



Site Name: Sharavogue Bog SAC

Site Code: 000585

Sharavogue Bog (SAC) comprises 2 raised bog sites. The main area, Sharavogue Bog, which covers 223.43 ha is located about 8 km south of Birr, Co. Offaly, in the Little Brosna Valley. Cangort (Kilfrancis) Bog is a small outlier 4 km further south, and covers 13.12 ha. The Sharavogue section is situated between the River Little Brosna and an elevated ridge of Carboniferous limestone. It includes 137 ha of uncut raised bog and 86.43 ha of surrounding areas which include cutover bog, wet grassland, semi-natural woodland, and an area of wet lagg vegetation in the cutover along the eastern margin of the bog. The eastern edge is bounded by a disused railway embankment, and the western edge by the river. The bog is underlain by low permeability limestone and limestone till. Cangort (Kilfrancis) Bog comprises a subsection of Cangort Bog NHA (site code 000890), which has been restored as part of an EU LIFE project. The site consists of 2.53 ha of high bog and 10.59 ha of cutover, most of which was afforested in the 1970s. It is bounded by open high bog to the west, cutover with scrub to the north and south-west and by agricultural fields to the east and south. In addition to the conifer plantations on the high bog and cutover, deciduous woodland is present on cutover bog at the southern and eastern margins of the site. A tributary of the Little Brosna River to the east and south drains the site. The underlying geology 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) 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) 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 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*).

Sharavogue Bog is one of the few remaining raised bogs in Ireland situated on a floodplain. It has a well-developed dome of uncut peat which is long and relatively narrow. ARB covers 25.8 ha and mainly occurs in central and southern part of the dome, but lacks any extensive areas of quaking hummock/hollow/pools as a result of long-term drying out caused by peat cutting and marginal and river drainage. In addition, drains were inserted across about 60% of the high bog dome in the early 1990s. The bog surface was also been damaged by burning in the past and there are invasive native and non-native tree and shrub species present on the bog dome. Fertilisation of the agricultural fields to the east may be impacting on small parts of the lagg zone. All the drains on the high bog and many of the drains on the south eastern area of the cutover were dammed in the late 1990s as part of an E.U. Cohesion project to restore peat forming conditions on the high bog and cutover. That project was successful in halting and reversing, to some extent, the decline of ARB on the site. All the typical vascular plant species for the ARB habitat such as Heather (*Calluna vulgaris*), Cottongrasses (*Eriophorum angustifolium* and *E. vaginatum*), Deergrass, Bog Asphodel and White Beak-sedge are common and the Midland raised bog indicator species Bog-rosemary (*Andromeda polifolia*) and Cranberry (*Vaccinium oxycoccos*) are present. The dominant micro-topography consists of *Sphagnum* hummocks and hollows. Pools are scarce and *Sphagnum cuspidatum* filled lawn-like depressions are very occasional. The overall *Sphagnum* cover ranges from 51 to 75%. The wettest areas are characterised by the abundance of Cottongrasses (*Eriophorum vaginatum* and *E. angustifolium*). Hummocks consist of *Sphagnum capillifolium*, *S. papillosum*, *S. magellanicum*, *S. tenellum*, *S. subnitens* and very occasionally *S. fuscum* and *S. austinii*. Hollows may contain *S. cuspidatum* and/or *S. tenellum*.

Whilst the surface is generally quite dry, there are some small pools and lawns where Rhynchosporion vegetation is well represented. Here the dominant species are *Sphagnum cuspidatum*, White Beak-sedge, Common Cottongrass (*Eriophorum angustifolium*) and Great Sundew (*Drosera anglica*). The rare Brown Beak-sedge also occurs. Rhynchosporion vegetation is also well-developed in extensive wet cut-away areas which occur along the eastern margins of the high bog. Other plant species of the raised bog which are less common are Bog-rosemary, Cranberry and Round-leaved Sundew (*Drosera rotundifolia*).

