MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Kilcummin Head**
Other names used for site	Benwee, Lackan Bay
IGH THEME	**IGH8 Lower Carboniferous**
TOWNLAND(S)	**Kilcummin, Carrowsteelagh**
NEAREST TOWN/VILLAGE	**Killala**
SIX INCH MAP NUMBER	**6a**
ITM CO-ORDINATES	**520800E 837390N (crossroads at Kilcummin)**
1:50,000 O.S. SHEET NO. 24	**GSI BEDROCK 1:100,000 SHEET NO. 6**
GIS Code MO065	

Outline Site Description
The site comprises sections of coastline around Kilcummin Head, at the northwest side of the mouth of Killala Bay.

Geological System/Age and Primary Rock Type
Lower Carboniferous Mullaghmore Sandstone Formation rocks are exposed on the Lackan Bay side of Kilcummin Head, and Ballina Limestone Formation rocks are exposed below the thick glacial deposits (cliffs) on the Killala Bay side of the head. The Lower Carboniferous rocks are crossed by Tertiary dykes trending W-WNW.

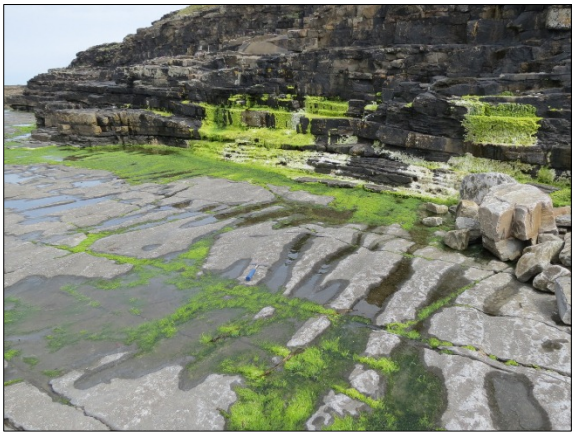
Main Geological or Geomorphological Interest
The rocky coastline on the west (Lackan Bay) side of Kilcummin Head comprises marine sandstone, siltstone, shale and carbonates. The strata display a suite of excellently preserved sedimentary structures (large metre-scale ripple marks, cross-laminations) and trace fossils (burrow and crawl marks) in the sandstones and siltstones. The strata dip gently north-north-eastwards (4º NNE). Littoral-zone karst is well developed on shoreline carbonate strata. A distinct ~0.5m thick layer of soft mud is visible above the high-tide mark, in which recent insect burrow marks are visible. Several storm beaches of large blocks plucked from the shoreline strata are stacked against the glacial drift capped low cliffs. Erosion of the soils along the low-cliff tops has revealed glacial striae (NNE-SSW) on the topmost sandstone. Sand and shingle occur at Pollgranny, to the east of the spit. Tertiary dolerite dykes are visible cutting through the Carboniferous strata along the coast, such as near Pollgranny. Windblown sand has accumulated as a spit across the head of Lackan Bay forming a bar between Lack Strand and the bay. On the east side of Kilcummin Head, cliff sections of unsorted glacial debris lie on gently dipping (5º east) Ballina Limestone Formation strata. A glacio-tectonic raft complex >400m long is exposed along this side of Kilcummin Head. This section provides evidence of bedrock rafting during a phase of active glacial retreat.

Site Importance – County Geological Site; recommended for Geological NHA
The western coastal section of the site is within the Lackan Saltmarsh and Kilcummin Head SAC (000516). The eastern coastal section presents a rare opportunity to investigate the process of glacio-tectonic rafting, and has wider implications for regional scale glacial reconstructions. This entire site is nationally important and requires designated as a geological NHA.

Management/promotion issues
Access to the west coastline is relatively easy, with limited parking at Pollgranny. The east side of the head accessed from the old Coast Guard Station pier at Ballinlena. The coastal sections along Lackan Bay are of great educational value, and due caution should be exercised on any exposed Atlantic shoreline. The site is not considered to be under significant threat, except as a result of natural coastal erosion.

