SITE SYNOPSIS

Site Name: Inishmore Island SAC

Site Code: 000213

Inishmore Island is the largest of the three Aran Islands, situated approximately 8 km off the south coast of Co. Galway. Geologically an extension of the Burren, Co. Clare, the island is formed of Upper Carboniferous limestone strata, interleaved with layers of shale and clay. In places along the coast, spectacular cliffs rise to 90 m. A thin cover of rendzina occurs in pockets between blocks of bare limestone. This soil is combined with a mixture of sand and seaweed to form a partially man-made soil cover, built up over the centuries. The site also includes a large area of marine waters surrounding the island.

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):

[1150] Coastal Lagoons*
[1170] Reefs
[1220] Perennial Vegetation of Stony Banks
[1230] Vegetated Sea Cliffs
[2110] Embryonic Shifting Dunes
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)*
[2170] Dunes with Creeping Willow
[2190] Humid Dune Slacks
[21A0] Machairs*
[4030] Dry Heath
[4060] Alpine and Subalpine Heaths
[6210] Orchid-rich Calcareous Grassland*
[6510] Lowland Hay Meadows
[8240] Limestone Pavement*
[8330] Sea Caves
[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)
[1351] Harbour Porpoise (*Phocoena phocoena*)

Inishmore has many good examples of submerged reef communities that are extremely exposed to wave action. On the infralittoral reef are two exceptional communities. Ireland's only recorded example of a population of sublittoral Purple Sea Urchins (*Paracentrotus lividus*) is on the west of the island, while at the reef in

Blind Sound, is found Ireland's best example of an extremely exposed, shallow, infralittoral community that is dominated by a forest of the brown seaweed, *Alaria esculenta*, with a red seaweed and anemone turf. Rare species are present in the infralittoral reef community, including soft corals, sea fans and anemones. In deeper water, there are many unusual and fragile circalittoral reef communities. Communities that are characterized by the rare sea fan, *Eunicella verrucosa*, are widespread and species-rich despite their fragility. A number of other notable circalittoral species are found, including sponges, hydroids, nudibranchs, soft corals and ascidians. Large submerged marine caves on the south-east coast are unusually species-rich (76 species recorded) and are characterized by a diverse fauna of sponges, hydroids, bryozoans, soft corals, anemones, nudibranchs, echinoderms and ascidians. Some of the caves extend back as far as 20 to 30 m. They are probably the best known sea caves in Ireland.

Limestone pavement and its associated plant communities dominate the upland area in the south of the island. The limestone pavement includes smooth-blocky and shattered types. The bare pavement is interspersed with fine examples of species-rich, dry calcareous grasslands. Dry heath, alpine heath and lowland hay meadows are additional habitats which occur on Inishmore.

A network of small, stone-walled fields dissect the island. Many fields enclose areas of limestone pavement and/or fine examples of species-rich, dry calcareous grasslands. Common species include Blue Moor-grass (*Sesleria albicans*), eyebrights (*Euphrasia* spp.), Wood Sage (*Teucrium scorodonia*), Carline Thistle (*Carlina vulgaris*) and Burnet Rose (*Rosa pimpinellifolia*), along with Knapweeds (*Centaurea nigra* and *C. scabiosa*), Orchids, Bloody Crane's-bill (*Geranium sanguineum*) and Spring Gentian (*Gentiana verna*). Two Red Data Book plant species have been recorded, Pyramidal Bugle (*Ajuga pyramidalis*) and Wood Small-reed (*Calamagrostis epigejos*). The latter species is legally protected under the Flora (Protection) Order, 1999.

Dry limestone heath has developed in places, with Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Purple Moor-grass (*Molinia caerulea*) and Black Bog-rush (*Schoenus nigricans*). Hoary Rock-rose (*Helianthemum canum*), a species listed in the Irish Red Data Book, occurs regularly throughout the dry heath and alpine heath habitats on the island. Other species found commonly in the heathy areas include Juniper (*Juniperus communis*), Blue Moor-grass, Bloody Crane's-bill, Quaking-grass (*Briza media*), Oxeye Daisy (*Leucanthemum vulgare*) and Wild Madder (*Rubia peregrina*).

A range of coastal habitats, some of which are listed on Annex I of the E.U. Habitats Directive, occur around the island. Sea cliffs occur along much of the southern coast of Inishmore and reach in excess of 80 m at the south-west end. The cliffs are mostly sheer and very exposed to the force of the Atlantic Ocean. They support a typical cliff flora, including the scarce species Roseroot (*Rhodiola rosea*). Inishmore also supports a variety of karstic lagoons, a type which is believed to be rare in Europe. All are in a natural state and of good quality. Loch Phort Chorrúch and Loch Dearg are good examples of karstic lagoons with cobble barriers. Loch an Chara, in particular, is a

good example of a karstic saline lagoon with underground connections to the sea. It behaves almost like a 'tidal turlough'. The flora is typically lagoonal with three lagoonal specialists. The fauna is not rich but comprises a high number of lagoonal specialists, including the rare corixid species *Sigara selecta* (Order Hemiptera).

