



Delve Deeper Audio Trail Four On the Great Flat Lode: the Basset Mines at South Wheal Frances.

This guide gives you an opportunity to find out more about these fascinating ruins. Use it to enhance your trail, or as a follow up after your visit.

If you wish to find out more about this mine, and others on the Great Flat Lode, then a visit to King Edward Mine (www.kingedwardmine.co.uk) is recommended. If you wish to delve deeper into the history of Basset Mines then this short guide will provide you with more information.

South Wheal Frances and Cornish Mining

Between 1700 and 1914, the metal mining industry of Cornwall and west Devon transformed the landscape. It fed the Industrial Revolution in Britain and influenced the development of our modern world.

The Cornwall and west Devon mining landscape consists of ten areas with distinct personalities. South Wheal Frances is in the Camborne and Redruth Mining District of the Cornish Mining World Heritage Site.

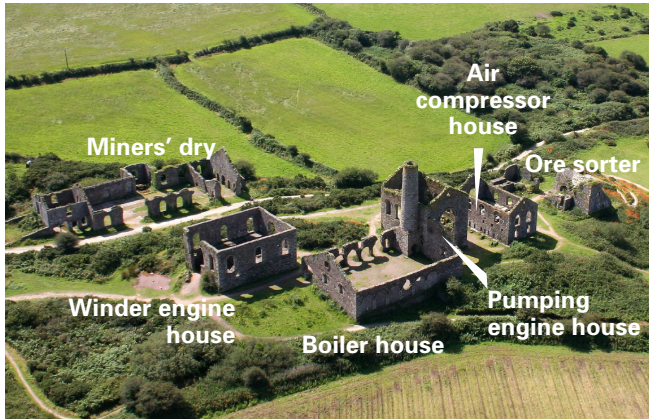
World Heritage Site status recognises the importance on a global scale of Cornish mining's historic landscapes, its outstanding mine buildings and other features.

Cornish miners and engineers developed technologies which transformed mining worldwide. Their innovations and skills were vital to the Industrial Revolution and helped shape our modern industrial society.



The Marriott's Shaft complex is one of Cornwall's most substantial, and more unusual, groups of mining remains. It was built for Basset Mines Ltd., formed in 1896, to exploit tin from the Great Flat Lode. They form a striking and remarkably intact survival, some buildings almost assuming cathedral-like proportions, set in open countryside around two miles south-west of Redruth.

Photo: Barry Gamble



Low aerial view looking south-west to the Marriott's Shaft complex of Basset Mines, South Wheal Frances section.

When the mine closed in 1918 it was still the best-equipped shaft in Cornwall: 'new' miners' dry, one of the largest in Cornwall, horizontal winder engine house, boiler house and stack which served all engines, compound pumping engine house, air-compressor house for rock drills, capstan house and ore-sorter/stone-breaker base driven by a 16-inch Tangye horizontal engine. Water from the shaft was used to augment the water supply to Redruth until the completion of Stithians Dam.

Photo: Barry Gamble/CCC



Marriott's Shaft complex. Audio Point 3

View north showing: the grilled circular collar of Marriott's Shaft (lower left) in front of the 30-foot high arched beam opening of the pumping engine house (no bob-wall, the two inverted cylinders powered an under-beam mounted in a slot below them – there are foundations for a second engine, never installed, in this house built for two); boiler house (centre) showing arches for six Lancashire boilers; winding house (right) aligned with the shaft.

Basset Mines were exceedingly wet mines, pumping an estimated 100 times the weight of ore during wet winters. A big inverted compound (40-inch & 80-inch) pumping engine was erected at Marriott's Shaft in 1897-1898 to replace an 80-inch Cornish beam pumping engine destroyed by fire, probably arson, in 1895. It was built by Hathorn Davey & Co., at their Sun Lane Works, Leeds; the partner Henry Davey (1843-1929) was born in Lewtrenchard, Devon, and served his first five years in engineering apprenticeship at the foundry of Nicholls, Matthews & Co., in Tavistock. The winder house contained a cross-compound engine made by Holman Bros. of Camborne. The bi-conical drum gave a maximum winding speed of 2,000 feet per minute in the shaft.



Ore sorter, Marriott's Shaft complex. Audio Point 8

This view, taken from the top of the masonry remnant of the ore-sorter, looks eastwards to the side elevation of the compressor house with the taller pumping engine house and stack behind. Inside the compressor house is a flywheel-slot between loadings for a Riedler-type compressor with two-stage air cylinders driven by a Fraser & Chalmers cross-compound horizontal steam engine. This drove up to 30 labour- and time-saving percussive compressed-air-driven rock-drills. The seven square openings at the base of the wall are 'crow-holes' for man-access to the engine holding-down bolts.

Pascoe's Pumping Engine House. Audio Point 10

Pascoe's The slit-windowed pumping-engine house at Pascoe's Shaft, South Wheal Frances. The mine was named after the Right Honourable Frances Baroness Basset, daughter and only child of Francis Basset (1757-1835) first Lord de Dunstanville. The shaft was named after manager and shareholder Captain Pascoe who emigrated to Utah in 1872. It formerly contained an 80-inch engine, the largest ever-built by St Austell Foundry, in 1881, for Old Shepherd's Mine, St Newlyn East. It was bought secondhand for South Wheal Frances in 1887, erected by engineer Nicholas Trestrail (1859-1922) and started in 1888. South Frances was a notoriously wet mine: in 1879 when the old part of the Wheal Basset sett was stopped the first cast-iron underground dam in Cornwall was installed to prevent flooding from that mine. The stoppage would also affect West Basset and West Wheal Frances and a committee was formed to keep the old Wheal Basset engine at work. Even in 1885 water-skips were used to supplement pumping, at night and on Sundays. Evidence for the boiler house (this side) for four Cornish boilers is now little more than lines of flashing on the wing wall and stack, and some rubble hidden amongst the scrub (lower right).



Pascoe's Whim Engine. Audio Point 11

This wound from Pascoe's Shaft situated 90 yards to the north-east. The wall on the right of this unusually slim engine house is the far gable of its boiler house which contained two Cornish boilers. South Frances was the first in Cornwall, from 1860, to permanently use wire rope in place of hemp or chains.