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Woodlands for Wales indicators 2026
Chapter 5: environmental quality

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Woodlands for Wales indicators 2026
Chapter 5: environmental quality

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Production of these indicators has been led by Forest Research, on behalf of Welsh Government. Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

For further information please contact:

Trees and Soils Branch
Climate Change and Environmental Sustainability
Welsh Government
Cathays Park
Cardiff
CF10 3NQ

PolisiCoedwigaeth.ForestryPolicy@gov.wales

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Introduction

This chapter includes indicators that monitor progress towards the outcomes set out in the environmental quality chapter of the Woodlands for Wales strategy.

Outcome 16: woodland management achieves high standards of environmental stewardship

Not directly assessed here, although area of certified woodland (used as a proxy for sustainable management) is included in chapter 1 outcome 2.

Outcome 17: woodlands and trees of special conservation value are identified, protected and in favourable management

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Trends

Trends have been calculated for the indicators using the criteria set out in table 1.

Table 1: description of trend analysis for the Woodlands for Wales indicators

Category	Symbol	Threshold
Improving	↑	>3% positive change since the last WfW indicators
Stable (*i.e.,* little or no overall change)	**=**	≤3% change since the last WfW indicators
Deteriorating	↓	>3% negative change since the last WfW indicators
Not assessed due to insufficient comparable data	**N/A**	Not applicable

Where appropriate data are available, the most recent data point is compared with the value from the last WfW indicators report (or with data from that time period, if that indicator was not previously reported), smoothed using a 3-year average.
For example, a data point from 2025 would be compared to the 3-year average around 2018 (2017, 2018 and 2019). The purpose of this is to reduce the likely impact of individual annual anomalies.
The chapter 5 indicators and the associated trends since the last indicators report are shown in table 2.

Table 2: trends for the Woodlands for Wales indicators

Indicator	Trend since the last WfW indicators report
17a: Area of woodland within designated sites	Data for this indicator provide a baseline
17b: Condition of habitat woodlands	Data for this indicator provide a baseline
18: Woodland biodiversity	This indicator is under development
19: Historic and cultural significance of woodland	=
20a: Condition of woodland soils	Mixed trends
20b: Woodland contribution to flood management	Data for this indicator provide a baseline

Outcome 16: woodland management achieves high standards of environmental stewardship

High environmental stewardship is not directly tracked within these indicators, however sustainable management is addressed using certified woodland area in chapter 1, outcome 2.

Wales has committed to the global 30by30 targets to protect 30% of land, freshwater and sea for people and nature by 2030, of which the series of designated sites forms a key component. Under a 30by30 framework for Wales the Management Effectiveness of Protected and Conserved Areas (MEPCA) indicator will be used to assess the quality of stewardship within designated woodlands contributing to 30by30, incorporating evidence on site management, monitoring, and condition. This may be incorporated into the WfW indicators in the future.

Outcome 17: woodlands and trees of special conservation value are identified, protected and in favourable management

There are several data sources that provide detail about the identification and protection of woodlands and trees of special conservation value. There are 2 indicators set out here relating to designated habitats in Wales. These are: area of woodland within designated sites, and condition of habitat woodland. As well as designated sites, the area of ancient and restored woodland and the number of ancient and veteran trees in Wales are also relevant to this outcome. Therefore, additional data from the ancient woodland inventory (AWI), ancient tree inventory (ATI) and information about tree preservation orders (TPOs) are included here.

Indicator 17a: area of woodland within designated Sites

Trend since the last WfW indicators report: this is new reporting for this edition of the WfW indicators, so no trend can be reported.

Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) form key parts of the UK's nature conservation framework. SSSIs are national designations that safeguard the most important habitats, species, and geological features. SPAs, created under the Birds Directive, provide additional protection for rare, vulnerable, and migratory bird species, while SACs, designated under the Habitats Directive, protect internationally important habitats and non-bird species. There are several SSSIs, SPAs and SACs in Wales, and woodlands play an important role within this network by supporting diverse wildlife and contributing to wider landscape resilience.

Table 3 shows the area of woodland that falls within the different designations of legally protected land. It should be noted that these areas do not sum to give the total area of National Forest Inventory (NFI) woodland within protected sites. All SPAs are underpinned by SSSIs, and some SACs, although not all, also lie within SSSIs. The total area of NFI woodland that lies within any designation, without double counting, is 18,299 ha. In addition, woodlands contribute to National Landscapes and National Parks within Wales.

Table 3: NFI woodland within different protected area classes, Wales

Protected Area Designation	Area of NFI woodland within these areas (ha)
Sites of Special Scientific Interest	18,172
Special Protection Areas	2,400
Special Areas of Conservation	10,519

Source: Analysis of National Forest Inventory Wales 2024 | Forestry Commission Open Data website, 2024, and Sites of Special Scientific Interest (SSSI) | DataMapWales, Special Areas of Conservation (SAC) | DataMapWales, and Special Protection Areas (SPA) | DataMapWales. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number AC0000849444. Crown Copyright and Database Right.

