SITE SYNOPSIS

Site Name: Rathlin O'Birne Island SAC

Site Code: 000181

Rathlin O'Birne Island is situated on the north-west corner of Donegal Bay, approximately 2 km from the mainland at Malin Beg. Co. Donegal. The bedrock is mostly granite, which rises steeply off the sea floor (charted as 50 – 80 m just offshore). The island is mostly low-lying, though rises to 26 m above sea level at the southern end where some cliffs occur. This wind-swept island, which is fully exposed to extremely powerful wave action from the Atlantic on its south and west coasts, is dominated by a maritime grass sward. Several small islets occur off the western shore. The island is uninhabited and has an automated lighthouse. The site is of particular importance for the presence of reefs and a large area of the surrounding seas is included in the site.

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):

[1170] Reefs

The shallow subtidal reef communities of Rathlin O'Birne on bedrock and boulder reefs are excellent examples of those that are very exposed or extremely exposed to wave action. The brown seaweed, *Alaria esculenta*, which is characteristic of wave-exposed communities, dominates the fringe between the intertidal and subtidal areas. It occurs with *Laminaria digitata*, coralline crusts and red algal species, such as *Corallina officinalis* and *Membranoptera alata*. The star fish *Asterias rubens* is common.

In surge-swept gullies on the west of the island, well lit upper vertical walls are dominated by red algae whereas darker upper vertical walls have fewer algae and more sponges and anemones. Deeper vertical walls are dominated by anemones and hydroids.

Kelp forests of *Laminaria hyperborea* occur on exposed bedrock deeper than 10 m, and the anemone *Phellia gausapata,* which is characteristic of extremely exposed headlands, occurs amongst the kelp to the south of the island. The feather star *Antedon bifida* is frequent in the kelp forests. The kelp becomes sparse in water deeper than 20 m and species richness is high (79 species at the north-west tip of the island). Where the reef is composed of boulders, hydroids (*Obelia geniculata*) and bryozoans, including the rose 'coral' *Pentapora foliacea* are common and the kelp parkland overlies dense red algal cover. At 29 m BCD, the kelp thins out. Red algae and the brown algae *Dictyota dichotoma* and *Dictyopteris membranacea* are frequent.

The jewel anemone, *Corynactis viridis*, and plumose anemone, *Metridium senile*, are characteristic.

The recently described red alga *Schmitzia hiscockiana* occurs in a shallow gully that bisects the island; the red alga *Drachiella spectabilis* occurs at several sites. *Carpomitra costata,* an uncommon species, generally only found in clean Atlantic waters, is also present.

The reefs in deeper water with animal dominated communities within this area range in depth from 30-42 m BCD. They are represented by bedrock that is extremely exposed to wave action and with very weak to negligible tidal streams. The steeply sloping and vertical bedrock supports the jewel anemone *Corynactis viridis*, the sea anemone *Metridium senile* and turfs of sponges, hydroids and ascidians, as well as the rare sea slug *Cuthona pustulata*. The feather star, *Antedon bifida*, is frequent. In one area the bivalve mollusc *Musculus discors* was abundant. This is an uncommon community.

The more gently sloping bedrock is characterised by pink coralline crusts, the bryozoan *Parasmittina trispinosa* and the cup coral *Caryophyllia smithi*. In deeper water the sponges *Axinella* spp., *Phakellia ventilabrum*, *Stelligera* spp. and *Raspailia ramose* occur; so too does the sea fan, *Eunicella verrucosa,* the anthozoan *Aclyonium glomeratum* and the fragile bryozoans, *Pentapora folacea* and *Porella compressa*. The rare sea slug *Aldisa zetlandica* was recorded in this community. Rathlin O'Birne appears to be the northern limit for *E. verrucosa* and *Tritonia nilsodhneri*. The red algae *Drachiella spectabilis* was also found down to 30 m, an indication of very clear water conditions.

The sublittoral sediment in this area is composed of pockets of coarse gravel in between rocky reefs. It is characterised by the polychaete worm *Chaetopterus variopedatus* and the star fish *Astropecten irregularis* and *Luidia ciliaris*; the sea anemone *Peachia cylindrica* is also present.

Rathlin O'Birne is an important site for breeding seabirds, with probably the largest colony of Storm Petrels in the north-west (approx. 1,000 pairs in 1987). This species is listed in Annex I of the E.U. Birds Directive. Also listed is the very rare Leach's Petrel, and this species has been recorded (15 individuals in 1987) and may breed here. Other breeding seabirds include Shag (10 pairs in 1987), Lesser Black-backed Gull (7 pairs in 1987), Herring Gull (>460 pairs in 1987), Great Black-backed Gull (45-60 pairs in 1987) and Black Guillemot (16 individuals in 1987). Terns, Common or Arctic, have bred in the past, with 15 pairs in 1984. The island regularly supports a nationally important population of Barnacle Goose in winter, with 345 in spring 1993 and 226 birds in spring 1994.

This site is of high conservation interest owing to the presence of excellent examples of reef communities. It supports nationally important populations of at least two bird species that are listed on Annex I of the E.U. Birds Directive.