Guidance note

Providing additional evidence on priority habitats and deep peat to support Glastir Woodland Creation applications

Identifying habitats, providing photographs, and commissioning ecological surveys to support Woodland Creation Scheme plans in areas identified as containing sensitivities

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What is this document about?
This guide provides advice on the standards of evidence required to support Glastir applications in areas where sensitivities are recorded on the Woodland Opportunities Map and where the Glastir Planners’ Guide or a consultation response has indicated that additional evidence is required to inform verification.

Who is this document for?
Forest planners developing plans for Glastir Woodland Creation schemes

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Collecting and submitting photographic evidence

Priority habitats are semi-natural types such as those included on the lists established under Section 7 of the Environment (Wales) Act 2016 – see section on Recognising Priority Habitats. Woodland Creation schemes which propose planting on priority habitats are unlikely to be verified. However, if you have reasonable grounds to believe the land has been wrongly recorded, you can submit photographic evidence and ask for a review.

When photographic evidence is required
You only need to submit photographic evidence when an area of land you wish to include in your planting scheme has been identified as a priority habitat, or a potential habitat, on the Woodland Opportunities Map and you have reasonable grounds to believe it has been recorded as priority habitat in error. The Recognising Priority Habitats section of this guide will help you to decide whether to submit further evidence. You can look on the Lle portal for priority habitats to determine the type of priority habitat on your proposed planting site.

On occasion, we may also suggest you submit photographic evidence for other suspected sensitivities.

When to take the photographs
Generally photographs are best taken from the beginning of May to the end of September; particularly for grasslands, but this may not be possible with an autumn or winter Glastir Expresssion of Interest window. If this is the case, still take the photos and we will need to look at any additional information we have access to and in most cases, we will still be able to make a decision.

Standards for photographs
- Photographs must be: in colour, in focus, and numbered
- Include one or more general site photograph of the whole area. Use as many photographs as needed to show the whole site.
- Include detailed photographs from as many points as necessary to give a representation of the whole site
- Detailed photographs for each point should consist of one taken at an oblique angle and one straight down; each showing the same two square metres of vegetation.
- Ensure detailed photographs are included for each different vegetation type found at the site.

Submitting your photographic evidence
- Photographic evidence must be submitted using RPW Online when you submit your plan for verification, along with any other evidence or consultation responses required.
  - If you would rather accommodate the decision in your plan before it is submitted, you may send your evidence directly to glastirqueries@cyfoethnaturiolcymru.gov.uk and ask for an early decision. We will try to accommodate you but please send it in as early as you can.
  - Photographs should be supplied as clearly-labelled and dated JPEG images. File names should include the relevant Customer Reference Number, a reference number for the photograph, and the date taken, for example: A0001111_photo1_Aug_2015
You must clearly identify the location from which the photographs of the priority habitats were taken. Ideally digitally geo-reference the photographs. This function is available on digital cameras with a built-in GPS receiver and on many smartphones using a downloadable app. Mark the location of the photographs on an accompanying Ordnance Survey map (or map of a similar quality) along with a six figure grid reference. Also mark the location and direction of photographs on a map of the site.

Map showing the location and direction of the photographs

Glastir officers will send your photographs to NRW habitat specialists who will review them. They may also look at any additional site evidence, such as aerial photographs, to assess the presence and quality of a priority habitat. In some instances, The specialist may also visit the site although there is no obligation for them to do so.
Examples of photographs demonstrating that an area is not a priority habitat

**General site photograph**

Encompassing the whole site and in this case demonstrating that it consists of a single habitat type.

This photograph indicates that the whole site is likely to be improved grassland and not a priority habitat.

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**Detailed vertical and oblique photographs**

Giving a representative example of approximately $2m^2$ of vegetation taken directly from above (top) and at an angle (bottom).

Because the site is clearly made up of a single habitat type detailed photographs are only submitted from one location. More diverse sites will require evidence from multiple locations.

Detailed photographs must be of a sufficient quality to allow a specialist to confidently identify the species make up.

In this case the detailed photographs confirm that the species present are indicative of improved grassland.
Commissioning and submitting ecological surveys

A Glastir Woodland Creation Scheme applicant might consider commissioning an ecological survey under the following circumstances:-

Proactive ecological surveys to inform a proposal
Applicants may wish to commission a survey early in the process to enable them to fully understand and take account of any ecological sensitivities, either by removing areas of sensitive habitat from schemes or designing their planting so as to mitigate against potential damage to the habitat. They may also use the survey to tailor their plans to maximise opportunities for the enhancement of important habitats or species.

