

SOUTH DUBLN - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	N4 Lucan cutting
Other names used for site	
IGH THEME	IGH8 Lower Carboniferous
TOWNLAND(S)	Lucan and Pettycanon, Esker South
NEAREST TOWN/VILLAGE	Lucan
SIX INCH MAP NUMBER	17
ITM CO-ORDINATES	703132, 734585
1:50,000 O.S. SHEET NUMBER	50
	GSi BEDROCK 1:100,000 SHEET NO. 16

Outline Site Description

Roadside exposure of Calp limestones beside the N4 underpass junction for Lucan.

Geological System/Age and Primary Rock Type

Bedrock consists of Lower Carboniferous (Mississippian) 'Calp' (Lucan Formation). Mainly dark grey coloured limestones interbedded with shaly limestones, and shales.

Main Geological or Geomorphological Interest

The bedrock consists of beds of dark grey-black, fine-grained limestone with interbedded calcareous shale. Calp bedrock underlies most of Dublin City. The Calp limestone is not susceptible to karstification and no major cavities occur in these rocks. The strata dip generally towards the south west and are exposed on each side of the N4 in the underpass created to keep traffic moving at a former traffic light junction. The limestone strata are typically between 10 cm and 30 cm thick, with thinner interbedded shale beds. Although there is a broad dip southwestward, there are local flexures.

Site Importance: County Geological Site

This site is of minor geological interest, but is a highly visible expression of local geology seen by thousands of people every day as they drive through the underpass. The general dip and local small scale flexures provide some interest for passengers in cars driving through the underpass.

Management/promotion issues

Owing to the high-level of traffic at this junction the opportunity for promoting geology is significant but any effort to do so must be within constraints of safety, and must not distract drivers. It is suggested here that a simple sign saying something like 'Calp Limestone – 340 million years old' might be possible, but such signage is best addressed in a strategic national approach in partnership with the NRA.

There is a problem of litter building up behind the crash barrier and over periods of tens of years, some outcrop cleaning might be advisable to remove accumulated shale debris and keep the bedded structure fresh and visible and dramatic.



The N4 Lucan cutting viewed from the south east side.



The north west section from the bridge.



The south east section from the bridge.



The Lucan bypass improvement was opened in 2009.



