

## Appendix 5

# Forest Resource Plans: Delivery of Biodiversity & Environmental Benefits

V2 March 2019

### Introduction

The diverse landscapes of Wales, has been influenced by human activity across millennia. Within this cultural and historical landscape large forest areas take their place in a modern landscape setting and provide provision for modern socio-economic and environmental needs. Forests provide numerous ecosystem services, including biodiversity, the provision of good water quality, attenuation of flows, carbon sequestration, carbon storage, as well as the socio-economic benefits.



Forest Resource Plans (FRP) are the documented process that sets direction to develop programmes for operational delivery on the Welsh Government Woodland Estate (WGWE). The FRP process includes the ecosystem approach for the relevant woodlands and forests within the context of the wider landscape and environment, using an integrated natural resource management approach.



Where appropriate this process is used as the mechanism to capture species conservation at a landscape/connectivity scale, for example, red squirrel populations are dependent on robustness and scale of quality habitat to ensure populations remain viable.

Deadwood strategy and associated biodiversity value is also captured at an FRP scale taking into consideration habitat networks and Planted Ancient Woodlands Sites (PAWS). Extensive heritage features such as industrial archaeology or historical landscapes may also require consideration within FRPs.



## Purpose of this Document

This document demonstrates how biodiversity, heritage and environmental benefits are delivered at a landscape scale through FRPs by providing interpretation of the FRP maps.

## The Importance of Biodiversity



Biodiversity is defined as: "the variability amongst living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." (United Nations Convention on Biological Diversity).

"Biodiversity ultimately underpins the functioning of all ecosystems and thereby the delivery of all ecosystem services" (National Ecosystem Assessment).

"In addition increasing evidence points to the importance of biodiversity and ecosystems in maintaining human health and well-being" (TEEB. MEA, Biodiversity Outlook (2010)).



Biodiversity also contributes to ecosystem resilience - diversity is necessary at all levels from genetic, through species, to habitats as it provides a capacity to adapt to change. For example, if a species-rich ecosystem is disturbed, causing some species to become rare or extinct, it is more likely that other species are present that can also

carry out ecosystem functions (e.g. nitrogen fixation, or leaf-litter decay). A topical example is the need for both genetic and tree species diversity to provide resilience against tree diseases.

Integral to under-pinning ecosystem services is the biodiversity element which is supported by several legislative requirements including Habitat Regulation - European Protected Species (EPS), Wildlife and Countryside Act 1988 and The Biodiversity Duty imposed within the NERC act 2006 to ensure no net loss of biodiversity and function within the Welsh Government Woodland Estate (WGWE).



The United Kingdom Forestry Standard (UKFS) and Guidelines outline the context for forestry in the UK, setting out the approach of the UK governments to sustainable forest management, define standards and requirements, and provide a basis for regulation and monitoring – including national and international reporting. This document identifies

some of the contributions that the FRP habitats contribute to biodiversity and the environment as outlined in UKFS. The Welsh Government's Woodlands for Wales strategy is a key driver to deliver this at a Wales scale.

NRW are committed to maintain certification of WGWE to the UK Woodlands Assurance Standard (UKWAS). The Standard is inclusive in meeting biodiversity requirements and is the WGWE is audited annually against this and the fulfilment of the UK Forest Standard.



## The Importance of the Environment

Many of the ecosystem service benefits of forests relate to aquatic systems, including healthy freshwater ecology and clean drinking water supplies. In order to ensure our forests continue to provide these benefits, it is important that they are managed in order to offer protection of the water environment. Water management is an important element of forest management. This is in part driven by the Water Framework Directive process that identifies waterbodies that are failing to meet standards. Consideration for the impact of felling and restocking, for example, can contribute to a waterbody's improvement in status.

There are certain circumstances where forestry may not deliver the greatest ecosystem service benefit, and in these situations it is necessary to evaluate the best use of the land. For example, some areas where we have afforested deep peat could provide greater benefit if restored to active peat bog. Restored peat can act as a carbon sink, a habitat for a range of species, and natural storage for water, as well as attenuating flows.

**It is essential, that Forest Managers and Planners have a good understanding of and apply the UKFS and associated guidelines including: Forests and Biodiversity, Forests and Water, Forests and Landscape and Forests and Historical Environment, in developing Forest Resource Plans.**



### **Delivering biodiversity and Environmental within wider ecosystem services**

The application of sustainable forest management as outlined in UKFS together with high silvicultural and environmental standards, (e.g. use of appropriate silvicultural systems and increasing diversity), delivers multiple objectives (ecosystems services) at a forest scale.



