MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Lough Mask**
Other names used for site	Loch Measca
IGH THEME	**IGH14 Fluvial and Lacustrine Geomorphology**
TOWNLAND(S)	**Numerous**
NEAREST TOWN/VILLAGE	**Ballinrobe; Cong; Tourmakeady; Partry**
SIX INCH MAP NUMBER	**99, 109, 110, 116, 117, 118, 120, 121**
ITM CO-ORDINATES	**510550E 763990N (centre of lake)**
1:50,000 O.S. SHEET NO. 38	**GSI BEDROCK 1:100,000 SHEET NOs. 10, 11**
GIS Code MO078	

Outline Site Description
A large shallow solutional lake occupying the limestone lowlands to the immediate east of the Maumtrasna and Partry mountains.

Geological System/Age and Primary Rock Type
The lake in its current shape formed in the Holocene, however it is likely that the feature developed during the last glaciation. The lake has developed predominantly on Carboniferous limestone bedrock, with westward extending embayments (drowned glacial valley floors) in Silurian and Ordovician bedrock.

Main Geological or Geomorphological Interest
Lough Mask is the sixth largest lake in Ireland. The lake covers an area of *c*. 8200ha, and measures *c*. 16km from north to south, and *c*. 6km at its widest point. Several rivers feed into the lake, including the Robe, Cloon, Owenbrin, Finny, Glensaul, and Keel, which feeds Lough Mask from Lough Carra. On the surface, Lough Mask is linked to Lough Corrib by the Cong Canal. However, much of the water that moves from Lough Mask to Lough Corrib does so via subterranean channels. Lough Mask is a shallow lake, with a mean depth of 5m. A maximum depth of 58m is reached along a trench (glacial gorge) on the western shore of the lake. The lake is classed as an oligotrophic (low nutrient concentration) lake, and has a high alkalinity (>100mg/$CaCO_3$). Lough Mask occupies an elevation 10m higher than Lough Corrib. Part of the southern margin lies in County Galway (Joyce Country).

Carboniferous limestone and calcareous shale are found along the southern and eastern shore, with excellent limestone pavement and karst features around Castle Lake. The western shore is bordered by both Ordovician and Silurian rocks, whilst Carboniferous sandstone and siltstones occupy the most northern part of the lake, between Partry and Srah.

Site Importance – County Geological Site, may be recommended for Geological NHA
This County Geological Site is within the Lough Mask/Lough Carra Complex SAC (001774) and Lough Mask SPA (004062). The site is significant as it demonstrates a fine example of a solutional lake, wherein acidic waters, most probably draining eastwards from the uplands to the west, have contributed to the dissolution of the limestone. Glacial erosion may also have played a role in the development of the feature.

Management/promotion issues
Any extraction of 'water-worn' limestone (as often used for garden rockeries and walls) should be prevented, most significantly as limestone pavement is a priority habitat (EU Habitats Directive, 8240). The lake is an important game fishing location. The inclusion of visitor information panels at strategic lakeshore sites and piers could help communicate aspects of the hydrogeological and geological heritage of the feature, as well as sharing the message of conservation of natural landscape features.

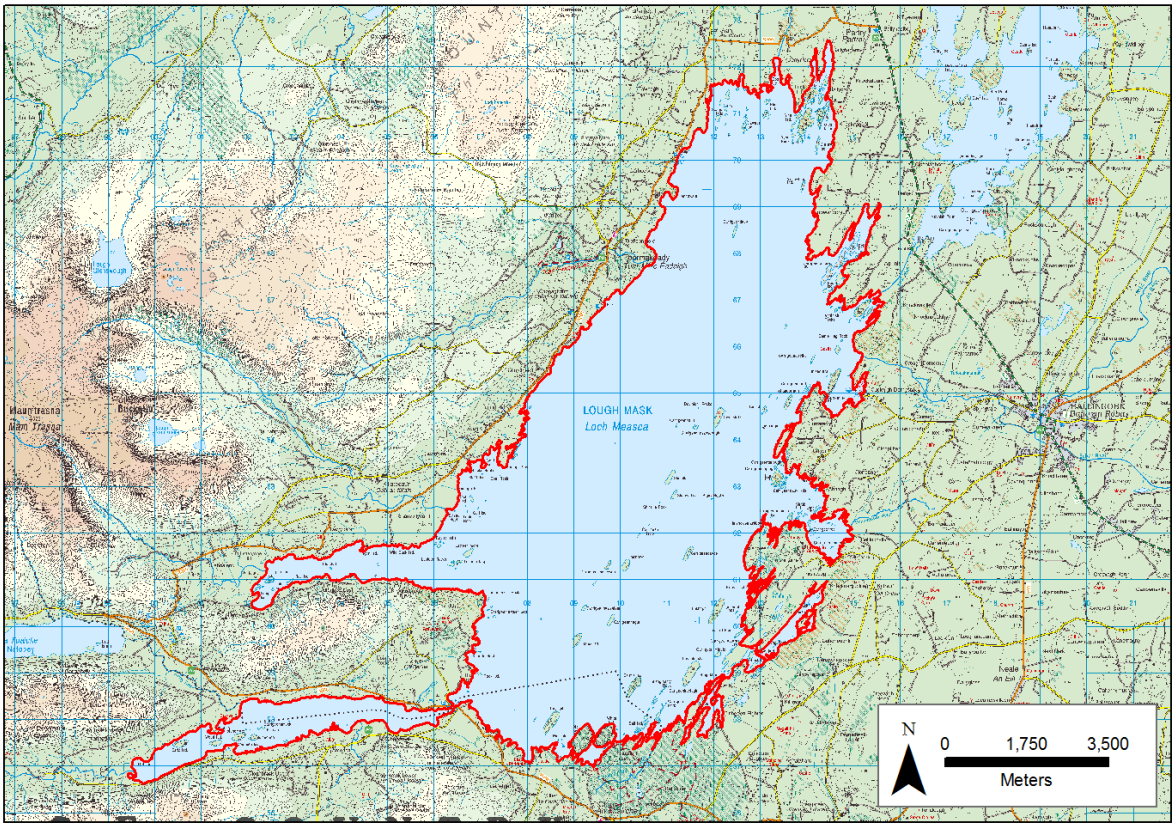
Hennessy et al. 2014 (revised 2019). Geological Survey Ireland.