Indicator 17b: condition of habitat woodland

Trend since the last WfW indicators report: this is a new data source for this edition of the WfW indicators so no trend can be reported. However, the trends reported within the Habitats 9A report are stable.

To assess the quality of woodlands of special conservation value, results of the Habitats Regulations 9A Report for Wales (2019-2024) are utilised. This represents Wales' first country-level assessment under Regulation 9A of the Conservation of Habitats and Species Regulations 2017. This report was published in 2026 by NRW on behalf of the Welsh Government and is due to be repeated every 6 years under the habitats Regulations and the Offshore Regulations.

The Habitats 9A report is an assessment of the condition, trends and management of the habitats, species, and wild birds that are of importance to Wales. Habitat assessments are conducted for Annex I habitats (designated as Special Areas of Conservation). Woodland habitats set out in the directive are:

- Atlantic acidophilous beech forests
- *Asperulo-Fagetum* beech forests
- *Tilio-Acerion* forests
- Old sessile oak woods
- Bog woodland
- Alluvial forests with alder and ash
- Yew-dominated woodland

Table 4 shows a summary of the results, by woodland habitat type. All these woodland habitats are assessed as in overall 'unfavourable-bad (U2)' condition. Under the Habitats Directive. The conservation status of a habitat is defined as the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure, functions, and survival. A habitat is considered in favourable condition when its natural range, and the areas it covers, are stable or increasing; the specific structure and functions necessary for its long-term maintenance exist and are likely to continue; and the conservation statuses of its typical species are also favourable.

For the Habitats 9A reporting, these definitions are applied to judge Favourable Conservation Status (FCS) for each Annex I habitat. FCS reflects whether a habitat or species is in a healthy and sustainable state, assessed through a set of supporting parameters. For habitats, these parameters are range, area, structure and functions.

Each parameter, and the resulting overall conclusion, is assessed using 1 of 4 standard categories:

- Favourable – in good condition, with no significant pressures or threats, and expected to remain so.
- Unfavourable–inadequate – not in good condition but could recover with appropriate measures, although some pressures or threats are present.
- Unfavourable–bad – in poor condition, facing major pressures or threats, and at serious long-term risk.
- Unknown – insufficient information to reach a reliable conclusion.

These categories follow definitions set out in the European Commission's reporting guidance for the Habitats and Birds Directives and are applied consistently across all reporting countries, allowing UK- and European-scale comparisons. This is the first time this assessment has been undertaken specifically for Wales.

The total area of the woodland habitats assessed is 57,600 ha. This is quite a small subset (circa 18.4%) of total woodland in Wales (~313,000 ha) and represents only woodland that meets the habitats directive. For condition assessment of all woodland in Wales see chapter 1 outcome 3.

Table 4: summary of results for woodland habitats from the Habitats 9a reporting from NRW, 2026

Woodland habitat	Surface area (hectare)	Area status	Range status	Structure and function status	Future prospects status	Overall status	Overall trend
Atlantic acidophilous beech forests	2100	Unfavourable -inadequate	Favourable	XX	Unfavourable -bad	Unfavourable -bad	XX
Asperulo-Fagetum beech forests	1300	Unfavourable -inadequate	Favourable	XX	Unfavourable -bad	Unfavourable -bad	XX
Tilio-Acerion forests	3000	Unfavourable -inadequate	Favourable	Unfavourable -bad	Unfavourable -bad	Unfavourable -bad	Stable
Old sessile oak woods	48000	Unfavourable -inadequate	Favourable	XX	Unfavourable -bad	Unfavourable -bad	XX
Bog woodland	150	Unfavourable -inadequate	Favourable	XX	Unfavourable -bad	Unfavourable -bad	XX
Alluvial forests with alder and ash	3000	Unfavourable -inadequate	Favourable	XX	Unfavourable -bad	Unfavourable -bad	XX
Yew-dominated woodland	50	XX	Favourable	Unfavourable -bad	Unfavourable -bad	Unfavourable -bad	XX

Source: Natural Resources Wales, 2026. Natural Resources Wales / Habitats Regulations 9A Report for Wales 2019-2024

