

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Tetrapod Trackway
Other names used for site	Valentia Trackway, The Tetrapod Trackway, Valentia Tetrapod Trackway, The Valentia Island Tetrapod Footprints
IGH THEME	IGH2 Precambrian to Devonian Palaeontology, IGH10 Devonian
TOWNLAND(S)	Dohilla
NEAREST TOWN/VILLAGE	Knight's Town
SIX INCH MAP NUMBER	78
ITM CO-ORDINATES	438860E 578020N
1:50,000 O.S. SHEET NUMBER	83
GSi BEDROCK 1:100,000 SHEET NO.	20
GIS CODE	KY077

Outline Site Description

A coastal rock platform containing fossilised footprints.

Geological System/Age and Primary Rock Type

The bedrock comprises purple sandstone-siltstone of the mid-Devonian Valentia Slate Formation (c. 385 million years old).

Main Geological or Geomorphological Interest

The sub-horizontal coastal rock platform at Dohilla on Valentia Island exposes the upper bedding plane of a 20 mm-thick graded sandstone-siltstone bed upon which the footprints of an early four-legged amphibian vertebrate (*tetrapod*) are preserved. The footprints, with a maximum depth of 20 mm, have been interpreted to form one long sinuous trackway as well as several shorter ones. One of the shorter trackways has a central groove interpreted as reflecting body drag on the ground surface. The sand and silt that forms the rocks were deposited on a river plain with the trackways formed on dried-out sediment. The host rocks of the Valentia Slate Formation are here gently folded and are cut by a near-vertical penetrative cleavage. The deformation of the host rocks has inevitably led to deformation (compression) of the trackways. Detailed stain analysis studies have been carried out to estimate the original morphology of the trackway and footprints prior to deformation, leading to a suggestion that the tetrapod had a length of around one metre.

The tetrapod trackway at Dohilla was discovered in 1992 and was the first Devonian trackway in Europe to be positively identified. It is the second oldest evidence, worldwide, of the colonization of land by vertebrates, after a more recent discovery in Poland dated at around 395 million years old. In the last decade further trackways have been described from several sites on Valentia Island.

Site Importance – County Geological Site; recommended for Geological NHA

The Tetrapod Trackway at Dohilla is one of Ireland's most significant geological sites and is of considerable international importance to the understanding of vertebrate evolution.

Management/promotion issues

The Tetrapod Trackway site was selected as the first geological site to be designated as a Natural Heritage Area, protecting it in law. The then Irish Heritage Board (Dúchas) purchased the site, allowing the subsequent installation of a car park and path. Dúchas was abolished in 2003 and its remit largely taken over by NPWS. However, the site does not appear to be listed as a protected site by the NPWS. It is entirely within the Valentia Island Cliffs pNHA (site code 001382) and partially within the Valentia Harbour/Portmagee Channel SAC (site code 002262) and Iveragh Peninsula SPA (site code 004154). The site is extensively promoted on all tourist literature on Valentia Island and is well signposted. An excellent signboard at the site is showing signs of age and will require renewal in the near future. No further promotion is required.



View west across the Tetrapod Trackway along the coast towards Reenadrolaun Head. Rock platform with trackway on bedding plane in foreground.



View eastwards along eastern segment of the Tetrapod Trackway, showing sinuous shape of trackway.



Eastern segment of Tetrapod Trackway, view to north.



View northwards showing entire exposure of Tetrapod Trackway, with second trackway prominent in the foreground.



Cross-cutting trackway at western end of platform, showing shallow groove interpreted as reflecting body drag.

