

Site Name: Roaringwater Bay and Islands SAC

Site Code: 000101

Roaringwater Bay, Co. Cork, is a wide, shallow bay located on the south-west coast of Ireland. The SAC includes the immediate coastline on the mainland from Long Island to Baltimore, together with the whole bay and most of the islands. Some of the larger islands included are Sherkin Island, Cape Clear Island, Heir Island, Horse Island, Castle Island and Long Island. The bedrock in the area is composed of a series of Devonian Old Red Sandstone reefs that run parallel to troughs of Devonian Carboniferous marine clastics in a north-east/south-west direction. These reefs emerge to form the islands on the south side of the bay and within the bay. Generally the coast is low-lying but the southern edge rises, in line with the hills behind Baltimore, to culminate in a summit of 160 m on Cape Clear.

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):

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| [1160] Large Shallow Inlets and Bays |
| [1170] Reefs |
| [1230] Vegetated Sea Cliffs |
| [4030] Dry Heath |
| [8330] Sea Caves |
| [1351] Harbour Porpoise (<i>Phocoena phocoena</i>) |
| [1355] Otter (<i>Lutra lutra</i>) |
| [1364] Grey Seal (<i>Halichoerus grypus</i>) |

The bay itself has a wide variety of reef and sediment habitats, subject to a range of wave exposures and tidal currents. Within the habitat 'large shallow inlets and bays' are found the following communities: muddy sand with bivalves and polychaetes complex, mixed sediment community complex, and shallow sand-mud community complex. Also found are marine caves and reefs. The shores of the bay range from the exposed, rocky shores of South Sherkin Island, to the sheltered rock, sand and mud communities of the Inner Bay and estuarine communities where the rivers enter the bay. The shallow subtidal reefs have good examples of kelp forest community grazed by the sea urchin *Echinus esculentus*. The animal dominated reefs includes the feather star *Antedon bifida* community, the hydroid *Sertularia argentia* and *Hydralmania falcata* community, and sponge and ascidian communities. Some of these are species-rich and at least two rare species occur; the sponge *Tethyspira spinosa* and the rare red alga *Phyllophora sicula*. The scarce hydroid *Tamarisca tamarisca* occurs at a number of sites within the bay. These communities are typical of very sheltered areas

with some current present. The cave community on Sherkin Island is home to the rare filamentous red alga, *Pterosiphonia pennata*. The sedimentary communities in Roaringwater Bay are exceptional. Of particular interest is the extensive bed of the calcareous free living red alga *Lithophyllum dentatum*, (generally termed maerl, but may be locally known as 'coral'), which is the largest in the country for this species. This bed typically contains specimens that are very large and uniquely flattened in form, with the rare filamentous red alga *Spyridia filimentosa*. *Lithophyllum dentatum* is only known from two other sites. There are also other maerl communities and several Eelgrass (*Zostera marina*) beds which may co-occur with a particularly good example in Horseshoe Bay, Sherkin Island.

The terrestrial habitats at this site are also of conservation interest and include good examples of two habitats listed under the E.U. Habitats Directive, i.e. dry heath and sea cliffs. The coastal heath vegetation is typified by an abundance of Western Gorse (*Ulex gallii*), Heather (*Calluna vulgaris*) and Bell Heather (*Erica cinerea*). This is regularly burnt in most places so that there are clearings where grasses and herbs such as Wood Sage (*Teucrium scorodonia*), Common Dog-violet (*Viola riviniana*) and Tormentil (*Potentilla erecta*) have a temporary rise to prominence before the shrubs grow again. Outcrops of rock bring variety into the heath and these areas are sometimes host to interesting species. These include many plants of southern distribution, for example the rare Red Data Book species Bird's-foot (*Ornithopus perpusillus*), Spotted Rock-rose (*Tuberaria guttata*), Hairy Bird's-foot-trefoil (*Lotus subbiflorus*), Pale Dog-violet (*Viola lactea*) and Lanceolate Spleenwort (*Asplenium billotii*). The latter three on this list are also protected under the Flora (Protection) Order, 1999. In addition there is a small amount of Deptford Pink (*Dianthus armeria*), one of only a very small number of places it grows in Ireland, though it may have been introduced here, as at other sites. Flushes and damp places through this vegetation support some interesting liverworts, as well as Bird's-foot Clover (*Trifolium ornithopodioides*) and the special annual plants of the south-west, Chaffweed (*Anagallis minima*), Yellow Centaury (*Cicendia filiformis*) and Allseed (*Radiola linoides*). Chamomile (*Chamaemelum nobile*) is also common, with Yellow Bartsia (*Parentucellia viscosa*) somewhat less so. Most of the species mentioned above have restricted distributions in Ireland.

