# LIMERICK - 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 65 GIS CODE LK004 **Caherconlish Quarry** 

IGH11 Igneous Intrusions, IGH8 Lower Carboniferous Knockatancashlane Caherconlish 14 580065E 650220N GSI BEDROCK 1:100,000 SHEET NO. 18

## **Outline Site Description**

Former stone quarry with exposed and overgrown faces.

## Geological System/Age and Primary Rock Type

Mississippian (Lower Carboniferous) trachyte of the Limerick Volcanics, within limestone of the Lough Gur Formation.

## Main Geological or Geomorphological Interest

Caherconlish Quarry was excavated in a small body of trachyte, which is a volcanic rock of intermediate composition that forms by fractionation from basaltic magma. It represents a more fractionated magma than that which forms the bulk of the volcanic rocks in Limerick, which are typically basaltic in composition. Trachyte is typically extruded as a lava but at Caherconlish it cuts across the strike of the bedding of the Lough Gur Formation limestone and thus appears to have been intruded as a sill or dyke. Other trachyte occurrences in the Limerick Volcanics, such as that at Derk Hill, were emplaced as plugs in volcanic vents.

While Caherconlish Quarry provides an excellent exposure of trachyte rock, the quarry is best known for its well-developed columnar jointing, which is visible on the quarry face. Columnar jointing develops in some igneous rocks as they cool, with vertical zones of contraction developing into regular, typically hexagonal columns, as exemplified by those on the Giant's Causeway in County Antrim. At Caherconlish the columns are exposed at the southern end of the quarry but are not readily inaccessible owing to the presence of thick undergrowth and the very uneven ground of the former quarry floor. The shape of the columns can be seen in the northern part of the quarry where fragments of columns display a hexagonal shape.

## Site Importance – County Geological Site

This site contains a large exposure of trachyte with well-developed columnar jointing. It is one of the best known occurrences of such jointing in the Limerick Volcanics and was featured in the 1907 Memoirs of the Geological Survey that described the geology of the Limerick area. It is recommended as a County Geological Site.

## Management/promotion issues

The quarry face is significantly overgrown and difficult to approach owing to thick undergrowth and uneven ground. The quarry is on private land, part of a working farm, and permission is required for access. Apart from being used to store materials it appears to be largely neglected and not under any threat. Further promotion is not warranted.



View northwards along quarry face



Close-up of best exposure of columns at southern end of the quarry face.



Part of a column on floor of quarry, displaying hexagonal shape.



Caherconlish Quarry in the early years of 20<sup>th</sup> century (from Lamplugh *et al.* 1907)



Meehan et al., 2021. Geological Survey Ireland.