

Site Name: Connemara Bog Complex SAC

Site Code: 002034

The Connemara Bog Complex SAC is a large site encompassing the majority of the south Connemara lowlands in Co. Galway. The site is bounded to the north by the Galway–Clifden road and stretches as far east as the Moycullen–Spiddal road. The site supports a wide range of habitats, including extensive tracts of western blanket bog, which form the core interest, as well as areas of heath, fen, woodlands, lakes, rivers and coastal habitats.

The site is underlain predominantly by various Galway granites, with small areas along the northern boundary of Lakes Marble, schist and gneiss. The Roundstone Bog area has a diverse bedrock geology composed mainly of the basic intrusive rock, gabbro. An area of rock, possibly Cambrian in age, called the Delaney Dome Formation occurs in the north-west of this area. Gabbro also occurs in the Kilkieran peninsula and near Cashel. The whole area was glaciated in the last Ice Age which scoured the lowlands of Connemara.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1150] Coastal Lagoons*
- [1170] Reefs
- [3110] Oligotrophic Waters containing very few minerals
- [3130] Oligotrophic to Mesotrophic Standing Waters
- [3160] Dystrophic Lakes
- [3260] Floating River Vegetation
- [4010] Wet Heath
- [4030] Dry Heath
- [6410] *Molinia* Meadows
- [7130] Blanket Bogs (Active)*
- [7140] Transition Mires
- [7150] Rhynchosporion Vegetation
- [7230] Alkaline Fens
- [91A0] Old Oak Woodlands

- [1065] Marsh Fritillary (*Euphydryas aurinia*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)

The Connemara Bog Complex is characterized by areas of deep peat surrounded by rocky granite outcrops covered by heath vegetation. However, the main habitat within this site is lowland Atlantic blanket bog, as most of the area is covered by blanket peat greater than 1 m in depth. A mosaic of different communities exists in association with the blanket bog, including hummock/hollow systems, inter-connecting bog pools, flushes, transition and quaking mires, freshwater marshes, lakeshore, lake and river systems. The key plant species of lowland blanket bog are Black Bog-rush (*Schoenus nigricans*), Purple Moor-grass (*Molinia caerulea*), Cross-leaved Heath (*Erica tetralix*), Deergrass (*Scirpus cespitosus*), Common Cottongrass (*Eriophorum angustifolium*), Bog Asphodel (*Narthecium ossifragum*), White Beak-sedge (*Rhynchospora alba*) and bog moss species (*Sphagnum* spp.). Rhynchosporion vegetation is found on the blanket bog by lake and pool margins, in wet hollows and in quaking areas. Species such as White Beak-sedge, Common Cottongrass, Bogbean (*Menyanthes trifoliata*), sundews (*Drosera* spp.) and bog mosses are common. Areas of wet heath are widespread throughout this site, where blanket peat becomes shallower. There is a limited amount of dry heath, with species such as Western Gorse (*Ulex gallii*), St. Dabeoc's Heath (*Daboecia cantabrica*) and Bell Heather (*Erica cinerea*) recorded.

Both oligotrophic and dystrophic lakes are found within Connemara Bog Complex SAC, with the greatest concentration in the west of the site. The latter type are generally smaller, have a mainly peaty bottom and there is generally an abrupt transition from blanket bog to open water. Oligotrophic lakes in this site typically have shallow margins, with a mixed rocky/peaty bottom. Typical plant species of the lake edges include Water Lobelia (*Lobelia dortmanna*), Pipewort (*Eriocaulon aquaticum*), Shoreweed (*Littorella uniflora*), Many-stalked Spike-rush (*Eleocharis multicaulis*) and Bulbous Rush (*Juncus bulbosus*). The rare species Slender Naiad (*Najas flexilis*) and Pillwort (*Pilularia globulifera*) have both been recorded from oligotrophic lakes at this site. Species commonly encountered in dystrophic lakes/pools include the bog mosses *Sphagnum auriculatum* var. *auriculatum* and *S. cuspidatum*, along with White Beak-sedge, Lesser Bladderwort (*Utricularia minor*), Pipewort and Bogbean.

The main river systems within the site are the Owenmore (Ballynahinch) river, the Glashanasmearany and Derrygauna rivers (to the south of Lough Bofin), the Cashla river (which flows out of Glenicmurrin Lough), the Glengawbeg river (which connects Lough Agraffard and Lettercraffoe Lough) and the Owenboliska river and its tributaries (north of Spiddal). Vegetation associated with some of these waterways includes Alternate Water-milfoil (*Myriophyllum alternifolium*), Bulbous Rush, Floating Club-rush (*Scirpus fluitans*), water-lilies, Great Fen-sedge (*Cladium mariscus*), Bog Pondweed (*Potamogeton polygonifolius*), Broad-leaved Pondweed (*P. natans*), Water Horsetail (*Equisetum fluviatile*) and the liverwort *Scapania undulata*.

Within this site, areas of transition mire occur mainly along the margins of lakes and bog streams. The surface of such areas is typically quaking and there is often evidence of base-enrichment. Typical plant species include Bog-sedge (*Carex limosa*), Slender Sedge (*C. lasiocarpa*), Bog Pondweed, Bogbean, Blunt-flowered Rush (*Juncus subnodulosus*), Common Cottongrass, Purple Moor-grass and White Beak-sedge. Locally there may be some Great Fen-sedge or Black Bog-rush. The rare and legally protected species Slender Cottongrass (*Eriophorum gracile*) occurs in this habitat. Moss cover is variable.

Areas of *Molinia* meadow at this site contain species such as Purple Moor-grass, Meadow Thistle (*Cirsium dissectum*), Sharp-flowered Rush (*Juncus acutiflorus*) and Tormentil (*Potentilla erecta*). The community occurs on wet acid soils.

