Northern Ireland Priority Habitat Guide: Lowland heathland

What is Lowland heathland?

Lowland heathland occurs widely on mineral soils and thins peats (less than 0.5m deep) below the upper edge of agricultural land (generally around 200m in the south-east but lower elsewhere). Lowland heathland is characterised by the presence of dwarf shrubs such as Heather, Bell heather and characteristically Western Gorse and includes both dry and wet heath. It excludes areas dominated by Whin, Common Gorse.

High quality Lowland heathland is usually structurally diverse, consisting of a dwarf shrub layer of varying heights and structures including areas of mature heather. Other habitats such as scattered scrub, bracken, gorse, flushes, mires and pockets of bare ground often form intimate mosaics with Lowland heathland vegetation. Although the plan concentrates on lowland heathland communities, it also recognises the importance of habitat mosaics.

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

Northern Ireland Priority Habitat type: Lowland Heath		
Habitat Directive Annex 1 habitats (SAC feature)	**ASSI features**	**NI priority species**
H4010 Northern Atlantic wet heaths with *Erica tetralix* H4030 European dry heaths H7150 Depressions on peat substrates of the *Rhynchosporion*	Wet heath Dry heath	Irish Hare, Curlew, Chough, Skylark, Linnet, Marsh Fritillary Butterfly, Keeled Skimmer Dragonfly

Definition

Lowland heath in Northern Ireland is defined as:

- Vegetation containing dwarf shrubs cover of at least 25% (including species such as Heather, Cross-leaved Heath, Bell Heather and Western Gorse. Note: where vegetation is dominated by heathland species but dwarf shrub cover is less than 25%, consider managing as lowland heath as this may indicate degraded lowland heathland.
- Peat depth of less than 0.5 m
- Located below the upper edge of agricultural land (generally around 200m in the south-east and less than 120m elsewhere)

Lowland heath can be easily confused with Upland heathland (especially in the Mournes and Slieve Gullion) and Maritime cliff and slopes (especially Rathlin). These habitats can also contain substantial amounts of dwarf shrubs. Upland heathland is mostly found at higher altitudes and in much more extensive tracts and generally lacks Western Gorse and the complex mosaic of vegetation found in Lowland heathland.

Maritime cliff and slopes may have areas with dwarf shrubs within a patchwork of diverse grassland vegetation but contains maritime plants such as Thrift. Dune heaths are included in the coastal sand dune habitat.

Often grassland (particularly Lowland acidic grassland) and wetland habitats such as lowland fens, upland flushes and swamps can be found within the habitat.

Where are they found?

Lowland heathland is often fragmented and restricted in its occurrence. It is largely confined to the lower slopes of the Mourne Mountains and the Ring of Gullion, Rathlin Island and narrow coastal strips in Counties Antrim and Down. Small areas of Lowland heathland are associated with some fens in Counties Down and Armagh.

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). 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?

Lowland heathland contains a small range of NI priority species including Skylark, Linnet and the Marsh Fritillary Butterfly. Important invertebrates associated with lowland heathland in the Mourne Mountains which include the Keeled Skimmer Dragonfly.

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

Lowland heathland is dependent on management by light grazing and to a lesser extent burning or cutting to prevent succession to scrub or woodland. Although many areas of Lowland heathland lack any form of management, other areas suffer from overgrazing and environmentally damaging burning regimes. As well as direct loss of habitat, many areas of Lowland heathland are characterised by limited structural diversity with a few natural

transitions from open heath into associated habitats. Current management and other factors are continuing to prevent development of these features in most areas.

- Grazing – high stocking levels of sheep, and to a lesser extent cattle, currently have the most significant impact on heather and other dwarf shrubs and affect the condition of Lowland heathland. Lower levels of grazing can lead to encroachment of invasive shrubs.
- Agricultural improvement – conversion to grassland occurs through ploughing, reseeding, liming and fertiliser application, particularly at lower elevations.
- Forestry – in addition to the direct physical impacts of existing plantations on Lowland heathland, the aerial application of fertilisers can result in drift onto adjacent areas of heath and mature trees can act as an invasive seed source.
- Burning / flailing– whilst small-scale prescribed burning / flailing can be beneficial for maintaining the quality of the habitat by reducing wildfire risk, however, large-scale and too frequent management reduces the quality of Lowland heathland by causing a simplification of the vegetation structure and loss of lower plant assemblages.
- Planning developments – quarries, wind farms and communication masts, together with their associated infrastructure can cause direct habitat loss and disturbance to wildlife
- Invasive species – encroachment by Bracken *Pteridium aquilinum* and shrubs can lead to a loss of Lowland heathland.
- Recreation- many Lowland heathland sites are accessible to the public. Heather is particularly sensitive to trampling.
- Nutrient enrichment – Lowland heathland is particularly sensitive to increased nitrogen enrichment caused by atmospheric deposition which could potentially lead to vegetation changes.
- Climate change – The vegetation communities occurring in bogs and heathlands are likely to be impacted from the prediction of higher temperature, increased rainfall and changed weather patterns.

