

WICKLOW - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Lough Dan, Lough Tay and Cloghoge River
Other names used for site	<i>Loch Déan, Loch Té, Guinness Lake, Luggala Estate</i>
IGH THEME	IGH7 Quaternary; IGH14 Fluvial and Lacustrine Geomorphology
TOWNLAND(S)	Cloghogue, Carrigeenshinnagh, Carrigeenduff, Ballinrush, Carrigroe, Ballinastoe
NEAREST TOWN/VILLAGE	Roundwood
SIX INCH MAP NUMBER	11, 12, 17, 18
ITM CO-ORDINATES	715250E 703650N (centre of Lough Dan) 716050E 707600N (centre of Lough Tay)
1:50,000 O.S. SHEET NUMBER	56 GSI BEDROCK 1:100,000 SHEET NO. 16

Outline Site Description

Situated in the central Wicklow Mountains, the Cloghoge River drains Lough Tay and flows south through the north-south oriented U-shaped Cloghoge valley, draining into Lough Dan.

Geological System/Age and Primary Rock Type

The valleys hosting the Lough Dan and Lough Tay ribbon lakes are Quaternary in age, shaped by glaciers during and prior to the Late Glacial Maximum (c. 25,000-22,000 years ago) of the last ice age. Bedrock is predominantly Ordovician schist with Devonian granite at the northwest end of Lough Dan, and on the west and north side of Lough Tay.

Main Geological or Geomorphological Interest

Wicklow's mountainous terrain was covered by the vast Wicklow Ice Dome (area c. 1000km²) during the Late Glacial Maximum (c. 25,000 to 22,000 years ago). From the ice dome, a large glacier flowed through the Lough Dan valley. This glacier was joined by another glacier moving south from above Lough Tay through the Cloghoge Valley. When the two glaciers merged, they continued as one into the southern reaches of the Lough Dan valley. When the ice sheets retreated and melted, meltwaters remained on the valley floors, forming Lough Dan and Lough Tay. 3km long and 0.5km wide, Lough Dan (mean depth 13.5m; area 106ha) is a classic ribbon lake occupying the floor of a U-shaped glacial valley, c. 200m above sea-level. Two rivers feed Lough Dan: the Cloghoge River and the Inchavore. Both rivers feature sandy river deltas where they enter Lough Dan. The Avonmore River drains Lough Dan to the south. The Cloghoge River valley was carved out of schist bedrock whilst the mountainous terrain north and west of Lough Tay is mostly granitic. Traces of the metamorphic aureole are inter-fingered with the granite terrain overlooking Lough Tay. At Luggala Lodge, the Cloghoge River meanders across flat 'delta' draining into Lough Tay. Mass wasting (boulder debris) is abundant at the foot of the eastern slopes of Luggala (595m). Large debris slumps are visible at the western side of the valley where landslides occurred when ice retreated from this over-deepened glacial valley.

Site Importance - County Geological Site

This County Geological Site encompasses one of Wicklow's classic and most scenic glacial landscapes. Most of the site is within the Wicklow Mountains SAC (002122) and it is imperative that the influence of the site's geological heritage on the landscape and biodiversity is promoted in any future promotion of the area.

Management/promotion issues

This is a hugely important site in terms of the variety of classic glacial landform features (ribbon lake, collapsed valley sides, river deltas). Roadside (R759) viewpoints overlooking Lough Tay and the walking route along the Cloghoge valley to Lough Dan allow for wonderful views of the landscape. A public information board at a roadside stop would be an ideal means of communicating the wonderful heritage of this scenic glacial landscape.



