

## SITE NAME: GALWAY BAY COMPLEX

### SITE CODE: 000268

Situated on the west coast of Ireland, this site comprises the inner, shallow part of a large bay which is partially sheltered by the Aran Islands. The Burren karstic limestone fringes the southern sides and extends into the sublittoral. West of Galway city the bedrock geology is granite. There are numerous shallow and intertidal inlets on the eastern and southern sides, notably Muckinish, Aughinish and Kinvarra Bays. A number of small islands composed of glacial deposits are located along the eastern side. These include Eddy Island, Deer Island and Tawin Island. A diverse range of marine, coastal and terrestrial habitats, including several listed on Annex I of the EU Habitats Directive, occur within the site, making the area of high scientific importance.

Galway Bay South holds a very high number of littoral communities (12). They range from rocky terraces, to sandy beaches with rock or sand dunes behind. The intertidal sediments of Galway Bay support good examples of communities that are moderately exposed to wave action. A well-defined talitrid zone in the upper shore gives way to an intertidal, mid-shore zone with sparse epifauna or infauna. On the lower, flat part of the shore, the tubes of the deposit-feeding terebellid worm, *Lanice conchilega*, are common on the surface. Nereid and cirratulid polychaete worms (*Hediste diversicolor*, *Arenicola marina*), small crustaceans and bivalves (*Angulus tenuis*, *Cerastoderma edule* and *Macoma balthica*) are present. The area has the country's only recorded example of the littoral community characterized by *Fucus serratus* with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata. This community has very high species richness (85 species), as do the sublittoral fringe communities on the Finavarra reef (88 species). The rare sea urchin *Paracentrotus lividus* and the foliose red alga *Phyllophora sicula* are present at Finavarra, whereas the red alga *Rhodymenia delicatula* and the rare brown alga, *Ascophyllum nodosum* var. *mackii*, occur in Kinvara and Muckinish Bays. Sublittorally, the area has a number of distinctive and important communities. Of particular note is that Ireland's only reported piddock bed thrives in the shallows of Aughinish Bay. The rare sponge, *Mycale contarenii*, is also found here. There is further interest in an extensive maerl bed of *Phymatolithon calcareum* which occurs in the strong tidal currents of Muckinish Bay. There is also maerl off Finavarra Point and in Kinvara Bay (*Lithothamnion corallioides*, *Lithophyllum dentatum* and *Lithophyllum fasciculatum*). An oyster bed in Kinvara Bay and seagrass (*Zostera* spp.) beds off Finavarra Point are also important features. Other significant habitats which occur include secondary maerl beds and communities strongly influenced by tidal streams.

Salt marshes are frequent within this extensive coastal site, with both Atlantic and Mediterranean marshes well represented. Most of the salt marshes are classified as the bay type, with the substrate being mud or mud/sand. There is one lagoon type and one estuary type. Lagoon salt marshes are the rarest type found in Ireland. The best examples of salt marsh are located in inner Galway bay, east of a line running between Galway city and Kinvara. In this area the coastline is highly indented, thus providing the sheltered conditions necessary for extensive salt marsh development. Common salt marsh species include Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvygrass (*Cochlearia officinalis*), Sea Lavender (*Limonium humile*), Common Saltmarsh-grass (*Puccinellia maritima*), Saltmarsh Rush (*Juncus gerardii*) and Sea Rush (*Juncus maritimus*). On the lower levels of the salt marshes and within pans there occurs Glasswort (*Salicornia europaea* agg.). A noteworthy feature of the salt-marsh habitat within this site is the presence of dwarfed brown seaweeds in the vegetation. These are also known as "turf fucoids" and typical species include *Fucus* spp., *Ascophyllum nodosum* and *Pelvetia canaliculata*. A number of locally rare vascular plant species also grow in salt-marsh areas within the site. These include *Puccinellia distans* and Sea Purslane (*Halimione portulacoides*), which are both relatively rare in the western half of the country.

Shingle and stony beaches can be found throughout the site, with the best examples along the more exposed shores to the south and west of Galway city and to the north and east of Finavarra, Co. Clare. In general, these shingle shorelines are sparsely vegetated and frequently occur interspersed with areas of sandy beach and/or bedrock shore. The associated flora is dominated by

plant species of frequently disturbed maritime habitats. To the south and west of Galway city, typical plants include Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Sea Sandwort (*Honkenya peploides*), Sea Beet (*Beta vulgaris*), Scentsless Mayweed (*Matricaria maritima*), Silverweed (*Potentilla anserina*) and *Atriplex* spp.. Two rare plant species are associated with the habitat: Henbane (*Hyoscyamus niger*), a threatened species listed in the Irish Red Data Book, grows on shingle beach to the south of Lough Atalia; there are also old records for the threatened plant species Sea Kale (*Crambe maritima*).

