

WICKLOW – COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Glen of the Downs
Other names used for site	<i>Gleann da Ghrua</i> , The Valley of the Two Brows
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Bellevue Demesne, Woodlands
NEAREST TOWN/VILLAGE	Delgany
SIX INCH MAP NUMBER	8, 13
ITM CO-ORDINATES	725990E 711250N (centre of channel)
1:50,000 O.S. SHEET NUMBER	56
	GSi BEDROCK 1:100,000 SHEET NO. 16

Outline Site Description

The Glen of the Downs comprises a deep channel that was formed by meltwater erosion on the northeastern flank of the Wicklow Mountains. The channel is oriented generally northwest–southeast, and extends for a distance of approximately 2 kilometres.

Geological System/Age and Primary Rock Type,

The feature is formed in an area of bedrock outcrop and subcrop and bedrock outcrops along the majority of the channel sides, giving the feature its 'scalped' appearance. The feature was etched out by meltwater during deglaciation at the end of the last Ice Age, about 12,000 years ago.

The bedrock in the locality is dominated by greywackes and quartzites of Cambrian age.

Main Geological or Geomorphological Interest

The Glen of the Downs is up to 100m deep and has a V-shaped profile. The base of the channel hosts a small stream, which seems tiny given the depth of the channel itself. Such streams, flowing through deep, relict glacial meltwater channels, are thus called 'misfit' streams.

The Glen of the Downs is considered to have formed completely in the Late-Glacial Period. Initially the glen was a subglacial channel, formed under the ice, but later carried surface glacial outwash from Glacial Lake Enniskerry southwards. As well as this, the channel carried huge amounts of subglacial meltwater draining the ice sheet which extended into Wicklow from the Irish Sea Basin. This very high energy meltwater flow resulted in the Glen of the Downs' unusual depth and size.

Much of the sides of the channel are very steep, and are nowadays covered in broadleaf forestry. The glen has an irregular long profile, which means that meltwater was under huge pressure from ice above, thus proving that the channel was initially subglacial in origin. The channel probably extended further southwards but its southern portion was blocked by ice marginal sediments which forced drainage from the later glacial lake to flow eastwards towards Delgany.

Site Importance – County Geological Site; recommended for Geological NHA

This is a site with excellent teaching potential on glacial meltwater erosion, as the feature is accessible, spectacular, and easily viewed from roads. The N11 passes through the feature and the glen is already an SAC and proposed NHA (Site Code 000719).

Management/promotion issues

The location of the channel with a road passing through it means it is easily accessible, although the flanks are located presumably in private ownership or in commonage. However, there is no parking in the centre of the channel and it is inadvisable to stop on the N11 road. There is a car park in the glen off the N11 from which its northeast slopes can be accessed, but its size and context can probably be better appreciated viewing it from the narrow road which climbs from Delgany to cross the hill immediately southeast of the glen. This is best approached on foot from Delgany as it is narrow and there are no convenient parking spaces.



The Glen of the Downs, viewed from the south.



The Glen of the Downs, viewed from the northeast.



The Glen of the Downs, from 'The Scenery and Antiquities of Ireland, 1841, by J. Stirling Coyne and N. P. Willis.