Note: XX = unknown

Additional data and context

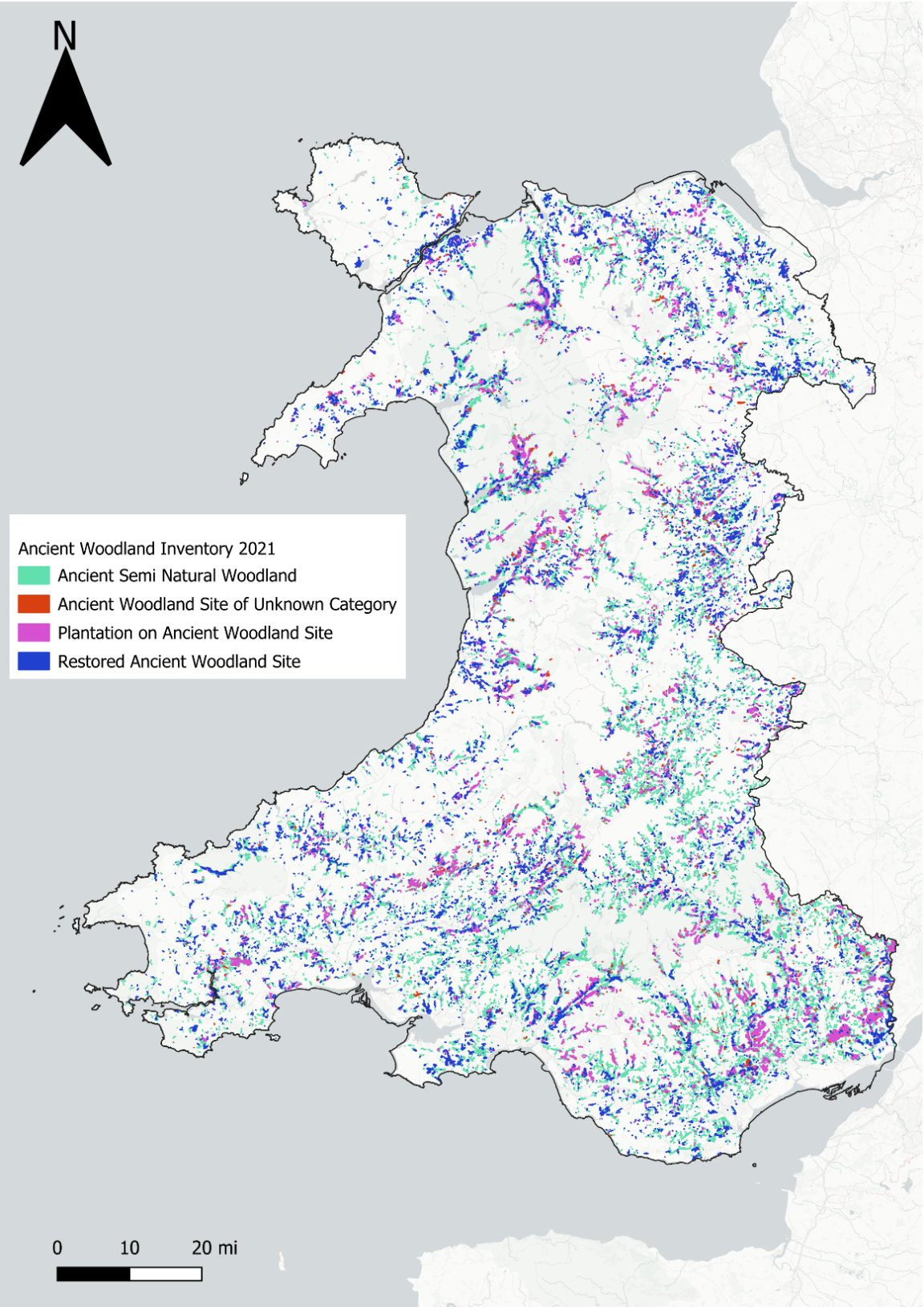
Area of ancient woodland from the ancient woodland inventory

Ancient woodlands are often more ecologically diverse, have high conservation value, and may also be culturally important. Natural Resources Wales's Ancient Woodland Inventory (AWI) shows woodlands that have had continuous tree cover for some centuries, based on analysis of historic Ordnance Survey maps and current remote sensing data. There are 4 categories of ancient woodland. These are:

- **Ancient Semi-Natural Woodland (ASNW):** Broadleaf woodlands with mainly native tree and shrub species which are believed to have been in existence for over 400 years.
- **Plantation on Ancient Woodland Sites (PAWS):** Sites which are believed to have been continuously wooded for over 400 years and currently have a canopy cover of more than 50% non-native conifer species.
- **Restored Ancient Woodland Sites (RAWS):** Woodlands which are believed to have been continually wooded for over 400 years. These woodlands will have gone through a phase when canopy cover was more than 50% non-native conifer species and now have a canopy cover of more than 50% broadleaf species. It should be noted that where the use of remote sensing techniques suggests that 'restored ancient woodland' has returned to a more natural condition, this does not mean the woodland is fully restored or that it is in good ecological condition.
- **Ancient Woodland Site of Unknown Category (AWSU):** Ancient woodland that could be in any of the 3 categories above. This could consist of woodland in transition, young trees, felled areas or shrubs.

Figure 1 shows the Ancient Woodland Inventory of Wales, produced in 2021. The area of woodland, by category, is shown in Table 5**.**

Figure 1: ancient Woodland Inventory Wales, 2021, by woodland type



Description of figure 1: a map of Wales showing the distribution of different ancient woodland types. Ancient woodland is distributed throughout Wales.

Source: Natural Resources Wales, Ancient Woodland Inventory, 2021.