An excellent range of lagoons of different types, sizes and salinities occurs within the site. This habitat is given priority status on Annex I of the Habitat Directive. One unusual type of lagoon, karstic rock lagoon, is particularly well represented. This type of lagoon is common on the Aran Islands, but on mainland Ireland, all but one are confined to this one site including the best example of all karstic lagoons in the country (Lough Murree). The flora of the habitat is rich and diverse, reflecting the range of salinities in the different lagoons, and typically brackish with two species of Tasselweed (*Ruppia* spp.), two Red Data charophytes *Chara canescens* and *Lamprothamnion papulosum*, and *Chaetomorpha linum* (all lagoonal specialists). The fauna of the lagoon is also rich, diverse and lagoonal. At least 10 lagoonal specialist species were recorded in 1996 and 1998 from the combined habitat of all the lagoons which is one of the highest number for any lagoonal habitat in the country. Many of the species appear to be rare. The lagoons within this site are an excellent representative of the habitat type and of high conservation importance.

Other terrestrial habitats within this site which are of conservation importance include Saw Sedge (*Cladium mariscus*)-dominated fen and Black Bog-rush (*Schoenus nigricans*)-dominated alkaline fen at Oranmore, a turlough of moderate size at Ballinacourty, limestone pavement mainly along the southern shore, dry calcareous grassland with orchids (best examples occurring east of Salthill), wet grassland and an area of deciduous woodland at Barna.

Inner Galway Bay provides extensive good quality habitat for Common Seals, a species listed on Annex II of the EU Habitats Directive. In 1984, this seal colony was one of the top three sites in the country, with over 140 animals recorded. The seals use a range of haul-out sites distributed through the bay - these include inner Oranmore Bay, Rabbit Island, St.Brendan's Island, Tawin Island, Kinvarra Bay, Aughinish Bay and Ballyvaughan. The site provides optimum habitat for Otter.

Galway Bay is a very important ornithological site. The shallow waters provide excellent habitat for Great Northern Divers (35), Black-throated Divers (28), Scaup (39), Long-tailed Duck (27) and Red-breasted Merganser (232). (Figures given are peak average maxima over the 3 winters 1994/95 to 1996/97). All of these populations are of national importance. The intertidal areas and shoreline provides feeding and roosting habitat for wintering waterfowl, with Brent Goose (517) having a population of international importance and a further 11 species having populations of national importance. Four of the regular wintering species are listed on Annex I of the EU Birds Directive - Golden Plover, Bar-tailed Godwit and the two diver species. Breeding birds are also of importance, with significant populations of Sandwich Terns (81 pairs in 1995) and Common Terns (99 pairs in 1995), both also being listed on Annex I of the EU Directive. A large Cormorant colony (c.300 pairs in 1989) occurs on Deer Island.

Fishing and aquaculture are the main commercial activities within the site. A concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities. Reef and sediment communities are vulnerable to disturbance or compaction from tractors accessing oyster trestles. The *Paracentrotus lividus* populations have been shown to be vulnerable to over-fishing. Extraction of maerl in Galway Bay is a threat. Owing to the proximity of Galway city, shoreline and terrestrial habitats are under pressure from urban expansion and recreational activities. Eutrophication is probably affecting some of the lagoons and is a continued threat. Drainage is a general threat to the turlough and fen habitats. Bird populations may be disturbed by aquaculture activities.

This large coastal site is of immense conservation importance, with many habitats listed on Annex I of the EU Habitats Directive, four of which have priority status (lagoon, *Cladium* fen, turlough and

orchid-rich calcareous grassland). The examples of shallow bays, reefs, lagoons and salt marshes are amongst the best in the country. The site supports an important Common Seal colony and a breeding Otter population, both species that are listed on Annex II of the EU Habitats Directive, and six regular Annex I EU Birds Directive species. The site also has four Red Data Book plant species, plus a host of rare or scarce marine and lagoonal animal and plant species.

