SITE SYNOPSIS

Site Name: Derragh Bog SAC

Site Code: 002201

Derragh Bog SAC includes most of the raised bog system known as Derragh Bog which occurs within Lough Kinale and Derragh Lough NHA (000985). The boundary in the west and south of the site is contiguous with the boundary of Lough Kinale and Derragh Lough SPA (site code 004061). It is a small raised bog situated 2.5 km east of Abbylara in county Longford in the townland of Derragh. This bog is an example of a floodplain raised bog which borders two lakes, Lough Kinale to the west and Derragh Lough to the south, the River Inny to the east and wet agricultural grassland to the north. To the west and south there is a full transition from high bog to cutover bog to semi-natural birch woodland, fen and swamp to Lough Kinale and Derragh Lough. The underlying geology of both lakes and bog is carboniferous limestone.

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 where the 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.

Derragh Bog SAC consists of 37.62 ha of raised bog (8.33 ha of high bog, 20.29 ha of open cutover and 9 ha of birch woodland on cutover grading into fen and swamp on the lake shores). None of the area was afforested but about 80% of the original bog was cutover to varying extents. Due to its small size, the remaining high bog cannot rewet sufficiently to support Active Raised Bog. The cutover consists of two types. The first is the more recent cutover immediately north and east of the high bog which consists of a series of relatively well-drained spread-grounds which slope away from the high bog and are separated from it by facebank drains. The second type is a much older, more low-lying area of uneven cutover without a well-defined drainage system that occurs to the north-east of the high bog and more recent

cutover. This area and the transitions through woodland to open water are the areas of greatest ecological interest on the site. This area has been regenerating for some time and contains wet flats and hollows with the beginnings of active bog and Bog Woodland formation.

The remaining area of the high bog has vegetation typical of Midland Raised Bog type, consisting of Heather (*Calluna vulgaris*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Cross-leaved Heath (*Erica tetralix*), Bog Asphodel (*Narthecium ossifragum*) and Deergrass (*Trichophorum cespitosum*) with abundant lichen (*Cladonia portentosa)*, which suggests that the bog is relatively dry and has not been burnt for a long time. Other more locally occurring plants include Bog Rosemary (*Andromeda polifolia*) and Round-leaved Sundew (*Drosera rotundifolia*). Bog moss cover is low, consisting of *Sphagnum capillifolium*, *S. papillosum* and *S. subnitens.*

On the more recent cutover bog, to the north and east of the high bog, the bog vegetation is regenerating and the wetter, vegetated areas are dominated by Heather and Hare's-tail Cottongrass with Cross-leaved Heath, Deergrass, Cranberry (*Vaccinium oxycoccos*), Bilberry (*Vaccinium myrtillus*), Bog Myrtle (*Myrica gale*), Purple Moor-grass (*Molinia caerulea*) and *Cladonia portentosa*. Bog moss cover is high in places and consists of *Sphagnum capillifolium*, *S. subnitens* and *S. papillosum* with the moss *Polytricum commune*. There are some encroaching Downy Birch and Lodgepole Pine (*Pinus contorta*) seedlings. Wet in-filling pools at the facebank are dominated by White Beak-sedge (*Rhynchospora alba*) and Great Sundew (*Drosera anglica*) with *Sphagnum cuspidatum, S. magellanicum, S. capillifolium* and *S. papillosum*.

In the older cutover in the east of the site, there is an undulating surface with a complete vegetation cover and wet to very wet depressions. Ling Heather, Hare's-tail Cottongrass and *Cladonia portentosa* dominates with Bog Asphodel, Deergrass, Bog Myrtle and Purple Moor-grass. Bog moss (*Sphagnum* spp.) cover is moderate to high and consists of *Sphagnum capillifolium*, *Sphagnum subnitens, Sphagnum magellanicum* and *Sphagnum tenellum*. In the wet hollows White Beak-sedge and *Sphagnum cuspidatum* dominate with Cranberry and Round-leaved Sundew. The wettest parts of this area, covering 0.67 ha, are recovering well and have a high diversity and cover of typical Midland raised bog species. It is expected that these areas will develop into Active Raised Bog habitat within 30 years and can therefore be considered as Degraded Raised Bog habitat.

