



Site Name: Ballygar (Aghrane) Bog SAC

Site Code: 002199

Ballygar (Aghrane) Bog SAC occurs within the larger raised bog system that is designated as Ballygar Bog NHA (000229). It is situated 2.0 km northwest of Ballygar in the townland of Aghrane, in Co. Galway. The site occurs on the north-western corner of a raised bog that includes both areas of high bog and cutover bog. The underlying geology is carboniferous limestone.

A wide variety of vegetation/habitat types occur within the site. The main ones are open high bog, recently cleared forestry on high bog and cutover bog and a lagg-type woodland. The site is bordered by open high bog on its eastern and south-eastern margins, by forestry on cutover bog on its northern margin and by agricultural grassland on its western and south-western side. Young trees of Lodgepole Pine (*Pinus contorta*) are encroaching onto the adjacent high bog to the south and east of the site through natural regeneration. The site has been intensively drained and most of this drainage was associated with past forestry. These drains have been blocked and the forestry has been harvested to protect the remaining bog and raise the water table.

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):

[7110] Active Raised Bog*
[7120] Degraded Raised Bog

Active Raised Bog comprises areas of high bog that are wet and actively peat-forming, where the percentage cover of bog mosses (*Sphagnum* spp.) is high, and where some or all of the following features occur: hummocks, pools, wet flats, *Sphagnum* lawns, flushes and soaks.

Degraded Raised Bog corresponds to those areas of high bog whose hydrology has been adversely affected by peat cutting, drainage and other land use activities, but which are capable of regeneration to Active raised bog within 30 years.

The unafforested areas of Ballygar (Aghrane) Bog SAC to the east of the site have vegetation typical of a Western Raised Bog, with the open high bog consisting of Heather (*Calluna vulgaris*), Hare's tail Cotton-grass (*Eriophorum vaginatum*), Cross-leaved Heath (*Erica tetralix*), Bog Asphodel (*Narthecium ossifragum*), Carnation Sedge (*Carex panicea*), White-beaked sedge (*Rhynchospora alba*) and the lichen *Cladonia portentosa*. Characteristic raised bog species such as Bog Rosemary (*Andromeda*

polifolia), Cranberry (*Vaccinium oxycoccos*) and the liverwort *Pleurozia purpurea* are also frequent. Bog mosses are common and include *Sphagnum capillifolium*, *S. magellanicum* and *S. papillosum*. Hummocks/ hollows and pools are found on the bog. In the wettest areas the hummocks are colonised by bog mosses, including *S. fuscum* and *S. austinii*; the hollows are colonised by the bog mosses *Sphagnum papillosum* and *S. capillifolium*, with *S. cuspidatum* the aquatic bog moss in the pools. Great Sundew (*Drosera anglica*) is also found in the wetter hollows. There is a good diversity of lichens present because, unlike many other bogs, Ballygar has not been burnt recently.

On the recently cleared Lodgepole Pine areas on high bog there has been natural regeneration of raised bog species, dominated by a mixture of Heather and Hare's tail Cotton-grass with Purple Moor-grass (*Molinia caerulea*) and Soft Rush (*Juncus effusus*) also locally frequent. Bog Moss (*Sphagnum* spp.) cover is locally good and is best developed in the flat, waterlogged drains between lines of conifer stumps. The natural regeneration of Downy Birch (*Betula pubescens*) and Lodgepole Pine is occurring on this recently cleared area; however, the seedlings are generally not abundant at present and their regrowth is being controlled. The south-eastern corner of the high bog area which adjoins the open intact high bog is very wet with a high cover of Hare's tail Cotton-grass and *Sphagnum* species evident. The vegetation composition in this area suggests that Active Raised Bog conditions are rapidly developing.

The cutover bog to the north of the site was afforested and recently clear-felled. These areas had supported closed canopy plantations with little vegetation beneath. The ground conditions are drier and bog species are absent. The natural regeneration of vegetation in these areas has been slow with scattered conifer brash and common mosses (*Hypnum cupressiforme* and *Thuidium tamariscinum*) generally dominating. There are scattered patches of the bog moss *Sphagnum capillifolium*, Soft Rush and Purple Moor-grass occurring in areas where waterlogged conditions exist and birch seedlings are starting to become locally frequent.

A band of mixed woodland, dominated by Downy Birch and Alder (*Alnus glutinosa*) with Lodgepole Pine, occurs along the northern margin of the site. Other frequent tree species include Willow (*Salix* spp.), Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*), Sitka Spruce (*Picea sitchensis*) and Sessile Oak (*Quercus petraea*). Parts of this woodland are flooded and Soft Rush is present. This marginal wooded area displays features typical of wet lagg habitat which is relatively rare in Irish raised bogs. The prospects for developing wet bog woodland along the margins of this raised bog are of particular interest and add greatly to the ecological and hydrological interest of the site.

Current landuse on the site consists of nature conservation management with the removal of conifer plantations and the blocking of drainage associated with these plantations, both on the high bog and on the cutover. The large area of coniferous forestry has been clear-felled and drain-blocked as part of the Coillte EU LIFE Project *Demonstrating Best Practice in Raised Bog Restoration in Ireland*. The restoration of these

previously afforested areas will, in the longer term, help to maintain or improve the hydrology of the adjoining open bog in the NHA which contain significant areas of Active and Degraded Raised Bog habitat. The colonization of Downy Birch and conifers poses an ongoing threat to the drier high bog areas which have been recently cleared of conifers and will require some ongoing management to avoid impacts to sensitive areas.

Ballygar (Aghrane) Bog SAC is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site is being actively managed for conservation as part of the Coillte EU LIFE Project. This site supports regenerating raised bog microhabitats, including hollows and wet flats, which add to the diversity and scientific value of the site. Ireland has a high proportion of the total E.U. resource of raised bog (over 50%) and so has a special responsibility for its conservation at an international level.