Table 5: area of woodland from the Ancient Woodland Inventory (2021) by woodland category

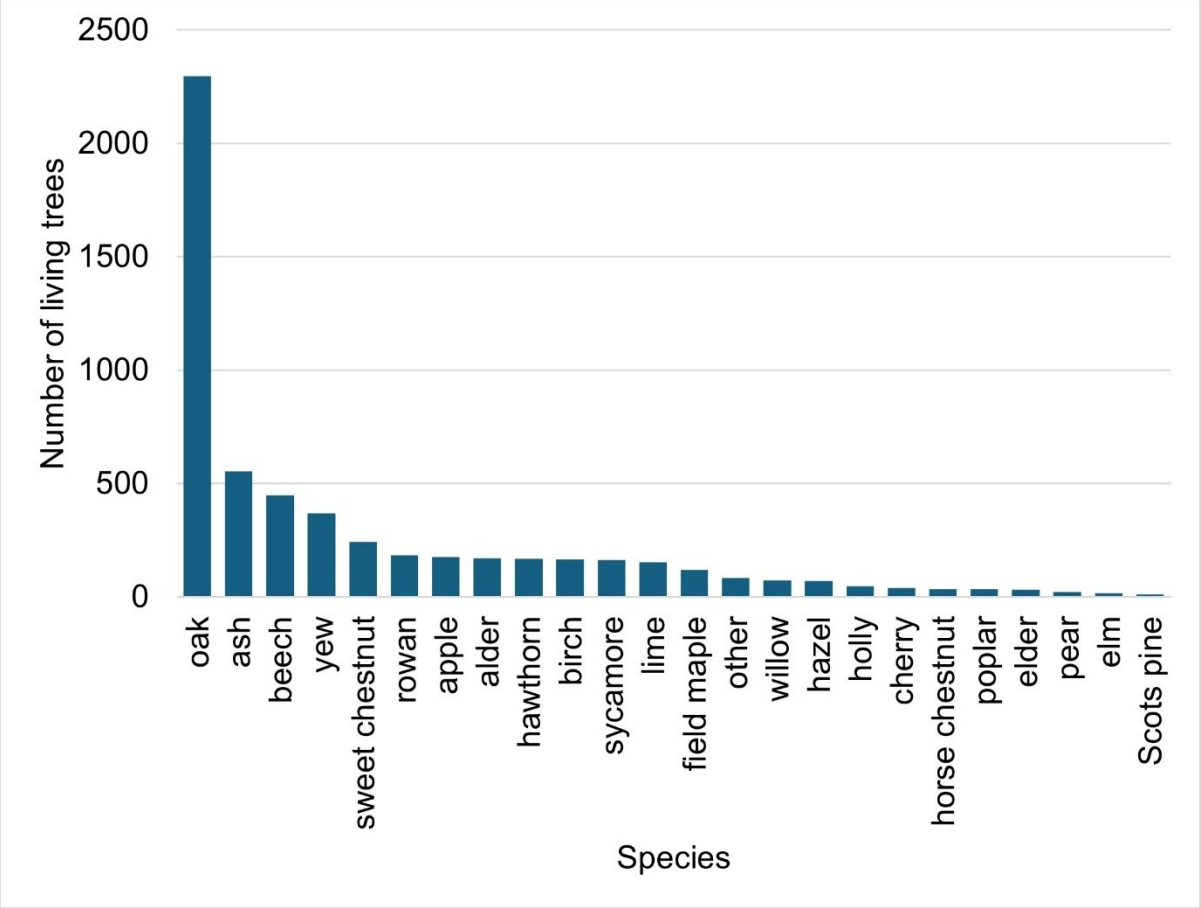
Woodland Category	Area (ha)
Ancient Semi Natural Woodland	41,749
Restored Ancient Woodland Site	23,296
Plantation on Ancient Woodland Site	26,953
Ancient Woodland Site of Unknown Category	2,833
Total	94,832

Source: Natural Resources Wales, Ancient Woodland Inventory, 2021.

Ancient tree inventory

Ancient and veteran trees are of significant ecological and cultural value. The UK has a large number of ancient trees, relative to other European countries. The Ancient Tree Inventory, produced and maintained by the Woodland Trust, aims to locate and map ancient, veteran and significant trees across the UK. The Ancient Tree Inventory relies on volunteers adding trees to the inventory, which are then verified by the Woodland Trust. **Error! Reference source not found.** 2 shows verified Welsh trees included in the Ancient Tree Inventory, by Species, as of December 2025. The total number of live trees in Wales in the ATI is 5,664, with ancient Oak trees representing the largest number of individual trees. This is not an exhaustive list of ancient, veteran and notable trees in Wales, and includes only the highest quality records that have been verified as veteran or ancient and for which a photo is available.

Figure 2: Welsh trees included in the Ancient Tree Inventory, listed as alive in December 2025, by species



Description of figure 2: bar chart showing the number of trees by species in the ATI. Oak species contribute the largest number of recorded ancient trees in Wales with over 2,000 living individuals. The next most abundant species, ash, has just over 500 individual trees classified as ancient.