30.11.2006

## SITE NAME: INNER GALWAY BAY SPA

### SITE CODE: 004031

Galway Bay SPA is a very large, marine-dominated, site situated on the west coast of Ireland. The inner bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poul-na-clough, Aughinish and Kinvarra Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Viséan) limestone platform of the Burren sweeps down to the shore and into the sublittoral. The long shoreline is noted for its diversity, with complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Intertidal sand and mud flats occur around much of the shoreline, with the largest areas being found on the sheltered eastern coast between Oranmore Bay and Kinvarra Bay. A number of small islands composed of glacial deposits are included, such as Deer Island, along with some rocky islets.

The southern part of Galway Bay holds a very high number of littoral communities. They range from rocky terraces to sandy beaches with rock or sand dunes behind. The intertidal sediments of Galway Bay support good examples of communities that are moderately exposed to wave action. A well-defined talitrid zone in the upper shore gives way to an intertidal, mid-shore zone with sparse epifauna or infauna. On the lower, flat part of the shore, the tubes of the deposit-feeding terebellid worm, *Lanice conchilega*, are common on the surface. Nereid and cirratulid polychaete worms (*Hediste diversicolor*, *Arenicola marina*), small crustaceans and bivalves (*Angulus tenuis*, *Cerastoderma edule* and *Macoma balthica*) are present. Sublittorally, the area has a number of distinctive and important communities. Of particular note is that Ireland's only reported piddock bed thrives in the shallows of Aughinish Bay. The rare sponge, *Mycale contarenii*, is also found here. Of additional interest is the presence of an extensive maerl bed of *Phymatolithon calcareum* which occurs in the strong tidal currents of Muckinish Bay. There is also maerl off Finavarra Point and in Kinvarra Bay (*Lithothamnion corallioides*, *Lithophyllum dentatum* and *Lithophyllum fasciculatum*). An oyster bed in Kinvarra Bay and seagrass (*Zostera* spp.) beds off Finavarra Point are also important features.

Salt marshes are frequent within this extensive coastal site, with the best examples located east of a line running between Galway City and Kinvarra. In this area the coastline is highly indented, thus providing the sheltered conditions necessary for extensive salt marsh development. Common salt marsh species present include Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvygrass (*Cochlearia officinalis*), Lax-flowered Sea-lavender (*Limonium humile*), Common Saltmarsh-grass (*Puccinellia maritima*), Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*Juncus maritimus*). On the lower levels of the salt marshes and within pans is found Glasswort (*Salicornia europaea* agg.). Shingle and stony beaches occur throughout the site, with the best examples found along the more exposed shores to the south and west of Galway City and to the north and east of Finavarra. In general, these shingle shorelines are sparsely vegetated, with such species as Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Sea Sandwort (*Honkenya peploides*) and Sea Beet (*Beta vulgaris*).

Galway Bay is one of the most important ornithological sites in the western region. It supports an excellent diversity of wintering wetland birds, with divers, grebes, cormorants, dabbling duck, sea duck and waders all well represented. There are internationally important wintering populations of Great Northern Diver (83) and Brent Goose (676), and nationally important populations of an additional sixteen species, i.e. Black-throated Diver (25), Cormorant (266), Mute Swan (150), Wigeon (1,157), Teal (690), Shoveler (88), Red-breasted Merganser (249), Ringed Plover (335), Golden Plover (2,030), Lapwing (3,969), Dunlin (2,149), Bar-tailed Godwit (447), Curlew (697), Redshank (505), Greenshank (20) and Turnstone (182) – all figures are average peaks for the 5 seasons 1995/96-1999/00. Of note is that the populations of Red-breasted Merganser and Ringed Plover represent 6.7% and 3.3% of the respective national totals. Black-throated Diver is a scarce species in Ireland and the Galway Bay population is the most regular in the country. Other species which occur in notable numbers include Little Grebe (35), Grey Heron (102), Long-tailed Duck (19) and Scaup (40). The bay is an important wintering site for gulls, especially Black-headed Gull

(1,815), Common Gull (1,011) and Herring Gull (216). In addition, the following species also use the site: Red-throated Diver (13), Great Crested Grebe (16), Mallard (200), Shelduck (139), Common Scoter (79), Oystercatcher (575), Grey Plover (60), Black-tailed Godwit (45) and Great Black-backed Gull (124). The site provides both feeding and roost sites for most of the species, though some birds also commute to areas outside of the site. The wintering birds of Galway Bay have been monitored annually since 1980/81.

