



South Wales RIGS Group Site Record

RIGS Description

SECTION A

General	South Wales
Site Name: Aberbran to Abercamlais Terraces	File Number: AH_15
RIGS Number: 680	Surveyed by: AJ Humpage
Grid Reference: SO 298361 229041	Date of Visit: 10 September 2011
RIGS Category: Scientific, Educational	Date Registered: Unknown
Earth Science Category: Geomorphological, Sedimentological	
Site Nature: Pasture farmland	Documentation prepared by: AJH
Unitary Authority: Powys CC	Documentation last revised: 6 November 2011
OS 1:50,000 Sheet: 160	Photographic Record: See images attached to this report
OS 1:25,000 Explorer Sheet: OL 12	
BGS 1:50,000 Sheet: 213 (Brecon)	
<p>RIGS Statement of Interest: This site forms part of a network of important scientific sites within the South Wales RIGS area associated with Late Devensian to Holocene fluvial development.</p> <p>This RIGS illustrates a well-developed morainic complex of Late Devensian age on the north bank of the River Usk which has subsequently been dissected, initially by glacio fluvial deposits and then by post-glacial fluvial processes to leave a short flight of terraces on both the north and south banks of the River Usk, the highest of which is c.10m above the modern floodplain. On the floodplain at Aberbran at the eastern end of the RIGS, well developed scroll marks and abandoned channels are visible.</p> <p>The moraine complex may contain elements of both a cross-valley moraine and lateral moraine emplacement on the margins of the retreating Usk valley glacier, plus influence from a possible tributary glacier entering the valley down the Nant Bran valley from the north. As the Usk valley ice front continued to retreat up-valley, vast quantities of outwash filled the valley floor with sediment (a sandur complex) breaching the moraine at this location. Small streams deposited alluvial fan sediments on this surface. With the onset of the Holocene, fluvial conditions were established, eroding the sandur sediments and establishing new flood plain levels which are continuing to be incised to form a modern floodplain.</p>	

Geological setting/context:

This site marks the location of a significant location in the Late glacial and post-glacial history of the middle Usk.

The glacial evolution of the Middle and Upper Usk is not well understood, although extensive glacial deposits have been mapped (BGS 2005) and a series of cross-valley morainic features, indicating minor re-advances or stillstands of the ice front have been identified (Elis-Gruffydd 1972, 1977; Barclay *et al* 2005; Lewis and Thomas 2005). However, without absolute dating, the exact correlation and chronology of deglaciation is still poorly understood.

Traditionally, the Usk valley glacier was assumed to reach its maximum extent c 20-22ka and to have disappeared, along with the Welsh ice cap by c.16ka (Thomas 1997). However, more recently, doubt has been cast on this model based on dating evidence from the uplands around Abergavenny, which suggests deglaciation may have been initiated earlier than traditionally thought. Coleman and Parker (2007) suggest ice free conditions may be prevailing in the uplands above Abergavenny as early as 19420+/-64 Cal BP.

The Aberbran moraine is part of a succession of terraces along the length of the River Usk which illustrate its Late Glacial history. This is also one of the few localities along the river where well developed terrace forms are visible and illustrates the complexities associated with distinguishing outwash sediments which tend to be coarser from finer grained, dominantly silty, fluvial sediment associated with Holocene incision and re-working.

In historical times, there is evidence for a Roman Road (Sarn Helen) entering the RIGS in the vicinity of Aberbran-fach Farm, crossing the river near Penpont House (Johnston 2002). One of Penpont's fields immediately east of the house, on the south bank of the Usk on the highest outwash terrace is known as "Castle Field", where again there is evidence of some form of watch tower or fortification, and is recorded as site of a castle on the 1:10,000 scale Ordnance Survey map.

Penpont House is a Grade 1 listed building, one of the finest private residences in the Brecon Beacons National Park, and which has been home to the same family since it was first built in about 1666.

References:

Barclay, W.J., Davies, J.R., Humpage, A.J. Waters, R.A., Wilby, P.R., Williams, M. and Wilson, D. (2005). Geology of the Brecon district – a brief explanation of the geological map. *Sheet Explanation of the British Geological Survey*. 1:50,000 Sheet 213 Brecon (England and Wales).

British Geological Survey (2005). *Brecon. England and Wales Sheet 213. Bedrock and Superficial Deposits*. 1:50,000. British Geological Survey, Keyworth.

Carr, S.J., Coleman, C.G., Humpage, A.J. and Shakesby, R.A. (2007). *Quaternary of the Brecon Beacons: Field Guide*. Quaternary Research Association, London.

Elis-Gruffydd, I.D. (1972). *The Glacial Morphology of the Upper Usk Basin (South Wales) and its right-bank Tributaries*. Unpublished Ph.D. Thesis. University of London.







Elis-Gruffydd, I.D. (1977). Late Devensian glaciation in the Upper Usk Basin. *Cambria*. 4 46-55.

Johnston, D.E. (2002). *Discovering Roman Britain*. Shire Publications Ltd., Princes Risborough. 162pp.

Lewis, C.A. and Thomas, G.S.P. (2005) The Upper Wye and Usk Regions. In: C.A. Lewis and A.E. Richards (Eds). *The Glaciations of Wales and Adjacent Regions*. Logaston Press, Logaston, Herefordshire.

Thomas, G.S.P. (1997). Geomorphology of the Middle Usk valley. In: S.G Lewis and D. Maddy (Eds). *The Quaternary of the South Midlands and Welsh Marches: Field Guide*. Quaternary Research Association, London.

SECTION B

PRACTICAL CONSIDERATIONS: Please score Accessibility and Safety Red Amber or Green			
Accessibility:			
Comment: Easily accessible where crossed by public rights of way and public highways allowing features to be viewed. Otherwise, permission will be required.			
Safety:			
Conservation status: The River Usk SSSI and River Usk (Tributaries) SSSI occur within this RIGS, being scheduled for biological reasons. The area is within the Brecon Beacons National Park and Fforest Fawr European Geopark. Penpont House is a Grade 1 listed building.			

OWNERSHIP/PLANNING CONTROL: Owner/tenant: Unknown / various Planning Authority: Brecon Beacons National Park Authority Planning status/constraints/opportunities: There are no known planning constraints or opportunities

CONDITION, USE & MANAGEMENT: Present use: Farmland and camp sites Site condition: Good Potential threats: None known Site Management:
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SITE DEVELOPMENT: Potential use (general): detailed scientific research and geomorphological mapping, would benefit this site Potential use (educational): Good accessible site to view a flight of terrace features including high level outwash terraces and younger fluvial terraces and their association and boundaries with older glacial deposits. Flood plain abandonment features can also be studied here.

Other comments:

Photographic Record



View looking north-east across the River Usk at Penpont with the highest glacio-fluvial terrace in the foreground (partly in shadow) with lower river terraces to left of view.



View looking west across flat outwash terrace on south bank of the River Usk at Penpont.



Penpont House, constructed on the First River Terrace of the River Usk.