

## TIPPERARY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Roaring Wells</b>
Other names used for site	Roosca Cave, Thonoge Sink and River Bed
<b>IGH THEME</b>	<b>IGH1 Karst</b>
<b>TOWNLAND(S)</b>	<b>Roosca, Carrigataha, Ballydrinan</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Caher</b>
<b>SIX INCH MAP NUMBER</b>	<b>81</b>
<b>ITM CO-ORDINATES</b>	<b>605475E 619550n (centre of site)</b>
<b>1:50,000 O.S. SHEET NUMBER 74</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 22</b>

### Outline Site Description

A conduit cave system which is mostly phreatic but with some short vadose sections and the risings in the bank of the River Suir, as well as a river sink and some associated karst features in a large area of karstic drainage features.

### Geological System/Age and Primary Rock Type

The River Suir springs or Roaring Wells are in Carboniferous limestone as are all of the other associated sinks, caves and karstic landscape features. Whilst there may be an inherited component of pre-glacial or interglacial development it is likely that most of the features in this site developed in the post-glacial period or Holocene.

### Main Geological or Geomorphological Interest

The importance of this site lies in its unusual hydrology and the interaction with the karstic geology. There is a rising complex along a short stretch of about 150 m of the River Suir, where several risings are found. The complex is notable in that some are derived from conduit flow, whilst others are fed by diffuse flow. Three risings are fed from a sink in an intermittent stream (Thonoge River) approximately 1 km distant. One of these is from a large phreatic conduit cave system which has been dived and extends for at least 700 m. Within this cave conduit, flow from a more distant sink (Tincurry Sink) is combined with the flow from the Thonoge River, deduced from a lower temperature and less suspended sediment than the newly sunk water.

Measurements of the mean temperature, calcium ion concentration and coefficient of variation for calcium (Ca) of the other risings, compared to the conduit fed ones, indicate that they are supplied by slow fissure flow, recharged by diffuse autogenic input i.e. meteoric water. The site includes a number of other karstic features which are of unknown relationship to the hydrogeology, including a short cave (Roosca Cave) which is sometimes a sink and sometimes a rising.

### Site Importance – County Geological Site; recommended for Geological NHA

The site has previously been recommended to NPWS for designation as a geological NHA, based on the national importance and unusual, demonstrable karstic groundwater mixing from different sources.

### Management/promotion issues

The access along the river bank to the Roaring Wells is apparently controlled by a fishing club, but is not a public path. The remainder of the site is private farmland and no access should be presumed without permission from the landowner.



Roaring Well 1.



Roaring Well 1 is to the left of the footbridge.



Roaring Well 2.



Roosca cave and rising is in this scarp.



The smallest of the minor spring outlets.



Roaring Wells are along the wooded bank.



Roosca cave is situated at the base of the wood on the left.