The site has several important populations of breeding birds, most notably colonies of Sandwich Tern (81 pairs in 1995) and Common Tern (99 pairs in 1995). A large Cormorant colony occurs on Deer Island – this had 205 pairs in 1985 and 300 pairs in 1989.

Inner Galway Bay provides good quality habitat for Common Seal, a species that is listed on Annex II of the E.U. Habitats Directive. In 1984, this seal colony was one of the top three sites in the country, with over 140 animals recorded. The seals use a range of haul-out sites distributed through the bay. The site provides optimum habitat for Otter.

While there are no imminent threats to the birds, a concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities and could affect food stocks of divers, seaduck and other birds. Bird populations may also be disturbed by aquaculture activities. Owing to the proximity of Galway City, shoreline habitats are under pressure from urban expansion and recreational activities.

This large coastal site is of immense ornithological importance, with two wintering species having populations of international importance and a further sixteen species having populations of national importance. The breeding colonies of Sandwich Tern, Common Tern and Cormorant are also of national importance. Also of note is that seven of the regularly occurring species are listed on Annex I of the E.U. Birds Directive, i.e. Red-throated Diver, Black-throated Diver, Great Northern Diver, Golden Plover, Bar-tailed Godwit, Sandwich Tern and Common Tern.

22.2.2005

## SITE NAME: LOUGH CORRIB

## SITE CODE: 000297

Lough Corrib is situated to the north of Galway city and is the second largest lake in Ireland with an area of approximately 18,240 ha (the entire site is 20,556 ha). The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones, to the north. The surrounding lands are mostly pastoral farmland, to the south and east, and bog and heath, to the west and north. Rivers, mainly to the east of the site are included within the cSAC as they are important for Atlantic Salmon. These rivers include the Clare, Grange, Abbert, Sinking, Dalgan and Black to the east, as well as the Cong, Bealanabrack, Failmore, Cornamona, Drimneen and Owenriff to the west. In addition to the rivers and lake basin, adjoining areas of conservation interest, including raised bog, woodland, grassland and limestone pavement, have been incorporated into the site.

This site is of major conservation importance and includes 14 habitats listed on Annex I of the E.U. Habitats Directive. Six of these are priority habitats - petrifying springs, Cladium fen, active raised bog, limestone pavement, bog woodland and orchid-rich calcareous grassland. The other annexed habitats present include hard water lakes, lowland oligotrophic lakes, floating river vegetation, alkaline fens, degraded raised bogs, Rhynchosporion vegetation, Molinia meadows and old Oak woodlands. Species present on the site that are listed on Annex II of this directive are Sea Lamprey, Brook Lamprey, Atlantic Salmon, White-clawed Crayfish, Freshwater Pearl Mussel, Otter, Lesser Horseshoe Bat, Slender Naiad and the moss *Drepanocladus vernicosus*.

The shallow, lime-rich waters of the southern basin of the lake support one of the most extensive beds of Stoneworts (Charophytes) in Ireland, with species such as *Chara aspera*, *C. hispida*, *C. delicatula*, *C. contraria* and *C. desmacantha* mixed with submerged Pondweeds (*Potamogeton perfoliatus*, *P. gramineus* and *P. lucens*), Shoreweed (*Littorella uniflora*) and Water Lobelia (*Lobelia dortmanna*). These *Chara* beds are an important source of food for waterfowl. In contrast, the northern basin contains more oligotrophic and acidic waters, without *Chara* species, but with Shoreweed, Water Lobelia, Pipewort (*Eriocaulon septangulare*), Quillwort (*Isoetes lacustris*), Alternate Water-milfoil (*Myriophyllum alternifolium*) and Slender Naiad (*Najas flexilis*). The last-named is listed under the Flora (Protection) Order, 1999 and is an Annex II species under the EU Habitats Directive.

