

# WESTMEATH - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Tyrrellspass Kettle Hole</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Ballykilmore</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Tyrrellspass</b>
<b>SIX INCH MAP NUMBER</b>	<b>39</b>
<b>ITM CO-ORDINATES</b>	<b>642175E 738400N (centre of feature)</b>
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>48 GSI BEDROCK 1:100,000 SHEET NO. 15</b>

## Outline Site Description

The Tyrrellspass Kettle Hole is a deep, concave hollow which assumes a bowl shape, a few hundred metres northeast of the centre of Tyrrellspass Village.

## Geological System/Age and Primary Rock Type

The drumlin is formed on Lower Carboniferous limestone bedrock. The kettle hole itself is Quaternary in age, having been formed at the edge of a retreating ice sheet during deglaciation, at the end of the last Ice Age. Such kettle hole features generally form in clusters, in association with small hills (kames), and form a landform assemblage known as 'kame and kettle topography'. Kettle holes are relatively rarely found in isolation, and the depth and dimensions of the feature at Ballykilmore are much more striking than most found across the Midlands of Ireland.

## Main Geological or Geomorphological Interest

A kettle hole is a shallow, sediment-filled hollow formed by retreating glaciers. The kettles are formed as a result of blocks of ice calving from glaciers and becoming submerged in the sediment on the outwash plain. When the block of ice melts, the depression it leaves behind is the 'kettle hole'.

The shape and conspicuous nature of the kettle hole near Tyrrellspass is unique within the main belt of 'kame and kettle topography' across the Midlands of central Ireland. Other examples of kettle holes found in isolation such as this one are known, but are not generally as deep or distinct. As well as this, the base is dry; many such features have wet bases whereby the exact formational history may be of some debate. The kettle hole is approximately 8 m deep, 40 m wide and 30 m long.

Beneath the kettle hole landform the ground is comprised of glaciofluvial sands and gravels, which are comprised mainly of Lower Carboniferous limestone clasts.

## Site Importance – County Geological Site

This kettle hole is a testament to the complex processes that occur at the edge of a retreating ice sheet. Its deep, dry and discrete nature means it is something of a geomorphological 'oddity' for this part of Ireland. The rarity of such isolated and dry-based kettle holes warrants County Geological Site status.

## Management/promotion issues

The Tyrrellspass Kettle Hole is comprised of sands and gravels and therefore may be of interest as an aggregate source. Quarrying should be prohibited in order to preserve the integrity of the landform. A signboard at the main, regional R446 road, which outlines the formational history of the feature, could be considered.



The Tyrrellspass Kettle Hole, viewed from the northwest.



The feature viewed from the south.

