

WEXFORD - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Fethard
Other names used for site	Fethard raised beach, Fethard-on-Sea raised beach, Wood Village raised beach
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Grange
NEAREST TOWN/VILLAGE	Fethard
SIX INCH MAP NUMBER	50
ITM CO-ORDINATES	680285E 606360N
1:50,000 O.S. SHEET NUMBER	76 GSI BEDROCK 1:100,000 SHEET NO. 23

Outline Site Description

This site includes a high coastal cliff section that extends for several hundred metres and is c. 6m-10m high over the majority of its extent. The cliff exposes long-studied sediments which have made this a type-site for glacial stratigraphic work in Ireland.

Geological System/Age and Primary Rock Type

The cliff section along the beach at Fethard is comprised of Quaternary Age glacial sediments, which rest unconformably on grey to black mudstones with siltstones of the Booley Bay Formation, which is of Cambrian age.

Main Geological or Geomorphological Interest

The site is located on a lowlying coastal plain, and the base of the section comprises a relatively smooth rock platform, c. 2.5m above sea level. Renowned glacial geologists Anthony Farrington (1966) and Frank Mitchell (1972) suggested that the platform was trimmed by the sea immediately before the last ice advance.

Three sediment units overlie this. The first overlies the rock platform and comprises generally stratified, variably oxidised gravels and moderately to well sorted sands, at altitudes between 2.5m and 3.9m ASL. This is interpreted as part of the Courtmacsherry raised beach, which extends discontinuously along the south coast of Ireland. Above this a geliflucted head deposit is seen, again succeeded by a stony diamicton, which is interpreted as a till forming part of the 'Bannow Formation'. The beach sands were dated using Infra Red Stimulated Luminescence dating to 129,000 years before present, in the late 1990s. This was the first time this raised beach had been definitively dated in Irish Quaternary studies.

The dating of the beach also suggest that the lithostratigraphy developed by Willie Warren of GSI in 1985, which itself suggests that the raised beach is the critical stratigraphic datum to which all other overlying deposits are dated, seems correct. However, the beach cannot represent the peak of sea level during the last interglacial, at least not completely around the Irish coast: it only does this for the site at Fethard. As well as this, the date of the beach casts serious doubt on the interpretation by academics Marshall McCabe and Colm O'Cofaigh (1996) that the Courtmacsherry raised beach belongs to the closing phase of the last glaciation.

Site Importance - County Geological Site; recommended for Geological NHA

This is a particularly impressive exposure into a striking glacial sequence, with several sedimentological characteristics well exposed. The site lies within a proposed NHA (pNHA 000697, Bannow Bay) and SAC for biodiversity reasons and the geological importance of the section, as well as the absolute dating of the raised beach, should be highlighted in promotion of this.

Management/promotion issues

The site is accessible through public beach access, and is therefore easily accessible. The cliffs are prone to slumping, however, and care must be taken when close to the faces. The importance of the site could be highlighted in promotional material for the Bannow Bay NHA.



View of the coastal section at Fethard, along the stretch where the raised beach crops out.



Detail of the cross bedded sands of the raised beach, resting on top of the rock cut platform.



The angular, unsorted, geliflucted material overlying the sorted beach sands.



Ferricreted, bedded sands and gravels within the raised beach profile.

