



South Wales RIGS Group Site Record

RIGS Description

SECTION A

General	South Wales
Site Name: Western Avenue	File Number: Site_SWGA_CCC_395
RIGS Number: 659	Surveyed by: South Wales Geologists' Association
Grid Reference: ST 1570 7785	Date of Visit: 30 th March 2009
RIGS Category: Educational	Date Registered:
Earth Science Category: Stratigraphic, Sedimentological	Owner: Unknown Planning Authority: Cardiff County Council
Site Nature: Road Cutting	Documentation prepared by: Rhian Kendall
Unitary Authority: Cardiff County Council	Documentation last revised: 4 th August 2009
OS 1:50,000 Sheet: 171	Photographic Record: Attached
OS 1:25,000 Explorer Sheet: 151	
BGS 1:50,000 Sheet: E263	
RIGS Statement of Interest:	
<p>Road cutting about 2.5m high exposing coarse red Triassic conglomerates containing many Pembroke Limestone Group limestone pebbles. These are exposed on both sides of the road but are most extensive on the north side. This section was quite overgrown but has recently been cleared.</p> <p>The proximity to the Cathedral School in Llandaff may make this a good for teaching.</p>	

Geological setting/context:

Triassic sedimentation in the Cardiff district was governed by Triassic landscape which was dominated by the effects of the erosion of the Cardiff-Cowbridge Anticline. The Carboniferous limestone and Upper Old Red Sandstone units on the two limbs of the fold formed major ridges with the softer Lower Old Red Sandstone being easily eroded along its axis to form a south eastward trending basin which connected with the main Triassic Basin.

Only Late Triassic deposits are preserved in the Cardiff District. These are made up of up to 200m of lacustrine and continental deposits, comprising the Mercia Mudstone Group which progressively onlap the irregular Triassic topography. Towards the end of the Triassic, there was a change to marine conditions, continuing the onlap. This marine sequence is up to 12m thick and is known as the Penarth Group and is made up of mudstones with thin limestones.

The thickest accumulations of the Mercia Mudstone Group are to be found in Cardiff where it includes an argillaceous facies and a contrasting heterogeneous marginal facies. The argillaceous facies is made up of red mudstones, representing a lake or inland sea deposit. The marginal facies is made up of breccias, conglomerates, sandstones, siltstones, mudstones, evaporites, calcretes, limestones and dolomites. These rocks represent continental and shoreline or continental scree and alluvial fans and plains deposits.







Ref: Waters and Lawrence 1987

This site encompasses both sides of the road east of the junction of Cardiff Road with Western Avenue. With the greater part of the exposure being on the north side of the road. Although covered in soot from passing cars, the nature of the Triassic Conglomerates is very easily accessible for study.

References:

WATERS, R A and LAWRENCE, D J D. 1987. Geology of the South Wales Coalfield, Part III, the country around Cardiff. BGS

SECTION B

PRACTICAL CONSIDERATIONS:			
Please score Accessibility and Safety Red Amber or Green			
Accessibility:			X 
Comment: Park in the car park in Llandaff Village and walk to site			
Safety:		X 	
Western Avenue is a very busy road and the pavement fairly narrow.			
Conservation status:			
There are no known conservation designations of this RIGS.			

OWNERSHIP/PLANNING CONTROL:
Owner/tenant: Unknown
Planning Authority: Cardiff County Council
Planning status/constraints/opportunities:
There are no known planning constraints or opportunities
CONDITION, USE & MANAGEMENT:
Present use: Roadside boundary
Site condition: Clear of vegetation at time of writing but obscured by soot from passing cars
Potential threats: None known
Site Management: Site could benefit from being cleaned and vegetation cover managed.
SITE DEVELOPMENT:
Potential use (general): The Triassic Conglomerates here are an attractive and traditional building stone, unique to Cardiff. Cleaning this section may provide an interesting feature for passers by
Potential use (educational): The educational interest for this site is the primary reason for its nomination as a RIGS, due to its proximity to the Cathedral School in Llandaff.
Other comments:

Photographic Record



General view of site looking towards the north-east



Detail of Triassic Conglomerate