Source: Ancient Tree Inventory, Woodland Trust, Accessed (12/25).

Tree preservation orders

As well as identifying trees of significant conservation or cultural value, it is important that other ‘valuable’ trees are protected. Local planning authorities can issue tree preservation orders (TPOs) to make it an offence to cut down, top, lop, uproot, wilfully damage, or wilfully destroy a tree without the planning authority’s permission.

Outcome 18: woodland biodiversity is supported and native woodland is in favourable management

This outcome is assessed by 1 indicator: woodland biodiversity. This indicator is under development as new metrics for assessing woodland biodiversity are considered.

Indicator 18: woodland biodiversity – under development

Trend since the last WfW indicators report: this indicator is under development, so no overall trend is reported here. However, short-term trends as reported by ERAMMP are included below.

In 2025 the Wales National Trends and Glastir Evaluation was published by the Environment and Rural Affairs Monitoring and Modelling Programme (ERAMMP) on behalf of Welsh Government. This built on the Glastir Monitoring and Evaluation Programme (GMEP) funded by the Welsh Government between 2012 and 2016. GMEP provided a baseline against which future assessments can be compared. The latest national trends findings report short-term trends between the GMEP results and ERAMMP results.

ERAMMP reports on several indicators that can help assess biodiversity in woodlands. Vegetation, pollinator, and bird survey results are considered here as proxies for woodland biodiversity. There are 2 woodland habitat types designated as part of the ERAMMP assessment: broadleaved mixed and yew woodland, and coniferous woodland. The ERAMMP habitat key defines woodland as consisting of over 25% canopy cover of trees and shrubs, over a metre tall. For the broadleaved mixed and yew woodland habitat this includes stands of trees and shrubs that have less than 80% cover by coniferous species, excluding yew. Coniferous woodland consists of stands where coniferous species (excluding yew) exceed 80% of cover. In ERAMMP reporting, woodland area is obtained from satellite imagery where woody species dominate a 10 m^2 pixel. This differs from the definition of woodland presented in chapter 1 of the WfW indicators. Data from the Wales National Trends and Glastir Evaluation are utilised here to assess woodland biodiversity, although this indicator is still considered to be under development as new metrics for assessing biodiversity are being actively considered.

Vegetation indicators

Table 6 shows selected short-term trend analysis results taken from the ERAMMP national trends and Glastir evaluation, for both woodland habitats assessed by ERAMMP. These results are obtained from National Field Survey (NFS) evidence, which captures change in the condition of woodland over the period 2013-16 and 2021-23. Species richness for ground flora, nectar plants and ancient woodland indicator plants are used as proxies for plant biodiversity in woodland. Here, results from large (200m^2) plots only are considered, as these are more suitable for the size of species in woodlands. However, in the ERAMMP reporting small (4m^2) plots are also considered for comparison to other habitats. For further methodology and complete results refer to the broad habitat results supplement and technical annex of the national trends report. The short-term trends for all species richness indicators considered here are stable.

Table 6: selected short-term trends in woodland vegetation indicators taken from ERAMMP National Trends and Glastir Evaluation, 2025

Habitat	Indicator	Mean 2013-16	Mean 2021-23	Short term analysis using GMEP 2013-16 to 2021-23
Broadleaf Mixed and Yew Woodland	Ground flora total species richness	22.3	23.8	=
Broadleaf Mixed and Yew Woodland	Nectar plant species richness	11.7	12.4	=
Broadleaf Mixed and Yew Woodland	Ancient woodland indicator species richness	4.33	4.46	=

Habitat	Indicator	Mean 2013-16	Mean 2021-23	Short term analysis using GMEP 2013-16 to 2021-23
Coniferous woodland	Ground flora total species richness	12.89	14.1	=
Coniferous woodland	Ancient woodland species richness	2.17	2.56	=

Source: ERAMMP National Trends and Glastir Evaluation, 2025.

Note: =: no significant change, ↑/↓: significant at P≤0.05, ↑↑/↓↓: significant at p≤0.01.

Pollinator indicators

For pollinators, ERAMMP field surveys were carried out twice in each 1 km sample square. Each sample square was assessed either in 2021 or in 2023. The survey protocol specified that the first survey should be carried out in July and the second in August of the year of sampling. Surveyors were provided with maps of the transect routes for each 1 km sample square. Each 2 km long walking route comprised 2 1 km 'transect lines', each subdivided into 5 contiguous 200 m transect sections. There were 5 indicators of pollinator abundance and diversity subsequently estimated from the data collected:

- **Pollinator abundance:** the combined sum across all pollinator species of the peak count per species, for each transect section.
- **Mean butterfly abundance:** the mean across all butterfly species of the peak count per species (including zeroes), for each transect section.
- **Butterfly species richness:** the total number of butterfly species recorded across all visits, for each transect section.
- **Functional group richness:** the total number of pollinator functional groups recorded across all visits, for each transect section. Bees and hoverflies were

recorded in the field to functional group level already (honeybees, bumblebees, mining bees, leafcutter bees; aphid-eaters, plant-eaters, detritivores). For butterflies, taxonomic subfamilies were used as proxies for functional groups, since closely-related butterfly species often tend to share similar life-histories, habitat requirements and/or larval host-plants.

