Northern Ireland Priority Habitat Guide: Mixed ashwoods

What is an Ashwood?

The term Mixed ashwoods is used for a broad range of woods on base-rich soils across Northern Ireland. Ash *Fraxinus excelsior* is generally the dominant species, although locally Hazel *Corylus avellana* may be the most dominant species. Rowan *Sorbus aucuparia* is also common. Some woods have been colonised by Sycamore *Acer pseudoplatanus* and Beech *Fagus sylvatica.*

Table 1: Linking Habitat types with Annex 1, ASSI features and NI Priority Species

Northern Ireland Priority Habitat: Mixed Ashwoods		
Habitat Directive Annex 1 habitats (SAC Features)	**ASSI features**	**NI priority species**
H9180 Tilio-Acerion forests of slopes, screes and ravines	Ashwood	Red Squirrel, Bat species; Common Pipistrelle Bat, Spotted Flycatcher, Song Thrush, Bullfinch, Scottish Wood Ant, Small Eggar Moth, Pale Eggar Moth, Wood Crane's-bill, Small Cow-wheat and a number of mosses e.g Rigid Apple-moss *Philonotis rigida*, Liverworts e.g. Downy Veilwort *Metzgeria pubescens* and Lichens e.g. *Enterographa elaborata, Strigula lateralis*

Definition

To qualify as Mixed ashwoods priority habitat, the woodland must meet the following criteria:

- Woodland area greater than 0.5 ha.
- 20% or more canopy cover or the potential to achieve this in the case of regenerating or newly planted stands of trees
- A canopy composed of 50% or more site-native trees or shrubs (or will be at canopy closure in the case of younger stands). Site-native trees are those which are native to the locality and capable of growing naturally on the site
  and/or
- Typical base-rich woodland ground flora (which may be composed of non-native tree species such as beech or sycamore).

The National Vegetation Classification (NVC) codes are useful in determining which habitat types fall within Mixed ashwoods priority habitat. NVC codes are provided in the Appendix 2.

Where are they found?

Mixed ashwoods are the main woodland type in Northern Ireland on base-rich soils, particularly those derived from the Tertiary basalts of County Antrim (which are predominately Hazel *Corylus avellana* dominated) and the Carboniferous limestones of County Fermanagh, with more occasional occurrences in the Sperrins and Counties Down and Armagh. The type ranges from woods on steep limestone scarps and screes, to those on more gentle slopes with a deeper, but still base-rich, soil.

Within any Mixed ashwoods, there may be pockets of acidic Oakwood and / or flushed woodland which are similar to wet woodland. The diversity of these woodland communities should be maintained.

DAERA hold priority habitat and species data on the NIEA Natural Environment Map Viewer. See https://appsd.daera-ni.gov.uk/nedmapviewer/ (and link to video tutorial on how to use). Note that the Map Viewer indicates areas which hold NIEA records of habitat / species data, but does not infer the complete coverage of these environmental assets in Northern Ireland.

Why are they important to wildlife?

Mixed ashwoods are notable for their species rich ground flora such as Primrose *Primula vulgaris*, Wood Anemone *Anemone nemorosa* , Bluebell *Hyacinthoides non-scripta*, Pignut *Conopodium majus* and Wild Garlic *Allium ursinum*. The alkaline bark of old Ash supports an important lichen flora, particularly the *Lobaria* species in Fermanagh. Mixed ashwoods support a wide diversity of invertebrate species and provide cover and breeding sites for a number of notable mammals and birds. Mixed ashwoods can host a number of priority species which are listed in Table 1.

The variety and abundance of flowering plants within semi-natural habitats provide good sources of pollen and nectar for many of our pollinating insects such as bumblebees, hoverflies, butterflies and moths. For further information on habitat management for pollinators, refer to the All-Ireland Pollinator Plan resources: www.pollinators.ie.

Pressures & Threats

Factors which can impact on Mixed ashwoods include, but are not limited to:

- Inappropriate grazing - by both domestic livestock and feral goats and deer can have a profound influence both on the structure, species and regeneration potential.
- Browsing and bark stripping - by feral animals and other fauna such as squirrels, can lead to significant changes in the woodland structure, ground flora impoverishment, and regeneration potential.
- Invasive species - including replacement of native trees by species that are not native to Northern Ireland such as *Acer pseudoplatanus* and Beech *Fagus sylvatica* and invasive alien species including Cherry Laurel *Prunus laurocerasus*, Salmonberry *Rubus spectabilis*, Japanese Knotweed *Fallopia japonica* and Snowberry *Symphoricarpos albus* and can lead to changes in the composition of the woodland and decreased diversity of field layer respectively.
- Habitat loss and fragmentation - through development, including quarrying Carboniferous limestone, and agricultural practices leading to greater ecological isolation of existing woods. Fragmentation is exacerbated by the removal of trees in field boundaries and small patches of Ash *Fraxinus excelsior* and Hazel *Corylus avellana* in fields.
- Dumping – wooded areas are prone to fly-tipping and the disposal of fallen animals (current and historical).
- Use for sport – can lead to soil enrichment and changes in ground flora.
- Nutrient enrichment - may occur from spray drift, runoff from adjacent agricultural land and game bird rearing leading to changes in soils and ground flora.
- Disease particularly Chalara dieback of Ash caused by the fungus *Hymenoscyphus fraxineus* but also other diseases such as Sudden Oak Death caused by the fungus-like organism *Phytophthora ramorum* and.
- Nitrogen Deposition - excess nitrogen deposition can favour the growth of competitive plants and lead to changes in ecosystem structure or function and to a reduction in biodiversity.
- Air pollution – derived remotely from vehicle and industry emissions could potentially cause pre-mature death of old and veteran trees.
- Climate change - potentially resulting in changes in the vegetation communities.