Large areas of reedswamp vegetation, dominated by varying mixtures of Common Reed (*Phragmites australis*) and Common Club-rush (*Scirpus lacustris*), occur around the margins of the lake. Reedswamp usually grades into species-rich marsh vegetation characterised by Slender Sedge (*Carex lasiocarpa*), Water Mint (*Mentha aquatica*), Water Horsetail (*Equisetum fluviatile*) and Bog Bean (*Menyanthes trifoliata*). Of particular note are the extensive beds of Great Fen-sedge (*Cladium mariscus*) that have developed over the marly peat deposits in sheltered bays, particularly in the south-east corner of the lake. Alkaline fen vegetation is more widespread around the lake margins and includes, amongst the typically diverse range of plants, the Slender Cottongrass (*Eriophorum gracile*), a species protected under the Flora (Protection) Order, 1999. Wet meadows dominated by Purple Moor-grass (*Molinia caerulea*) occur in seasonally flooded areas close to the lake shore. These support species such as Sharp-flowered Rush (*Juncus acutiflorus*), Jointed Rush (*J. articulatus*), Carnation Sedge (*Carex panicea*), Devil's-bit Scabious (*Succisa pratensis*), Creeping Bent (*Agrostis stolonifera*) and Tormentil (*Potentilla erecta*), amongst others.

This large site contains four discrete raised bog areas and is selected for active raised bog, degraded raised bog, Rhynchosporion and bog woodland. 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. 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*).

At Addergoole, on the eastern shores of Lough Corrib, there is an important area of western raised bog. This bog area is one of the most westerly, relatively intact raised bogs in the country. There are also other substantial areas of raised bog along various tributaries of the Corrib in east Co. Galway, namely Slieve Bog, Lough Tee Bog and Killaclogher bog. The active parts of these bogs mostly correspond to the wettest areas, where there are well developed surface features with hummocks, lawns and pools. It is in such areas that Rhynchosporion vegetation is best represented. The dominant species is the aquatic bog moss *Sphagnum cuspidatum*, which is usually accompanied by Bogbean (*Menyanthes trifoliata*), White Beak-sedge, Bog Asphodel, Bog Cotton (*Eriophorum angustifolium*), Bog Sedge (*Carex limosa*) and Great Sundew (*Drosera anglica*). Brown Beak-sedge, a locally rare plant of wet bog pools, has been recorded from a number of the bog areas within the site. At Addergoole a substantial bog lake or soak occurs and this is infilling with large rafts of Rhynchosporion vegetation at present. This area is associated with an important area of wet bog woodland dominated by Downy Birch (*Betula pubescens*).

The largest part of the uncut high bog comprises degraded raised bog. Degraded bog is dominated by a raised bog flora which tends to be rather species-poor because of disturbance and/or drying-out. The most conspicuous vascular plant species are usually Carnation Sedge (*Carex panicea*), Heather (*Calluna vulgaris*), Bog Cotton, Cross-leaved Heath (*Erica tetralix*), Bog Asphodel and Deergrass. Bog Rosemary (*Andromeda polifolia*) and Cranberry (*Vaccinium oxycoccos*), two species indicative of raised bog habitat, are frequent on both degraded and active areas of raised bog. Sphagnum cover is generally low within degraded areas due to a combination of drying-out and frequent burning.

Limestone pavement occurs along much of the shoreline in the lower Corrib basin and supports a rich and diverse flora, including Herb-robert (*Geranium robertianum*), Bloody Crane's-bill (*G. sanguineum*), Carlina Thistle (*Carlina vulgaris*), Spring Gentian (*Gentiana verna*), Wild Thyme (*Thymus praecox*), Rustyback (*Ceterach officinarum*), Wood Sage (*Teucrium scorodonia*), Slender St. John's-wort (*Hypericum pulchrum*), Quaking-grass (*Briza media*) and Blue Moor-grass (*Sesleria albicans*). Areas of Hazel (*Corylus avellana*) scrub occur in association with exposed limestone pavement and these include species such as Hawthorn (*Crataegus monogyna*), Buckthorn (*Rhamnus catharticus*), Spindle (*Euonymus europaeus*) with occasional Juniper (*Juniperus communis*). Three Red Data Book species are also found in association with limestone scrub - Alder Buckthorn (*Frangula alnus*), Shrubby Cinquefoil (*Potentilla fruticosa*) and Wood Bitter-vetch (*Vicia orobus*), the latter is also protected under the Flora (Protection) Order, 1999.

Open areas of orchid-rich calcareous grassland are also found in association with the limestone exposures. These can support a typically rich vegetation, including many orchids such as Pyramidal Orchid (*Anacamptis pyramidalis*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Early-purple Orchid (*Orchis mascula*), Frog Orchid (*Coeloglossum viride*), Fragrant Orchid (*Gymnadenia conopsea*), Marsh Helleborine (*Epipactis palustris*), Greater Butterfly-orchid (*Platanthera chlorantha*) and Irish Lady's-stresses (*Spiranthes romanzoffiana*). The latter is protected under the Flora (Protection) Order, 1999.

