



## South Wales RIGS Group Site Record RIGS Description

## SECTION A

General	South Wales
<b>Site Name:</b> Crumlin Quarry	<b>File Number:</b> Site_BIGC_7
<b>RIGS Number:</b> 786	<b>Surveyed by:</b> David Roberts
<b>Grid Reference:</b> ST 2141 9806	<b>Date of Visit:</b> 15 <sup>th</sup> October 210
<b>RIGS Category:</b> Scientific	<b>Date Registered:</b>
<b>Earth Science Category:</b> Stratigraphic, sedimentological	<b>Owner:</b> Unknown <b>Planning Authority:</b> Caerphilly County Borough Council
<b>Site Nature:</b> Disused Quarry	<b>Documentation prepared by:</b> Rhian Kendall
<b>Unitary Authority:</b> Caerphilly County Borough Council	<b>Documentation last revised:</b> 24 <sup>th</sup> March 2012
<b>OS 1:50,000 Sheet:</b> 171	<b>Photographic Record:</b> Embedded in text
<b>OS 1:25,000 Explorer Sheet:</b> 152	
<b>BGS 1:50,000 Sheet:</b> E249	
<b>RIGS Statement of Interest:</b>	
<p>This site has been chosen as a RIGS as it provides an easily accessible location in which to study the Hughes Member of the Pennant Sandstone Formation. The site displays many of the features typical of this formation therefore the site would be useful for study by researchers working on coalfield stratigraphy and for students learning about sedimentology in river channel and flood plain environments.</p>	

**Geological setting/context:**

This site is directly off the A467 a few hundred metres south of junction with A472 and is presently occupied by a Shell garage and a car sales/ hire company.

The quarry exposes The Hughes Member of the Pennant Sandstone Formation in near vertical faces of to 50 metres high which are now heavily overgrown.

Within the coalfield, The Hughes Member is typically green-grey lithic arenites with thin mudstones and siltstones, interbedded with seat earths. Coal seams where they exist are mainly very thin.

The Pennant Sandstone Formation is composed of large scale fining upwards cycles; fining up from sandstones with erosional bases through siltstones to mudstones. The sandstones are commonly cross bedded with conglomerates at their bases, clasts of coal, siltstones and ironstones. The sediments represent deposition in alluvial environments in high sinuosity river channels. The mudstone and siltstone deposits are floodplain deposits.

Within the quarry, the faces are made up of mainly massive and cross bedded sands. The faces are joint controlled and generally stable though there is evidence of recent falls some involving large pieces of rock. The base of the succession exposed is less massive with some shale bands as displayed at the south corner.







**References:**

HOWELLS, M F. 2007. British Regional Geology: Wales (Keyworth, Nottingham: British Geological Survey)

SQUIRRELL, H C and DOWNING, R A. 1969. Geology of the South Wales Coalfield, Part I, the country around Newport (Mon), British Geological Survey, Sheet 249 (third edition)

WATERS, C N, WATERS, R A, BARCLAY, W J, and DAVIES, J R. 2009. A lithostratigraphical framework for the Carboniferous successions of southern Great Britain (Onshore). British Geological Survey Research Report, RR/09/01.

**SECTION B**

<b>PRACTICAL CONSIDERATIONS:</b> Please score Accessibility and Safety Red Amber or Green			
<b>Accessibility:</b>			X 
Comment: Very accessible. Permission should be sought from petrol station			
<b>Safety:</b>		X 	
Comment: Faces are relatively stable but are high.			
<b>Conservation status:</b> There are no known conservation designations of this RIGS			

<b>OWNERSHIP/PLANNING CONTROL:</b> <b>Owner/tenant:</b> Unknown <b>Planning Authority:</b> Caerphilly County Council <b>Planning status/constraints/opportunities:</b> There are no known planning constraints or opportunities
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<b>CONDITION, USE &amp; MANAGEMENT:</b> <b>Present use:</b> Petrol Station and care sales <b>Site condition:</b> The damage has been done with the vegetation on the quarry faces. For this site to be of any use in a geological study context all vegetation would have to be removed and the faces stabilised after stripping. <b>Potential threats:</b> Encroachment by vegetation will conceal the features of interest  <b>Site Management:</b> Periodic clearance of vegetation would enhance the usefulness of this site.
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<b>SITE DEVELOPMENT:</b> <b>Potential use (general):</b>  <b>Potential use (educational):</b> This is it a useful educational site as it is very close to vehicle parking and has enough space to bring field parties too for teaching – with permission from the landowner to ensure that this activity is not disruptive to business.
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<b>Other comments:</b>
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## Photographic Record



North side of site. Photograph by David Roberts



South side of site. Photograph by David Roberts





Cross beds at base of exposures at N side of site. Photograph by David Roberts



Base of succession at S corner showing interbedded sandstones and shales. Photograph by David Roberts





Massive sandstones on S wall. Photograph by David Roberts



Massive sandstones at S of site. Photograph by David Roberts