Favourable management of Mixed ashwoods

These important woodlands should be protected and maintained where they occur, and should be restored where their condition has declined. Some of our most important woodland sites are protected through National and International legislation. In the wider countryside, woodlands are protected from development and increased agricultural productivity through planning policies and legislation such as the Environmental Impact Assessment Regulations.

Woodland habitat can be managed through grazing or no grazing. The choice of management method for this habitat is based on historical management and current condition.

Optimal grazing management for Mixed ashwoods is light, extensive grazing at low stocking rates during late spring and summer months, with no winter grazing.

Ungrazed Mixed ashwoods management is used to maintain naturally ungrazed woodlands and to restore woodlands which have been subject to prolonged grazing, used for over-wintering of livestock and where there is damage to the woodland ground flora, excessive poaching and/or little evidence of natural regeneration. Most woodland features of designated sites will be subject to the exclusion of grazing, dependant on the condition of the woodland.

Organic and inorganic fertilisers should not be applied as this would reduce species-richness and diversity with a loss of nature conservation value.

Deadwood should be retained and windblown trees should be left where they fall.

Non-native invasive species, including Bracken *Pteridium aquilinum,* Rhododendron *Rhododendron ponticum* and Laurel *Prunus laurocerasus*, and non-native invasive canopy species, including Sycamore *Acer pseudoplatanus*, Beech *Fagus sylvatica* and conifers, should be controlled. Machinery should only be used where ground conditions permit.

How do we determine the "health" or condition of Mixed ashwoods?

The conservation status can be determined by the condition of the habitat. Favourable condition is defined by setting targets or target ranges for a series of different attributes. These are components or characteristics of the vegetation that are relatively easy to measure, but which are reliable indicators of the "health" of the habitat.

Rapid Condition Assessments have been developed for several broad habitat types (grassland, moorland, lowland raised bog, woodland and parkland, coastal and wetlands). Identification and rapid habitat assessment is undertaken using the Woodland and Parkland Rapid Condition Assessment.

NIEA has developed Rapid Condition Assessments for several broad habitat types (grassland, moorland, woodland, coastal and wetlands). These will be made available online in the future. In the interim copies can be requested by contacting NIEA by E-mail: NIEA.EFSHigher@daera-ni.gov.uk.

Appendix 1: Mixed ashwoods Indicator species

Positive Indicators:

Allium ursinum	Ramsons / Wild garlic
Anemone nemorosa	Wood Anemone
Conopodium majus	Pignut
Corylus avellana	Hazel
Dryopteris spp.	Buckler-fern species
Fraxinus excelsior	Ash
Geum urbanum	Herb Bennett / Wood Avens
Hyacinthoides non-scripta	Bluebell
Primula vulgaris	Primrose
Polystichum setiferum	Soft Shield-fern
Salix caprea	Goat Willow
Sanicula europaea	Sanicle

Negative Indicators:

Acaena novae-zelandiae	Pirri-pirri-bur
Acer pseudoplatanus	Sycamore
Conifer spp.	Conifer species
Epilobium spp.	Willowherb species
Fagus sylvatica	Beech
Fallopia japonica	Japanese Knotweed
Galium aparine	Cleavers / Robin-run-
Graminoid spp.	Non-woodland grass
Heracleum spp.	Hogweed species
Hyacinthoides hispanica	Spanish Bluebell
Impatiens glandulifera	Indian Balsam (Himalayan Balsam)
Leycesteria formosa	Himalayan honeysuckle/ Pheasant berry
Prunus laurocerasus	Cherry Laurel
Rhododendron spp.	Rhododendron species
Rubus spectabilis	Salmonberry
Rumex obtusifolius	Broad-leaved Dock
Symphoricarpos albus	Snowberry
Urtica dioica	Stinging Nettle

Appendix 2: National Vegetation Classification codes

Mixed ashwoods in Northern Ireland encompass a range of plant communities that broadly reflect a number of those communities described in the National Vegetation Classification (NVC) of Great Britain (Rodwell, 1991a) where descriptions and codes are given to associations of plants that are characteristic of particular environmental and management conditions.

The vegetation found in Mixed ashwoods in Northern Ireland equates to:

W9 - *Fraxinus excelsior – Sorbus aucuparia – Mercurialis perennis* woodland, which is characteristic of base-rich soils.

Mixed ashwoods are also found on more poorly-drained acid soils where there is flushing of nutrients. Often the latter are just small fragments of woodland with irregular margins or narrow strips along flushes, riparian tracts, outcrops and steep banks.

In Northern Ireland, the habitat tends to be dominated by a canopy of Ash *Fraxinus excelsior* and Hazel *Corylus avellana*, often with frequent Goat Willow *Salix caprea* and a ground flora rich in spring-flowering herbs such as Wood Anemone *Anemone nemorosa,* Bluebell *Hyacinthoides non-scripta,* Primrose *Primula vulgaris* and Ramsons *Allium ursinum.* However, in some stands, especially in County Antrim where the canopy is dominated by Hazel, all of the above "character" species for W9 may be absent. Even here, however, the occurrence of a typically rich ground flora provides sufficient species information to readily assign this community to the NVC W9 type. Note *Mercurialis perennis* is not native to Northern Ireland.