



South Wales RIGS Group Site Record RIGS Description

SECTION A

General	South Wales
Site Name: Blaen Pig and Canada Tips	File Number: Site_AB_39
RIGS Number: 778	Surveyed by: Rhian Kendall
Grid Reference: SO 2370 1160 (center point)	Date of Visit: Various over 15 years. Last visit 16 th July 2011
RIGS Category: Historical, Scientific	Date Registered:
Earth Science Category: Stratigraphic, Sedimentological, engineering geology, industrial/historical	Owner: Private Planning Authority: Torfaen County Borough Council and Monmouthshire County Council
Site Nature: Spoil Tips, cliffs and industrial remains	Documentation prepared by: Rhian Kendall
Unitary Authority: Torfaen County Borough Council and Monmouthshire County Council	Documentation last revised: 28 th July 2011
OS 1:50,000 Sheet: 161	Photographic Record: Attached
OS 1:25,000 Explorer Sheet: OL13	
BGS 1:50,000 Sheet: E232	
<p>RIGS Statement of Interest:</p> <p>The opencast faces and waste tips of Blaen Pig and Canada Tips are proposed as a RIGS for a number of reasons. The site is dominated by the World War II opencast workings of the Canada Tips which are believed to be the only surviving, unrestored, early opencast sites in Britain. There are also other industrial features such as hushes, pits, levels, leats and mines at Blaen Pig as well as tracks and tramroads.</p> <p>The site is also important for the study of the South Wales Middle Coal Measure which are rarely exposed at the surface and for engineering students wishing to study open cast waste tips.</p>	

Geological setting/context:

Surface mining for coal in Pwll Du began in 1941, using specialist excavation equipment from America. Production peaked in 1944 at 8.65 million tons as part of the World War II War effort. The name Canada Tips, given to the waste tips, originates from these times when the Canadian Army, based in the UK, provided the specialist drills and experience needed for this kind of work. It is thought that these are the only workings of this type in Britain to be surviving in an unrestored condition (Barber 2002) and one of the earliest surviving examples of open cast working in Britain (TCBC 1999). This man made landscape, although unnatural and to many unsightly, is a rare example and a reminder of what these kinds of workings would have looked like.

The Canada Tips also give a relatively rare surface opportunity to examine the South Wales Middle Coal Measures. In South Wales, The Lower and Middle Coal Measures are sequences of coarsening upwards, coal capped units. These cycles are typical of "fluvial-dominated delta plains". Fine mudstones at the base of a sequence, coarsen through silty mudstones and siltstones to fine sandstones. The finer lithologies are frequently rich in carbon and ironstones of siderite are common. The fine mudstones are lacustrine in origin, deposited in deep fresh water lakes. The sandstones at the top of the cycles are mouth bar deposits of minor channels. Sandstones can also occur at any point in the cycle as distributary channels, crevasse splays and levee deposits. Channel fill sandstones are the coarsest and can be conglomeratic at their bases, fining upwards and are cut into underlying beds. (Barclay, WJ. 1989)

There are also a number of coal seams intersected at this site, mainly now covered by scree. It is however possible to see the Upper 6 foot, seen as a distinct line of black brash extending northwest and southeast of SO24437 10960 for approx 50m near the top of the scarp. The seam is thought to be seen again in small outcrop at SO24618 10928 where it is also seen as a line of brash along the path. The Lower and Upper 4 feet are recorded at this site.

The Aegiranum Marine Band is known to outcrop on the back wall of the Blaen Pig Open cast where it is seen as a Lingula bed at the base of a upwards coarsening cycle 8m thick. (Barclay, WJ. 1989)

The eastern most fault of the Blaenavon Trough – the Carreg Maen Taro Fault is documented as being visible in the back wall of the opencast at SO 2370 1146 where it has a throw of 12m. (Barclay, WJ. 1989)

In the area of SO 23556 11483, a thicker unit of sandstone within the Middle coal measures can be examined in a series of small quarries. The grid reference given however refers to a particular small quarry where large fossil log casts can be seen.

