

**Site Name: Lough Cahasy, Lough Baun and Roonah Lough SAC**

**Site Code: 001529**

This site comprises a chain of wetlands on the south Mayo coast, 1.5 km south of Roonah Quay and 7 km south-west of Louisburgh. A sandy beach forms the shoreline, with occasional outcrops of exposed bedrock. Shingle and boulder bars are also present. Behind these lie sand hills and machair, three lagoon-type lakes and their associated riverine channels.

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*
[1220] Perennial Vegetation of Stony Banks
[2110] Embryonic Shifting Dunes
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)*
[21A0] Machairs*

The largest of the lakes at this site, Roonah Lough, is a natural sedimentary lagoon, separated from the sea by a low barrier of shingle and sand. The bed of the lake is composed predominantly of sand, with more silt and unconsolidated peat at the eastern end. The Carrownisky River is the main freshwater inflow and drains into the lagoon from the north. A smaller stream, the Bunleemshough River, flows in from the south-east. An outlet to the sea runs through the barrier about midway along the western shore. The outlet is natural, although re-located; a road now runs along the old channel. Salinity levels in lagoons tend to vary considerably, depending on precipitation and tides. Sea water appears to enter Roonah Lough at spring tides only. The lake also receives large volumes of freshwater from the rivers and run-off from surrounding land, and so salinity levels here are likely to be relatively low throughout the year, with a tendency to increase in summer.

The vegetation in and around Roonah Lough reflects the combination of sea- and fresh-water influences. Open water is sparsely colonised by Beaked Tasselweed (*Ruppia maritima*), stoneworts (*Chara globularis* var. *virgata* and var. *annulata*) and filamentous algae. Fringing the northern lakeshore is a community dominated by Common Spike-rush (*Eleocharis palustris*) and Creeping Bent (*Agrostis stolonifera*), with occasional Sea-milkwort (*Glaux maritima*). At more sheltered locations, around the southern lakeshore, stands of Sea Club-rush (*Scirpus maritimus*) and Grey Club-

rush (*Scirpus lacustris* subsp. *tabernaemontani*) occur, which are indicative of brackish conditions.

Roonah Lough supports a range of invertebrates which includes a mixture of species of brackish and freshwater conditions. Two insects (*Sigara stagnalis*, Order Hemiptera, and *Bembidion bipunctatum*, Order Coleoptera) which occur here are considered to be "specialist lagoonal species", in that they tend to occur specifically in habitats which are associated with lagoons.

Lough Cahasy and Lough Baun are similar to Roonah Lough in their topography and geomorphology, but are classified as freshwater lakes which may have a brackish character at times. Both have large reedbeds dominated by Common Reed (*Phragmites australis*). Shoreline vegetation generally grades into wet grassland, dominated by Creeping Bent and Silverweed (*Potentilla anserina*), with Soft Rush (*Juncus effusus*) and Yellow Iris (*Iris pseudacorus*).

Sand dunes are scattered throughout the site. Embryonic dunes, characterised by the presence of Sand Couch (*Elytrigia juncea*), occur along the front of Lough Cahasy but are not extensively developed, a not uncommon feature along the western seaboard, where the coastal dynamics of the Atlantic prevents the establishment of foredune communities. The occurrence of large accumulations of sandy substrates at Lough Cahasy is characterised by fixed dune grassland. Most of the fixed dunes are fenced off and display the impacts of agricultural management. While small patches of short sward occur, the vegetation is predominantly rank in nature and is characterised by Marram (*Ammophila arenaria*). Large areas of the fixed dunes are grazed by cattle, sheep and horses. Other typical species include Red Fescue (*Festuca rubra*), Lady's Bedstraw (*Galium verum*), White Clover (*Trifolium repens*), Common bird's-foot-trefoil (*Lotus corniculatus*), Ribwort plantain (*Plantago lanceolata*), Common mouse-ear (*Cerastium fontanum*) and Dandelion (*Taraxacum* agg.). Small areas of machair also occur, largely concentrated along the southern end of the site around Lough Cahasy itself.

An extensive and high boulder-shingle ridge occurs along most of the shoreline of the site. The total length is approximately 3.5 km, though the width varies. The vegetation of the boulder ridge is naturally species-poor owing to the exposure. Characteristic species such as Sea-holly (*Eryngium maritimum*) are known to occur. The Red Data Book species Oysterplant (*Mertensia maritima*), which is covered by the Flora (Protection) Order, 2015 and is typical of shingle habitat, has also been recorded here. Its main range in Ireland is along the northern and north-eastern coasts, with extant populations only known from a few sites. Below the boulder-shingle ridge is a fine sandy beach.

The wetlands at this site provide habitat for wintering waterfowl, and for wildfowl and waders at other times of the year. Whooper Swans occur regularly on the lakes, with numbers between 20 and 40 present in the winters of 1993/94 - 1995/96. The following populations of birds were recorded from Roonah Lough in a single count

in January 1994: Brent Goose (10), Mute Swan (7), Shelduck (13), Teal (40), Mallard (15), Common Gull (20), Great Black-backed Gull (20) and Curlew (110).

Agriculture around the site is relatively intensive for the area, and fertiliser applications are likely to contribute to high nutrient levels in the lakes. However, in Roonah Lough susceptibility to eutrophication is reduced by the large amounts of freshwater which flushes through the lake. The site is used for cattle grazing. Grazing is generally considered to be a positive influence in coastal sites, in that the correct level of grazing contributes to the maintenance of open, species-rich swards. However, the presence of too many grazers can cause damage due to the destruction of the vegetation cover, the exacerbation of erosion of beach material, poaching and manuring of lakeshore communities. A major threat to coastal habitats is the removal of beach material (sand and shingle). Amenity developments can also cause damage and careful planning of sewage treatment, for example, is required.

This site is of ecological significance primarily for its lagoon habitat. The whole coastline, from Killary Harbour to Roonah Point, consists of a complex and dynamic barrier system of dunes and shingle bars, with lagoons of various sizes and salinities. Lagoons are naturally dynamic habitats, subject to changes in sedimentation patterns. They are increasingly rare in a European context, due to reclamation and development, and for this reason receive priority status on Annex I of the E.U. Habitats Directive. The range of other coastal habitats present, including others which are listed on Annex I, add diversity to this site, while the wetlands also provide habitat for waterfowl.