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Thermal spring –
visitor hot spot



A voyage of
discovery

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Influencing
decision makers



Making most of
plant fossils

Thermal spring is visitor hot spot again

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Sources of clean water for drinking, bathing or soothing ailments have long been held in high regard. Early cultures must have known of the benefits and dangers of various sources of water. In Britain, many of the Christian Holy wells and springs have previous histories as Pagan sites of worship, offering cures to numerous ailments and the blessings of many saints. In this modern world we may simply regard these as curiosities or archaeological sites. However, many are still visited by religious and non-religious people seeking cures or spiritual benefits. St Winefride's Well at Holywell in North Wales 'springs' to mind as a famous example.

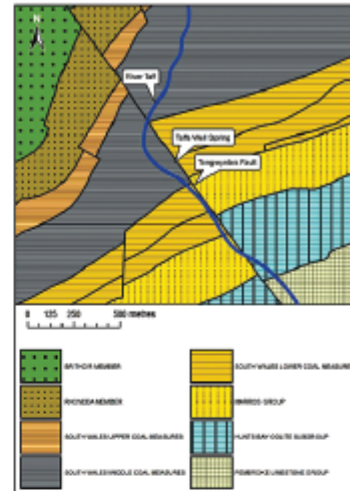
Spring waters can be fresh, saline, sulphur or iron rich (chalybeate) and on some rare occasions 'thermal'. Thermal waters in the UK gain their heat by descending to great depths where the geothermal gradient warms the water before it ascends to the surface. This process is entirely controlled by the structure of the geology; principally syndinal structures offer pathways for water to descend and faults act as pathways for or barriers to water re-ascending to the surface.

The only thermal spring in Wales, Taffs Well, is in a village that takes its name from the spring, a few miles north of Cardiff. Although not as warm as the waters at Bath (~45 °C), the waters at Taffs Well maintain 21 °C, at least twice as warm as most spring waters in the UK. It is thought that the Taff's waters gain their heat by flowing as deep as 400 m below the syndinal basinal structure of the South Wales Coalfield, most likely within the Marros Group (Millstone Grit) and the Carboniferous Limestone (Farr & Bottrell, 2013).

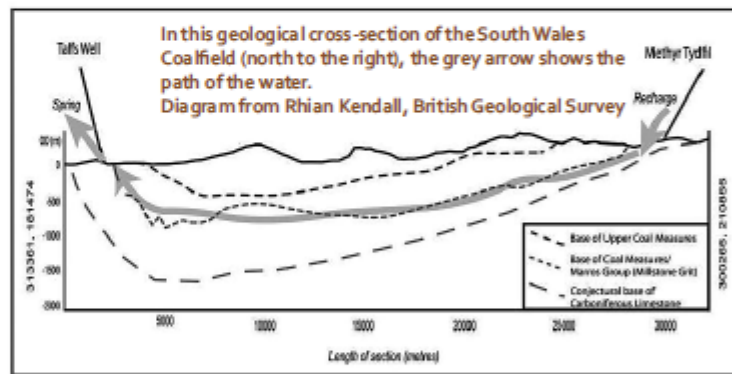
Human interaction with this hydrogeological curiosity can only be traced back to the 1700s, when it was no more than a small plunge pool with a wooden structure to protect the bathers' modesty. Development of the South Wales Coalfield and associated transport networks enabled people to visit, and by the late 1800s a permanent stone structure enclosed the spring surface waters. Although there was no religious significance attributed to the water, people flocked to bathe, in search of promised cures for rheumatism. By the 1930s an outdoor swimming pool was constructed and remained popular until the late 1950s. Thereafter the pool and well fell into disrepair, the doors were locked and the pool filled with rubble during the early 1980s.

The doors were still locked and the well house flooded and strewn with rubbish when I paid my first visit in 2010. Even in this sad state of repair, the waters (dated to over 5,000 years old) were still flowing gleefully and I was totally captivated. Luckily I wasn't on my own and the owners, Rhondda Cynon Taf County Borough Council (RCTCBC) had the vision to realise the spring's potential as a small, quirky tourist attraction, particularly when included as part of a wider visitor offer. In the subsequent years RCTCBC helped oversee the installation of a new outflow system, allowing the water level to be controlled, revealing the tiled floor and spiral staircase into the water.

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This geology map from Farr & Bottrell (2013) shows the geological features that lead to Taffs Well producing its hot waters.



Taffs Well in 2010. The well building was flooded, access was unsafe and the doors had been shut for most of the previous 50 years.

POPULARISING GEODIVERSITY

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The well was open for one day only in 2012 as part of the European Open Doors event, Wales' biggest celebration of architecture and heritage. We were overwhelmed with more than 300 visitors in just a few hours and since then over 1,000 people have enjoyed the talk about its history. More recently, the area's Destination Management Partnership secured funding through the local authority and Capital Region Tourism (Welsh Government) to carry out essential structural improvements to the well building and to develop a vibrant audio-visual experience. The well building is now open daily from Easter to August so visitors can discover the historical journey of the warm waters, which still have the power to captivate the imagination.

Taffs Well thermal spring is recorded as a RIGS (Regionally Important Geodiversity Site) and is housed within a Grade II listed building, supporting geotourism and heritage in the South Wales area. The waters could further support the local community if plans to install a ground-source heat exchanger, to warm the nearby pavilion building, can be realised.

Further reading

Farr, G. & Bottrell, S. (2013). *The hydrogeology and hydrochemistry of the thermal waters at Taffs Well, South Wales, UK*. Cave and Karst Science Transactions of the British Cave Research Association, 40 (1), 5-12.



In 2014, Taffs Well was officially re-opened to the public for the first time in over 50 years after the building had been made safe and the provision of disabled access and a bilingual audio-visual display. It is open daily to visitors from Easter to August free of charge.

Photos by RCTCBC



Left, a view inside the well house reveals red staining from iron in the water.

VISITING THE SITE

Taffs Well Thermal Spring can be found in Taffs Well Park, Cardiff Road CF15 7PR. Parking, toilets and disabled access are all available and entrance to the well is free.