

TIPPERARY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Toberadora
Other names used for site	Toberadorah, <i>Tiobraid Fheorainn</i>
IGH THEME	IGH1 Karst, IGH16 Hydrogeology
TOWNLAND(S)	Toberadora
NEAREST TOWN/VILLAGE	Holycross
SIX INCH MAP NUMBER	53
ITM CO-ORDINATES	607850E 649692N
1:50,000 O.S. SHEET NUMBER 66	GSI BEDROCK 1:100,000 SHEET NO. 18

Outline Site Description

Toberadora is a roadside spring site, regarded as a sacred well, along the road between Holycross and Cashel.

Geological System/Age and Primary Rock Type

The spring is of karstic origin, formed in relatively impure limestones of the Durrow Formation, which are of Lower Carboniferous (Mississippian 359-323 Ma) age.

Main Geological or Geomorphological Interest

The limestone across a wide area in mid- and south Tipperary comprises well bedded, well-jointed, pale, clean, coarse grained bedrock, with occasional thin shales. A large spring at Toberadora, set in a roadside compound, forms the head of the Toberadora Stream, which flows westwards towards the River Suir,

Though emerging from impure limestones, which crop out at the spring emergence, much of the area immediately east (and up-gradient of) the spring is underlain by karstified, pure bedded limestones. At such karstic spring localities, groundwater will either emerge from the bedrock directly, as at Toberadora, or will filter through some depth of glacial till deposits. In the area east of Toberadora the limestone aquifer is probably highly karstified, given the size of the spring emergence here.

The zone of contribution to the spring has been mapped by the EPA, and is estimated to cover almost 5 square kilometres. The site is not used as a public water supply, but was historically, and is in the EPA's operational diffuse and spring flow network. The spring has a measured daily outflow of 2,182 m³. Nitrate levels are relatively high, with an average concentration of 30 mg/l NO₃.

Site Importance – County Geological Site

This spring is worthy of recognition as a County Geological Site owing to the detailed mapping and modelling that led to the delineation of its zone of contribution and Source Protection Zones on behalf of the EPA in the early-2010s, and as it is in their monitoring network.

Management/promotion issues

The site has its own compound, but the spring is open to the elements. Being a water source vulnerable to contamination the general promotion of the locality should be regarded with sensitivity. General education about the vulnerability of karst groundwater supplies to pollution from septic tanks and agricultural slurry spills and bad spreading practices is advisable, and a signboard illustrating the hydrogeology of the feature, how it arises, and the potential risks to contamination owing to its nature, would be beneficial.



The spring emerging at Toberadora.



View of the Toberadora Stream, flowing out westwards from the spring.



Limestone bedrock outcrop at the head of the spring.



The small roadside compound housing the spring.