There are a number of areas of old oak woodland, but the woodland at Shannawoneen, north of Spiddal, is the best known. This woodland lies in the valley of the Owenboliska river. It provides a good example of a Sessile Oak (*Quercus petraea*) dominated canopy woodland, although there is also a lot of Downy Birch (*Betula pubescens*). Other examples of this habitat at the site are found at Ballynahinch, Glendollagh, Derrywaking Lake, as well as on some of the lake islands. The invasive alien shrub Rhododendron (*Rhododendron ponticum*) is found in some areas of woodland.

There are some limited, but nonetheless well developed, examples of alkaline fen at this site. These fens are often species-rich, and support species not typically found in association with blanket bog areas - e.g. Dioecious Sedge (*C. dioica*), Black Bog-rush, Broad-leaved Cottongrass (*E. latifolium*), the moss *Campyllum stellatum* and Lesser Clubmoss (*Selaginella selaginoides*).

Four main lagoons occur within this site: Lough Ahalia, Doire Bhanbh, Lough Aconeera and Salt Lake. All four are regarded as saline lake lagoons and they range in size from 1–90 ha. The smallest (Doire Bhanbh) is quite shallow and surrounded by Common Reed (*Phragmites australis*) swamp, while the three larger lagoons are relatively deep and are surrounded by moorland and exposed granite. Salt Lake contains a serpulid worm reef. Lough Ahalia consists of a series of basins, and these are deep in places, with an unusual salinity structure. The lowest lake is relatively shallow (0–4 m) and brackish throughout, while the middle lake is deep (13 m) and permanently stratified, with water below 3 m depth measuring 14 ppt. The flora and fauna of this lagoon system are extremely diverse, with many communities found. This, along with Lough Aconeera, is the only known site in Ireland for the Red Data Book stonewort *Chara balthica*. Another Red Data Book plant, *Lamprothamnium papulosum*, also occurs, as well as *Chara aspera* and *C. virgata*. An unusual form of Fennel Pondweed (*Potamogeton pectinatus*) occurs in high salinity water. There are a number of other notable records of plant and animal from this lagoon. Lough Aconeera is less remarkable in terms of flora and fauna, but nonetheless supports a sizeable number of lagoonal specialists.

Nine species protected under the Flora (Protection) Order, 2015, occur within this site: Forked Spleenwort (*Asplenium septentrionale*), Parsley Fern (*Cryptogramma crispa*), Bog Hair-grass (*Deschampsia setacea*), Slender Cottongrass, Bog Orchid (*Hammarbya paludosa*), Slender Naiad, Heath Cudweed (*Omalotheca sylvatica*), Pillwort and Pale Dog-violet (*Viola lactea*). Rare and threatened species such as Dorset Heath (*Erica ciliaris*), Mackay's Heath (*Erica mackaiana*) and Green-winged Orchid (*Orchis morio*) also occur within this site. All of the above species are listed in the Irish Red Data Book, and Slender Naiad is listed on Annex II of the E.U. Habitats Directive.

The Annex II butterfly species, Marsh Fritillary, is known to occur at this site.

Atlantic Salmon, a species listed under Annex II of the E.U. Habitats Directive, occurs in many of the rivers within the site. The Cashla and Ballynahinch systems are good examples of western acidic spate rivers which support the species. Good spawning and nursery grounds for the species occur in these systems. Arctic Char occurs in a number of lakes within the site: Ballynahinch Lake, Glenicmurrin Lough and Lough Shindilla. The species has also been reported from Lough Oorid and Lough Glendollagh in the past, but has not been recorded from these lakes in recent years. Arctic Char is listed as threatened in the Irish Red Data Book.

Otter have been recorded as occurring in the Connemara Bog Complex. Irish Hare, another mammal listed in the Red Data Book, occurs on the site. Common Frog breeds on the site.

The site is of national importance for wintering populations of Greenland White-fronted Goose. Small flocks (up to 30) are found on Roundstone Bog and also use the bogs between Recess and Maam Cross. In April 1989 a synchronised ground and air census of the Connemara bogs located 7 flocks of Greenland White-fronted Goose, totalling 134–137 birds. In 1991/93 wintering numbers were considered to be approximately 60 birds.

There is an internationally important breeding area for Cormorants at Lough Scannive with 218 pairs present in 1985 in a colony which is known to have existed pre-1968. Golden Plover, a species listed on Annex I of the E.U. Birds Directive, nests at up to four locations in the site, with a maximum of two pairs noted at any one location. Another Annex I species known to be present in the site is Merlin. Lough Naskanniva is an important inland breeding site for Common Terns (up to 60 pairs in 1977 and 1992) and Choughs, both of which are also Annex I species under the E.U. Birds Directive.

The main damaging operations and threats in the Connemara Bog Complex are peat cutting, over-grazing and afforestation. Extensive peat extraction using 'Difco' machines has become common in the region in recent years, and cutting by excavator and hopper is also increasing. The hand-cutting of peat is less threatening as it is usually on a much smaller scale, but nonetheless it should be controlled within the site. Over-grazing and poaching by sheep and cattle is a widespread problem within the site, with erosion of peat ensuing. The above operations are the most extensive

but other threats and potentially damaging operations include land drainage and reclamation, fertilization, quarrying and dumping.

In summary, the Connemara Bog Complex encompasses a large area of relatively undamaged lowland Atlantic blanket bog of high conservation significance both in Ireland and at a European level. The site also contains good examples of at least 13 other habitats listed on Annex I of the E.U. Habitats Directive, as well as four species listed in Annex II. Further, the site supports a number of threatened and protected plant species. The site is internationally important for Cormorant and nationally important for Greenland White-fronted Goose, and contains nesting sites for Golden Plover.