

WICKLOW - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Great Sugar Loaf
Other names used for site	Big Sugar Loaf, Little Sugar Loaf, <i>Ó Cualann</i>
IGH THEME	IGH4 Cambrian-Silurian, IGH7 Quaternary
TOWNLAND(S)	Glencap Commons South, Glencap Commons Upper, Glencap Commons North
NEAREST TOWN/VILLAGE	Kilmacanoge
SIX INCH MAP NUMBER	7, 8
ITM CO-ORDINATES	723710E 713110N (summit)
1:50,000 O.S. SHEET NUMBER	56 GSI BEDROCK 1:100,000 SHEET NO. 16

Outline Site Description

A prominent, scree covered, quartzite conical mountain peak standing out on the north Wicklow and Dublin skyline.

Geological System/Age and Primary Rock Type

Cambrian quartzite (Bray Head Formation) bedrock with greywacke/quartzite bedrock on the south/southwest slopes. The scree deposits (of quartzite) are Quaternary in age, having formed from freeze-thaw activity during the last glaciation.

Main Geological or Geomorphological Interest

Great Sugar Loaf (501m) is a prominent conical peak of pale-pink Cambrian quartzite, around 7km southwest of Bray. The conical shape contrasts with the rounded summits of the granite mountains to the west. The elevated terrain comprising Great Sugar Loaf, Little Sugar Loaf and Bray Head marks the northern margin of a tectonic slide (roughly along the course of the River Dargle) where Cambrian rocks were thrust up onto Ordovician rocks (found between Bray Head and Killiney Hill and southwest beyond Rathdrum). This NW directed thrusting occurred during a great mountain building event (Caledonian Orogeny), 475-400 million years ago, also during which the Late Caledonian Leinster granites were formed.

Great Sugar Loaf and Little Sugar Loaf (341m), 3km to the northeast, are separated by Kilmacanoge valley. This valley was part of a regional north-south subglacial meltwater drainage route that included the Scalp (north) and Glen of the Downs (southeast). The mountain summit affords wonderful views of these spectacular meltwater channels, which are incised into high topography of solid bedrock. The steep upper slopes of Great Sugar Loaf are blanketed with extensive patches of loose angular quartzite boulders (scree) that have physically weathered out, by freeze-thaw action, from the upper summit and rolled downwards to their present locations. Scree occurs in virtually all upland areas throughout Ireland, particularly on quartzite mountains such as Great Sugar Loaf, Errigal (Co. Donegal) and the Twelve Bens (Co. Galway). Views even as far as Snowdonia, Wales are possible from the summit of Great Sugar Loaf on a clear day.

Site Importance - County Geological Site

Great Sugar Loaf is a prominent landmark on the Dublin and north Wicklow skyline. Great Sugar Loaf is a proposed NHA (001769). A Landscape Survey of the Great and Little Sugar Loaf Mountains conducted in 2010 considered the site to be of 'high amenity, cultural and natural heritage significance in a local and regional context'.

Management/promotion issues

A popular site for hiking, the southern 1km-long route to the summit is severely eroded down to the bedrock. Litter is a common problem along the well-trodden track and summit. A public information panel at the car park would help to inform visitors of the sensitive nature of the site, how to minimise damage, and promote the geological heritage of the mountain.



Great Sugar Loaf, viewed from the southern hiking route to the summit.



Hiking track through a scree slope-failure scar on the southern slopes of Great Sugar Loaf.



View of the north side of Great Sugar Loaf from Glencullen, looking southeast.



Scree on the southeast slopes of Great Sugar Loaf.



