

## NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	Corvish
Other names used for site	
<b>IGH THEME</b>	IGH7 Quaternary
<b>TOWNLAND(S)</b>	Churchland Quarters
<b>NEAREST TOWN/VILLAGE</b>	Carndonagh, Malin
<b>SIX INCH MAP NUMBER</b>	11
<b>ITM CO-ORDINATES</b>	647120E 948190N
<b>1:50,000 O.S. SHEET NUMBER 3</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 1</b>
<b>GIS Code ND045</b>	

### Outline Site Description

A low coastal section comprising a gently eroding low cliff (bluff) at the head of Trawbreaga Bay, exposing around 7m of sand/mud and fossiliferous marine muds.

### Geological System/Age and Primary Rock Type

Layers of sand and fossiliferous marine muds deposited during the late stages of the last Ice Age. Radiocarbon dating (AMS C<sub>14</sub>) of microfaunas provides Quaternary age constraints of between c. 17,000 years ago and 14,000 years ago.

### Main Geological or Geomorphological Interest

At the northern edge of the flat late-glacial outwash fan at Carndonagh, on the southern margin of Trawbreaga Bay, a gently eroding shoreline bluff occurs. The bluff exposes a 7m section of sand and fossiliferous marine mud, with a further 3m of marine mud, below beach level (identified by hand-coring). Distinctly cold-water species of marine microfaunas have been identified in the muds.

Radiocarbon dating (AMS C<sub>14</sub>) of microfaunas in the marine muds indicates that initial deglaciation of the continental shelf occurred prior to 17,000 years ago, during the Cooley Point Interstadial. Deformed mud and sand, overlying the lower fossiliferous marine muds indicate an ice sheet re-advance into Trawbreaga Bay that extended as far north as Ballycramsy (the Ballycramsy moraine limit) during the Killard Point Stadial (c. 15,000 years BP). The upper section of marine muds records the final deglaciation of the Inishowen Peninsula around 14,000 years ago.

At both International and National levels the site shows very distinct marine microfaunal populations and records opportunistic populations of marine fauna invading recently deglaciated sites at the last glacial termination in NW Europe, together with evidence for deep isostatic depression (depression of the Earth's crust by the weight of the overlying ice sheet) at the margin of the last ice sheet in north Donegal.

### Site Importance – County Geological Site; recommended for Geological NHA

This is a unique site in Ireland in that it records deglaciation of the continental shelf, followed by ice sheet re-advance across the marine muds, and then final deglaciation, all within the one section. The site is recommended for geological NHA because such successions have very low preservation potential. The site is located on the boundary of the Trawbreaga Bay SPA (004034), and is within the North Inishowen Coast NHA/SAC (002012).

### Management/promotion issues

Dumping has been occurring historically across the cliff face. The cliff face is only partially exposed, being vegetated mostly and partly protected by boulders and tree stumps (dumped). The low-energy shoreline is not subjected to regular severe wave action.



Marine muds at Corvish, looking west towards mouth of Trawbreaga Bay.



Corvish site looking west along Trawbreaga Bay shore. Low bluff (cliff) visible on left.



Corvish site looking east to head of Trawbreaga Bay. Tree stumps/roots and boulders have been dumped along shore to arrest erosion. Marine muds exposed in low bluffs.



