

SOUTH DUBLIN - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Ballinascorney Quarry
Other names used for site	
IGH THEME	IGH11 Igneous Intrusions
TOWNLAND(S)	Ballinascorney Upper
NEAREST TOWN/VILLAGE	Tallaght
SIX INCH MAP NUMBER	24
NATIONAL GRID REFERENCE	707638E 722824N (centre of quarry)
1:50,000 O.S. SHEET NUMBER	50 GSI 1:100,000 Bedrock Sheet No. 16

Outline Site Description

The site consists of a large abandoned quarry in the hills above Tallaght, bounded by the R114 road and a forest that covers Slievenabawnogue hill to the southeast.

Geological System/Age and Primary Rock Type

The rock is predominantly Caledonian dolerite, emplaced into Ordovician siltstones and slates of the Aghfarrell Formation. The dolerite pre-dates the Leinster Granite (405 Ma) but post-dates the main regional deformation.

Main Geological or Geomorphological Interest

Ballinascorney quarry is an excellent exposure of the Tallaght Dyke Swarm, a zone of dolerites emplaced into the Lower Palaeozoic metasediments on the western side of the Northern unit of the Leinster Granite. Individual dolerite sheets range from up to 5 m in thickness but many are multiple and have a much greater combined thickness. Such was the intensity of dolerite sheet intrusion that the host rocks are in some cases reduced to thin partitions between adjacent dolerite sheets. The dolerites are greenish-grey in colour and consist mostly of porphyritic dolerite with altered phenocrysts of plagioclase together with finer plagioclase and hornblende.

The quarry contains numerous high faces where the relationships between individual dolerite sheets and between the dolerites and their host rocks can be observed.

Site Importance – County Geological Site

The quarry at Ballinascorney is the best available exposure of the Tallaght Dyke Swarm. Dolerite has been intensely quarried in the hills around Ballinascorney for many years.

Management/promotion issues

A small quarry is marked on the old 19th-century 6-inch maps but most of the quarry observed today was developed between 1969 and 1979. The site is privately owned and a 2m-high chain-link fence prevents access at what was the main entrance at a sharp bend on the R114. The quarry is easily entered along an old road at the back of the quarry which can be reached via the forest road immediately to the south, but permission should always be sought from the owner. Large concrete structures, the remains of the quarry's infrastructure, remain on site. These and the high quarry faces represent a hazard and the site is not suitable for general promotion. In any case it is likely to be of most interest to geologists.



Ballinascorney Quarry entrance.



Multiple dolerite sheets, separated by very thin layers of host rock, dipping southeast (left-to-right).



Dolerite, fractured from blasting, conformable with country rock (top right).