The majority of species and habitats are catered for and overall biodiversity and environmental benefits are increased by considering forest management at a landscape scale. As this takes into account diversity due to forest rotation, structural changes and permanent habitats such as riparian areas, and areas managed as continuous cover forestry. Where appropriate minor adjustments to management can be used to deliver for specific biodiversity interests.

Where specific key biodiversity, environment or heritage features are identified, the process set out in the Biodiversity/Heritage - Strategic Planning appraisal template will be followed.

In order to minimise the risk of an operation causing damage to the water environment through, for example, sediment delivery, all operations require a water management plan to be undertaken. For harvesting, silvicultural and civil engineering operations, this will be initiated at the coupe planning stage with an Environmental Risk Assessment. The water management plan details mitigation measures and monitoring of watercourses.

The FRP needs to respond to the Water Framework Directive objective of achieving good status. Where forestry is identified as exacerbating acidification that leads to a water body failing to achieve good status it is necessary to consider actions to minimise the impact. The primary actions in these situations will be to develop riparian areas of a native or mixed species assemblage, to disconnect forest roadside drainage from the watercourse and to realign artificial forest drains so that they don't discharge directly into natural watercourses. These are described within the Forest and Water guidelines. Further instruction regarding forest management requirements within waterbodies that are failing or at risk of failing WFD due to acidification are set out in the UKFS Practice Guide "Managing forests in acid sensitive water catchments", and this approach must be implemented through all FRPs.



NRW has a policy on restoring viable areas of deep peat to active bog habitat, where there is a clear ecosystem service benefit, in accordance with the Welsh Government's "Woodlands for Wales" strategy. All areas of forest which are on deep peat should be assessed using the peat toolkit, in order to make decisions regarding the viability of a site for restoration. If restoration is viable then a programme should be put into place to actively manage the site for peat bog restoration. If a site is not seemed viable for restoration, there are rules for how to manage the site that should result in it not being degraded.

**The biodiversity and environmental value in blue text, has been added to the FRP mapping legend below. This shows how FRPs contribute through structural diversity and forest rotation to enhance biodiversity.**

There is a separate template that captures biodiversity programmes for each FRP.

## 1. Map 1 - Long-Term Primary Objectives

This map sets out the long-term management objectives (long-term vision) for the Welsh Government Woodland Estate (WGWE). By breaking up the forest area into these categories below, it identifies and prioritises the WGWE into its prime objectives and sets it within the context of the wider landscape and habitats. **Refer to Map 4 to see 10 year management requirements to achieve these policy objectives.** This map also forms the basis from which Map 3 - *Indicative Forest Types and Habitats* is drawn. It provides enough information for the local forest planning team to develop forest establishment and Conservation and Heritage plans. The standard legend will be as set out below:

*Note this is the prime objective of the area – management intention is to maximise the delivery of ecosystem services from the whole WGWE through a range of policy and guidance at the tactical and coupe levels.*

***Riparian management will also be a key objective for all woodland alongside rivers and streams. These areas will be shown on Map 3 as ‘Riparian Woodland’***

- **Ancient Woodland Management – AWM** – This includes all sites to be managed with the prime objective of restoring or managing ancient woodland. These may currently be fully restored Ancient Semi Natural Woodlands (ASNW) or Plantations on Ancient Woodland Sites (PAWS) waiting to be restored, or anything in between.

For management purposes this can be split into two broad categories (not detailed in the FRP) - **Partial or complete restoration** – Definitions for this are set within the Ancient Woodland Management background information document on the DMS:

[Restoring and Management of Ancient Woodlands on the Welsh Government's Woodland Estate](#)

- **Complete restoration** is characterised by a minimum 80 % canopy cover of site native species. Complete restoration should be the objective where ecological potential is high or where a site is part of habitat network WHN1 or WHN2. Complete restoration may also be pursued on sites with lower ecological potential and which are not part of key habitat networks if this is in keeping with design plan objectives, although it should be recognised that potential gains are smaller and may be more costly to achieve.
- **Partial restoration** is characterised by a minimum 50 % canopy cover of site native species and should be the objective wherever complete restoration is not a priority.

