

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Caherglassaun Turlough
Other names used for site	
IGH THEME	IGH1 Karst, IGH15 Economic Geology
TOWNLAND(S)	Caherglassaun, Killomorán, Ballynastaig, Shigaunagh
NEAREST TOWN/VILLAGE	Gort, Kinvara
SIX INCH MAP NUMBER	122
ITM CO-ORDINATES	541480E 706385N (centre of Caherglassaun Lough
1:50,000 O.S. SHEET No. 52	GS1 BEDROCK 1:100,000 SHEET NO. 14

Outline Site Description

A large turlough and associated dolines and including an historic silver mine site.

Geological System/Age and Primary Rock Type

The karstic features are all in Carboniferous Limestone but are largely post glacial in age (Holocene).

Main Geological or Geomorphological Interest

A karstic lake 32 ha in extent, some 5 km from the nearest tidal waters (at Kinvara), but showing marked tidal effects under low water conditions. Water level rises and falls lagged some 3-4 hours behind the tidal changes at the coast, presumably due to fresh water backing up in the conduit system down-flow of Caherglassaun, in response to high head levels at the coast. Tidally induced water level change is approximately 10% of that in Kinvara Bay. The lake is a unique turlough, underlain by marl, and fed by springs on the south-western side and emptied by sinks on the northwest and northeastern sides. The surface of the rock outcrops on the north-eastern shore of the lake are highly karstified with a high density of karren features. Characteristic lacustrine karren forms (small, symmetrical hemispherical pits) are widespread on horizontal surfaces up to 2.5 m above low water level. The bedding planes exhibit intense solutional activity (commonly upwards into the overlying bed) including anastomosing channels 250 mm high. This combined with solutional joint enlargement has caused large 2 m³ blocks of limestone to become detached from bedrock and to founder.

To the west and north of the lake are a series of large collapse dolines, mostly to static water (e.g. Polldalagha, Pollnapasty, Pollnamona) which may be associated with the karst conduits draining from Caherglassaun to the springs at Kinvara. This site is a unique example of large scale interaction of karstic hydrology and marine hydrological systems.

To the west of the turlough itself and near Pollnamona is the site of an historic silver mine, although little remains on the ground except for open cast excavations and some calcite spoil heaps. Recent agricultural work has levelled and reseeded many of these.

Site Importance – County Geological Site; recommended for Geological NHA

This is one of numerous sites within the Gort-Kinvara lowlands which make up a complex of international importance. The site is recommended to NPWS for designation as a geological NHA, comprising one of 15 critical sites within the Gort-Kinvara lowland karst which is one of the best studied lowland karst areas of the world.

Management/promotion issues

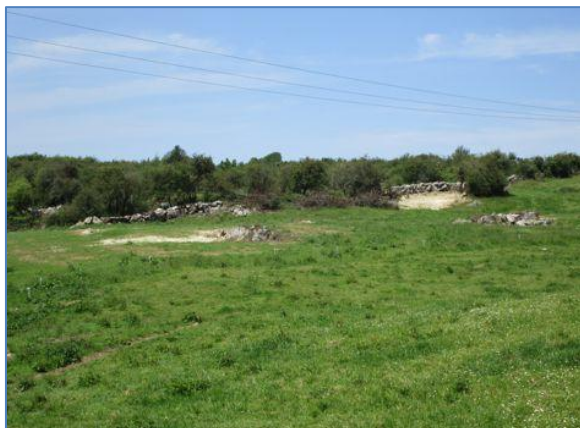
The site is already an SAC (site code 000238) and is a proposed NHA (with a different boundary). Access is not suitable for general promotion as the site is on private farmland and permission should be sought from relevant landowners. There are good roadside views of Caherglassaun from the eastern side, with the tower house castle beside Pollnapasty being a landmark.



Panoramic view of Caherglassaun Turlough.



Pollnamona.



The calcite spoil at the silver mine.



Polldalagha.