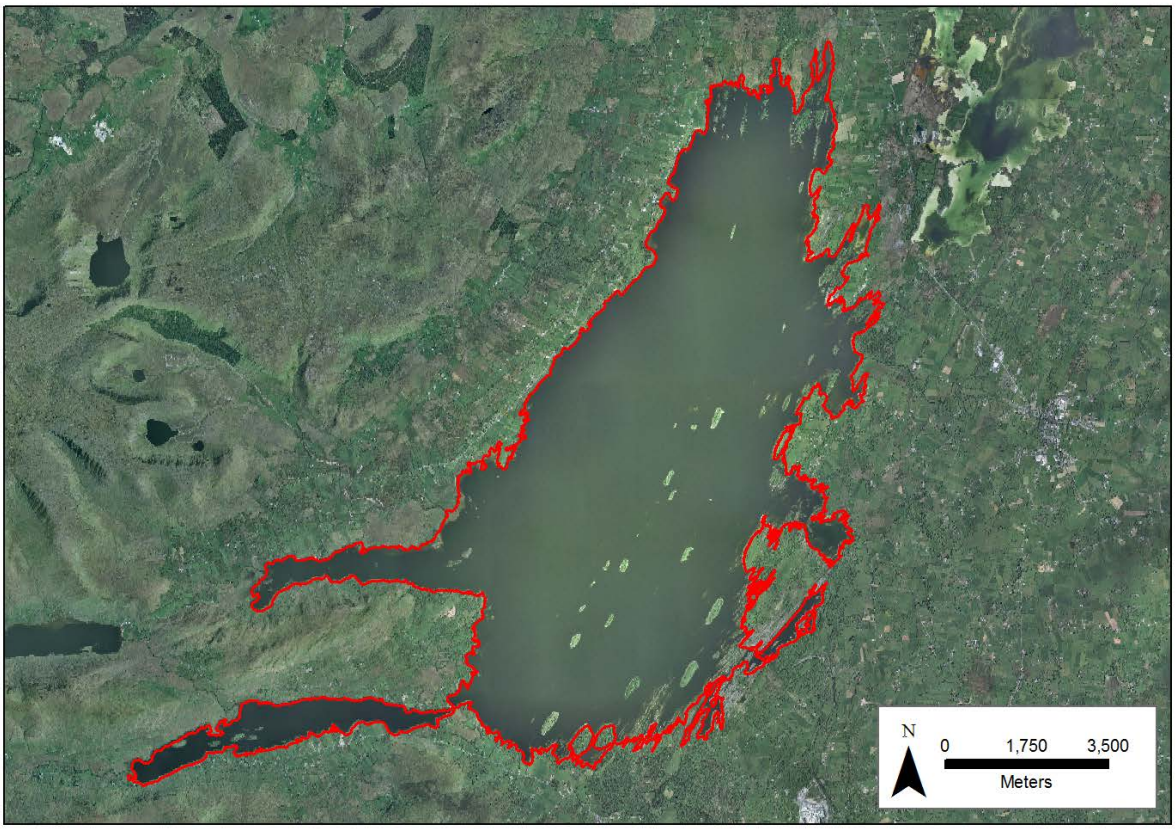
Looking east from Kilbride towards Ferry Bridge, and Clonbur. Lough Mask has flooded the east-west trending glaciated valley in the near-right.

Looking west towards Joyce Country, along the southwestern-most section of Lough Mask at Finny.

Looking east from Derrybay to the islands of Lusteen beg and Lusteen more, on the western side of Lough Mask.

View of Lough Mask from roadway at Derrymore Bridge looking south, at the most northerly point of Lough Mask.





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