Machair is a form of coastal grassland which is characterised by a species-rich, dry calcareous grassland, with a short turf and a low abundance of sand-binding species such as Marram (*Ammophila arenaria*). The coastal habitats of Inishmore support a range of rare plant species. Purple Milk-vetch (*Astragalus danicus*) grows on machair and sandy places close to the sea. It is confined in Ireland to Inishmore and Inishmaan and is legally protected under the Flora (Protection) Order, 1999. Sea-kale (*Crambe maritima*) occurs on coastal sands and shingle around the island; Hairy Violet (*Viola hirta*) and Bee Orchid (*Ophrys apifera*) can be found among the coastal grasslands. All three species are listed in the Irish Red Data Book, and Hairy Violet is legally protected under the Flora (Protection) Order, 1999.

A number of sand dune habitats are found at this site, including embryonic dunes, Marram dunes, Fixed dunes, dunes with Creeping Willow (*Salix repens*) and dune slacks. Sand Couch (*Elymus farctus*) typically dominates the embryonic dunes, with accompanying species such as Sandwort (*Honkenya peploides*), Hairy Rock-cress (*Arabis hirsuta*), Sea Spurge (*Euphorbia paralias*), Sea-holly (*Eryngium maritimum*) and Sea Bindweed (*Calystegia soldanella*). Marram (*Ammophila arenaria*) dominates the Marram, or white, dunes, with some of the species listed above also being found. Additional important species in the fixed dunes include Red Fescue (*Festuca rubra*) and a number of compositae; Groundsel (*Senecio vulgaris*), Common Ragwort (*Senecio jacobaea*) and Dandelion (*Taraxacum* agg.). Rarer species, also linked to the fixed dunes, include Purple Milk-vetch, Autumn Lady's-tresses (*Spiranthes spiralis*), Bee Orchid (*Ophrys apifera*) and Dodder (*Cuscuta epithymum*). In the dune slacks, Creeping Willow, Kidney Vetch (*Anthyllis vulneraria*) and Common Bird's-foot-trefoil (*Lotus corniculatus*) are all common.

On Inishmore, the vegetation of stony banks consists of such species as the rare Red Data Book species Sea-kale, along with Sea Couch, Sea Mayweed (*Matricaria maritima*), Spear-leaved Orache (*Atriplex prostrata*), and Sea Beet (*Beta vulgaris* subsp. *maritima*).

Traditional farming practices, in the form of rye cultivation for thatching, has maintained suitable habitat for a number of Rare and threatened arable weeds. Darnel (*Lolium temulentum*), Smooth Brome (*Bromus racemosus*), Cornflower (*Centaurea cyanus*) and Bristle Oat (*Avena strigosa*) all occur on Inishmore. All four species are listed in the Irish Red Data Book and, prior to their discovery on the Aran Islands, some of these species were thought to have been extinct in Ireland. These lowland hay meadows are excellent examples of this rare and floristically diverse habitat.

The birdlife of Inishmore is considered to be of international significance, due to the presence of significant numbers of bird species listed under Annex I of the E.U. Birds

Directive. Chough, Little Tern, Arctic Tern and Peregrine Falcon all breed here. Additional bird species on Inishmore include Merlin, Kestrel, Sparrowhawk, Linnet and Goldfinch. Along the western coastline, cliffs provide excellent nesting sites for Guillemot, Fulmar, Razorbill, Shag, Herring Gull, Great Black-backed Gull and Kittiwake.

A colony of Common Seals is occasionally seen, resting on the island's shores. This species is listed under Annex II of the E.U. Habitats Directive.

The mollusc, *Vertigo angustior*, a species that is listed on Annex II of the E.U. Habitats Directive, occurs at three different locations within the site, two on dune and one on maritime grass, the latter an unusual habitat for the species. This is the only known island population of this rare snail.

Most of the island is grazed by cattle and sheep and, in places, goats. Agricultural intensity is relatively higher here than on the other two Aran Islands. Parts of the site have been damaged by over-grazing and agricultural improvement. Elsewhere, the abandonment of farming, in favour of tourism and related enterprises, has resulted in the increase in scrub and particularly Bramble (*Rubus fruticosus* agg.) thickets. This is at the expense of species-rich grasslands. An increase in leisure activities, in particular scrambling and walking, on the Marram dunes at the east of the island, has resulted in damage to this habitat. Maintenance of traditional farming practices, which include winter grazing, absence of fertilisers and the cultivation of rye for thatching, is vital to preserve the species-richness and high diversity of the island flora. Development plans for tourism and amenity require close monitoring, to safeguard the wildlife and scientific value of this unique environment.

Inishmore is of considerable scientific interest primarily for the wide range of good quality habitats which occur, and the floristic richness of many of these habitats. The island supports an impressive array of rare and threatened plant species, and it also provides excellent habitat for several bird species. The cultural heritage of Inishmore (and in particular the continuation of traditional, low-intensity farming practices) is intrinsically linked with its scientific interest. The island is also of high scenic and amenity value.