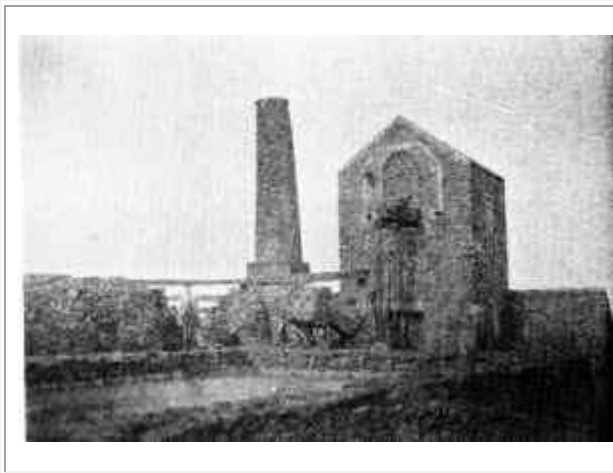


Location and information on steam engines used at Parys mountain

Pearl Engine:- (Ingian Cerrig y bleiddiau) (SH446907)

This engine was installed and commissioned on 27-30 March 1819 and is the oldest surviving example of a Cornish beam engine in Wales. It has been designated as a Scheduled Ancient Monument. The engine was purchased by the Mona mine from Neath Abbey Ironworks and used to pump the already existing 360 ft pearl shaft which was intersecting the Cerrig y doll vein.

The original engine is thought to be an 18-inch cylinder which powered one lifting pump and a number of forcing pumps in the shaft. All of which, after a short time, suffered with copper attack of the engine and pump parts. The engine and pump parts were replaced with wooded pipes and brass moving parts. To prevent further boiler attack water from the top of the mountain was collected and neutralized with lime and chalk before being used in the boiler. The condensate was also collected in a reservoir and reused. The engine only remained in use until 1829.



Pearl Engine House 1897



Pearl Engine House 2000

In 1853 a new 24-inch engine was brought from the Perran Foundry for £632 and installed in the engine house. This particular engine remained in used until at least 1880.

It is possible that another engine existed to the south of the Pearl shaft. Flat rods may have been carried on stone pillars which still remain in line with the building. However, this site has also been described as an office.

Cairns Engine:- (Winding and pumping)

A winding engine was erected here sometime after 1865.

A 5 sailed windmill was erected in 1870 to assist pumping the shaft when it became clear that the Carreg y Doll pumping engine could not dewater this part of the mine on its own. Eventually a new pumping engine was also erected near the Cairns shaft. This was of a differential compound type manufactured at the Sandycroft foundry and steamed for the first time on 8th December 1880. The pumping engine was eventually connected to the windmill by flat rods to assist pumping.

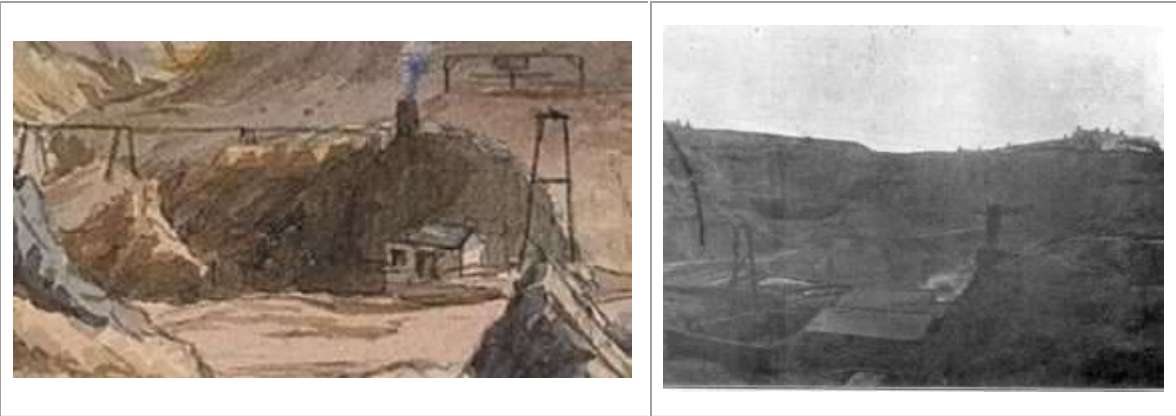


Parys winding engine:- (SH440903)

Said to have been installed at the Parys open cast to wind in about 1790. Winding engines had only been in used since around 1780. However, the acidic cupriferous water soon damaged the boiler. Thomas Williams had been petitioning parliament since 1786 to try and reduce the duty on coastwise coal for use in his "fire engines" at the mines. However, it is not thought that a pumping engine was installed until sometime around 1819 at the Pearl shaft. Another incline plain and possible winding house is visible at SH44239027

Parys mine open cast engine (SH 44089027)

The first pumping engine at Parys mine was built in the great open cast before 1850. It is shown in a painting of 1851. Owen Griffiths also had a photograph in his book of 1897. The chimney is built into the felsite. The horizontal engine worked a pump in the nearby Marquis shaft.



Cerreg y Doll engine shaft Mona mine (SH4442 9052)

Only the overgrown remains of this small engine house are visible. It was used to pump the Carreg Y Doll shaft at the Mona mine. It was probably built in July 1846. In 1860 Capt Tiddy hid in the engine house during a strike prayer meeting only to find that the engine' wheels broke loose and shattered over him. The engine was patched up and supplied with a new boiler in May 1865.

Cerreg y Doll up haulage engine Parys Mine SH44131 90507

This engine was erected above the carreg Y Doll shaft in the Parys mine. The windmill and cairns pumping engine were used to remove water from the seam and this engine for hauling material out of the mine.

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Hillside incline plane engine (SH44439031)

This was first recorded in 1852. It may have been the engine which was referred to in 1841. In 1889 a new engine was noted on a map at the summit of the plane from the Hillside open cast. The possible site of the engine winding house is now sunken into the surrounding spoil tips.



Gwen's shaft engine (SH4383 9055)

This was the deepest shaft on the mountain. The remains of the engine shaft base can still be seen. The square section nuts on the holding down four holding down bolts are visible. The structure suggests a single cylinder horizontal engine was used at the shaft.



Calciner's engine house (SH44573 790570)

This may have been an engine house serving a winding engine for up to three shafts. It has also been said to contain stamps for crushing ores.



Miscellaneous engines

There are references to other engines on the mountain. The location and use of these engines it not yet known. In 1834 a small engine valued at £425 was obtained.

In 1836 there is a reference to steam power in a mine captains note book

In 1841 there are a number of references again in the same. One of which was said to have suffered a broken crank suggesting a rotary engine. In the same year and diary there is a reference to a surface and an underground engine and to an engine in the opencast. The surface engine may have been used to haul an incline plain.

At Amlwch port a four HP steam engine was obtained in about 1828. However, it was not brought into use until June 1834 when it was used to haul coal up the incline to the smelter works. A second hand Cornish boiler was installed in this engine in 1862. Which exploded in 1870 killing a workman. A steam crane was also in use at the port by 1880.

A gas suction engine (SH44939034) was used at Ty Main to draw water out of the Dyffryn Coch precipitation system through an enclosed pipe across the hillside area to sparge the head of the tips near the cairns shaft.