

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	The Gaddagh
Other names used for site	Gaddagh Valley, Gaddagh River Valley
IGH THEME	IGH14 Fluvial and Lacustrine Geomorphology, IGH7 Quaternary
TOWNLAND(S)	Meallis, Coomcallee, Lisleibane
NEAREST TOWN/VILLAGE	Beaufort
SIX INCH MAP NUMBER	63, 73
ITM CO-ORDINATES	482550E 586200N (centre of river valley)
1:50,000 O.S. SHEET NUMBER	78
GS1 BEDROCK 1:100,000 SHEET NO.	20
GIS CODE	KY078

Outline Site Description

The Gaddagh is a deep glacial valley at the northern end of the Macgillycuddy's Reeks, hosting the Gaddagh River.

Geological System/Age and Primary Rock Type

The bedrock comprises Devonian rocks (419-359 million years old), while the glacial valley was formed during the Quaternary Period, during the last Ice Age, by glacier ice scouring out a deep valley within the mountains. The river terraces in the valley are of Holocene Epoch age, formed in the last 5,000 years since the Ice Age.

Main Geological or Geomorphological Interest

The Gaddagh River emerges from two corrie lakes, Lough Gouragh and Lough Callee, in Hag's Glen, at the head of the Gaddagh Valley. These lakes are further fed by numerous mountain streams from four distinct corries at Coumgouragh, Cummeenoughter, Cummeenalassa and Cummeenmore.

The Hag's Teeth moraine ridge and another moraine 1 km downstream of Lough Gouragh effectively split The Gaddagh into three sub-reaches: the Upper, Middle and Lower Gaddagh Basins. Within these basins, detailed geomorphological mapping has identified six distinct Holocene alluvial terrace levels. Associated sedimentological, pedostratigraphical and palaeoecological analyses of fluvial and glacial deposits infilling the valley have been used to elucidate the patterns and controls of Late Quaternary valley floor development.

A total of four Holocene alluvial terraces (Terrace Levels 2–5) and a modern floodplain (Terrace Level 6) have been identified and lie within a terrace comprising Late Quaternary till (Terrace Level 1). Postglacial fluvial terrace development in The Gaddagh has therefore occurred primarily in response to hydrological changes and reworking of local valley floor deposits, rather than catchment-wide debris supply changes. Pollen analyses of valley floor peat deposits, interbedded with minerogenic alluvium, indicate that anthropogenic disturbance of catchment tree cover had commenced by c. 1,690–1,450 BCE and that the catchment was largely cleared of woodland by later prehistoric times.

Site Importance – County Geological Site

The Gaddagh river terraces are among the best studied Holocene river / alluvial terrace sequences in the country, with well-constrained ages. Given that the features are both easily seen and relatively accessible, they merit recognition as a County Geological Site.

Management/promotion issues

The site is only accessible *via* a well-trodden hill walking pathway. Parts of the pathway are boggy, and any walking or climbing should only be attempted in good weather conditions. Quad biking represents a possible risk to the site. The cliff slopes at the edge of the lower terraces are dangerously steep and there is also a risk of landslip and landfall, so no attempt should be made to access the base of any escarpments. Some leaflets or booklets detailing the geological history of the mountains in general would be beneficial. Most of the site is within the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC and pNHA (site code 000365).



View southwards into The Gaddagh from its northern end, with Carrauntoohil the cloud-shrouded peak.



Modern floodplain and adjacent terraces in the Lower Gaddagh Basin, looking north.



Modern floodplain and adjacent terraces in the Upper Gaddagh Basin, looking north.



Modern floodplain and adjacent terraces in the Middle Gaddagh Basin, looking south.