**Biodiversity** – ancient woodland sites (AWS) including ancient semi-natural woodland (ASNW), Plantations on ancient woodland sites, both restored and in restoration, (PAWS) are significantly rich in biodiversity within the forest block. They form a key element in adding connectivity and habitats for key protected spp and Section 42 spp. They may also act as core areas at the local scale to target action for benefiting and stepping stones for biodiversity.



**PAWS** may be in different stages of restoration and within these stands, will be enhanced through predominately Continuous Cover Forestry (CCF) management to retain remnant and shade tolerant species. The developing structure of remnant broad woodlands habitat types form a key attribute to connectivity and contribute to future key protected spp and Sec 42 habitat enhancement.

**Key species** – Dormice, Bats, Wood ants, Marsh / Willow Tit, Wood Warbler...

Photos Before (just thinned) and 2 years after forest ops



Restored PAWS



■ **Native Woodland Management – NWM** – (non-ancient) Existing and new areas of native species along riparian corridors or elsewhere but primarily for improving connectivity linking existing broadleaf habitats areas/high value amenity woodlands (> 50% - native species) and can include mixed woodland especially where management of existing conifers through LISS to a more diverse woodland type.



**Biodiversity** - In expanding the area of native woodland it is recognised that it will take many decades for these to establish many of the features of a “native woodland habitat” but establishing non - ancient native woodlands/new native woodlands is vital if we are to improve the resilience of our existing native woodlands in Wales, and will support the expansion of our native fauna and flora. These woodland areas will be at a variety of stages of development and will contribute to biodiversity, especially as successional habitat to high forest, adding connectivity and habitats for key protected spp and Section 42 spp. It may provide opportunities to expand rare native woodland types, for floodplain or high altitude woodland.

**Key species** – Dormice, Bats, Wood ants, Marsh / Willow Tit, Wood Warbler...



**Standard Forest Management** – SFM – predominantly non-native conifers and broadleaves with the primary objective of management for timber. **NB: Although these areas will be given standard forest management, the aim is to increase the ecological potential of all these areas** through thinning, improving ground flora, increasing the structural diversity of the forest and increasing the range of tree species where possible – See **Guidance on Tree Species Diversity and Increasing the Structural Diversity of our forests** as to how this will be achieved.



**Biodiversity** - These areas can provide the main contribution within the forest block for structural diversity through utilising a range of management systems (Moving away from clearfell systems to increasingly use CCF where possible) and will form a diverse age structure for biodiversity. They are key components in maintaining core connectivity and habitats networks across significant landscapes for key protected spp and Sec 42.

**Key species** – Woodland Birds – wood warbler, Marsh / Willow Tit, Dormice, Bats, Wood ants, Red Squirrels...



**Successional Woodland** – SW - The objective for these sites will be for creating open woodland habitat of low density mixed species (broadleaf or conifer) in a matrix with open space/bog delivering an intimately mixed habitat for predominantly environmental, riparian or landscape benefit. Some management may occur in these areas, but mainly limited to designated sites. e.g. removing conifers and other invasive species from upland SAC's. It will also include areas which are difficult to establish and manage as productive woodland. e.g. repeatedly burnt areas in South Wales. In the main, sites will not be restocked, allowing natural regeneration and natural processes to develop. Tree cover of between 10%-20% would be expected within 10 years of felling and 20% within 15 years with up to 50% in the long term. These may develop into Minimal Intervention or Natural Reserve sites as no significant silvicultural management is intended in the long term.

**Biodiversity** - These woodland areas will be at a variety of stages of development and will contribute to biodiversity especially as successional habitat. If they contribute to adjacent or key habitat or species features, they should be managed for their site specific biodiversity objectives. However, in most cases, natural processes or minimum intervention should be the main approach.

**Key species** – Passerines (Meadow pipit, Tree Pipit, Redpoll,) Nightjars, Water voles, Black Grouse.....



**Open Habitat Management** – OHM – Primarily for environmental benefits improving existing habitats or creation of new areas of open habitat. Existing or proposed open space; e.g. upland bog, deep peat, heathland, coastal dunes, crags – specific habitat type either current or aspired can be shown.

**Biodiversity** - These diverse/mosaic habitats may consist of different open habitat types either as remnant or restoring. Depending on their type, they may complement adjacent key features expansion or connectivity. Their presence within the forest adds structural diversity value for pollinators and open forest species. They form an integral component in forest structures and should be managed for their site specific biodiversity objectives (i.e. heather areas – maintain predominately open - maintain heather structural diversity



through annual rotational mowing). **Key species** – Passerines (Meadow pipit, Tree Pipit, Redpoll,) Nightjars, Water voles, Black Grouse.....

