# LEITRIM - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE Other names used for site IGH THEME TOWNLAND(S) NEAREST TOWN/VILLAGE SIX INCH MAP NUMBER ITM CO-ORDINATES 1:50,000 O.S. SHEET NUMBER 16 GISCODE LM028 Teampall Shetric Teampul Shetric, Teampol Shetric IGH1 Karst Carrickeeny Manorhamilton 7 581600E 842835N (entrance) GSI BEDROCK 1:100,000 SHEET NO. 7

### **Outline Site Description**

An extensive cave system below a stream sink.

### Geological System/Age and Primary Rock Type

The cave predates the last main phase of glaciation and the lowering of the Glencar Valley, but has continued to develop since. The cave is formed in the Dartry Limestone Formation, a cherty limestone of Mississippian (Lower Carboniferous) age.

### Main Geological or Geomorphological Interest

Teampall Shetric is one of the larger caves in the Glencar area, with a surveyed length of 1,090m, and a depth of 63.5m. It originally carried water from sinks in the Gorteenaguinnell area to the northwest, but these were altered by the glacial downcutting of Glencar. A new stream sinking into the cave from the impermeable rocks of the Meenymore Formation to the north then reactivated it, leaving a dry valley, where the previous cavern was, below the current entrance. New explorations in 2013 revealed much more cave passage than was previously known, and provided an accurate survey.

The entrance is within an amphitheatre of rock, perhaps giving the 'Teampall (Temple)' name, with a church-like appearance. The stream sinks some 50m away and connects to the complex cave morphology *via* an upper stream passage, entering the 'Teampall' in the side wall, and sinking into the floor.

Most Leitrim caves are very strongly controlled by the relative hardnesses of the units in the limestone geology, including the high proportions of chert layers in the Dartry Limestone Formation. The impermeable layers of chert mean that cave development is predominantly vertical, and controlled by joints and faults in the rock, rather than bedding planes (which is more common in many karstic areas). Continued cave development in such limestone is nearly all vadose (i.e. the cave passages are air filled). However, Teampall Shetric is unusual in that it was largely formed under phreatic conditions (the cave passages were water filled). As a consequence, there is significant horizontal cave passage development, compared to most Leitrim caves (which are, in effect, vertical or sub-vertical potholes).

## Site Importance – County Geological Site

Teampall Shetric is a significant cave amongst the many known in County Leitrim. It has a complex geomorphological history, and related surface landforms, and is recognised as a County Geological Site.

#### Management/promotion issues

The cave is on private farmland and should only be visited with landowner permission. It is not suitable for visits by the general public, and only properly equipped, experienced cavers could enter the cave safely.



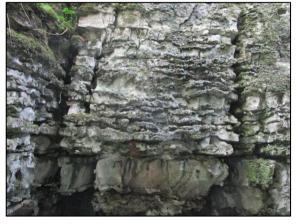
The stream sink into the upper stream passage of Teampall Shetric.



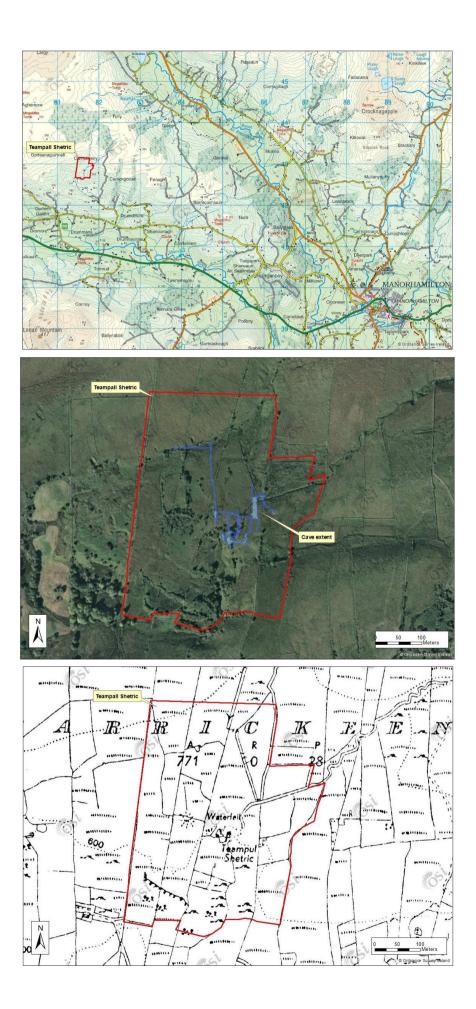
The inner section of the 'temple' entrance to Teampall Shetric.



The view looking out of the 'temple'.



Chert bands in the Dartry Limestone Formation.



Parkes et al., 2020. Geological Survey Ireland.