

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Castledaly
Other names used for site	Castle Daly
IGH THEME	IGH14 Quaternary
TOWNLAND(S)	Castledaly
NEAREST TOWN/VILLAGE	Gort
SIX INCH MAP NUMBER	114
ITM CO-ORDINATES	551340E 709182N
1:50,000 O.S. SHEET No. 52	GSI BEDROCK 1:100,000 SHEET NO. 14

Outline Site Description

An overgrown stream section cut into thick glacial till deposits.

Geological System/Age and Primary Rock Type

The till deposits are Late Pleistocene in age, deposited during the late stage of the last Ice Age. Peats underlying the tills have been dated to the Gortian temperate stage, a Middle Pleistocene warm interglacial period. Uncertainty remains as to the age of the Gortian, and research is ongoing into determining an age for this interglacial stage.

Main Geological or Geomorphological Interest

This site is of significance owing to exposures of interglacial peat discovered in the streambed at this site in the mid-1970s. Primarily based on palynological analyses and some plant macrofossil analyses, the Castledaly interglacial site is correlated with the Gortian sequence type locality at Boleyneendorrish River, around 4km south of Castledaly.

Interglacial deposits (organic peats and muds) were first identified below glacial deposits on the banks of the Boleyneendorrish River by Kinahan in 1865.

The organic sediments at Castledaly were found to host pollen assemblages (biozone GnIIIb) that correlated with pollen biozones of the Gortian temperate stage (albeit only representing fragments of the interglacial stage). The Castledaly biozone is characterised by the presence of pine, birch, alder, yew, fir, spruce, with the development of diverse heather communities and Rhododendron. Palynological and sedimentological evidence indicates that wet conditions and bog development prevailed during this substage. Attempts at dating the Gortian Interglacial suggest the interglacial stage is the equivalent of the Marine Oxygen Isotope Stage 7 (251,000 – 195,000 years ago), or Marine Oxygen Isotope Stage 9. (338,000 - 302,000 years ago).

Site Importance – County Geological Site

The sediments, pollen and plant macrofossils identified at Castledaly are important to the understanding of environmental and vegetative conditions that prevailed in Ireland during a warm interglacial period a few hundred thousand years ago. This is an important County Geological site, and was previously listed as an Area of Scientific Interest. The site is located with the Peterswell Turlough SAC and pNHA (site code 000318)

Management/promotion issues

The site is overgrown and the important organic deposits are difficult to locate or to identify. The site is only of interest to researchers, and as it is on private farm, it is not suitable for general promotion.



Stream (viewed looking downstream) at Castleday-Ballylahy townland boundary. Till muds and sands exposed on stream bank.



Underlying Tubber Formation (dipping NW) beds exposed in streambed.



Steep slope from streambed (NW bank) up to surrounding pasture-land level. Slope indicates depth at which stream has cut into thick till deposits.

