



## South Wales RIGS Group Site Record RIGS Description

### SECTION A

General	South Wales
<b>Site Name:</b> Llangammarch Wells Barium Well	<b>File Number:</b> AH_65
<b>RIGS Number:</b> 750	<b>Surveyed by:</b> AJ Humpage / M Mitchell
<b>Grid Reference:</b> SN 94500 47670	<b>Date of Visit:</b> 1 September 2011
<b>RIGS Category:</b> Scientific, historical	<b>Date Registered:</b> Unknown
<b>Earth Science Category:</b> Spring	
<b>Site Nature:</b> Riverside	<b>Documentation prepared by:</b> AJH
<b>Unitary Authority:</b> Powys CC	<b>Documentation last revised:</b> 3 October 2011
<b>OS 1:50,000</b> Sheet: 147	<b>Photographic Record:</b> See images attached to this report
<b>OS 1:25,000</b> Explorer Sheet: 188	
<b>BGS 1:50,000</b> : Sheet 196 (Builth Wells)	

**RIGS Statement of Interest:** This site forms part of a network of significant mineral springs in southern mid Wales in the former county of Brecknockshire. This site is of importance as it is the location of the only Barium Spa resort outside Germany.

The human relationship with minerals springs for has long been known. Springs as religious sites have been known since antiquity, but it was in Malvern that their modern usage began in the 1620's, the waters being bottled for sale. By the start of the 18<sup>th</sup> century, mineral springs were becoming increasingly important attractions and efforts were made to locate and promote them for their health giving properties. The spring at Llanwrtyd was 'discovered' in 1732, followed by that at Builth by 1740. However, it was from the middle of the 19<sup>th</sup> century that "taking the waters" became truly popular and a significant industry developed.

Llangammarch Wells is a moderately saline source with a chemical composition very similar to that of Llandrindod Wells. It has undergone complete sulphate reduction and this gives rise to the highest concentration of barium of any of the Welsh spas; the lithium content is also high. The proposed RIGS incorporates both the Barium spring and a chalybeate spring higher on the valley side.

In 1912, Kaiser Wilhelm II of Germany visited Llangammarch Wells to take the Barium Spa treatment

### **Geological setting/context:**

Llangammarch Wells is within the Irfon valley, a tributary of the River Wye and is underlain by an area of outcropping Silurian age mudstones and siltstones of the Irfon Formation on the margins of the volcanic rocks of the Builth inlier.

A mediaeval holy well, Ffynnon Gadferth, was recorded by the late 17<sup>th</sup> Century antiquarian Edward Lhuyd in the parish. Although its site has not been precisely located, Lhuyd's vague description suggests it was outside the village, and therefore may be either the Barium well or the nearby Chalybeate spring, both of which are to the east of the modern village on the south bank of the Afon Irfon.

The Lake Hotel was built in 1840, and the adjacent riverside pump house probably dated from this period as well, both hotel and pump room being shown on the 1885 edition of the six inch Ordnance Survey map of the area. Edmunds et al (1998) however, reported that the original location of the well is now difficult to locate.

Edmunds *et al* (1998), considered that with the exception of Llandrindod Wells, the saline waters of central Wales probably were of meteoric origin, although acknowledging that deep groundwater circulation giving rise to their mineral properties.

The Barium Well pump room appears to be constructed out of local Silurian sandy siltstone with brick highlights around door and window frames. This rock is weathering badly and may have contributed to the deterioration of the structure. The Chalybeate Spring well house is a mix of Silurian stone and concrete, possibly indicating a later phase of development, may be associated with the adjacent concrete tower, which appears to date from the early 20<sup>th</sup> century.

### **References:**

Edmunds, W.M., Robins, N.S. and Shand, P. (1998). The saline waters of Llandrindod and Builth, Central Wales. *Journal of the Geological Society of London*. 155, 627-637.

Jones, J.R. (1859) *Pryse's handbook to the Breconshire and Radnorshire mineral springs: with notes and excerpts illustrating the history, antiquities, and topography of many of the surrounding towns and villages*. Llanidloes: Pryse, 1859.

## SECTION B

<b>PRACTICAL CONSIDERATIONS:</b> Please score Accessibility and Safety Red Amber or Green			
<b>Accessibility:</b>			X
Comment: <b>Private Property.</b>			
<b>Safety:</b>			X
Comment: Private hotel grounds			
<b>Conservation status:</b> The River Irfon channel is part of the River Wye (Tributaries) SSSI, otherwise there are no known designations of this location.			

<b>OWNERSHIP/PLANNING CONTROL:</b> <b>Owner/tenant:</b> Lake Country Hotel <b>Planning Authority:</b> Powys 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> Hotel grounds <b>Site condition:</b> The pumphouse and bathhouse of both springs are in ruins. <b>Potential threats:</b> Ruins of pumphouse and well site may be lost as the ruins collapse. Chalybeate Spring site is being covered by fly tipped material <b>Site Management:</b> Urgent conservation should be considered.
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<b>SITE DEVELOPMENT:</b> <b>Potential use (general):</b> <b>Potential use (educational):</b> Could be used to highlight the circulation and movement of groundwater.
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<b>Other comments:</b>
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## Photographic Record



Surfinia2

[www.delcampe.net](http://www.delcampe.net)

To date, the only image discovered of the Victorian Barium spa pump room and wellhouse at Llangammarch Wells, published by the LNWR in 1904.



West facade of Barium Well pump room facing onto a small terrace



The collapsed remains of the Barium Well pump room (the left hand building of the 1904 image above).





The Barium Well wellhouse – note borehole standpipe left of centre. This was the right hand building shown on the 1904 image, partly obscured by the tree.



Remains of a stoneware bathtub presumed from the Barium well pump room or wellhouse.



Remains of wellhouse with wall of pump room beyond.



Standpipe in floor of Barium Well wellhouse



Curious early 20<sup>th</sup> century concrete structure – possible a water tower or an uncompleted elevator which was intended to lead to the Chalybeate Spring from the lane above.





Site of rising spring behind ruins of Chalybeate Spring wellhouse



Remains of Chalybeate Spring wellhouse (beyond) and pump room



Chalybeate Spring wellhouse with possible cistern in pump house in foreground



A possible stone trough adjacent to ruins of Chalybeate Spring cistern



The Chalybeate Spring wellhouse (behind) and pump house/cistern in foreground.