Within the cutover zone along the eastern margins of the site there is upwelling of base-rich water and these areas now support carr woodland and calcareous fen vegetation. Areas of wet lagg vegetation such as this are very rare in the country and the lagg system at Sharavogue is one of the best-developed in the country. The rare semi-aquatic plant species Slender Cottongrass (*Eriophorum gracile*) has been recently discovered growing in fen vegetation at this site. This species is legally protected under the Flora (Protection) Order, 2015. The nationally rare shrub Alder Buckthorn (*Frangula alnus*), a Red Data Book species, occurs in dry bog woodland on cut-away. On the western side the site, the vegetation grades from high bog, through fringing woodland, to alluvial wet grassland by the Little Brosna River.

Cangort Bog NHA is a remnant of a larger area of bog much of which has now been cutover and reclaimed for forestry and agriculture, with only 58 ha of high bog remaining. No Active Raised Bog habitat is present but, based on hydrological modelling an area of 6.28 ha is considered to be Degraded Raised Bog habitat. In the SAC section of Cangort Bog NHA — Cangort (Kilfrancis) — the high bog supported an open canopy of small Sitka Spruce (*Picea sitchensis*), which was spreading further onto the open high bog. The afforested areas on the high bog and cutover were clear-felled and the associated drains blocked in 2014. With the clear-felling of all the conifers some vegetation is regenerating with, in the drier areas, Heather, Bramble (*Rubus* spp.), Willow-herb (*Epilobium* spp.), Common Gorse (*Ulex europaeus*), Bracken (*Pteridium aquilinum*), Birch seedlings (*Betula pubescens*) and the moss *Hypnum jutlandicum*. On some of the wettest areas of the cutover, Heather dominates the ground flora with Purple Moor-grass (*Molinia caerulea*), Bracken, Bramble, the lichen *Cladonia portentosa* along with the mosses *Hypnum jutlandicum*, *Sphagnum subnitens* and *Sphagnum palustre*. Saplings of Birch and Willow (*Salix* spp.) are regenerating in these areas and are developing into wet native birch woodland. Adjacent to the southern stream a more mesotrophic wet woodland is developing with Birch dominating accompanied by Ash (*Fraxinus excelsior*), Alder (*Alnus glutinosa*) and Oak (*Quercus* sp.).

A draft restoration plan has been developed for Sharavogue 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 at Sharavogue to 40.9 ha. The area of ARB was reported as 25.8 ha during the latest monitoring survey (2011) and it has been concluded that there is 14.7 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 0.4 ha of bog peat-forming habitats (BPFH) to develop if restoration measures are undertaken on cutover areas. Detailed objectives have yet to be developed for the Cangort (Kilfrancis) subsite of the SAC but will be produced as part of the restoration plan for the Cangort Bog NHA. Current information suggests that up to 1.4 ha of cutaway will rewet sufficiently to support peat forming habitats. The drain blocking on the high bog and cutover will support the eventual restoration of some of the Degraded Raised Bog habitat in the NHA to Active Raised Bog. Cangort (Kilfrancis) 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 redevelopment of Active Raised Bog habitat within Cangort Bog NHA.

Sharavogue Bog SAC is a site of considerable conservation significance comprising two subsites, Sharavogue Bog and Cangort (Kilfrancis) 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 good diversity of raised bog microhabitats, including some hummock/hollow complexes, and rewetted cutover bog. 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. Along the eastern margins of Sharavogue there is upwelling base-rich ground water in the lagg zone which supports carr woodland and calcareous fen vegetation. Areas of wet lagg vegetation such as this are very rare in Western Europe and the lagg system at Sharavogue is one of the best developed in the country. The protected semi-aquatic plant species Slender Cottongrass (*Eriophorum gracile*) is growing in fen vegetation in the lagg zone, while the nationally rare shrub Alder Buckthorn occurs in dry bog woodland on cutaway. Although the Cangort (Kilfrancis) Bog subsite of the SAC is small (13 ha) and currently lacks annex habitats, it has been restored and has the potential to support the retention of DRB in Cangort Bog NHA.