The Hill of Doon, located in the north-western corner of the lake, is a fine example of a Sessile Oak (*Quercus petraea*) woodland. The understorey is dominated by Sessile Oak, Holly (*Ilex aquifolium*) and occasional Juniper. There are occasional Yew (*Taxus baccata*) and Ash (*Fraxinus excelsior*) and a well developed ground layer dominated by Bilberry (*Vaccinium myrtillus*), Hard Fern (*Blechnum spicant*) and Wood Rush (*Luzula sylvatica*). Woodland also occurs on some of the islands in the lake.

The lake is rated as an internationally important site for waterfowl. Counts from 1984 to 1987 revealed a mean annual peak total of 19,994 birds. In the past a maximum peak of 38,281 birds was recorded. The lake supports internationally important numbers of Pochard (average peak 8,600) and nationally important numbers of the following species: Coot (average peak 6,756), Mute Swan (average peak 176), Tufted Duck (average peak 1,317), Cormorant (average peak 110) and Greenland White-fronted Goose (average peak 83). The latter species is listed on Annex I of Birds Directive. The Coot population is the largest in the country and populations of Tufted Duck and Pochard are second only to Lough Neagh. 30-41 breeding pairs of Common Scoter occur on the lake (1995 data) as well as breeding populations of Arctic Tern and Common Tern. Other bird species of note recorded from or close to the lake recently include Hen Harrier, Whooper Swan, Golden Plover and Kingfisher. All of these species are listed on Annex I of the E.U. Birds Directive.

Otter and Irish Hare have been recorded regularly within this site. Both of these species are listed in the Red Data Book and are legally protected by the Wildlife Act 1976. Otter is also listed on Annex II of the E.U. Habitats Directive. Lough Corrib is considered one of the best sites in the country for otter, due to the sheer size of the lake and associated rivers and streams and also the generally high quality of the habitats. Atlantic Salmon (*Salmo salar*) use the lake and rivers as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the E.U. Habitats Directive. Lough Corrib is also a well known fishing lake with a very good Trout (*Salmo trutta*) fishery. The lake has a population of Sea Lamprey (*Petromyzon marinus*), a scarce, though probably under-recorded species listed on Annex II of the E.U. Habitats Directive.

A population of Freshwater Pearl-mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs within the site. White-clawed Crayfish (*Austropotamobius pallipes*), also listed on Annex II, is well distributed throughout Lough Corrib and its in-flowing rivers over limestone. A summer roost of Lesser Horseshoe Bat (*Rhinolophus hipposideros*), another Annex II species, occurs within the site - approximately 100 animals were recorded here in 1999.

The main threats to the quality of this site are from water polluting activities resulting from intensification of agricultural activities on the eastern side of the lake, uncontrolled discharge of sewage which is causing localised eutrophication of the lake, and housing and boating development, which is causing the loss of native lakeshore vegetation. The raised bog habitats are susceptible to further degradation and drying out due to drainage and peat cutting and, on occasions, burning. Peat cutting threatens Addergoole Bog and already a substantial area of it has been cut away. Fishing and shooting occur in and around the lake. Introduction of exotic crayfish species or the crayfish fungal plague (*Aphanomyces astaci*) could have a serious impact on the native crayfish population. The bat roost is susceptible to disturbance or development.

Despite this ongoing interference however, Lough Corrib is one the best examples of a large lacustrine catchment system in Ireland, with a range of habitats and species still well represented. The lake itself is internationally important for birds and is designated as a Special Protection Area.

9.12.2005



**SITE NAME: LOUGH CORRIB S.P.A.**

**SITE CODE: 004042**

Lough Corrib is situated to the north of Galway City and is the largest lake in the country. The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones, to the north. The main inflowing rivers are the Black, Clare, Dooghta, Cregg, Owenriff and the channel from Lough Mask. The main outflowing river is the Corrib, which reaches the sea at Galway City. Over the 1994-97 period Lough Corrib was classified as a mesotrophic system, a change from its oligo/mesotrophic status in the 1991-94 period. It retained its mesotrophic status for the 1998-2000 period, with a reduction in phosphorous and planktonic algal growth noted. Overall, the water quality of the Corrib is considered satisfactory.

