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# Llanfihangel–Crucorney

## Highlights

The finest example in South Wales of a terminal moraine formed at the extremity of the ice cap during the final (Devensian) phase of glaciation.

## Introduction

The large arcuate moraine at Llanfihangel–Crucorney [SO316 205], north of Abergavenny, provides some of the clearest evidence available for the terminus of the Late Devensian ice-sheet in South Wales. The moraine was formed by a branch of the Usk glacier. The site was first described by Strahan and Gibson (1900) who mapped the glacial deposits in the neighbourhood of Abergavenny. It was subsequently referred to by Grindley (1905) and Charlesworth (1929), and, more recently, Lewis (1970b) described the site in relation to the Late Pleistocene history of the region.

## Description

The moraine runs west from Llanfihangel–Crucorney for about 1.5 km across the valley and rises about 20m on average above the general level of the valley floor. It has a steep, north-facing ice contact slope, best developed around Bridge Wood [SO 320 205]. The moraine as a whole is characterised by the fine development of hummocky terrain, especially in its central portions. Sections through the moraine along a north-south railway line have been described (Strahan and Gibson 1900).

The site was first described by Strahan and Gibson (1900) who mapped an area of glacial sand and gravel (Abergavenny Sheet 232), extending some 1.2 km across the valley and for 1.6 km down its length. They noted that at Llangattoch, Llanfihangel and Clytha the gravels reached their northern and eastern margin, ending abruptly against a gently rising slope of Old Red Sandstone. The sand and gravel composition of these mounds was confirmed by exposures in the railway cutting at Llanfihangel. These exposures were also noted by Grindley (1905) who observed, in the deepest part of the cutting, solid rock capped by a considerable thickness of sand and what he considered to be coarse river drift. He noted that at its highest point the moraine lay about 127 ft (38m) above the level of the flood plain to the north, and that the feature was steep enough for it to be mistaken for an artificial embankment. To the south, the surface of the moraine sloped more gently, merging into an area of hummocky fluvioglacial terrain. Grindley considered that the moraine, the 'Llanfihangel dam', had caused a major diversion of Afon Honddu from a southerly course to its present north-east course, leaving the large valley south of the moraine occupied by a small misfit stream, the River Gavenny.

## Interpretation

The Llanfihangel–Crucorney moraine was next referred to by Charlesworth (1929) who considered that during the 'Newer Drift' period a large glacier fed by ice from the Brecon Beacons had filled the Usk Valley. Part of this glacier had terminated near Llanfihangel, leaving extensive accumulations of outwash and morainic material.

More recently, Lewis (1966b, 1970b) concluded that, although a limited ice cap existed during the Late Devensian, the Usk Valley glacier was extensive. This bifurcated at Crickhowell, and the smaller of the two ice streams moved eastwards across the Lower Grwyne Fechan Valley to enter the Grwyne Fawr/Cwm Coed-y-cerrig trough at Llanbedr, and thence to the Vale of Ewyas where it formed the Llanfihangel–Crucorney terminal moraine (Lewis 1970b).

Charlesworth's (1929) 'Newer Drift' limit has been revised in many parts of Wales, but has been confirmed in south-east Wales (Bowen 1973b) where the morphological evidence of an ice-sheet terminus is well developed. The Llanfihangel moraine is probably the finest example of this morainic development in the area, and contrasts with that at Glais in the Swansea Valley, which is thought to represent a recessional rather than terminal feature of the Late Devensian ice-sheet.

The moraine at Llanfihangel–Cruorney provides some of the finest evidence for an ice terminus in Wales and probably represents the maximum limit of the Late Devensian ice-sheet in the area. It was formed by a branch of the Usk glacier and has caused a major diversion of drainage, in deflecting Mon Honddu from a southerly course to its present north-easterly route.

## **Conclusions**

The Llanfihangel–Cruorney moraine accumulated at the margin of the last major ice-sheet in southeast Wales. It is an exceptional example of its kind and is important because it provides data for reconstructing the dimensions and nature of this last major ice-sheet in Wales. As such it adds to the information about the south-westernmost extension of the North-West European ice-sheet complex.

## **[References](#)**