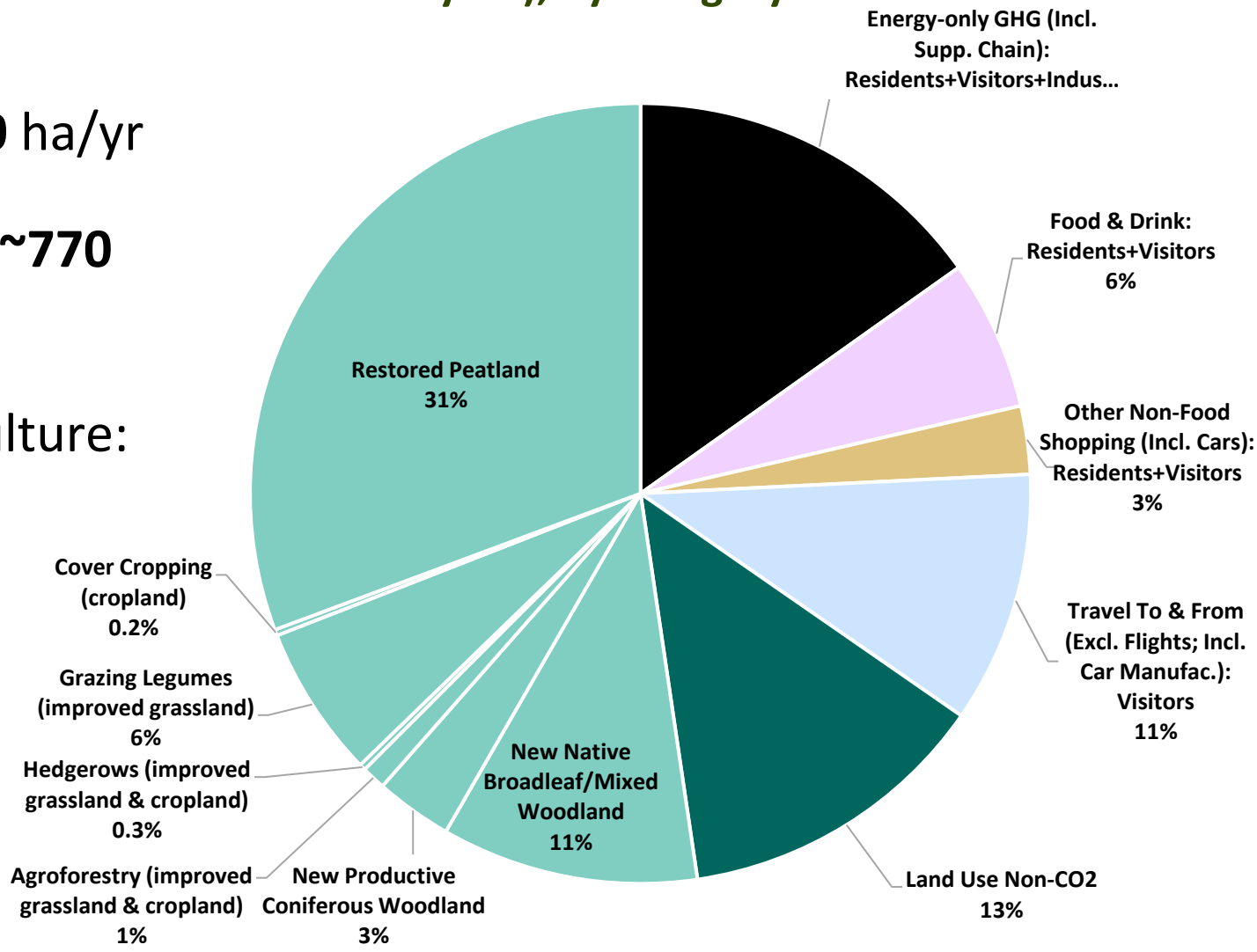
    - **Sustainable energy – 12.8% pa** (per annum) cut in emissions arising from energy usage by residents, visitors and industry
    - **Sustainable food & drink – 5% pa** cut in emissions arising from consumption of food and drink
    - **Sustainable purchasing – 5% pa** reduction in emissions from other goods purchased by residents and visitors
    - **Sustainable travel – 10% pa** reduction in emissions from visitor travel to and from the National Park
    - **Sustainable agriculture** – **5% pa** cut in emissions from livestock and fertilisers
    - **Sustainable land use** – **a net reduction of 9,436 tCO_2e emissions pa** from restoring degraded peatlands and mineral soils, and increasing sequestration of carbon in healthy soils, woodlands, and other vegetation:

- When converted to changes in the **net GHG emissions**, emissions reduction due to peatland restoration (roughly minus 5,500 tCO_2e per year) provides nearly 3 times more effect compared to the second-largest contribution from carbon sequestration through new native broadleaf/mixed woodland, and nearly 5 times more effect compared to the third-largest contribution from carbon sequestration through adding legume species (applicable to improved grassland only). This clearly illustrates the priorities for land use measures in the Exmoor National Park in order to achieve net zero emissions

Emission reduction & carbon sequestration targets:

- New woodland: **130** ha/yr
- Restored peatland: **~770** ha/yr
- Regenerative agriculture: **~670** ha/yr