Favourable management of Lowland heathland

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

Land reclamation techniques such as use of fertilisers, drainage and reseeding, can result in habitat loss or damage and should be prevented.

Lowland heathland is best managed by light, extensive grazing. Undergrazing and/or overgrazing should be avoided. In many areas unfavourable past management and current pressures requires that more favourable management should be established.

Light summer grazing can maintain and enhance Lowland heathland and the other priority habitats and species found within the habitat.

Encroaching scrub should be controlled by cutting as this can spread at the expense of the priority habitat.

In some areas specific management such as different grazing levels, different timing of grazing or other vegetation management such as scrub cutting (especially Whin *Ulex europeaus*) may be required to establish correct grazing, or to reduce the risk of wildfire or address particular habitat and species needs.

How do we determine the "health" or condition of Lowland heathland?

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.

Identification and rapid assessment of Lowland heathland habitats is undertaken using the generic moorland guide.

Some of the attributes targets may vary due to on site conditions, geographic location and in the case of Lowland heathland the type of heath (wet or dry).

- Dry heaths in the lowlands are dominated by Bell Heather *Erica cinerea*, Heather *Calluna vulgaris* and Western Gorse *Ulex gallii.* On Rathlin Island and other coastal sites, dry heaths tend to be more extensive than wet heaths and Spring Squill *Scilla verna* is a typical component of these lowland maritime heaths.
- Wet heaths, which are generally more widespread throughout the rest of Northern Ireland, are dominated by Heather *Calluna vulgaris*, Cross-leaved Heath *Erica tetralix* and Purple Moor-grass *Molinia caerulea*. In the Lowland wet heath communities and flushes around the lower slopes of the Mournes, Black Bog-rush *Schoenus nigricans* is locally important.
- The target for dwarf shrub cover for Lowland heath is usually 50-75%. However, a higher dwarf shrub cover is acceptable in dry heath and a cover of greater than 75% would indicate good condition.
- Wet heaths can also be highly variable, with some communities naturally supporting a dwarf shrub cover as low as 25% or as high as 90%. However, the target cover of 50 – 75% is typical of wet heaths in good condition.

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: Lowland heathland Indicator species

Note the high degree of overlap with Upland heathland

Positive Indicators:

Calluna vulgaris	Heather
Cladonia spp	Reindeer Lichen
Danthonia decumbens	Heath Grass
Dicranum scoparium	Broom Fork-moss
Erica cinerea	Bell Heather
Erica tetralix	Cross-leaved Heath
Galium saxatile	Heath Bedstraw
Hypnum jutlandicum	Heath Plait-moss
Molinia caerula	Purple Moor-grass
Myrica gale	Bog Myrtle
Narthecium ossifragum	Bog Asphodel
Pleurozium schreberi	Red-stemmed Feather-moss
Potentilla erecta	Tormentil
Polygala serpyllifolia	Thyme-leaved Milkwort / Heath Milkwort
Succisa pratensis	Devil's-bit Scabious
Sphagnum compactum	Compact Bog-moss
Sphagnum tenellum	Soft Bog-moss
Trichophorum cespitosum	Deer-grass
Ulex galli	Western Gorse
Vaccinium myrtillus	Bilberry

Negative Indicators:

Trees	
Agricultural grasses	
Agricultural weeds	
Juncus effusus	Soft Rush
Pteridium aquilinum	Bracken
Ulex europeaus	Whin/Gorse

Appendix 2: National Vegetation Classification codes

Lowland heathland in Northern Ireland encompasses 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.

In Northern Ireland, the five main NVC communities which make Lowland heathland are:

H8 - Heather *Calluna vulgaris* – Western Gorse *Ulex gallii* heath

H10 - Heather *Calluna vulgaris* – Bell Heather *Erica cinerea* heath

H11 - *Calluna vulgaris* - *Carex arenaria* heath (Dune heath)

H12 - Heather *Calluna vulgaris* – Bilberry *Vaccinium myrtillus* heath

M15 - Deergrass *Scirpus caepitosus* – Cross-leaved Heath *Erica tetralix* wet heath

M16 - Cross-leaved heath *Erica tetralix* – Compact Bog-moss *Sphagnum compactum* wet heath

H8 and M16 are particularly characteristic of Lowland heathland.

In addition a wide range of other non-heathland NVC communities are associated with wetland and grassland found within areas of predominately Lowland heathland. This are particularly associated with rocks and screes, flushes and more heavily grazed or disturbed areas.