We encourage applicants to commission a proactive ecological survey if they feel it would be useful. However, we accept that for smaller schemes the cost might be prohibitive and a full ecological survey might be unnecessary in many cases so it is not compulsory. Where an applicant wishes to commission a proactive survey, we recommend that they use the standards we suggest below to ensure they get value for money.

Reactive ecological surveys to get a second opinion
If a priority habitat is recorded on the Woodland Opportunities Map, our Planners’ Guide recommends that an applicant can submit photographic evidence if they have reason to believe the sensitivity has been included in error. Where the habitat specialist has determined that a priority habitat is present but the applicant wishes to have a second opinion, they may commission an independent ecological survey at their own expense.

We generally don’t encourage an applicant to commission reactive ecological surveys where our specialists have already given their opinion, but we will give them proper consideration provided they meet the standards listed below (see Standards for ecological surveys – Appendix 1).

Planting on land recorded as containing deep peat
UKFS (Forests and Biodiversity Guidelines 5, Forests and Carbon 5, Forests and Soils 2) requires “Avoiding the establishment of new forests on soils with peat exceeding 50 cm in depth and on sites that would compromise the hydrology of adjacent bog or wetland habitats”.

We generally advise applicants to exclude land included on this layer from their application. If you have good reason to believe it may be recorded in error, however, we will consider evidence provided it meets our standards.

Whilst there may be clues on the surface suggesting whether deep peat is present, it is impossible to be sure without carrying out probing and taking core samples. Additional photographic evidence of the vegetation will not allow our staff to make a judgement about the presence of deep peat. If you wish to plant on land recorded on the deep peat layer you must commission an ecological survey, ensuring that it includes the peat depth assessment as described in the specification in Appendix 1.
Standards for ecological surveys
You should commission a competent professional ecological surveyor. We would generally expect them to be a member of the Chartered Institute of Ecology and Environment Management (CIEEM).

We have included a specification for ecological surveys in appendix 1. You should give this to the surveyor so they understand the level of detail required. Make sure you provide them with a list of any sensitivities you have identified, as some (like deep peat) might not be apparent on the surface and will need specific attention.

Surveys should be carried out at times of year appropriate for the effective identification of any protected species or priority habitats identified as being present on the site.

The survey report should follow the CIEEM Guidelines for Ecological Report Writing.

Submitting an ecological survey
- Any ecological survey should be submitted using RPW Online when you submit your plan for verification, along with any other evidence or consultation responses required.

- If you are providing an ecological survey as additional evidence after a priority habitat has been assessed by a habitat specialist, you can send the survey directly to glastirqueries@cyfoethnatirolcymru.gov.uk and ask us to pass it to the relevant specialist for consideration.

- In most cases, it will be best to send surveys as PDF or Word documents.
Recognising Priority Habitats

Introduction
Whilst accurately identifying habitats can be a skilled job, in most cases it should be possible for you to make a reasonable assessment of whether land is a priority habitat. If any areas you are proposing for the scheme are identified on the Opportunities Map as containing priority habitat, these illustrative photographs and descriptions should help you decide whether it is worthwhile submitting additional evidence, or whether you should just remove these areas from your proposal.

Our habitat specialists have recommended three books on plant identification in the British Isles to help you during your field survey.

Averis, Ben (2013)  
*Plants and Habitats: an introduction to common plants and their habitats in Britain and Ireland*

Blamey, Majorie, Fitter, Richard  
Fitter, Alistair (2013)  
*Wild flowers of Britain and Ireland (2nd edition)*  
Publisher – Harper Collins

Rose, Francis (1981)  
*The Wild Flower key: British Isles and North West Europe: A guide to plant identification in the field*  
Publishers - Frederick Warne
Lowland Dry Acid Grassland

Location
Lowland acid grassland occurs on well-drained acid soils with low fertility in the lowlands at below 300m above sea level

Key species of lowland acid grassland
- Sheeps’s fescue (*Festuca ovina*)
- Bent grasses (*Agrostis spp.*)
- Wavy hair grass (*Deschampsia flexuosa*)
- Tormentil (*Potentilla erecta*)
- Heath bedstraw (*Galium saxatile*)
- Sheep’s sorrel (*Rumex acetosella*) on drier areas
- Heather (*Calluna vulgaris*) - scattered at less than 25% cover
- Bilberry (*Vaccinium myrtillus*) – scattered at less than 25% cover
- Rushes (*Juncus spp.*) – there may be clumps of rushes
Unimproved Neutral Grassland (Lowland Meadows)

Location
This category includes flower-rich hay-meadows and pastures below the upper limit of agricultural enclosure on soils that are neither strongly acidic nor alkaline. This type of traditionally-managed grassland is now scarce in Wales and usually occurs as isolated fields or small clusters of fields.

