



South Wales RIGS Group Site Record

RIGS Description

SECTION A

General	South Wales
Site Name: Quarella Quarry (Wildmill Community Park)	File Number: SITE_248_143
RIGS Number: 772	Surveyed by: Elaine Burt And Nigel McGaw
Grid Reference: SS 9038 8082	Date of Visit: 13thm 15 th and 27 th October 2010
RIGS Category: Scientific, historical educational	Date Registered: Owner: Bridgend County Borough Council Planning Authority: Bridgend County Borough Council
Earth Science Category: Stratigraphic, Building stones	
Site Nature: Disused Quarry	Documentation prepared by: Elaine Burt
Unitary Authority: Bridgend	Documentation last revised: 1 st February 2011
OS 1:50,000 Sheet: 170	Photographic Record: Embedded in document
OS 1:25,000 Explorer Sheet: 151	
BGS 1:50,000 Sheet: E261/2 (Bridgend)	
RIGS Statement of Interest:	
<p>The Wildmill Community Park has been chosen as a RIGS to highlight its historical importance as one of the most important producers of a local building stone called Quarella Sandstone. Reputed to be one of the finest building stones in Wales, it is said to have excellent carving qualities. One of the most impressive examples of its use is at Margam Castle and Orangery.</p> <p>This site is an old quarry in the Marginal Facies of the Penarth Group, which was worked for building stone and brick making. The site is at Quarella in Bridgend and the building stone is known locally as 'Quarella Stone'.</p>	

Geological setting/context:

This RIGS is to be found on the east side of Quarella Road in a residential area of north Bridgend, immediately to the north of the mainline railway. The site is designated as Wildmill Community Park - an area of public open space maintained by the local authority. The old quarry faces have been covered by soil and vegetation and are barely visible. Only small exposures remain.

Description of site - Site can be divided into 4 identified exposures

(A) Mixture of small and larger blocks of medium to coarse grained yellow quartzitic sandstone. These blocks are possibly not in situ.

(B) In situ, medium to coarse grained yellow quartzitic sandstone, well jointed , thickly bedded.

(C) This is the largest exposure with very distinct, thick bed of fine grained green siltstone overlying an extensive non bedded yellow, coarse grained sandstone with a wavy , laminar structure. Similar but smaller example of this lithology observed above siltstone bed .

(D) Small exposure of an irregular bedded sandstone with the quarried stone used in the construction of the overlying railway bridge and abutments.

Quarella Stone is an important building stone commonly used in the region and one of the most workable building stones in Wales. It was quarried in a narrow band stretching from Bridgend to the Vale of Glamorgan. It is said to have excellent carving qualities. One of the best examples of the use of Quarella Sandstone is Margam Castle and Orangery.

Quarella Road Quarry in Wildmill is one of the principal sites that historically extracted Quarella Sandstone although it was worked elsewhere. The works at Wildmill included sawing and masonry works in the late 19th and early 20th centuries and produced building stone, slabs and blocks as well as grindstones. The quarry had the reputation of low life expectancy for its workers who suffered from silicosis from the fine quartz dust created when sawing the stone.

The Quarella sandstone is the local name for the Upper Sandstone (Marginal Facies) of the Westbury Formation which is a division of the Penarth Group. Colloquially, the term Quarella Sandstone describes a series of pale coloured Triassic sandstones that occur in the Bridgend area. A description of the stone given in the 1904 Bridgend Memoir describes the stone as hard and soft white and pale green sandstone. In thin section, its described as an impure, fine grained, pale green sandstone consisting of quartz, feldspar with infrequent chert, iron ores, chlorite and zircons. The green colour is attributed to the chlorite and partially weathered feldspars.

This unit is interpreted as a progradational sequence that occurred at the end of a marine transgression. It shows a coarsening upwards sequence from offshore sediments, through shore sands. The culmination of this progradational event is seen as massive sandstones with cocquinas at the tops of the sequence. It is thought that these sands of the Upper Sandstone accumulated around small islands and on shoals.

The boundary given for this RIGS includes Quarella House which is the most local example of this stone in use as a building material.

References:







NEWMAN, J. 1995. The Buildings of Wales. Glamorgan. Yale University Press.

STAHAN, A S, CANTRILL, T C. 1904. Geology of the South Wales Coalfield, Part IV, the country around Bridgend. Memoir of the British Geological Survey, sheets 261 and 262.

WILLIE, D. 2008. Quarella Stone. Welsh Stone Forum Newsletter No 5.

WILSON, D, DAVIES, J R, FLETCHER, C J N and SMITH, M. 1990. Geology of the South Wales Coalfield, Part IV, the country around Bridgend. Memoir of the British Geological Survey, sheets 261 and 262.

SECTION B

PRACTICAL CONSIDERATIONS: Please score Accessibility and Safety Red Amber or Green			
Accessibility:			X 
Comment: The site is easily accessible			
Safety:			X 
Comment: Although the site is an old quarry the faces appeared to be relatively stable and there was no evidence of recent movement, although hard hats would still be recommended.			
Conservation status: There are no known conservation designations of this RIGS			

OWNERSHIP/PLANNING CONTROL: Owner/tenant: Bridgend County Borough Council Planning Authority: Bridgend County Borough Council Planning status/constraints/opportunities: There are no known planning constraints or opportunities

CONDITION, USE & MANAGEMENT: Present use: Presently used as parkland area. Site condition: Largely overgrown and degraded quarry faces. Quarry floor grassed over. Potential threats: Could be developed for building purposes. Site Management: May need vegetation clearing to the view the stone in the quarry faces.

SITE DEVELOPMENT: Potential use (general): This park is already and community space. Interpretation boards describing the geology and industrial heritage of the site could enhance the existing work undertaken in the park and inform ongoing regeneration that is presently going on here. Potential use (educational): Interpretation panels or leaflets could be used to teach local people and school children about the historical importance of the quarry, its building stones and geology. It is a very safe and easily accessible site so would be ideal for teaching purposes if some of the faces could be salvaged.
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Other comments:

Photographic Record







Yellow Sandstone blocks at locality A



Sandstone Outcrop at B



Green Siltstone overlying yellow silty yellow sandstone below.



Quarella sandstone, used to build railway bridge abutments, on top of natural exposure. This example is on Quarella Road near entrance to site