

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Carrigacapeen
Other names used for site	Carrigacapeen Erratic
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Gortagass
NEAREST TOWN/VILLAGE	Kenmare
SIX INCH MAP NUMBER	93
ITM CO-ORDINATES	493830 572150
1:50,000 O.S. SHEET NUMBER	78
GS1 BEDROCK 1:100,000 SHEET NO.	20, 21
GIS CODE	KY030

Outline Site Description

Glacial erratic sandstone boulder resting on limestone in area of rough grazing.

Geological System/Age and Primary Rock Type

The glacial erratic boulder is Devonian Old Red Sandstone, perched on a bedrock limestone 'pedestal'. The bedrock at the site is Lower Carboniferous (Mississippian, 359-323 million years old) muddy limestone and shale of the Ballysteen Formation.

Main Geological or Geomorphological Interest

One of Ireland's more unique glacial erratics, Carrigacapeen comprises a sandstone boulder sitting on a limestone pedestal. Transported from its Old Red Sandstone bedrock source by glacial ice, the boulder was deposited in Gortagass townland onto bare limestone bedrock when the ice melted at the end of the last Ice Age. The site is situated in the Lower Carboniferous (Mississippian, 359-323 million years old) limestone core of the Kenmare Syncline and is flanked to the north and south by Devonian Old Red Sandstone (Ballinskelligs Sandstone Formation and Caha Mountain Formation). The sandstone boulder is derived from the Old Red Sandstone terrain. It is possible that quarrying may have led to the peculiar configuration of the sandstone boulder on the narrow limestone pedestal, but no records exist to support this. Natural weathering of the limestone as the sole reason is also a possibility.

Cosmogenic nuclide surface-exposure dating analysis carried out at Carrigacapeen suggest that deglaciation was occurring in southwest Ireland around 22,000 years ago during the last Ice Age. The measurement of Chlorine-36 (³⁶Cl) on rock surfaces allows for the estimation of how long the surface of a rock has been exposed to the elements (*i.e.* ice free). Chlorine-36 exposures age at Carrigacapeen indicate deglaciation in the area east of Kenmare at around of 22,000 years.

Site Importance – County Geological Site; recommended for Geological NHA

This is a remarkable and unique feature in that a large sandstone boulder sits balanced upon a noticeably smaller limestone pedestal. This is an important County Geological Site as an example of a glacial erratic and pedestal that reflect the two main lithologies (sandstone and limestone) of the Kenmare area, and because radiometric analysis of Chlorine-36 ratios at Carrigacapeen provide evidence of deglaciation and ice sheet retreat in southwest Ireland.

Management/promotion issues

The site is situated on private property in a field grazed by cattle. Permission to access the site should be sought from the landowner who resides nearby. Photographs of the site dating from the late nineteenth century can be found online. The site has been described in publications such as Frank Mitchell's book 'The Way that I Followed' published in 1990.



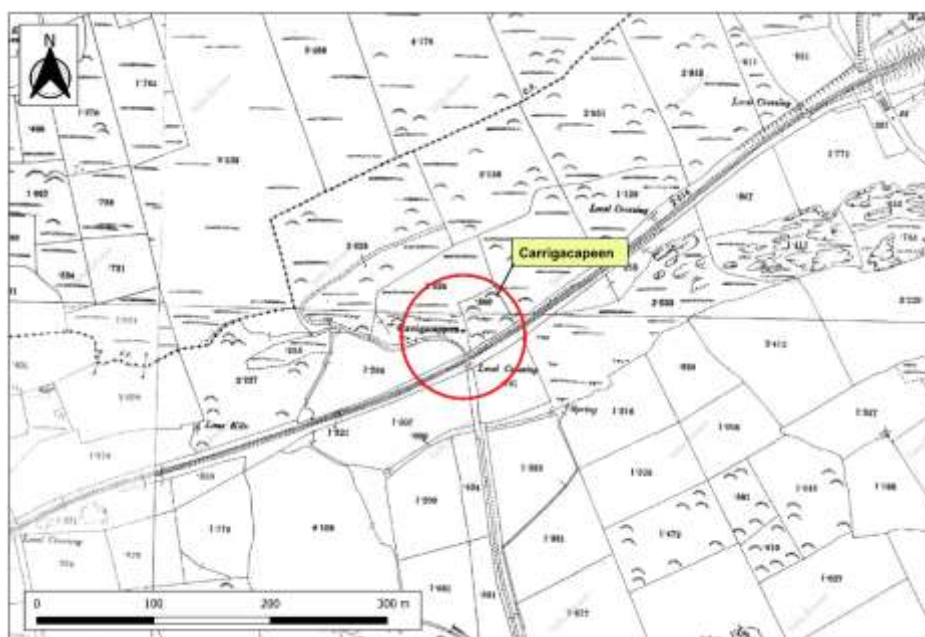
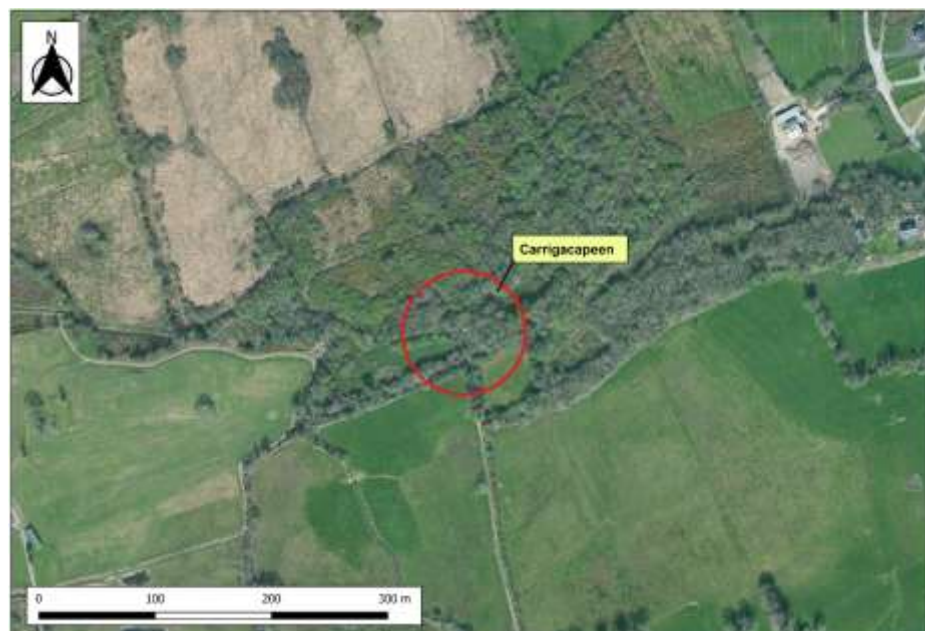
The west side of Carrigacapeen. Sandstone boulder resting on limestone pedestal.



Close up view of the northeast side of the limestone 'stand' (< 1 m wide).



North side of Carrigacapeen. Geologist (~1.65 m) for scale.





George Victor Du Noyer: Boulder of coarse grit resting on the mountain limestone of Kenmare Valley
15th April 1857 (Royal Society of Antiquaries of Ireland)