Key species of unimproved neutral grassland (lowland meadow)
- Crested dogs-tail (*Cynosurus cristatus*)
- Red fescue (*Festuca rubra*)
- Lesser birds-foot trefoil (*Lotus corniculatus*)
- Common knapweed (*Centaurea nigra*)
- Rushes (*Juncus spp.*) – there may be clumps of rushes in damper areas but not the continuous cover sometimes found in marshy grassland
Unimproved Calcareous (Limestone) Grassland

Location
This type of flower-rich grassland occurs on soils that have a relatively high lime content. The habitat occurs both above and below the upper limit of agricultural enclosure. It is particularly associated with limestone rocks in north and south Wales but also occurs on other lime-rich rocks elsewhere.

Key species of unimproved calcareous grassland
- Sheep’s fescue (*Festuca ovina*)
- Wild thyme (*Thymus polytrichus*)
- Common rock rose (*Helianthemum nummularium*)
Calaminarian Grasslands

Location
A rare form of grassland on soils and rocks rich in heavy metals such as lead and zinc. Often very open with plentiful bare ground. Found mainly on abandoned mine sites.

Key species of Calaminarian grassland
- Spring sandwort (*Minuartia vernia*)
- Alpine penny-cress (*Thlaspi caerulescens*)
- Unusual mosses and lichens
Rush Pasture

Location
These marshy grasslands are typically dominated by rushes, accompanied by a range of herbs, including greater bird’s-foot trefoil, marsh bedstraw, meadowsweet and iris (yellow flag). They may have a tussocky or smooth texture and often have a taller sward structure than the drier grassland habitats. They are most extensive in the uplands and upland fringes and are locally prevalent in the lowlands on soils with impeded drainage.

Key species of rush pasture
- Marsh bedstraw (*Galium palustre*)
- Meadowseet (*Filipendula ulmaris*)
- Greater birds-foot trefoil (*Lotus pedunculatus*)
- Iris (yellow flag) (*Iris pseudacorus*)
Purple Moor-grass Pasture

Location
These marshy grasslands are typically dominated by purple moor-grass, with a varying cover of short sedges and rushes. They may have a tussocky or smooth texture and often have a taller sward structure than the drier grassland habitats. They are generally most extensive in the upland fringes, but are locally prevalent in the lowlands on soils with impeded drainage, notably in west and south Wales.

Key species of purple moor-grass pasture
- Purple moor-grass (*Molinia caerulea*)
- Sedges and rushes
Lowland Heath

Location
Lowland heath includes both dry and wet heathland types that occur below the upper limit of agricultural enclosure. Lowland heath usually consists of at least 25% cover of dwarf shrubs such as heather, bilberry and western gorse. Variable amounts of grasses, such as sheep’s fescue (dry heath) or purple moor-grass (wet heath) are also typically present.

Key species of lowland heath
- Heather (*Calluna vulgaris*)
- Bilberry (*Vaccinium myrtillus*)
- Western gorse (*Ulex gallii*)
- Sheep’s fescue (*Festuca ovina*)
- Purple moor-grass (*Molinia caerulea*)
Upland Heath

Location
Upland heath is found above the limit of agricultural enclosure and consists of vegetation with more than 25% cover of heather, bilberry and western gorse. Variable amounts of grasses such as sheep’s fescue, mat grass and purple moor-grass, are also typically present. This habitat is found throughout the uplands, and is often associated with other moorland habitats, such as blanket bog, acid grassland and bracken.

Key species of upland heath
- Heather (Calluna vulgaris)
- Bilberry (Vaccinium myrtillus)
- Western gorse (Ulex gallii)
- Sheep’s fescue (Festuca ovina)
- Mat grass (Nardus stricta)
- Purple moor-grass (Molinia caerulea)
Fens, swamps, bogs and reedbeds

Location
This category covers a range of wetland priority habitats both above and below the upper limit of enclosure. They occur on poorly drained hill and valley slopes, valley bottoms, wet hollows and along the margins of rivers, streams and ponds.