-  **Open Land Other** – OLO - this could be used to show a range of other land-uses including small renewable energy, landscape amelioration, deer management, archaeology, small quarries and mining. Specific detail on land use should be stated within the FRP and should be replicated within the Sub-Compartment Database, the FRP will have notation on these areas.
  
-  **Undefined** – UND - This category is used for areas that are currently under tree crops and where the aim is for a mixture of some of the above categories but where the boundaries cannot be determined until after the trees have been felled. Examples include areas of afforested deep peat where detailed site assessment will be carried out after felling when the actual boundaries between tree cover and open ground can be identified and mapped. This category in total should not exceed more than 5% of the plan area.

**Note transitional zones between some of these primary objectives will be necessary** e.g. creating buffer zones where black grouse habitat is being created from dense forest to open space.

### **Areas managed for other purposes**

-  **Recreation Sites** – REC - These apply to recreational facilities and the surrounding infrastructure, where the prime objective of management is for recreational purposes. It may include car parks, picnic sites, visitor centres, skills trails, ropeways and intensively managed trails like all ability boardwalks e.g. Coed-y-Brenin visitor centre and Bike Park Wales. They should not include wider forest areas with trails, where management of the woodland is the primary objective.
  
-  **Other Land Use** – OTH – This may include, Lost Land, Development, Housing, Large-scale Renewables, Mineral Extraction, Agriculture - land designated as agricultural with no proposed change of land use, Open Water – For lakes, reservoirs or other open bodies of water – any other land use not specified above.

## **National Forest Inventory (NFI)**

The areas below identify all areas allocated as woodland cover according to the NFI. These should be shown on Map 1 – Long-Term Primary Objectives to demonstrate woodland connectivity outwith the WGWE.



**Broadleaf** - The canopy of broadleaved woodland is generally more uneven than that of coniferous woodland, being made up of rounded crowns but with variations according to species, age, height and season. Boundaries with adjacent internal polygons are generally less clearly defined than with conifers and naturally occurring stands. Some conifer trees may also be present but greater than 80% of the area will consist of broadleaved trees.



**Conifer** - Coniferous woodland often occurs as large plantations with trees in regular rows and the stand edges may be regular and sharply defined. Some broadleaved trees may also be present but greater than 80% of the area will consist of conifer trees.



**Mixed mainly broadleaf** - Mixed woodland exhibits intermediate characteristics between conifer and broadleaved woodland. There can be several types of mixed woodland. A plantation of alternate rows of conifers and broadleaves may produce a 'striped' appearance. Conifers and broadleaves may be planted in blocks, or there may be general interspersed woodland. The proportion of the broadleaves will be more than 50% of the area and less than 80%.



**Mixed mainly conifer** Mixed woodland exhibits intermediate characteristics between conifer and broadleaved woodland. There can be several types of mixed woodland. A plantation of alternate rows of conifers and broadleaves may produce a 'striped' appearance. Conifers and broadleaves may be planted in blocks, or there may be general interspersed woodland. The proportion of the conifers will be more than 50% of the area and less than 80%.



**Other woodland categories on NFI** – Includes - Young Trees, Coppice, coppice with standards, felled, shrub, assumed woodland.

## Map 2 – Forest Management Systems

This map assigns the management system to all the forested area identifying where and when areas will be clearfelled, and those areas to be managed by other Low Impact Silvicultural Systems (LISS), as well as forming the basis for production forecasting. This map should be viewed along with local thinning plans (CCF and standard) as delivery of thinning, including continuous cover forest management, is essential to the delivery of this plan. Note that categories and sub-divisions of LISS management (e.g. specific CCF systems) should be identified if known and are the management systems used at the time of the plan development, rather than aspirational unplanned systems.

-  **Clearfell - 2017-21**
-  **Clearfell - 2022-26**
-  **Clearfell - 2027-31**
-  **Clearfell - 2032-36**
-  **Clearfell - 2037-41**
-  **Clearfell - 2042-46**
-  **Young Crops – Unassigned Management – UM** – These crops may be suited to any of the management systems listed below or clear felled after 2047. They are predominately young crops where the management system cannot be decided in the current FRP. A decision will be made in future FRPs when the crops are older.
-  **Low Impact Silvicultural Systems– LIS** – All LISS management excluding any of the categories below. Broadleaf and conifer CCF/Small coupe felling and coppice - This can be subdivided if known into more specific LISS types – e.g. if a local team was managing a strip shelterwood system or group felling then it should be identified on the ‘Coupe’ layer.
-  **Minimum Intervention – MI** – These will mostly be young crops of predominantly native species or successional crops (See map 1) – Areas that cannot be classified as Natural Reserves or Long-Term Retentions. In time some of these crops may develop and be re classified.

