

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Bullaunagh Sinks
Other names used for site	
IGH THEME	IGH1 Karst
TOWNLAND(S)	Bullaunagh
NEAREST TOWN/VILLAGE	Ardrahan
SIX INCH MAP NUMBER	114
ITM CO-ORDINATES	551413E 710030N (centre of sinking stream section)
1:50,000 O.S. SHEET No. 52	GS1 BEDROCK 1:100,000 SHEET NO. 14

Outline Site Description

This site comprises a series of swallow holes and sections of sinking stream along a meandering portion of the Owenahree River course.

Geological System/Age and Primary Rock Type

The swallow holes and 'sinking' section of the stream is of karstic origin, formed in pure bedded limestones of the Newtown Member (Tubber Formation), which are of Lower Carboniferous age. The river itself is of Holocene age, formed in the last 10,000 years since deglaciation.

Main Geological or Geomorphological Interest

The limestone across a wide area in southwest Galway comprises well bedded, well-jointed, pale, clean, coarse grained rock, with occasional thin shales. A number of swallow holes were known historically at this locality at Bullaunagh, labelled on the original six inch map of 1937-1842 as 'sinks'. By the time the Cassini map had been published later that century, the channel had been straightened along the river course, and the sinks were nowhere to be seen.

In the Bullaunagh area the limestone aquifer is highly karstified, as illustrated by the high number of karst features. In examining the stretch of river in the field, it can be seen that the river sinks along a long section of its bed, with many discrete swallow holes and sections of 'losing' river in evidence. Well developed meanders still function in the river channel when the bed is full, and lie dry when empty in summer. It has been recorded that the water springs from the river bed when the river is filling up, meaning that in fact the river bed comprises a series of estavelles.

No dye tracing has been completed on the water sinking into the limestone at Bullaunagh, although swallow holes a few hundred metres northeast of the site have been traced to the Coole Risings, in Coole Demesne near Gort.

Site Importance – County Geological Site

This locality is worthy of recognition as a County Geological Site owing to the complex nature of the river bed substrate, which seems to flood the river bed as springs during wet periods and allow water to sink from the river bed in dry. The drainage history is also noteworthy, with the new channel constructed in the mid 1800s achieving little in terms of altering the karstic nature of the environment.

Management/promotion issues

The site is on private land and no access is permissible without the landowner's consent. The river (dry in summer) can be easily viewed from the public road at Ballybackagh Bridge.



The dry Owenahree River, at Bullaunagh, in July 2019.



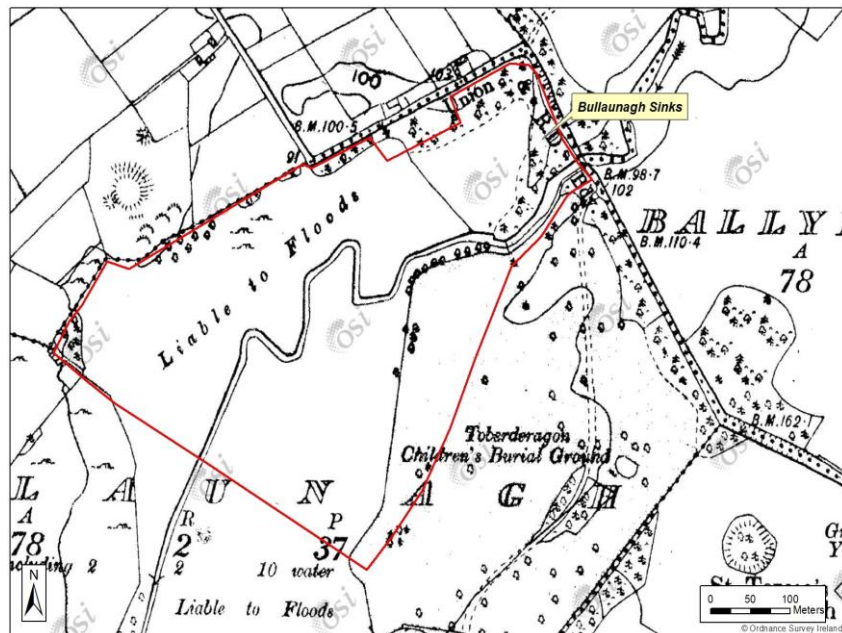
One of the localities of limestone pavement with estavelles in the river bed at Bullaunagh.



The channelised river south of the 'sinks'; this channel was dug out in the mid-1800s.



The now-abandoned swallow hole 'sinks' which were shown on the original six inch map.





The Owenahree River, shown as sinking at Bullaunagh on the first edition, Ordnance Survey six inch sheets of the locality.