% breakdown of total proposed reduction in net annual GHG emissions from 2019 to 2050 (561,131 tCO_2e / year), by category:



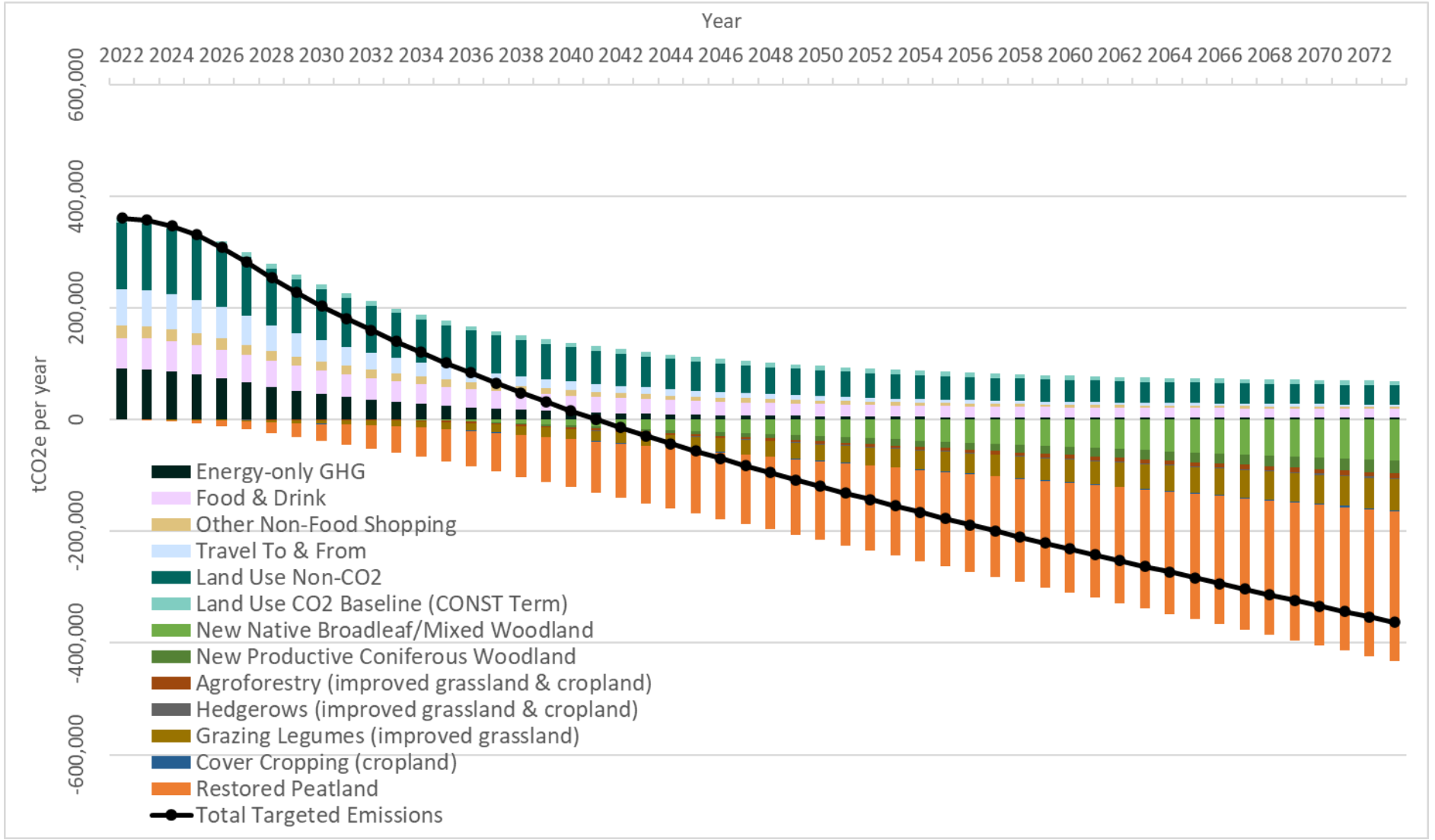
Source: Exmoor National Park GHG Assessment, Small World Consulting 2023

Exmoor National Park Net zero goals

- The GHG baseline report sets out that if the emissions reduction targets are achieved, and using 2019 as the baseline year, Exmoor National Park is projected to reach net zero GHG emissions by 2035
- However, the high levels of ambition for the different sectors required to achieve the required cuts in emissions are challenging and are likely to take several years to achieve, particularly as decarbonisation trends to date have been relatively small in magnitude compared to what is required. These factors are expected to push the projected net zero year back until the early 2040s, which is illustrated in the figure in the next slide
- The trajectories for each of the six components of the target are still expected to become steep and challenging in the coming years, reflecting the severity of the climate emergency
- The net zero date also depends on the unique circumstances of the National Park and should therefore not be taken in isolation as a level of ambition

Pathway to Net Zero by 2041

A recommended pathway to Net-Zero in line with the Paris Agreement to limit global temperature rises to 1.5 degrees, and the UK's targets for specific sectors. Uses 2022 as the base year and assumes 5-year lags in ratcheting up the efforts to the recommended levels



Source: Exmoor National Park GHG Assessment, Small World Consulting 2023