Cross laminations in sandstones.

Near horizontal strata on west side of head. Looking SW towards Lackan Strand.

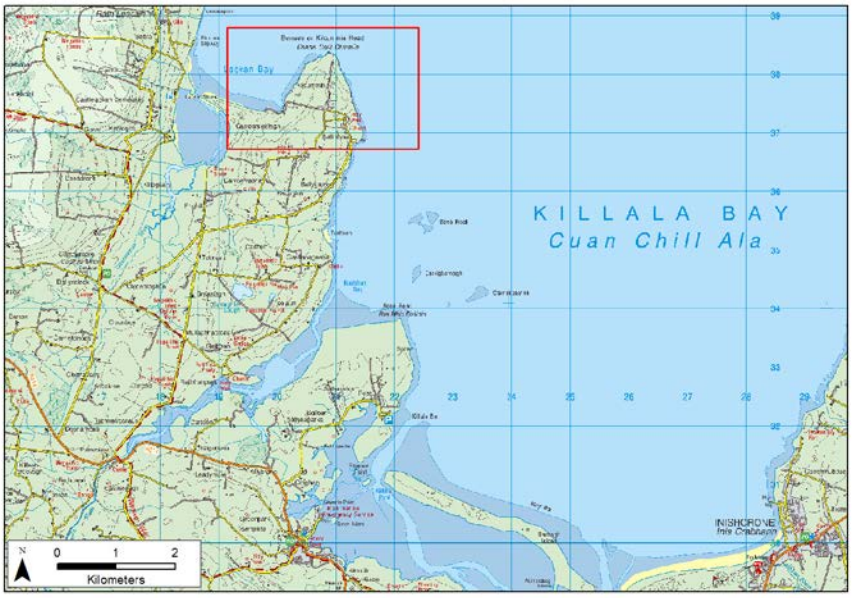


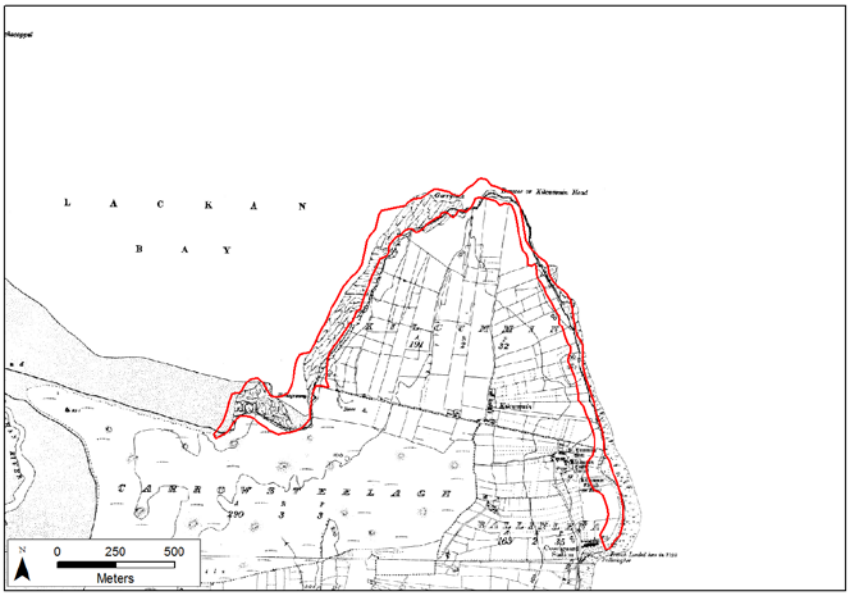
Ripple marks (hammer in centre of photo).

Littoral karst along west side of Kilcummin Head, looking west towards Downpatrick Head.

Fossiliferous muddy limestones.

Glacial deposits on limestone strata on the Killala Bay side of Kilcummin Head.





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