- **Generality of pollinators**: the mean number of plant species visited per pollinator species, for each timed observation location.

Full details of the survey methodology and results can be found in the national trends technical annex and pollinators technical annex.

The results for the 2 woodland habitat types considered are shown in Table 7. For broadleaved woodland, statistically significant declines have occurred in both mean butterfly abundance and butterfly species richness. There were no statistically significant changes in the other indicators for broadleaved woodland. For coniferous woodland, statistically significant increases were recorded in pollinator abundance, with no statistically significant change in the other indicators.

Table 7: national trend analysis for pollinator indicators in woodland

Habitat	Indicator	Mean 2013-16	2021-23 estimate	Short term analysis using GMEP 2013-16 to 2021-23
Broadleaf Mixed and Yew Woodland	Pollinator abundance	32.66	29.44	=
Broadleaf Mixed and Yew Woodland	Mean butterfly abundance	0.31	0.17	↓
Broadleaf Mixed and Yew Woodland	Butterfly species richness	3.45	2.64	↓↓
Broadleaf Mixed and Yew Woodland	Functional group richness	5.2	5.26	=
Broadleaf Mixed and Yew Woodland	Generality of pollinators	1.85	1.61	=
Coniferous Woodland	Pollinator abundance	22.92	35.1	↑
Coniferous Woodland	Mean butterfly abundance	0.15	0.13	=
Coniferous Woodland	Butterfly species richness	2.24	2.07	=
Coniferous Woodland	Functional group richness	4.37	4.96	=
Coniferous Woodland	Generality of pollinators	1.83	1.94	=

Source: ERAMMP National Trends and Glastir Evaluation, Broad Habitat Results, 2025.

Note: Note: =: no significant change, ↑/↓: significant at P≤0.05, ↑↑/↓↓: significant at p≤0.01.

Bird indicators

The BTO/JNCC/RSPB Breeding Bird Survey (BBS) has run since 1994. It is a volunteer survey run by BTO staff, with assistance from a network of regional organisers. The BBS is a line-transect survey based on randomly located 1-km squares. Squares are chosen through stratified random sampling, with more squares in areas with more potential volunteers. For Wales, this means there is a lower density of squares than in much of England. The BBS provides reliable population trends for breeding birds in Wales provided there are a large enough number of squares considered. Following scoping and experience, a threshold of 30 squares per year during the trend period of interest is used for birds in Wales. With this considered, as of 2023, long-term trends for 60 species of birds, subdivided by habitat preference, have been published by ERAMMP. Short-term trends for woodland bird species from the policy-led standard list of species from Burns, *et al.,* (2023)[1], that is consistent with national monitoring, and the extended list of species from Siriwardena, *et al.,* (2019)[2] that provides a more complete representation of the bird community that uses woodland, are also reported by ERAMMP. Table 8 shows a summary of these results. In the long-term, for woodland bird species from the BBS, abundance is increasing. For both species lists considered in the short-term, abundance is stable.

[1] Burns, F., August, T., Eaton, M., Noble, D., Powney, G., Isaac, N., & Hayhow, D. (2023). UK Biodiversity Indicators. Retrieved from https://data.jncc.gov.uk/data/1f47d611-dbfc-421a-bc26-b019433306d1/ukbi2023-techbg-c4a.pdf

[2] Siriwardena, G., Henderson, I., Noble, D., & Fuller, R. (2019). How can assemblage structure indices improve monitoring of change in bird communities using ongoing survey data? Ecological Indicators 104: 669–685.

Table 8: national trends for woodland bird indicators

Indicator	Long-term trend from BBS (1994-2013	Mean 2013-16	Mean 2021-23	Short term analysis using GMEP 2013-16 to 2021-23
Abundance of woodland bird species (indicator) – BBS	↑	118.2	108.5	
Abundance of woodland bird species (indicator)		7.3	7.3	=
Abundance of woodland bird species (guild)		7.6	7.3	=

Source: ERAMMP National Trends and Glastir Evaluation, Broad Habitat Results, 2025.

Note: Note: =: no significant change, ↑/↓: significant at P≤0.05, ↑↑/↓↓: significant at p≤0.01.

Additional Data and Context

National Forest Inventory Woodland Ecological Condition

The NFI assesses woodland against 15 woodland ecological condition (WEC) indicators. These data are included in chapter 1, outcome 3: Woodland ecosystems are healthy and resilient. However, the same data are also relevant for assessing progress towards the current outcome. Assessment against the WEC indicators is done by woodland type (native woodland, near native and fragments, and non-native woodland). The last iteration of the NFI WEC reporting for Wales was produced in 2020, based on the 2010-2015 survey cycle. A new WEC report, based on the next survey cycle, is expected in 2026.

