WICKLOW - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE Other names used for site IGH THEME TOWNLAND(S) NEAREST TOWN/VILLAGE SIX INCH MAP NUMBER ITM CO-ORDINATES 1:50,000 O.S. SHEET NUMBER Wicklow - Greystones Coast Wicklow Coast, The Murrough, The Breaches IGH13 – Coastal Geomorphology *Numerous townlands border this coastline* Wicklow, Greystones 11 731670E 703870N (at Six Mile Point)

56 GSI BEDROCK 1:100,000 SHEET NO. 16

Outline Site Description

An uninterrupted shingle beach extending for over 17km between Greystones and Wicklow.

Geological System/Age and Primary Rock Type

The shingle ridge (beach) is a Quaternary (Holocene) feature, and is understood to have formed around 5,000 years ago. At this time, a rise in sea-level carried eroded sea-floor glacigenic deposits into a shingle ridge.

Main Geological or Geomorphological Interest

The low and flat terrain coastal landscape between Greystones and Wicklow town is underlain by Cambrian bedrock, which is not widely exposed between the two towns. Wicklow Head is a bold headland of slopes descending to rocky cliffs of grey schist. At Greystones, Cambrian greywacke rocks outcrop along the esplanade coastline.

Between the two towns is 'the Murrough'. This 15km long coastal wetland area borders the Irish Sea with an uninterrupted shingle ridge consisting of smooth rounded pebbles interspersed with sand particles. Sediment size increases from north to south, being dominated by sand along its northern stretch near Greystones, and by larger pebbles nearer Wicklow. The variation is understood to be a result of wave-induced grading of the ridge deposits by longshore drift.

At Six Mile point, a salient point (land jutting seaward) on the shingle coast has been armoured with a rampart of large boulders dumped to protect the railway. The shingle ridge carries the Dublin-Rosslare railway line. To the north, the Breaches are small inlets where the Kilcoole Marshes drain to the sea. Saltmarsh is present at the Breaches and further south at the brackish, partly tidal Broad Lough near Wicklow.

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

This is an important County Geological Site that could be considered for a geological NHA status under the IGH13 Coastal Geomorphology theme. The site is located within the Murrough Wetlands SAC (002249), the largest coastal wetland complex on the east coast of Ireland and supports a number of habitats listed on Annex I of the EU Habitats Directive.

Management/promotion issues

The site is publicly accessible from access points at e.g. Kilcoole Railway Station, Six Mile Point and Five Mile Point. Coastal protection works have been carried out by larnród Éireann to protect the railway line, with the installation of rock armour on the seaward side of the line such as at Six Mile Point. Any future promotion of the Murrough Wetlands SAC should make reference to the natural processes of coastal erosion affecting this coastline, and also to the extensive shingle shoreline and greywacke boulders (defence walls).



Shingle beach and coastal defences (greywacke boulders) at Six Mile Point, looking north.



Railway bridge and shingle accumulations at the Breaches, looking north.



Coastal Defence Works sign at Six Mile Point.



Proximity of railway line to shore at Six Mile Point.



Coastal defences at Kilcoole Railway Station, looking north.