**Biodiversity** -These areas are a significant contribution within the forest block as a diverse age structure retained beyond their usual economic age, which also provide high biodiversity value and components in adding connectivity. They may add key element to connectivity value and permanent habitat structures for protected spp and Sec 42.



**Natural Reserve – NR – Managed in perpetuity by minimum intervention with biodiversity as its primary objective.** Establishment operations/management may occur. **They are permanent designations and should not be reassigned at any future date. For local planning purposes these areas should be clearly identified and for all operations and activities should be treated as exclusion zones. See guidance on management of NRs.**

**Biodiversity** - Natural Reserves are specifically targeted for biodiversity and ecological processes. They may consist of windblow areas, mature conifer, ANSW, restored PAW's and add significant biodiversity value. They may add key elements to connectivity value and permanent habitat structures for protected spp and Sec 42.





**Long-Term Retention – LTR** – “Trees retained for environmental benefit significantly beyond the age or size generally adopted by the woodland enterprise” – UKWAS Standard 3.1, **these sites are not permanent** designations and are managed either by minimum intervention or by LISS. They can be clearfelled in time should their current reason for retention become redundant or they may become Natural Reserves. See guidance on management of NRs.

**Biodiversity** - These areas are a significant contribution within the forest block as a diverse age structure retained beyond their usual economic age, which also provide high biodiversity value and are a component in adding connectivity. They may add key elements to connectivity value and permanent habitat structures for protected spp and Sec 42.



**Recent Felling, (At time of plan unplanted) – RE** – awaiting planting or allocation of other land use



**Other/Open Land – OL** – Used to show land that is intentionally managed as open, not planted. *Also includes other non-forest land.*

## Map 3 – Indicative Forest Types and Habitats Map

This map shows what the forest will be composed of in the future when all the long-term management objectives are achieved. The categories are based on the Forest Types as set out within W Guidance - Increasing Tree Species Diversity, and should follow guidance as listed below – **Note this map only gives an indication of what forest type is suitable – site assessments are essential for all planting and establishment considerations**

### **Essential guidance for interpretation of this map**

- [Good Practice Guide on Improving the tree species diversity of Welsh woodlands – Mar 2017](#)
- [Guidance on tree species choice – Aug 2015 update](#)
- [OGN 18: Priorities for the restoration and management of ancient woodland on the WGWE 2018-28](#)



**Riparian Woodland – RW** – This is shown as standard on the indicative forest types and habitats map, as it is considered that the network of streams, rivers and associated woodland will form a key part of linking habitat networks. Riparian woodland and all water courses will follow a minimum standard of management as set out within the latest Forestry and Water Guidelines. This standard will apply to all water courses, including smaller streams identified on site, but not necessarily shown on the map. It is considered that all areas adjoining a water course will have water management as a key objective, as well as other objectives indicated on Map 1. These may include successional, native and ancient woodland management with limited timber harvesting where appropriate

**Biodiversity** - The presence of open/wooded riparian areas within the forest adds structural diversity value for pollinators and other open forest species. They may also contribute to connectivity for open semi-natural habitat at the landscape scale. These diverse habitats form an integral component in forest structures and should be managed for their site specific biodiversity objectives (i.e. heather areas – maintain predominately open).

**Key species** – Passerines (Meadow pipit, Tree Pipit, Redpoll,) Nightjars, Water voles, Black Grouse....



**Water –** Riparian areas are valuable within the forest as a buffer zone which protects watercourses from direct inputs from the forest. Such areas may intercept overland flow, or absorb water from artificial drainage systems which can protect the watercourses from sediment and acidification. UKFS guidance exists on the appropriate management of these areas, their width and their design. Well managed riparian areas will also contribute a valuable and diverse food resource to detritivores that live in the watercourses.

Photo illustrating open riparian woodland (upland)



Photo of riparian woodland (lowland)



Photo illustrating recent clear-felling opening riparian area on meandering stream (upland)



Photo below demonstrates natural creation of debris dams or managing fallen deadwood within water courses. This should only be carried out following appropriate assessment of hydrology and waterflow risk assessment on downstream impact. (See deadwood strategy WGWE).