Outcome 19: woodlands and trees make a positive contribution to the special landscape character of Wales, to sites of heritage and cultural importance and the urban landscape

This outcome is addressed by 1 indicator: historic and cultural significance of woodland. This indicator reports on the results of 2 LANDMAP survey datasets: visual and sensory and historic landscape.

Indicator 19: historic and cultural significance of woodland

Indicator	Trend since the last WfW indicators report
19: Historic and cultural significance of woodland	=

To assess the contribution of woodlands and trees to the special landscape character of Wales and to sites of heritage and cultural importance the nationally consistent and quality assured LANDMAP datasets produced by NRW are used.

LANDMAP maps and classifies landscapes from the unique perspective of each dataset and evaluates their importance from a national to local scale. There are 2 LANDMAP datasets considered for this indicator, Visual and Sensory, and Historic Landscape.

The percentages reported relate to landscape character areas that are particularly associated with woodland and therefore do not relate to the total woodland cover in Wales reported in chapter 1, outcome 1 of the indicators. These data were included in the previous edition of the Woodlands for Wales indicators; 2 values are compared here from 2017 and 2024.

Land cover pattern in the Visual & Sensory dataset is classified on landform, land cover, qualities and features. Relevant classifications for this indicator (Table 9) include Woodland (>70% tree cover) and Field pattern/mosaic (characterised by an agricultural field system, boundaries and small woodlands of <10ha and/or 20-50% tree cover).

8% of Visual and Sensory landscapes remain classified as woodland in character. Of this, 35.3% is evaluated as outstanding or high, wooded landscapes that are of national or regional landscape importance. 57% is evaluated as locally important, with 7.7% evaluated low evaluation. Collectively, Woodland and Field pattern/mosaic landscapes remain important components of the landscapes of Wales to conserve and enhance. Good forest design taking landscape character into account during planning and management operations in accordance with the UKFS can contribute to improvements in woodland landscape character and evaluation.

Table 9: visual & Sensory evaluation of landscapes classified as woodland and field pattern/mosaic, 2017 and 2024

Value	Woodland				Field pattern/Mosaic			
	2017		2024		2017		2024	
	Area (ha)	% of woodland in each class	Area (ha)	% of woodland in each class	Area (ha)	% of field pattern/ mosaic in each class	Area (ha)	% of field pattern/ mosaic in each class
Outstanding (evaluated as nationally important)	5,700	3.5%	5,741	3.5%	50,700	4.1%	50,843	4.1%
High (evaluated as regionally important)	52,600	31.9%	52,757	31.8%	467,700	37.7%	469,909	37.8%
Moderate (evaluated as locally important)	94,100	57.0%	94,410	57.0%	716,800	57.8%	717,989	57.7%
Low (evaluated as little/no importance in Visual & Sensory terms)	12,700	7.7%	12,784	7.7%	4,700	0.4%	4,732	0.4%
Total	**Area (ha)**	**% of total Wales landcover**	**Area (ha)**	**% of total Wales landcover**	**Area (ha)**	**% of total Wales landcover**	**Area (ha)**	**% of total Wales landcover**
	165,000	7.8%	165,692	7.8%	1,239,900	58.5%	1,243,473	58.6%

Source: LANDMAP Visual and Sensory dataset, Natural Resources Wales, 2024. Woodlands for Wales Indicators, 2017-18.

Table 10 shows the results of analysis of the current Historic Landscape LANDMAP dataset. 46.5% of woodland areas are evaluated as outstanding or high, affirming

their important national or regional contribution to the overall historic character of the present landscape.

Table 10: historic landscape evaluation of landscapes with a woodland classification, 2024

Woodland	Area (ha)	% of woodland in each class
Outstanding (evaluated as nationally important)	18,691	15.1%
High (evaluated as regionally important)	38,916	31.4%
Moderate (evaluated as locally important)	34,223	27.6%
Low (evaluated as little/no intrinsic value to the Historic Landscape)	32,034	25.8%
Unassessed	242	0.2%
Total	**Area (ha)**	**% of total Wales landcover**
	124,106	5.9%

Source: LANDMAP Historic Landscape dataset, Natural Resources Wales, 2024. Landmap Historic Landscape | DataMapWales.

There have been minor changes in survey data since last reported in 2017-18. Landscape change detection, monitoring and updating of these 2 datasets commenced in 2025. Updates will be available for the next reporting period.

Woodlands may contain Scheduled Monuments, Listed Buildings, Historic Environment Records, and evidence of past management. These historic assets contribute to Wales' distinctive character, identity and sense of place. Woodland operations should be planned to limit the risks to historic assets and provide positive opportunities to conserve their cultural and heritage value.

