

LOUGH CARRA



Lough Carra is a mostly shallow, hard water lake with a surface area of around 4,000 acres (1,560 hectares). Contrary to details given in several publications, it is not predominantly spring-fed, but rather acquires most of its water via the feeder streams that flow in at various points around its perimeter. It seems likely that the myth of being mainly spring-fed originated many years ago in early publications and has been perpetuated through repetition without verification. Data from the EPA show that over 90% of the water in the lake (perhaps as much as 95%) derives directly from the inflowing streams which drain a low-lying catchment of about 114 km². Much of this catchment is agricultural land used mostly for grazing livestock (cattle and sheep) and winter fodder production (mostly silage with some hay).

The maximum depth of water is around 19 metres (60 feet), but the majority of the lake is shallow with a mean depth of around 1.75 metres. In recent years, eutrophication has resulted in a decline in the clarity of the water, but previously most of the lakebed was visible as the water was so clear. The deep areas are few and found in isolated locations: for example in the bay known as “black hole” southeast of the Doon peninsula; south of Castle Carra; and south of Otter Point.



The lakebed consists of marl (calcareous deposits) and this gives the lake its characteristic appearance, although in recent years the increasing pollution has resulted in the colour becoming much greener from the algal growth. The water is alkaline and, contrary to the NPWS SPA site synopsis, was naturally oligotrophic, i.e. nutrient-poor. It is **now** mesotrophic with a higher level of nutrients principally as a result of intensification of agriculture in the catchment. This issue is addressed in some detail elsewhere in this website (see the sections Aquatic Ecology and Catchment Land Use).

Because the lake was naturally oligotrophic, the growth of aquatic macrophytes (“water weeds”) is not very prolific, although there is a good variety of these plants present. Much of the growth is of charophytes, stoneworts of the genus *Chara*, which give the lake much of its characteristic ecology and conservation value as, perhaps, the best example of its type in Ireland.



The lake is situated in the Carboniferous limestone region on compact, crystalline limestone with an overburden of undulating clays and gravels. Most of the catchment is fairly flat terrain with low-lying drumlins. The water table is close to the surface and in addition to the improved agricultural land, there are fens, marshes, turloughs and cutaway peat bogs.

The shoreline is extremely convoluted, with many small bays, inlets and peninsulas. This results in the lakeshore having a total length of approximately 69 kilometres. Much of this shoreline is fringed with reedbeds (*Phragmites australis*) and there are also many stands of the true bulrush (*Scirpus lacustris*). As a result of drainage work carried out in the catchment (in the 1850s and more recently), the lake level is now slightly lower than historically. Current levels are controlled to some extent by the weir and sluice on the Keel River which empties the lake into Lough Mask, but vary nonetheless by up to about 0.7 m.

There are around 73 islands scattered throughout the lake, varying in size from less than 50 m² up to just over 1 ha (2.5 acres). In recent decades, the vegetation on these islands has been left more or less untouched and much of it is developing into scrubby, deciduous woodland. Previously, some of the islands were grazed by livestock taken across the water for periods in the summer.



The vegetation of the land around the lake is very varied, with mature deciduous woodland, conifer plantation, mixed woodland, scrub, grassland, marsh, fen, peat bog and heath. Further details are available elsewhere on this website (“Habitats” and “Flora”).

The climate is mild and relatively humid. Mean temperatures varying from around 4°C in February to about 14°C in July and August. Annual rainfall is usually about 1,100 mm to 1,200 mm (ranging from around 1,000 mm to 1,600 mm) and fairly evenly spread throughout the year, but with the winter months usually the wettest.