

## LIMERICK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>St. Bridget's Well (Newcastle West)</b>
Other names used for site	St. Brigid's Well, <i>Tobar Bríde Naofa</i>
<b>IGH THEME</b>	<b>IGH16 Hydrogeology</b>
<b>TOWNLAND(S)</b>	<b>Shanagarry</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Newcastle West</b>
<b>SIX INCH MAP NUMBER</b>	<b>36</b>
<b>ITM CO-ORDINATES</b>	<b>526520E 632720N</b>
<b>1:50,000 O.S. SHEET NUMBER 64</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 17</b>
<b>GIS CODE LK028</b>	

### Outline Site Description

A warm water spring and site of a holy well associated with St. Brigid (St. Bridget).

### Geological System/Age and Primary Rock Type

Bedrock at the site is Mississippian (Lower Carboniferous) Viséan limestone, with interbedded shales (Calp), underlain by Waulsortian limestones.

### Main Geological or Geomorphological Interest

St. Bridget's Well is an artesian spring emerging from limestone bedrock. The well issues from a c. 1m wide depression, surrounded by a low dry-stone wall, and flows eastwards *via* an open, shallow conduit, eventually draining to a northeast flowing tributary of the River Arra.

The average water temperatures are in the order of around 13°C, with an average discharge rate of 113 litres/min. These temperatures are warmer than average groundwater temperatures in Ireland - which are in the order of 9°C-11.5°C.

The spring was one of several springs studied in the early 1980s by Peter Brück. The study suggested that the warm waters originate within the well-jointed Waulsortian lithologies and rise along a shattered junction zone within the otherwise impermeable Viséan 'Calp'. Geophysical investigations carried out in the same study suggest the overburden (sediments and soils) may influence the well's location.

### Site Importance – County Geological Site

An important County Geological Site in terms of its cultural and religious associations as a 'holy well' and a site of pilgrimage on February 1<sup>st</sup>, St. Brigid's Day. Of geological importance, the site is among a group of warm springs located in Munster that share a location on the eastern margin of the Namurian basin where normal limestone groundwater undergoes deep circulation and returns to the surface via fault or fracture zones.

### Management/promotion issues

Situated about 1km west of Newcastle West, the spring well is accessible *via* a gated entrance and short (50m) path leading south from the N21 road. More than 3,000 holy wells were recorded on surveys conducted by the Ordnance Survey in the nineteenth century. A National Monument (SMR LI036-060002), the well is classed as a 'ritual site – holy well', and is situated within bounds of a ringfort/rath (SMR LI036-060001). The well is listed in the Geological Survey Ireland Groundwater Wells and Springs database as Well No. 1113SEW081 and Well No. 1113SEW107. The site has seating benches and a variety of items of religious association, and an information panel about the site's associated hydrogeology.



Spring at St. Bridget's Well, and eastward outflow along shallow conduit.



Spring at St. Bridget's Well.



Path to St. Bridget's Well (right).



