WATERFORD - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Dunhill Quarry**		
Other names used for site			
IGH THEME	**IGH4 Cambrian - Silurian**		
TOWNLAND(S)	**Dunhill Lodge**		
NEAREST TOWN	**Annestown**		
SIX INCH MAP NUMBER	**Waterford 25**		
NATIONAL GRID REFERENCE	**250607 100888**		
1:50,000 O.S. SHEET NUMBER	82	**1/2 inch Sheet No.**	23

Outline Site Description
Dunhill Quarry is a small, disused and heavily vegetated old quarry on the east side of the Annestown Stream valley, opposite the landmark of Dunhill Castle ruins.

Geological System/Age and Primary Rock Type
The quarry is cut into Ordovician rocks, which date from about 460 million years ago. The rocks are bedded tuffs.

Main Geological or Geomorphological Interest
The bedded tuffs here are the product of a volcanic eruption, which spread ash and debris into air around the volcano. These ashes fell down into the sea around the volcano and then sank to the sea floor. Tuffs are simply the ashes reconstituted as a new rock, either as sedimentary particles in water, or sometime as a welded deposit where their own retained heat helped them recombine.

The quarry has been closely examined by geologists and the tuffs show a lot of details, which help understand how many of the Copper Coast volcanic rocks developed and formed. At least 5 different tuff units or beds are seen with grading of different sized particles, indicating they have settled in water. Specific features seen include laminations in the finer grained tops of each tuff and coarser grained layers made of larger particles called lapilli by volcanologists. There are also some larger blocks, which have fallen directly to the sea floor, and indented the last tuff deposit. Some units of tuff have larger pumice fragments at the top, where the gas holes in pumice helped it float, but eventually the fragments became waterlogged and sank, after the finest particles had settled out already. One face is a very clean cut through the dipping tuff units, like a cheese wire had been cut through the rock for geological exhibition purposes.

Site Importance
The site is of national importance in the Cambrian – Silurian theme, and recognition as a County Geological Site will help protect it until it is formally put forward for designation as a geological NHA.

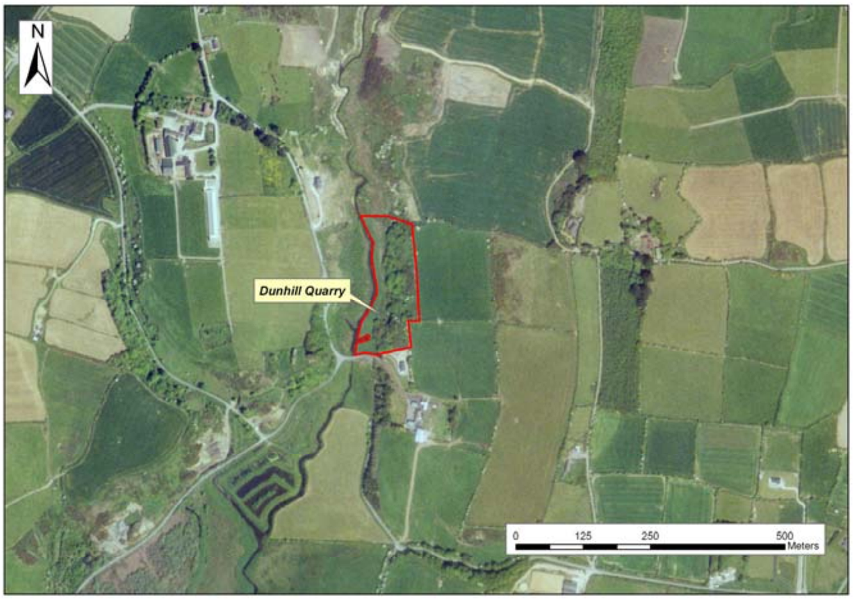
Management/promotion issues
The site is on private land and access would need to be agreed with the landowner before any promotion can take place. However, the subtlety of what it shows is probably of primary interest for geological groups, rather than the general public. For management of the site, clearance of ivy and other vegetation from the main face would be a priority to maintain the excellent display of the tuff units in a clean face. With low face heights and competent rock, there is low risk from loose rocks falling down.

A view of the main face of bedded tuffs in Dunhill Quarry.

Close up of a graded tuff unit.

The quarry is situated in the trees, on the left side.


Dunhill Quarry
TRAMORE
Trá Mhór
Tramore Bay
Cuan
Thrá Mhór
Brownstown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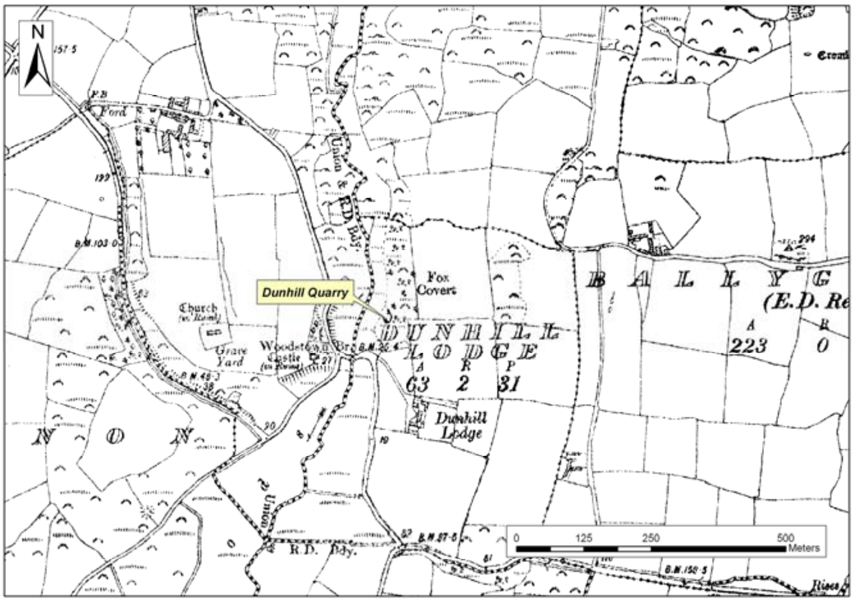
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