There are a number of other points of interest at this site. There is a standing stone, known as "Carreg Maen Taro" (SO23821133) marked with a B and an M which marks the boundary between Monmouthshire and Breconshire but also marks the limits of the Blaenavon Ironworks lease.

Crossing the site from southwest to northeast is the Dyne Steel Incline. The section from the top of the hill to the Lamb and Fox Pub at Pwll Du was destroyed by the open cast work. The incline was half a mile long and is a double incline railway crossing from stretching from New Pit in Blaenavon to Pwll Du. The trucks were hauled up and down the incline by a central engine and winding drum. It was

designed and constructed by Thomas Dyne Steel who was engaged in 1850.(Govilon History <http://history.govilon.com/trail/purple/railway/>)

The importance of this site is further appreciated when it is considered in its wider environment. It is within the Blaenavon World Heritage site and forms a part of a tapestry of industrial exploitation over hundreds of years. These include the adjacent site of Pen-ffordd goch, to the east which is a Scheduled Ancient Monument preserving a legacy of iron stone exploration, using bell pits and scouring techniques. These were probable in operation from before the 17th century and continued to 1817. The limestone quarries to the north also provided limestone flux to the local steel works. These sites are well documented in books available from the World Heritage Centre book shop in Blaenavon.

References:

The Glamorgan – Gwent Archaeological Trust website:

http://www.ggat.org.uk/cadw/historic_landscape/blaenavon/english/Blaenavon_010.htm

BARBER, C. 2002. Exploring Blaenavon Industrial Landscape World Heritage Site.

Torfaen County Borough Council. 1999. Nomination of the Blaenavon Industrial Landscape for Inclusion in the World Heritage List.

BARCLAY, W J. 1989. Geology of the South Wales Coalfield. Part II, the country around Abergavenny, 3rd edition. Mem. Br. Geol. Surv. , Sheet 232 (England and Wales).

<http://history.govilon.com/trail/purple/railway/>

PRACTICAL CONSIDERATIONS: Please score Accessibility and Safety Red Amber or Green			
Accessibility:			X
Comment: Easily accessible via a network of rough paths			
Safety:		X	
Comment: The main causes for safety concerns at this site are the cliffs which should only be examined from a distance and from the motor bike which like to use the area.			
Conservation status:			
The site is at risk from companies wishing to extract coal which would change the character of the area. The features are also being eroded by excessive use of motor bikes on the site. The area falls within the Blaenavon World Heritage Site.			

OWNERSHIP/PLANNING CONTROL:
Owner/tenant: Private.
Planning Authority: Torfaen County Borough Council and Monmouthshire County Council
Planning status/constraints/opportunities: There are no known planning constraints or opportunities

CONDITION, USE & MANAGEMENT:
Present use: The site is open access "country side"
Site condition: Good, slightly overgrown and damaged by motor bikes
Potential threats: Encroachment of vegetation, renewed opencast, erosion from motor vehicles
Site Management: The site could be improved by work to remove some of the vegetation from key part of the site (would need to be done in consultation with biologist. The use of motor vehicles needs to be discouraged. The site is obviously well used by walkers and mountain bikers and it is thought that this activity could happily co-exist with conservation of the tips if thought is given to paths that avoid damaging the most interesting parts of the site.

SITE DEVELOPMENT:
Potential use (general): The site could be developed with walks and paths to guide people safely to the most interesting parts of the sites with interpretation boards or leaflets linking in with other sites of interest with the world heritage site.
Potential use (educational): This site is a good place for students at any level to learn about Coal Measures geology and stratigraphy and well as the engineering

issues associated with opencast waste tips.

Other comments:

Photographic Record



Photograph M Roels. General view of site



Photograph M Roels. General View of site



Photograph R Kendall. ?Upper 6 foot seam exposed in footpath