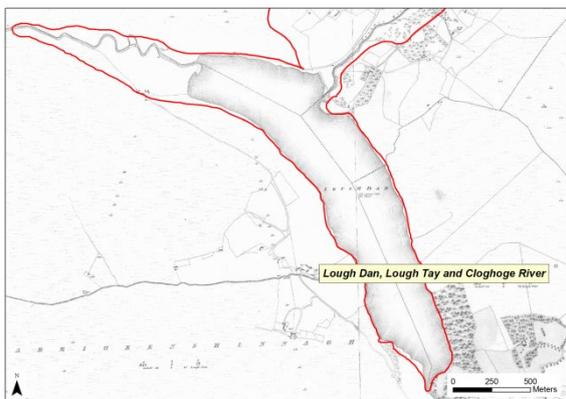
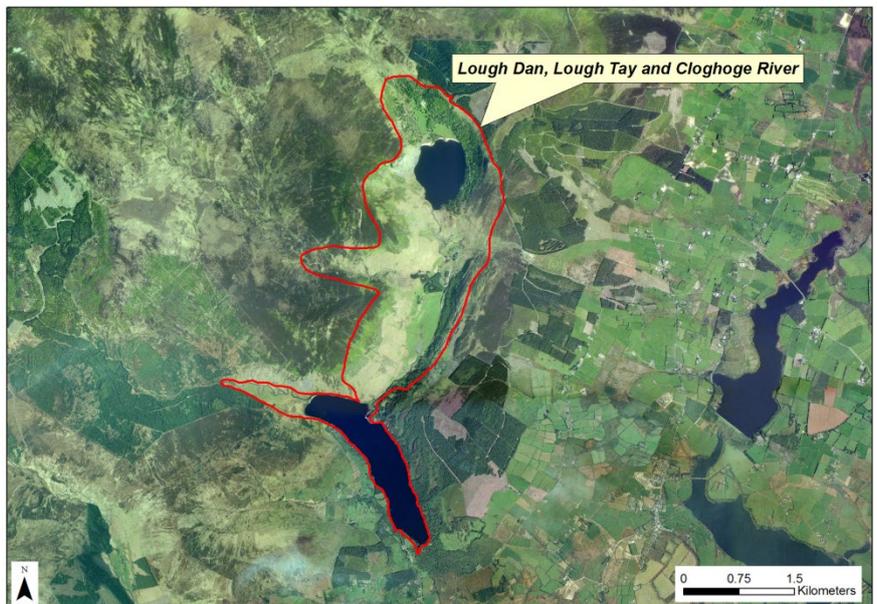
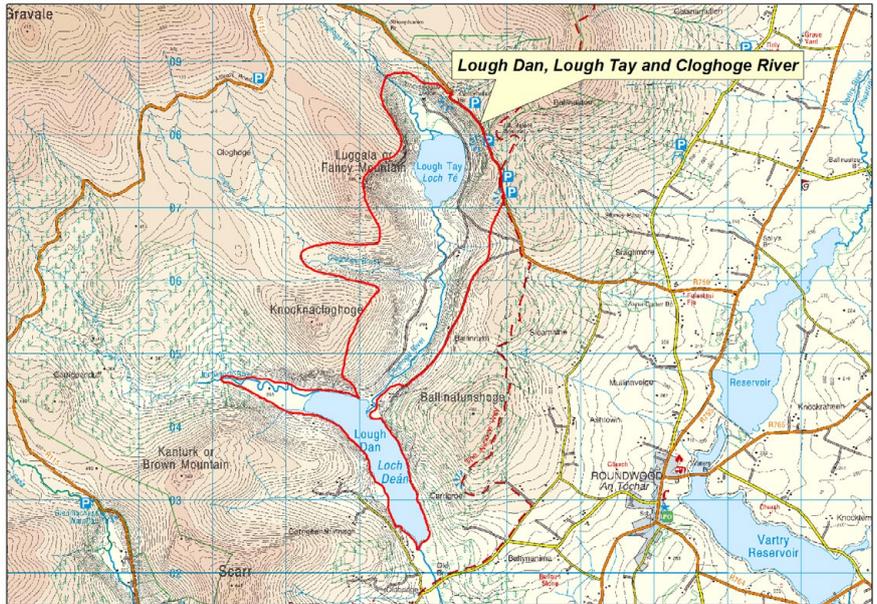
North end of Lough Dan, viewed looking west from Cloghoge River delta.



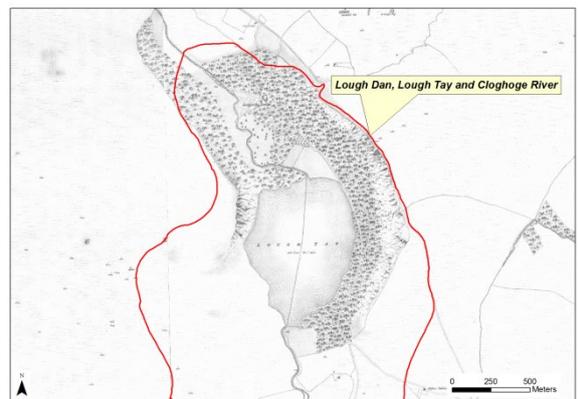
Lough Tay viewed from roadside viewing area overlooking Lough Tay – looking south down Cloghoge Valley.



Cloghoge Valley - view northwards from track at east foot of Knocknacloghoge hill (left). Stone wall built of local Ordovician schist and some Devonian granite. Debris slumps right of track in middle-distance near woodland.



Lough Dan



Lough Tay