- **Mixed Woodland Predominantly Broadleaf – MWB** – These areas have the greatest opportunities for using a wide range of tree species and will be predominately native. Where broadleaves are chosen the presumption is that locally native (native woodland habitat) will be the preferred choice.

Consideration must be made for growing quality timber as well as accounting for predicted impacts of climate change on species choice. The presumption is for use of Continuous Cover Forest (CCF) systems including coppice and/or Short Rotation Forestry. Managers should look for all opportunities to establish mixed conifer/broadleaf stands with species such as redwoods, oak, ash and sweet chestnut. Drought will become an issue for some species particularly in the east and south of Wales. > **50% broadleaf**

**Note this category also includes Ancient Woodland Sites and new native woodlands**

- **Mixed Woodland Predominantly Conifer – MWC** – These areas have the greatest opportunities for using a wide range of tree species but will be predominately non-native. Where conifers are chosen the presumption is that Douglas fir and other redwoods will be the preferred conifer species, where site and exposure allow. On brown earth sites a wide variety of species are suitable and in no circumstances should Sitka spruce be selected if an alternative species will yield quality timber.

The presumption in this zone is that LISS management options will be possible in future and therefore a range of mixtures at intimate and matrix scales could be established to facilitate this. Managers should look for all opportunities to establish mixed conifer/broadleaf stands with species such as redwoods, oak, ash and sweet chestnut. Where intimate mixtures are used careful selection of compatible species is necessary.

Drought will become an issue for some species particularly in the east and south of Wales. Most sites below 400m have moderate or low exposure: *where exposure is high some species indicated in this category will be unsuitable.* Always check species suitability in the context of the local exposure. > **50% conifer**

- **Upland Wales – Lower exposure – UWLE - Predominantly conifer tree species.** These sites have increased opportunity for species diversity (compared to higher exposure sites) and a wider range of species may be used as major components at a catchment/forest scale. If LISS management is planned, consider species suitable for only under planting (e.g. European silver fir). On better soils, redwoods including Douglas fir, western red cedar, Japanese red cedar and sequoias should all be favoured when exposure allows. Where suitable grand fir and noble fir will prove useful choices for fibre rather than timber production as an alternative to Sitka spruce. Many of these sites will have potential for biomass through short rotation forestry management. > **50% conifer**

- **Upland Wales – Higher exposure – UWHE - Predominantly conifer tree species** - the presumption here is that all opportunities will be taken to diversify species choice where better soils occur even where these are isolated pockets. However, Sitka spruce will remain the most productive conifer on these sites. Other suitable conifers primarily have fibre rather than timber potential but this should not deter their selection if site opportunities allow. For native species, birch and rowan will predominate but opportunities should be sought to use other non-natives where it is possible. Consider species suitable for short rotation forestry where this helps meet your objectives. > **50% conifer**

- **Successional Woodland – SW** – (Non Riparian). The objective for these sites will be for creating open woodland habitat of low density mixed species (broadleaf or conifer) in a matrix with open space/bog delivering an intimately mixed habitat for predominantly environmental or landscape benefit. Some

management may occur in these areas, but mainly limited to designated sites. e.g. removing conifers and other invasive species from upland SAC's. It will also include areas which are difficult to establish and manage as productive woodland. e.g. repeatedly burnt areas in South Wales. In the main, sites will not be restocked, allowing natural regeneration and natural processes to develop. Tree cover of between 10%-20% would be expected within 10 years of felling and 20% within 15 years with up to 50% in the long term. These may develop into Minimal Intervention or Natural Reserve sites as no significant silvicultural management is intended in the long term.



**Open Land – OL** – Specific open land habitats can be shown on this map if appropriate but otherwise will be shown in conservation plans, strategic peat mapping assessments or plans for statutory designations which can be overlaid on to any FRP map, as required.



**Other Land – OTH** – lost land, development, housing, large scale renewables, mineral extraction, agriculture (*land designated as agricultural with no proposed change of land use*), open water (*for lakes, reservoirs or other open bodies of water*) and any other land use not specified above.



**Undefined – UND** - This category is used for areas that are currently under tree crops and where the aim is for a mixture of some of the above categories but where the boundaries cannot be determined until after the trees have been felled. Examples include areas of afforested deep peat where detailed site assessment will be carried out after felling when the actual boundaries between tree cover and open ground can be identified and mapped. In total, this category should not exceed more than 5% of the plan area.

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