

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Leenaun
Other names used for site	Leenaun Delta
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Leenaun
NEAREST TOWN/VILLAGE	Leenaun
SIX INCH MAP NUMBER	11, 12
ITM CO-ORDINATES	488230E 761120N
1:50,000 O.S. SHEET NO. 37	GS1 BEDROCK 1:100,000 SHEET NO. 10

Outline Site Description

The locality just south of Leenaun village includes a large accumulation of sands and gravels which has been quarried historically and which forms a distinctive, elevated, flat-topped plateau at the base of the Maumturk Mountains.

Geological System/Age and Primary Rock Type

The 'delta' is comprised of deep glaciofluvial and glaciolacustrine sediments and the bedrock is at great depths throughout the area of the feature. This bedrock is Ordovician and Silurian in age, and is composed of conglomerates, sandstones, siltstones and mudstones. The 'delta' is Quaternary in age, having been deposited at the edge of the southeastward-retreating glacier during deglaciation after the last Ice Age.

Main Geological or Geomorphological Interest

The delta is a striking feature, a large, flat-topped sand and gravel accumulation deposited into a glacial lake which was probably impounded by ice occupying Killary Harbour during deglaciation. The meltwaters that deposited the feature have been proven to have flowed from ice of a large glacier which occupied the valley of the Joyce's River, southeast of Leenaun. The delta was built out from this glacier into the lake, the surface of which was at about 75m above present sea level; a second, lower delta surface records a later lake level of approx. 62m above sea level. The delta surfaces can be viewed well from the R335 road along the northern side of Killary Harbour, where one gets an impression of these large, level surfaces rising above Leenaun village.

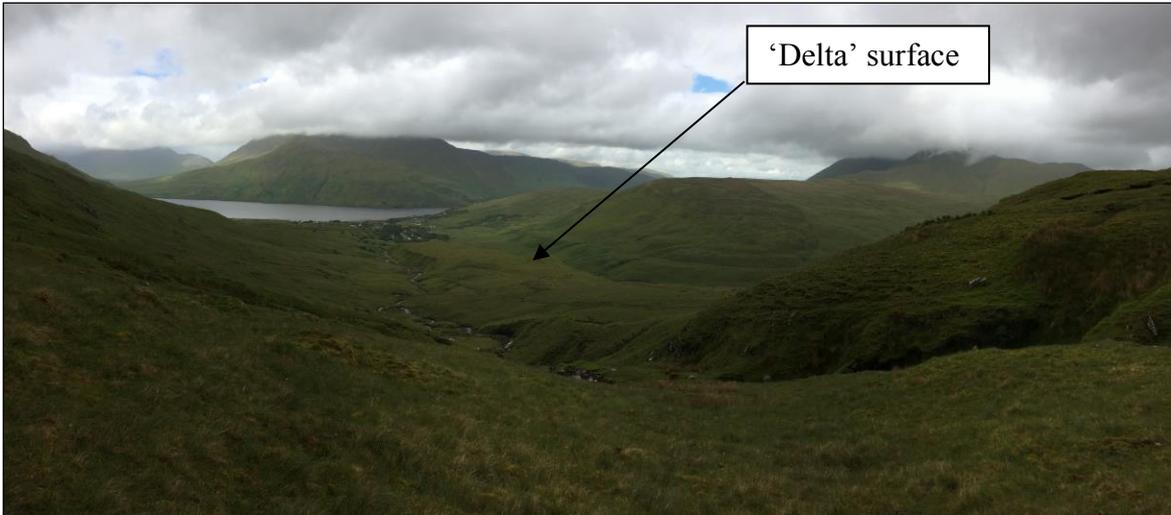
The delta is just under 1 kilometre long and up to 300 metres wide, covering an area of approximately 0.5 square kilometres. The sands and gravels are comprised largely of metamorphic rocks from the central portion of Connemara, to the south of the feature locality. The sediments are arranged in the typical delta sequence: topset gravels composed of up to 2m depth of horizontally bedded sands and gravels on top; foreset gravels which are relatively steeply dipping and well bedded, deposited at the front of the delta; and bottomset, finer sediments, with interbedded diamictons, of sands and silts, usually underlying the foresets. The latter represents sediment that was originally deposited beyond the steep delta front, on the floor of the water body. There are some old gravel pits along the roadside, but exposure is poor today.

Site Importance – County Geological Site; may be recommended for Geological NHA

The feature is a high, striking example of a dry sand and gravel ridge, and stands proud of the surrounding landscape. This is an excellent example of a deglacial, ice marginal, meltwater-deposited feature.

Management/promotion issues

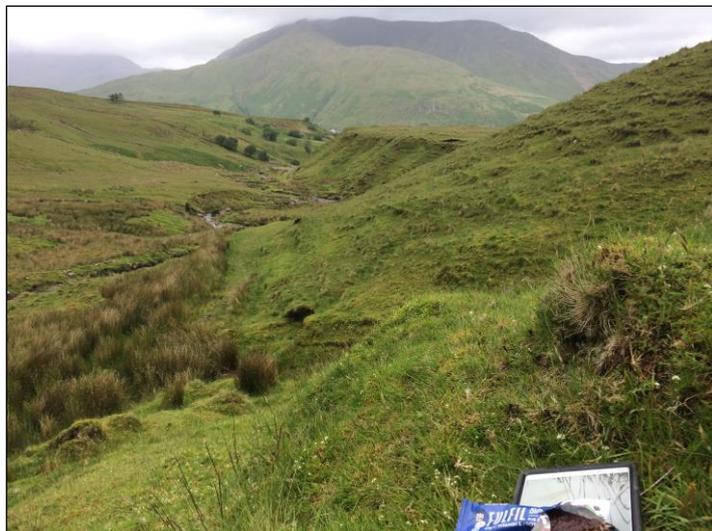
A small portion of the delta has been removed by quarrying, and access to either pits or the covering fields is by permission of the owners or operators; all safety protocols must be followed. Viewing while hillwalking on the high ridge to the southwest, or from the R335 on the north side of Killary Harbour, is the best means of viewing the delta surface.



View of the delta from the high ridge to the southwest.



Bedded sands and gravel foresets in one of the small, disused pits in the delta.



View south through the stream incising through the delta feature.

