



South Wales RIGS Group Site Record RIGS Description

SECTION A

General	South Wales
Site Name: Sudbrook Point	File Number: Site_233_250_129
RIGS Number: 652	Surveyed by: T Sharpe / J Hiscott
Grid Reference: ST 5027 8732 – 5054 8727	Date of Visit: 5th June 2009
RIGS Category: Educational, Historical, Scientific	Date Registered: Owner: Unknown Planning Authority: Monmouthshire County Council
Earth Science Category: Historical, lithological, stratigraphical.	
Site Nature: Beach Section	Documentation prepared by: T Sharpe
Unitary Authority: Monmouthshire County Council	Documentation last revised: 24 th February 2012
OS 1:50,000 Sheet: 162/171/172	Photographic Record: Attached
OS 1:25,000 Explorer Sheet: 154	
BGS 1:50,000 Sheet: 250	
RIGS Statement of Interest:	
<p>The site is a coastal cliff section, where the Sudbrook Sandstone can be examined. The Sudbrook Sandstone is a sandstone unit towards the base of the Triassic aged Mercia Mudstone Group. The rock was deposited in hot arid conditions in sheet like deposits and is thought to have a fluvial origin, deposited in seasonal braded streams.</p> <p>The stone has properties that make it a good freestone and has been used historically in the local area as a building stone. Examples can be found in the Roman buildings of Caerleon and Caerwent. There are also Norman and Medieval examples in the area. Examples include Chepstow Castle and Caldicot Castle where it is the primary building stone.</p>	

Geological setting/context:

From the village of Portskewett, turn south at the Church (signposted Paper Mill). After reaching the hamlet of Sudbrook, just before reaching the large red brick pump house, turn right over a redundant level crossing and park on left hand side of road. Follow the lane past the houses to the coast above the cliff top. Take the cycle track along the cliff top to the west around the edge of the football field/Iron Age fort (earth ramparts visible) until reaching a path down to the foreshore near the western end of the section.

The site is a coastal cliff section, not overgrown although access to some sections require scrambling over large, deeply jointed blocks or crossing sections of the salt marsh. Not accessible at high tide.

The name Sudbrook Sandstone is a locally used term for a sandstone unit in this area. It is mapped by BGS on the 1:10,000 sheet as a sandstone within the Mercia Mudstone Group, occurring early in the Triassic sequence.

The Sudbrook Sandstone was deposited in hot arid conditions in sheet like deposits. It is strongly cross bedded, pebbly, very coarse sandstones which interfinger upward with parallel laminated, cross bedded, medium to fine sandstones, arranged in an upwardly fining sequence. It is thought that the sandstone is fluvial in origin, deposited in seasonal braided streams. There are common quartz pebbles within the sandstone which are likely to have been derived from the Upper Devonian Quartz Conglomerates 5-10km to the north. The sand component is thought to be derived from the Tintern Sandstone. (*Allen. 2005*).

At Sudbrook, approximately 4.5m of Triassic aged red and yellow sandstones are exposed in a cliff. This rests on red calcareous mudstone with bands of yellow pebbly sandstones, which extend onto the foreshore (*Welch and Trotter 1961*).

The yellow sandstones are planar bedded with strongly cross stratified beds above and then planar beds above that, with some coarser bands. Bedding strikes 326° dip 6° SW. Bedding also shows hummocky bedding and possibly load casts or dewatering structures. Vertical, sub-vertical and horizontal. Burrows up to 3cm across are present in the upper beds at the western end of the section.

At the eastern end of the section, red sandstone with green reduction spots underlies the yellow sandstone which forms an overhang.

Along the section, major joints up to 1 metre wide in places have been opened up by erosion and developed into potholes. Joints trend 330° magnetic.

On the beach there are many loose blocks of Dolomitic Conglomerate, red Carboniferous limestone and Pennant sandstone.

The Sudbrook Sandstone has a good calcite-dolomite cement and infrequent joints so they can be worked as free stones. The Sudbrook Sandstone has been used as a building stone for millennia and there are examples of it being used in Roman and

later dated buildings locally.

The stone is found in the Roman remains at Caerleon and Caerwent. They include in the legionary fortress baths at Caerleon, where large blocks were required. Arches and voussoirs of Sudbrook Sandstone are seen south-west of the Amphitheatre. At Caerwent, Sudbrook Sandstone is seen to be used where large building stones are required such as in; column bases, steps, pavings, gutters and drains. It is utilised in buildings constructed over a 400 year history of occupation in Caerwent, including the Forum Bassilica, some of the public buildings, and temples and the town wall.

The stone is also used in the medieval and early modern periods where it is used in two distinct areas. The first is the Caerleon and Caerwent area. In this area, Sudbrook Sandstone is used in Holy Trinity, Christchurch (Late Norman), The late Medieval Towers of St Cadoc, Caerleon, St Mary the Virgin at Nash and St Marys at Llanwern to name a few.

In a more easterly area around Chepstow, Sudbrook Sandstone is used in a numerous buildings which include; The Priory Church of St Mary and Chepstow Castle where its uses included Lewis Holes and the decorated entrance in the eastern wall, as well as quoins and buttresses in the Great Tower. Other interesting examples include St Mary the Virgin in Portskewett where a massive lintel is of Sudbrook Stone which is carved with a cross. At Holy Trinity at Sudbrook, there is a small font of the Sandstone Both are Twelfth century. Caldicot Castle is built predominantly of Sudbrook Sandstone and is the best example of the stone in use in the area (*Allen 2005*).

References:

ALLEN, J R L. 2005. Roman and Medieval-Early Modern Building stones in South East Wales: the Sudbrook Sandstone and Dolomitic Conglomerate (Triassic). The Monmouthshire Antiquary. Volume, XXI (2005)

WELCH, F B A and TROTTER, F M, 1961. Geology of the country around Monmouth and Chepstow. Explanation of one-inch geological sheets 233 and 250. Memoir of the Geological Survey of Great Britain.

SECTION B

PRACTICAL CONSIDERATIONS:

Please score Accessibility and Safety Red Amber or Green

Accessibility:



Comment: Not accessible at high tide

Safety:



Comment: Not accessible at high tide

Conservation status:

There are no known conservation designations of this RIGS

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: None

Site condition: Good

Potential threats: The site would be potentially damaged if a barrage scheme was implemented.

Site Management: None

SITE DEVELOPMENT:

Potential use (general): This site exposes the Sudbrook Stone building stone so is a useful place to examine examples of the natural outcrop of this resource.

Potential use (educational): Useful place to examine the sandstones of the Mercia Mudstone Group which is an unusual lithology within this Group.

Other comments:

Photographic Record



Burrows Sudbrook Point T Sharpe



Cross bedded Triassic sandstone Sudbrook Point T Sharpe



Eastern end of section Sudbrook Point T Sharpe



Possible dewatering structure Sudbrook Point T Sharpe



Possible load casts Sudbrook Point T Sharpe



Red Triassic sandstones beneath yellow sandstone Sudbrook Point T Sharpe



Yellow Triassic sandstone Sudbrook Point T Sharpe



Yellow Triassic sandstones Sudbrook Point T Sharpe