In the wettest slightly flushed areas of the old cutover Downy Birch saplings and small trees are abundant and Heather, Hare's-tail Cottongrass and Purple Moor-grass dominate a species-rich ground flora with abundant mosses including *Hypnum jutlandicum* and *Polytricum commune*. Bog Moss cover is high consisting of *Sphagnum capillifolium*, *S. cuspidatum*, *S. subnitens*, *S. palustre* and the rare *S. pulchrum*. The peat substrate is very wet and quaking. There are some old dry turf banks dominated by Ling Heather with Devil's-bit Scabious (*Succisa pratensis*) and Bilberry. Part of this area on the eastern cutover of the SAC (covering 0.19 ha) is considered to be Active Raised habitat that is part of a mosaic with non-active raised bog vegetation. It consists of sparse Downy birch (Betula pubescens) in a flush with colonising

Lodgepole Pine (Pinus contorta) on old cutover with deep peat. This flush is expected to evolve into Bog Woodland (91D0) in the future.

The cutover bog generally grades down to Birch (*Betula* spp.) woodland with Willow (*Salix* spp.), Common Gorse (*Ulex europaeus*) and Bracken (*Pteridium aquilinum*) along the bog margins which border the River Inny and the lake shores. Along the lake shores, the bog grades into rich fen and swamp habitats, with alder (*Alnus glutinosa*), willow and wet grassland with Purple Moor-grass communities. The swamps are dominated by Common Reed (*Phragmites australis*) behind which there is often a calcium-rich and species diverse small sedge marsh, characterised by species such as Marsh Pennywort (*Hydrocotyle vulgaris*), Water Mint (*Mentha aquatica*) and Red Rattle (*Pedicularis palustris*). These almost intact wetland transitions between raised bogs and lakes are extremely rare in Western Europe.

This Coillte owned site was never afforested and the main conservation problem for the bog was drying out due to drainage associated with peat cutting in the past and possibly the arterial drainage of the River Inny. The drainage also has facilitated the spread of birch and the invasive conifer Lodgepole Pine onto the bog. The main drains associated with the turf cutting were blocked in 2013/14 and the Lodgepole Pine and birch controlled where necessary in 2014 as part of an EU funded Coillte LIFE project *Demonstrating Best Practice in Raised Bog Restoration in Ireland*. The objective of that project was to raise the water table and restore Active Raised Bog and Bog Woodland on the site. With the blocking of drains, the cutover bog is re-wetting and water-levels in some areas now remain high throughout the year and limited areas of wet flats and hollows are developing. As a consequence, raised bog vegetation is improving in quality. Bog mosses are regenerating, including *Sphagnum papillosum, S. capillifolium, S. palustre, S.magellanicum, S. pulchrum* and *S. subnitens,* with *Sphagnum cuspidatum* in drains. However the majority of the recently cutover areas have not yet developed vegetation characteristic of wet bog conditions. This situation is expected to improve over time as the bog surface becomes wetter.

Derragh Bog SAC is a site of conservation significance comprising raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site contains interesting examples of the E.U. Habitats Directive Annex I priority habitat Bog Woodland along with the non-priority habitat Degraded Raised Bog (capable of regeneration). Although Derragh Bog is a small example of a raised bog, its development in close association with the lakes and their floodplains and the relatively intact wetland transition between the two systems make it unusual in a western European context. In addition, its location towards the north-eastern extreme of the range of raised bogs in Ireland and its close proximity to Moneybeg and Clare Island Bogs SAC (002340) increases its ecological importance. The site is being actively managed for conservation as part of the Coillte EU LIFE Project. Ireland has a high proportion of the total E.U. resource of Atlantic raised bog (over 50%) and so has a special responsibility for its conservation at an international level.