

## CORK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	Trinity Well
Other names used for site	
<b>IGH THEME</b>	IGH16 Hydrogeology
<b>TOWNLAND(S)</b>	Curraduff
<b>NEAREST TOWN/VILLAGE</b>	Newmarket
<b>SIX INCH MAP NUMBER</b>	44
<b>ITM CO-ORDINATES</b>	529990E 607740N
<b>1:50,000 O.S. SHEET NUMBER</b>	72 GSI BEDROCK 1:100,000 SHEET NO. 21
<b>GIS CODE</b>	CK085

### Outline Site Description

A warm spring with religious and ritual association located 1.5 km west of Newmarket.

### Geological System/Age and Primary Rock Type

Surface bedrock in the area is Mississippian (Upper Carboniferous, or Namurian) sandstone and shales of the Cloone Flagstone Formation. These rocks are part of the Shannon Group that comprise the lower part of the Namurian succession of the Shannon Trough. The springs issue from Mississippian (Lower Carboniferous) limestones. The hydrochemistry of the spring indicates that the water derives from the Carboniferous limestone aquifer. The Dinantian limestones outcrop at the surface in a set of small inliers occurring around Meelin and Taur.

### Main Geological or Geomorphological Interest

The Trinity Well issues from a c. 1 m wide depression surrounded by a low dry-stone wall, opening to the east in the direction of water flow. Water flows via a shallow conduit accessible through a metal grill and two manholes situated along the 20 m conduit that empties into a small stream flowing southeastwards towards the R578 road, along the Curraghduff-Coolagh townland boundary. Mean water temperatures are c. 14.5°C. This water temperature is notably warmer than average groundwater temperatures in Ireland (9°C-11.5°C). Five kilometres to the north, Ballinatona Spring has a mean temperature of c. 13.5°C.

A study in 1983 recorded a discharge yield of 18 litres/min and a mean pH value of 7.5 at Trinity Well, which is compatible with a limestone aquifer source. The well is situated at an elevation of about 150 mOD, around 100 m to the north of the Glenlara River. A national River Water Monitoring station (RS18G080500) is located 270 m southwest of the well. The warm springs of north Cork–east Limerick region tend to be associated with Carboniferous Limestone, and it is probable that limestone occurs at relatively shallow depth beneath Trinity Well. It is possible that east-west trending thrust faults allow the warm waters to rise from depth. The influence of fault control has been suggested due to the relatively high elevations of these warm springs. The hydrochemistry of the springs indicates that they are all derived from Carboniferous limestone aquifers.

### Site Importance – County Geological Site

This is an important County Geological Site because it is characterised as a warm water spring with a mean temperature of c. 14.5°C and because it hosts two National Monuments that are directly linked to the occurrence of the well, and also due to the cultural and religious associations with the site.

### Management/promotion issues

Situated just off the R578 Newmarket to Ballydesmond road, the site is well maintained with a kissing gate entrance and gravel pathway leading to the well. The site has seating benches and a variety of items of religious association. A willow tree overhanging the well is used as a rag-tree. A National Monument (SMR CO014-085001), the well is classed as a 'ritual site – holy well'. A fulacht fiadh (SMR CO014-085002) is adjacent to the well, comprising a horsehoe-shaped mound of burnt material, overgrown with scrub, willow and hawthorn. A well-maintained path encircles the well and fulachta fiadh.



Trinity Well.



Kissing-gate entrance and information panel. R578-R576 Road junction in distance 200m to east.



Spring well within stone structure beside kneeling flagstone.