Tranquillity is a highly valued landscape resource and contributes to landscape value and identity. NRW has developed a nationally consistent Tranquillity & Place resource comprising 6 mapped themes that identify relative tranquillity across Wales. Theme 1 maps the relative abundance, perception, or experience of nature, natural landscapes and greenspaces. 'Seeing woodland' is a contributing indicator to this theme and is based upon elevation and visibility modelling of woodland species and type. Increased visibility of woodland enhanced tranquillity, higher scores relate to a higher contribution to tranquillity in the landscape. Visit the Tranquillity and Place Storymap for further information and to view the theme 1 'Seeing woodland' map.

Woodlands can be important contributors to intrinsically dark landscapes and dark skies, characterised by the absence of lighting and important as places and corridors free of light pollution. Light pollution can impact our perception or experience of nature and landscapes, and our understanding of heritage and culture associated with the night sky. Visit the Dark Skies Storymap for further information, and to view the data.

Outcome 20: woodlands and trees contribute to water and soil management

This outcome is assessed by 2 indicators: condition of woodland soils and woodland contribution to flood management.

Indicator 20a: condition of woodland soils

Indicator	Trend since the last WfW indicators report
20a: Condition of woodland soils	**Mixed trends**

As part of the Wales National Trends and Glastir Evaluation, reported by ERAMMP, soil health by habitat was assessed. During the ERAMMP National Field Survey (NFS) topsoil samples were taken throughout Wales and assessed across a number of indicators: carbon, pH, nitrogen, carbon density, and bulk density. The full methodology is available in the ERAMMP soil health technical annex, including details about sampling methodology and the results across different habitats. There are 2 woodland habitats considered in the ERAMMP assessment: “broadleaved, mixed and yew woodland”, and “coniferous woodland”.

The long-term and short-term indicators for both woodland habitats are shown in Table 11. For broadleaved, mixed and yew woodland, there are positive long-term trends for pH and carbon density, with no significant change in carbon. In the short-term, there has been a negative change in carbon, positive change in bulk density and no significant change in pH, nitrogen and carbon density. For coniferous woodland, the long-term trend is no significant change for pH and carbon density, with a negative change in carbon. Carbon density and bulk density have improved significantly in the short-term, with no significant change in the other indicators.

Table 11: long-term and short-term trends in topsoil indicators for woodlands

Habitat	Indicator	Long term analysis using CS data 1978/1990 - 2007	Mean 2013-16	Mean 2021-23	Short term analysis using GMEP 2013-16 to 2021-23
Broadleaf mixed and yew woodland	Carbon (g/kg, from Organic matter) [1]	=	80.9	70.1	↓
Broadleaf mixed and yew woodland	pH	↑	4.96	4.87	=
Broadleaf mixed and yew woodland	N(g/100g dry soil) [2]		0.49	0.46	=
Broadleaf mixed and yew woodland	C density (tC/ha) [1]	↑	60.8	63.6	=
Broadleaf mixed and yew woodland	Bulk density (g/cm^3) [1,2]		0.54	0.62	↑
Coniferous woodland	Carbon (g/kg, from Organic matter) [1]	↓	146.9	134.6	=
Coniferous woodland	pH	=	4.21	4.25	=
Coniferous woodland	N(g/100g dry soil) [2]		0.69	0.65	=

Habitat	Indicator	Long term analysis using CS data 1978/1990 - 2007	Mean 2013-16	Mean 2021-23	Short term analysis using GMEP 2013-16 to 2021-23
Coniferous woodland	C density (tC/ha) [1]	=	60.6	69.7	↑↑
Coniferous woodland	Bulk density (g/cm^3) [1,2]		0.34	0.45	↑↑

Source: ERAMMP, Wales National Trends and Glastir Evaluation Supplement-2, 2025.

[1] Topsoil carbon sequestration or loss is most reliably indicated by a change in both carb concentration and density (carbon concentration corrected for the bulk density which is the mass of soil expressed on a unit area basis). Caution in interpretation needs to be taken where change in bulk density heavily influence carbon density values.

[2] An increase in this indicator is interpreted as a decline in condition for this habitat.

Note: =: no significant change, ↑/↓: significant at P≤0.05, ↑↑/↓↓: significant at p≤0.01. Where no data exist, this is shown as grey boxes.

Indicator 20b: woodland contribution to flood management

Trend since the last WfW indicators report: this is a new data source for this edition of the WfW indicators, and no historic data are available, therefore no trend can be reported.

Woodlands and trees provide various benefits to the overall health of water systems. Woodlands and trees can improve water quality, reduce flood risk, and improve waterway health by reducing soil erosion and increasing climate resilience. The economic value of flood mitigation by woodland was calculated as part of the Woodland Natural Capital Accounts, produced by the Office for National Statistics, The annual value of flood regulation from woodland in Wales was estimated to be £97 million (2024 prices) for 2021, 2022, 2023 and 2024. The office for national statistics woodland natural capital accounts provides more detail. This is the first estimate of the value of flood mitigation within the Natural Capital Accounts, so this value will serve as a baseline. Further research will be needed to evaluate the contribution made by woodlands to water quality within Wales.