SITE SYNOPSIS

Site Name: Garriskil Bog SAC

Site Code: 000679

Garriskil Bog SAC consists of two areas of raised bog: Garriskil Bog, which covers 324.81 ha and lies 3 km east of Rathowen in Co. Westmeath; and a small outlier, within the townland of Derrya, which covers 22.9 ha and lies 2.2 km to the east on the northern shore of Lough Derravaragh. Both bogs are remnants of the large river floodplain bogs which developed where the River Inny enters and leaves Lough Derravarragh. Garriskil Bog is bounded to the south-east and south-west by the rivers Inny and Riffey and by the Dublin-Sligo railway line to the north. It is considered an exceptional example of a midland raised bog and includes 170.26 ha of uncut raised bog and 154.55 ha of surrounding areas which includes 109 ha of cutover bog. The section at Derrya (which comprises part of Lough Derravaragh Bog NHA (site code 000684)) has been restored as part of an EU LIFE project. The site consists of 2.5 ha of high bog and 20.4 ha of cutover, all of which, except for a broadleaf woodland fringe along the River Inny, was afforested in the 1970s. All the conifer plantations were recently clear-felled and restored by drain-blocking. It is bordered by open high bog to the north-east, by the River Inny to the west and by cutover bog grading into Lough Derravaragh to the south-east. The bedrock geology of both sites 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] Raised Bog (Active)*
[7120] Degraded Raised Bog
[7150] Rhynchosporion Vegetation

Active Raised Bog (ARB) habitat 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 (DRB) habitat 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 ARB within 30 years. The Rhynchosporion habitat occurs in wet depressions, pool edges and erosion channels where the vegetation includes White Beak-sedge (*Rhynchospora alba*) and/or Brown Beak-sedge (*R. fusca*), and at least some of the following associated species, Bog Asphodel (*Narthecium ossifragum*), sundews (*Drosera* spp.), Deergrass (*Scirpus cespitosus*) and Carnation Sedge (*Carex panicea*).

Garriskil Bog is a large raised bog with 51.7% of the original bog still present. It contains a large, wet high quality central core of active raised bog which comprises approximately 50.87 ha (30%) of the uncut high bog area. There are extensive, well developed systems of pools and hummocks present. The bog mosses *Sphagnum imbricatum, S. fuscum* and the moss *Leucobryum glaucum* are important components of the hummocks, which are frequently crowned by the moss *Racomitrium lanuginosum* and sometimes colonised by Bilberry (*Vaccinium myrtillus*). The numerous areas of inter-connecting pools are mostly dominated by Rhynchosporion vegetation which forms floating rafts on the water surface. Typical plant species present include the bog mosses *Sphagnum cuspidatum* (generally dominant) and *S. auriculatum*, the liverwort *Cladopodiella fluitans*, White Beak-sedge, Bogbean (*Menyanthes trifoliata*), bladderworts (*Utricularia* spp.), Common Cottongrass (*Eriophorum angustifolium*) and Great Sundew (*Drosera anglica*). Brown Beak-sedge, a sedge species considered to be rare on a national basis, is present in some of the bog pools. The areas between the pools support occasional wet and quaking lawns of White Beak-sedge, as well as Bog Asphodel.

The vegetation of the rest of the high bog, including the DRB, tends to be dominated by Heather (*Calluna vulgaris*), Deergrass, Bog Asphodel, cottongrasses (*Eriophorum vaginatum* and *E. angustifolium*) and Cross-leaved Heath (*Erica tetralix*). The distribution and relative abundance of these species varies with peat wetness. *Sphagnum* cover is generally less than 30%. In these drier areas the cover of the lichen *Cladonia portentosa* can be locally high. Outside the ARB area, pool complexes are rare and where they do occur they tend to be dominated by shallow open water or algal mats. Small areas of Rhynchosporion vegetation also occur here, however the habitat is, in general, not well developed outside the ARB area. In a number of places the high bog is being invaded by Downy Birch (*Betula pubescens*) and pines. Often the pines are associated with small flushes dominated by species such as Purple Moor-grass (*Molinia caerulea*), Soft Rush (*Juncus effusus*), Bramble (*Rubus fruticosus* agg.) and Heather.

The large areas of old cutover bog provides an additional habitat where Purple Moor-grass and Heather dominate, along with cottongrasses, while in some parts Downy Birch woodland is developing. Along the north-east margin of the high bog a narrow band of fen-grassland occurs.

