South Wales RIGS Group Site Record
RIGS Description

SECTION A

General	South Wales
Site Name: Bournville Landslide	**File Number:** Site_BIGC_18
RIGS Number: 785	**Surveyed by:** Rhian Kendall, David Roberts and Ben Evans
Grid Reference: SO 2030 0650	**Date of Visit:** Last visited 26th September 2010
RIGS Category:	**Date Registered:** **Owner:** Unknown
Earth Science Category:	**Planning Authority**: Blaenau Gwent County Borough Council
Site Nature: Landslip	**Documentation prepared by:**
Unitary Authority: Blaenau Gwent County Borough Council	**Documentation last revised:**
OS 1:50,000 Sheet: 161	**Photographic Record:** Attached
OS 1:25,000 Explorer Sheet: 152	
BGS 1:50,000 Sheet: E232	

RIGS Statement of Interest:

Probably the best example of a large rotational landslide in South Wales. The result of glacial over steepening and significant under mining this large landslip feature dominates the valley side. Complete with large rotated blocks, significant back scar, tension gashes and toe zone mudflow structures this landslide has all the typical characteristics associated with rotational failure landslides. Remedial work has been undertaken in order to dewater and stabilise the lower toe areas and prevent any further ground creep and progress of the slide towards the terrace of houses and village that lie below. This site is a classic interpretative and educational tool and certainly worthy of RIGS designation

Geological setting/context:

Above Bournville Terrace, Blaina. Access to the site can be made from car park at the south of the terrace and across a style. SO 203 065

This site appears to be still active. Whilst this is an excellent example of a landslip it is part of much more extensive landslips on both sides of the valley. The slip on the eastern side is about 1km in length and 600 m across with the most dramatic part being at the southern end. It occupies an area of 20ha and has an estimated volume of approximately 1 million cubic meters. It is difficult to see this slide from the A467 due to the planting of trees and absence of stopping places. However the road through the village gives good access to the site. To appreciate this site fully it should be viewed in the afternoon period with the sun in the south west but it is difficult to gain access to such a locality, the exception being onto Coal authority land via the track at SO 202 064 off the old Blaina Road.

Brithdir and Hughes Beds sandstones form the steep escarpment and cap the ridge. The northern part of the slip is thought to be ancient but much of the slip is said to have developed in 1893. Some time after 1915, the southern part of the slip became active and the rear scarp suffered deep seated sliding and rock falls. The slip continued to move with major rock falls in 1946-7 and further southward extensions in the 1960's. The slip continues to move to this day.

Conway *et al* describe this site as "a deep seated rotational slip in Llynfi, Rhondda and Brithdir Beds grading into debris slides and flows downslope". They consider it to have significant debris flow at the foot of the slip. The effects of the slip are also seen in the hill top above where tension cracks and joint controlled fissures have opened up in response to the movement of material associated the landslip.

This is an excellent educational site especially for engineering geologists, geotechnical engineers and civil engineers: there is also a good lesson here for mining engineers in relation to maintenance of the surface above mine workings. This site could be monitored by locating poles which could be surveyed at regular intervals to monitor any movement. This would provide excellent training for students of geology, engineering and surveying.

References:

Barclay, W J, 1989. Geology of the South Wales Coalfield, Part II, the country around Abergavenny. Memoir of the British Geological Survey, Sheet 232, (England and Wales)

Conway BW, Forster A, Northmore KJ, Barclay WJ. 1980. South Wales Coalfield Landslip Survey. Report No EG 80/4. British Geological Survey

Siddle H J, Bromhead E N, Bassett M G. 2000. Landslides and Landslide Management in South Wales. National Museum and Galleries of Wales.

SECTION B

PRACTICAL CONSIDERATIONS:
Please score Accessibility and Safety Red Amber or Green

Accessibility:			X
Comment: Easily accessible from Bournville Terrace			
Safety:	X		
Comment: Great care needs to be taken at this site. It is very loose and is an active landslip so is subject to movement and falling rocks.			

Conservation status:

There are no known conservation designations of this RIGS

OWNERSHIP/PLANNING CONTROL:

Owner/tenant: Unknown

Planning Authority: Blaenau Gwent County Borough Council

Planning status/constraints/opportunities:

There are no known planning constraints or opportunities

CONDITION, USE & MANAGEMENT:

Present use: None – countryside. Grazed

Site condition: Excellent

Potential threats:

Site Management: The site is managed for drainage to try and control the landslip.

SITE DEVELOPMENT:

Potential use (general):

Potential use (educational): This is an excellent educational site for engineering geologists, geotechnical engineers and civil engineers and mining engineers in relation to maintenance of the surface above mine workings. This would provide excellent training for students of geology, engineering and surveying.

There is a great opportunity for explanatory boards here showing the full history of the slide from the rock succession, through Quaternary processes in the area to the effects of mining and followed by an explanation of the current hazards and how these are being mitigated.

Other comments:

Photographic Record

Photograph: Andy Kendall. General view of Bournville Landslide from the South.

Photograph: Andy Kendall. Bench formed by back tilted rotational block

Photograph: Andy Kendall.

Photograph: Andy Kendall. View towards backscar