The shallow, lime-rich waters of the southern basin of the lake support one of the most extensive beds of Stoneworts (Charophytes) in Ireland, with species such as *Chara aspera*, *C. hispida*, *C. delicatula*, *C. contraria* and *C. desmacantha* mixed with submerged Pondweeds (*Potamogeton perfoliatus*, *P. gramineus* and *P. lucens*), Shoreweed (*Littorella uniflora*) and Water Lobelia (*Lobelia dortmanna*). These *Chara* beds are a very important source of food for waterfowl. In contrast, the northern basin contains more oligotrophic and acidic waters, largely lacking Charophyte species, but with such species as Shoreweed, Water Lobelia, Pipewort (*Eriocaulon aquaticum*) and Quillwort (*Isoetes lacustris*). Large areas of reedswamp vegetation, dominated by varying mixtures of Common Reed (*Phragmites australis*) and Common Club-rush (*Scirpus lacustris*), occur around the margins of the lake. Reedswamp usually grades into species-rich marsh vegetation. Of particular note are the extensive beds of Great Fen-sedge (*Cladium mariscus*) that have developed over the marly peat deposits in sheltered bays. Limestone pavement occurs along much of the shoreline in the lower Corrib basin and supports a rich and diverse flora. The lake has numerous islands, from rocky islets to larger islands with grassland or woodland. The surrounding lands are mostly pastoral farmland, to the south and east, and bog and heath, to the west and north.

Lough Corrib is of international importance for wintering Pochard (10,182) - all figures are average peaks for the 5 seasons 1995/96-1999/00. It is one of the top five sites in the country for wintering waterfowl and also qualifies for international importance because it regularly supports well in excess of 20,000 waterfowl. It is the most important site in country for Pochard, Tufted Duck (5,521) and Coot (14,473), supporting 21%, 46% and 13% of the respective national totals. It also has nationally important populations of wintering Mute Swans (182), Gadwall (48), Shoveler (90), Golden Plover (1,727) and Lapwing (2,424). The lake is a traditional site for Greenland White-fronted Goose (62) though nowadays most feeding is on improved grassland outside of the site. Relatively small numbers of Whooper Swan (35) occur, along with Wigeon (528), Teal (77), Mallard (155), Goldeneye (74) and Curlew (114).

Lough Corrib is a traditional breeding site for gulls and terns, with various islands being used for nesting each year. There are important colonies of Common Tern (37 pairs in 1995) and Arctic Terns (60 pairs), both populations being of national importance. The site supports substantial colonies of Black-headed Gull (856 individuals in 1999) and Common Gull (181 pairs in 1999), these representing 11% and 17% of the respective national totals. Lesser Black-backed Gull (51 individuals in 1999) and Great Black-backed Gull (16 individuals in 1999) also breed, with a few pairs of Herring Gull. Considerably higher numbers of breeding gulls occurred in the recent past, as shown by surveys in 1977 and 1993; the reasons for the continued declines are, however, not fully known.

Whilst only colonised in the 1970/80s by nesting Common Scoter, Lough Corrib now supports approximately half of the national population of this rare duck, a Red Data Book species. The population has been stable since the mid-1990s, with 36 pairs recorded in the most recent survey in 1999.

Lough Corrib supports a range of species listed on Annex II of the E.U. Habitats Directive, including Otter, Salmon and Slender Naiad (*Najas flexilis*). The lake is an internationally renowned salmonid fishery.

Any deterioration in water quality of the lake would be of concern for the wintering birds and perhaps the breeding Common Scoter, though the condition of the lake has been satisfactory in recent years. The reasons for the long-term declines in the breeding gull populations since the 1970s are not known and require investigation. Fishing and shooting occur in and around the lake though it is not considered that these are significant threats to the birds.

Lough Corrib is one of the top ornithological sites in the country, and easily qualifies for international importance on the basis of numbers of wintering birds using it. It is also of international importance for its population of Pochard. There are a further seven species of wintering waterfowl that have populations of national importance. Its populations of breeding gulls and terns are also notable, with nationally important numbers of Common Tern, Arctic Tern, Common Gull and Black-headed Gull. The site is now the most important in the country for nesting Common Scoter. It is of note that several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Greenland White-fronted Goose, Golden Plover, Common Tern and Arctic Tern. The site has been relatively well monitored for birds in recent years. Research is required into the reasons for the decline of the breeding gull populations.

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