Past drainage of the bog, associated with arterial drainage of the Inny and Riffey rivers and peat cutting, has unfavourably impacted on the site and led to widespread subsidence and drying out. The northern area of the site was also affected in the 1990s by intensive surface drainage which directly affected the area of ARB reducing it from 71.23 ha to 45.12 ha. Those drains were blocked by NPWS in the late 1990s and by 2014 the area of ARB had increased by 5.75 ha to 50.87 ha. There has been no turf cutting since the 1990s and though burning has caused damage in the past, there has been no severe fire in recent years.

The outlier bog at Derrya comprises a part of Lough Derravaragh Bog NHA. Lough Derravaragh Bog is a remnant of a larger area of bog much of which has now been

cutover and reclaimed for forestry and agriculture with only 48 ha (approximately 40%) of high bog remaining. A small area of Active Raised Bog habitat is present and, based on hydrological modelling, an area of 2.1 ha is considered to be Degraded Raised Bog habitat. In Derrya Bog both the high bog and cutover were planted with a closed canopy plantation of Sitka Spruce (*Picea sitchensis*) in the 1970s. This conifer plantation was clear-felled in 2011 and the drains were blocked with peat dams in 2013. As a consequence, water-levels have risen and some raised bog vegetation has returned to the wetter areas of the high bog. These areas contain Ling Heather, Hare's-tail Cottongrass (*Eriophorum vaginatum*), Bilberry, Purple Moor-grass and Tormentil (*Potentilla erecta*) with the bog moss *Sphagnum palustre* and, in the wet drains, *Sphagnum fallax*. There is some scattered Birch and Sitka Spruce regenerating and these are being controlled. On the cutover bog, once the plantations were clear-felled, the ground layer became dominated by the moss *Hypnum jutlandicum*, with Bracken, Bramble, Holly (*Ilex aquifolium*), Ivy (*Herdera helix*), Bilberry, Creeping Bent-grass (*Agrostis stolonifera*), Tufted Hair-grass (*Deschampsia cespitosa*), Creeping Butter-cup (*Ranunculus repens*), Meadow-sweet (*Filipendula ulmaria*), Soft Rush, Honeysuckle (*Lonicera pericylmenum*) and scattered Birch. There is some Lodgepole Pine (*Pinus contorta*) regeneration, which is being controlled. Most of this area will develop into dry native broadleaf woodland but 4.5 ha may be wet enough to support wet woodland conditions.

A draft restoration plan has been developed for Garriskil Bog to help meet the national conservation objectives for raised bogs. One of the key objectives of that plan is to restore the area of ARB to 84.9 ha. The area of ARB was reported as 50.9 ha during the latest monitoring survey (2014) and it has been concluded that there is 31.6 ha of Degraded Raised Bog (DRB) on the high bog which can be restored to ARB with the appropriate restoration measures. There is also long-term potential for 2.4 ha of bog peat-forming habitats (BPFH) to develop if restoration measures are undertaken on cutover areas. Such detailed objectives have yet to be developed for the Derrya Bog subsite of the SAC but will be produced as part of the restoration plan for the Lough Derravaragh Bog NHA site. Current information suggests that up to 4.5 ha of cutaway could rewet sufficiently to support wet native woodland. Derrya Bog is being actively managed for conservation by the landowner, Coillte, as part of an EU LIFE Project and most of the required restoration measures have already been carried out. An After LIFE management plan is being developed by Coillte for the future conservation management of that part of the SAC and its conservation management should support the retention and redevelopment of Active Raised Bog habitat within Lough Derravaragh Bog NHA.

Garriskil Bog SAC is a site of considerable conservation significance comprising two subsites, Garriskil Bog and Derrya Bog which contain raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. It contains good examples, covering significant areas, of the E.U. Habitats Directive Annex I habitats Active Raised Bog, Degraded Raised Bog (which is being restored to the priority Annex 1 habitat Active raised bog), and Depressions on peat substrates (Rhynchosporion). The site already supports a large area of high quality raised bog microhabitats, which is unusual for a site in the east Midlands, including some very

well developed hummock/hollow complexes and has a large area with the potential for restoration to ARB. Although the Derrya Bog subsite of the SAC is small (22.3 ha) and lacks annex habitats it has been restored and has the potential to support the retention of ARB and the restoration of DRB to ARB in Lough Derravaragh Bog NHA. 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.