

## LIMERICK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Clare Glens</b>
Other names used for site	Clare Glen
<b>IGH THEME</b>	<b>IGH10 Devonian, IGH14 Fluvial and Lacustrine Geomorphology, IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Puckane, Ashroe</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Murroe</b>
<b>SIX INCH MAP NUMBER</b>	<b>7</b>
<b>ITM CO-ORDINATES</b>	<b>572956E 659928N (entrance to site at car park walkway)</b>
<b>1:50,000 O.S. SHEET NUMBER 65</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 18</b>
<b>GIS CODE LK008</b>	

### **Outline Site Description**

The Clare Glens comprise a deep river gorge over 2.5km long along the boundary between County Tipperary and County Limerick.

### **Geological System/Age and Primary Rock Type**

The rocks exposed in the bed and banks of the Clare River at the Clare Glens site are all Devonian in age, part of the Keeper Hill Formation, informally referred to as 'Old Red Sandstone'. The rock is predominantly sandstone, but includes some pebbly conglomerate also. The river gorge is Quaternary in age, and was also a glacial meltwater channel at the end of the last Ice Age.

### **Main Geological or Geomorphological Interest**

The main interest here is the extensive exposures of the Devonian Keeper Hill Formation, which is generally poorly exposed. The Clare Glens section provides a good representative traverse of this rock type, over more than 2km. Though the bedrock is not continuously accessible or exposed along the walking trails, the site provides an extensive exposure of the formation.

The Keeper Hill Formation comprises mainly sandstone, both whiteish and red in colour, with some pebbly conglomerate. The conglomerate clasts are mostly white, rounded, well-sorted pebbles of vein quartz. The rounding and sorting imply a significant degree of transport prior to deposition and these pebbles are therefore probably derived from erosion of much older rocks from more northern part of Ireland, rather than from the local Slieve Felim Mountains. The wider path on the Limerick side of the Clare Glens is further away from the river bed but there are accessible large boulders of conglomeratic sandstone along the route.

The geological interest of Clare Glens is furthered by the geomorphology of the gorge itself, which is a glacial meltwater channel where immense volumes of glacial meltwater carved a deep ravine. The Clare River has continued downcutting since the Ice Age ended around 10,000 years ago. Waterfalls occur in many places along the river, and may be due to either the occurrence of particularly thick beds of sandstone or pebble rich beds which are more resistant to erosion than adjacent rocks.

### **Site Importance – County Geological Site**

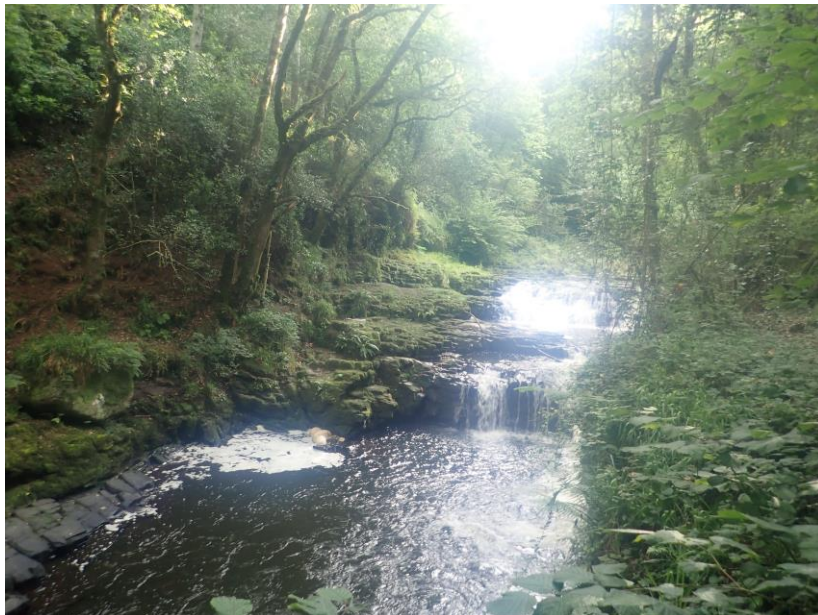
The Clare Glens provide a good representative section of Devonian rocks that are otherwise not well exposed, and together with the geomorphological interest and educational potential of the river ravine, deserves recognition as a County Geological Site.

### **Management/promotion issues**

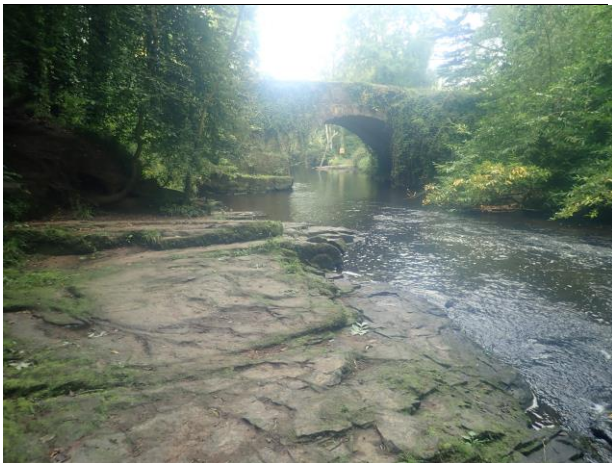
Clare Glens is an SAC (sitecode 00930) and protected for its biological interest of oak woodlands and associated plant species. On the county boundary between County Tipperary and County Limerick, the site is jointly managed by the respective Local Authorities as a public amenity and nature reserve, and two public car parks are available at the western end of the site. The paths are slippery and uneven in many places and must be treated with caution by visitors. The higher-level path at the top of the gorge is generally easier, but more removed from the interesting geological exposures in the river bed. The public signboards do mention some geological elements but could be much expanded.



Clare Bridge, viewed from the southeast; see the huge sandstone boulders.



Stepped waterfall cascading over beds of Devonian Sandstone, Ashroe.



Outcrop of sandstone bedrock near Clare Bridge.



One of the iconic falls at the head of the glen.

