



## South Wales RIGS Group Site Record

### RIGS Description

#### SECTION A

General	South Wales
<b>Site Name:</b> Coed Ithel Furnace	<b>File Number:</b> AH_25
<b>RIGS Number:</b> 735	<b>Surveyed by:</b> AJ Humpage
<b>Grid Reference:</b> SO 52797 02578	<b>Date of Visit:</b> 11 July 2011
<b>RIGS Category:</b> Historical	<b>Date Registered:</b> Unknown
<b>Earth Science Category:</b> Industrial, Educational	
<b>Site Nature:</b> Overgrown early ironworks	<b>Documentation prepared by:</b> AJH
<b>Unitary Authority:</b> Monmouthshire CC	<b>Documentation last revised:</b> 19 August 2011
<b>OS 1:50,000</b> Sheet: 162	<b>Photographic Record:</b> See images attached to this report
<b>OS 1:25,000</b> Explorer Sheet: OL 14	
<b>BGS 1:50,000</b> Sheet: 233 (Monmouth)	

**RIGS Statement of Interest:** This site forms part of a network of historical industrial sites within the South Wales RIGS area. Collectively, these sites represent the key developments in the utilisation of geological resources.

Coed Ithel blast furnace is one of the finest examples of a 17<sup>th</sup> century charcoal fired blast furnaces in the UK. It is sited on the valley side in the Wye valley about 10m above a stream which supplied power to the ironworks. The blast furnace was built on a platform of ground formed behind masonry retaining walls. It is a square rubble-masonry structure that is 7.3metres (24ft) high with two sides standing. The curved walls of the furnace can be seen rising from the hearth which is currently buried under rubble. Other structures, including foundations of the smelt mill, waterwheel pit and supply leat are visible on the site. The blast furnace walls remain coated in green and cream coloured vitreous iron slag.

The blast furnace was in operation by 1651 and between 1672 and 1676 had an average weekly output of 18 tons. It lasted until the beginning of the eighteenth century but does not appear in the list of furnaces for 1717. Most of the output, in the form of "pig" iron would probably have been shipped downstream to forges locally sited in the Wye valley, probably in Tintern where an extensive industry developed.

**Geological setting/context:**

The furnace was probably sited at this location to exploit the surrounding Beech woods for charcoal, as the ironworks development in the Wye valley in the 17<sup>th</sup> Century predates the extensive use of coal resources. The underlying bedrock geology is Devonian age - Lower Devonian Brownstones Formation underlies the valley floor and lower valley slopes, including the furnace site, with Upper Devonian Quartz Conglomerate Group and Tintern Sandstone Formation capping the surrounding hilltops on either side of the Wye valley. The ironstone and limestone used in the furnace was probably sourced from the Forest of Dean and transported to the ironworks site by barge..

**References:**

Burton A (1975). *Remains of a Revolution*. Cardinal Books 255pp.

Rees, D.M. (1967). *Mines, Mills and Furnaces*. National Museum of Wales.

Tylecote, R. F. (1966). Blast furnace at Coed Ithel, Llandogo, Mon. *Journal of the Iron and Steel Institute*, Vol. 204, pp. 314-319.

**PRACTICAL CONSIDERATIONS:**

Please score Accessibility and Safety Red Amber or Green

**Accessibility:**

X

Comment: Access from steep poorly waymarked footpath from Bargain Wood car park [SO 352568, 202607]. Site heavily overgrown. There is nowhere to park on the A466 main road.

**Safety:**

X

Comment: Disused ancient industrial site. Some structures may be unstable.

**Conservation status:**

There are no known conservation designations of this RIGS although RCAHMW have flagged this site for inclusion as a scheduled ancient monument

**OWNERSHIP/PLANNING CONTROL:**

**Owner/tenant:** Unknown

**Planning Authority:** Monmouthshire County Council

**Planning status/constraints/opportunities:** There are no known planning constraints or opportunities

**CONDITION, USE & MANAGEMENT:**

**Present use:** Abandoned

**Site condition:** Heavily overgrown

**Potential threats:** Damage to remaining structures by plant growth. Blast furnace structure has deteriorated since 1970's

**Site Management:** Needs be maintained and structures stabilised.

**SITE DEVELOPMENT:**

**Potential use (general):**

**Potential use (educational):** Good site to see an early industrial use of nearby geological sources and place in wider context of early Welsh industrialisation.

**Other comments:**

Excavation has disclosed a furnace structure about 24 feet square. The present maximum height from the foundation level is about 20 feet; the furnace never exceeded this height by more than a foot or two. The square shaft was made up of 3 inches thick grey sandstone and the circular hearth was built up from the bottom with 6 inches of white sandstone. It joined the shaft at a point more than half way up the interior of the furnace. The hole which took the nozzle of the bellows, that provided the blast, was about 18 inches from the bottom of the hearth of the furnace. Among

the finds were three cast-iron runners which were probably used in the sandbeds or pig beds, that is, the casting area, to connect the main channels, along which the molten iron ran, into parallel furrows wherein the pigs were formed (Tylecote 1966).

## Photographic Record



View west showing the overgrown remains of the 17<sup>th</sup> Century Coed Ithel blast furnace. The charge hole on the left has collapsed since the 1970's, filling the base with rubble. Note "two cone" internal form of the blast furnace



View of ironworks leat leading towards the furnace looking north-east



Coed Ithel blast furnace in the 1960's clearly showing the internal form of the furnace



Wall of blast furnace clearly showing iron slag fused to walls. Collapsed charge hole to top right of image



Close up showing green iron slag on wall of furnace and fusing of stone work due to the heat in the blast furnace. Twenty pence coin for scale.



Brickwork on northern wall of blast furnace



Brickwork in lower half of northern wall of blast furnace





Charging hole which has collapsed since 1970's



Remains of blast furnace structure from rear looking north-east

## Annotated Sketch