Swamps and reed beds (swamps where common reed is the dominant plant) usually occur at locations where water lies above the surface of the ground for much of year, even during the summer. Fens are generally drier and without summer flooding, although the peaty soil usually remains waterlogged throughout the year. Tall grasses (especially reeds), sedges and rushes are usually dominant in swamps, but fens may bear a lower-growing and more diverse vegetation with many different flowering plants.

Small areas of fen vegetation on hillsides and valley slopes associated with springs and flushes are mostly recognisable by their high cover of bog mosses under a covering of rushes or sedges, and should be included in this category. Some types of fen can appear similar to marshy grassland, but fens only occur on peat more than half a metre deep. This habitat is found throughout the uplands, and is often associated with other moorland habitats, such as blanket bog, acid grassland and bracken.
Key species of fens, swamps, bogs and reedbeds

- Sphagnum moss (*Sphagnum spp.*)
- Sedges (*Carex spp.*)
- Rushes (*Juncus spp.*)
Wood pasture and parkland

**Location**
Wood pasture and parklands are habitat complexes having a tree cover of less than 30%, and occurring as scattered individuals over grassland, heath or bracken. In both habitats, the trees are of open grown character with wide deep crowns and short trunks. The woodland understorey is sparse or absent as a result of grazing. Wood pasture often occurs in the upland fringes with mature hawthorn and rowan as the dominant tree species. Parkland is essentially wood pasture that has been established as part of a designed landscape.
Traditional orchards

Location
Traditional orchards are plantations of tall, widely spaced fruit trees, typically apple, pear, cherry, plum or damson. Tree density when fully stocked may be 120-150 trees per hectare, down to a minimum of seven trees per hectare. Traditional orchards contain standard or half-standard fruit trees and do not include modern dwarfing varieties.
Appendix 1:
Specification for an Ecological Survey to support an application for the Glastir Woodland Creation Scheme

The aim of the survey is to provide sufficient information to allow Natural Resources Wales to make an informed decision on the suitability of the site for new woodland creation. The survey must be carried out by a qualified surveyor.

Ecological surveys will usually be commissioned because some or all of the land has been identified as containing sensitivities, such as priority habitats or deep peat. This information should be provided by the person who commissions the survey.

A Phase 1 habitat survey is required with additional information collected on the species composition of each habitat. For peatland habitats, or where the land has been recorded as containing deep peat, the survey must include an assessment of peat depth.

Carrying out the field work

Undertake a Phase 1 habitat survey of the proposed planting area and immediately adjoining land. The preferred season for undertaking vegetation surveys is from the beginning of May to the end of September. It is recognised that this may not always be possible.

For each Phase 1 habitat patch, record a species list of higher plants (include *Sphagnum* where present) and the cover of each species using the DAFOR scale.

Take photographs of each Phase 1 habitat showing close-up detail of the vegetation. Follow the guidance on taking the photographs provided in the Selecting and collecting photographic evidence section of this guidance.

Any sightings or signs of fauna species on the site should also be noted.

Where habitats are recorded that could occur on deep peat, or where the land is included on the deep peat layer on the woodland opportunity map (the planner will advise), include an assessment of the depth of peat as part of the survey. Carry out peat probing up to 60 cm depth; providing a measurement to the nearest 10 cm. For peat deeper than this, a record of greater than/or equal to 60 cm is sufficient.

Peat depth should be sampled on a grid system (with a minimum ten peat probes per hectare) to assess the extent of peat present. Peat cores need to be taken to make sure that peat is present and not soft in-wash clays. See our Field assessment tool for deep peat for further information.

What to include in the report

In addition to basic details of the site and survey, the report should include:
- Details of the surveyor
- A brief description of the site
• A Phase 1 habitat map of the proposed planting area with notes on the habitat immediately around the perimeter of the site. A scale of 1:5000 would be an appropriate scale for most sites
• A table of the total area of each Phase 1 habitat present within the proposed planting area
• Lists of species and estimated cover for each Phase 1 habitat recorded. Botanical nomenclature should follow *New Flora of the British Isles*, 3rd edition (Stace, 2010)
• Clear photographs illustrating each vegetation type recorded
• Records of any fauna sightings or signs

Additionally, if a peat depth assessment is included in the survey:
• Records of peat probes and core samples marked on a map
• Peat probe and core information in a table including the National Grid Reference of the location, measurement of peat depth, and phase 1 vegetation type
• Clear colour photographs of all core samples