High rocky sea cliffs are confined to the southern and south-eastern sides of Clear Island and Sherkin Island. The steep areas of rocky cliffs are generally between 30 and 60 m in height, but more sloping ground with a heath covering extends to 120 m on Clear Island and to 100 m on Sherkin Island. Low, gently sloping cliffs occur elsewhere on some of the islands and on coastal sections of the mainland (mostly less than 30 m). The cliffs have typical maritime vegetation, with Thrift (*Armeria maritima*), scurvygrass (*Cochlearia* spp.), Red Fescue (*Festuca rubra*), Sea Campion (*Silene vulgaris* subsp. *maritima*), plantains (*Plantago maritima* and *P. coronopus*), Rock Samphire (*Crithmum maritimum*), Tree-mallow (*Lavatera arborea*) and, locally, Dotted Sedge (*Carex punctata*) and the Slender Spike-rush (*Eleocharis uniglumis*).

Two Red Data Book plants, Little-Robin (*Geranium purpureum*) and Sea Pea (*Lathyrus japonicus* subsp. *maritimus*), occur rarely on shingle beaches within the site, while

Ray's Knotgrass (*Polygonum oxyspermum* subsp. *raii*) is more widespread. Sea Pea is listed in the Flora (Protection) Order, 1999. Several streams have been ponded by such beaches to create marshes of Common Reed (*Phragmites australis*) where Marsh Pennywort (*Hydrocotyle vulgaris*), Marsh Cinquefoil (*Potentilla palustris*) and marsh-orchids (*Dactylorhiza majalis* and *D. incarnata*) are frequent, together with some Creeping Willow (*Salix repens*) and Gypsywort (*Lycopus europaeus*). On Clear Island a similar marsh has developed into a bog with abundant bog mosses (*Sphagnum* spp.), Bogbean (*Menyanthes trifoliata*) and Marsh St John's-wort (*Hypericum elodes*). Sand is a notable feature of Sherkin Island and occurs to a small extent elsewhere. Wild Radish (*Raphanus raphanistrum*), Crested Hair-grass (*Koeleria macrantha*) and Sea Stork's-bill (*Erodium maritimum*) grow in this habitat, with a little Hare's-foot Clover (*Trifolium arvense*), Knotted Clover (*T. striatum*) and the Red Data Book species Lesser Centaury (*Centaureum pulchellum*). The last species is also listed under the Flora (Protection) Order, 1999.

Otter, Grey Seal and Harbour Porpoise, all mammal species listed on Annex II of the E.U. Habitats Directive, occur within the site. Grey Seal is present at the site throughout the year during all aspects of its annual life cycle which includes breeding, moulting, non-breeding, foraging and resting phases. A minimum population for all ages was estimated at 116-149 in 2005. Roaringwater Bay may be one of the most important sites in Ireland for Harbour Porpoise. Harbour Porpoise in Irish waters are largely resident and observations have shown that they are regular in the waters of Roaringwater Bay. Most observations are in the autumn, when more than 100 individuals have been recorded in a day. The population has been estimated (in 2008) to be 117-201 individuals. The main threat to Harbour Porpoise is incidental capture in fishery gear, especially set gillnets but also drift nets.

Seabirds breed on some of the islands in the bay. A survey on Clear Island in 1995 reported the following species: Fulmar - 716 pairs, Shag - 59 pairs, Lesser Black-backed Gull - 160 pairs, Herring Gull - 51 pairs, Great Black-backed Gull - 50 pairs, Guillemot - 42 individuals and Razorbill - 31 individuals. Cormorants breed on Calf Island, Carrigmore and The Catalogues (approx. 100 pairs in mid 1980s), and there is a scattering of gulls on several other islands. Roaringwater Bay has a nationally important population of Black Guillemot, with 198 individuals counted in 1999. Terns (Arctic/Common) bred within the site in the 1980s, with a large colony of 122 pairs on Carrigvish Rock in 1984. Such large numbers, however, have not been seen since and there have been no records of breeding in recent years. The site holds a very important concentration of Chough (33 pairs in 1992), as well as several pairs of Peregrine Falcon. Both of these species are listed on Annex I of the E.U. Birds Directive. Clear Island has Ireland's only manned bird observatory (established in 1959) and there is a marine research station on Sherkin Island.

In conclusion, Roaringwater Bay and Islands is a site of exceptional conservation importance, supporting diverse marine and terrestrial habitats, five of which are listed under the E.U. Habitats Directive. The site is also notable for the presence of Otter, Grey Seal and Harbour Porpoise, and supports important sea bird colonies.

Further, the site supports a large number of plants which are rare or scarce in Ireland, a number of which are listed under the Flora (Protection) Order, 1999.