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# The History and Remains of the Wheal Victoria Copper Mine at Golitha Falls

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By Clive ffitch, Redgate Smithy, Redgate, Cornwall

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Dated 5 May 2020; for online photographs and content of this research, please refer to:  
<http://www.photofilecornwall.co.uk/cornwall-mineheritage/wheal-victoria-copper-mine.htm>

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## 1: Sources

Sources researched for this work include: "Mines and Miners of Cornwall" Vol. XII (A.K. Hamilton Jenkin), pub. 1966; plus various other excerpts from Mining Journals (courtesy of the Cornish Studies Library, Cornwall Centre) and other quoted sources. Other primary research includes the excellent online mapping resources from the NLS (National Library of Scotland), and the more recent LIDAR mapping from Lidarfinder that became available in 2019, plus specifically, additional evidence taken from on the ground investigations. I am also grateful for the use of underground photos and information in 2011 from Mine Explorer Stuart Dann, and also "Orphan" of AditNow, plus a walk around Golitha and discussion with John & Cheryl Manley in 2011.

## 2: Introduction

Wheal Victoria Copper Mine is one of those mines that appear to have escaped much modern scrutiny; it rarely appears in books or mining records and references, where even there it is perhaps left as best forgotten. There is however a wealth of history associated with even this relatively small mining adventure, and there is much industrial archaeology and history left that is still extant in the landscape of Draynes Wood and the English Nature **Golitha Falls National Nature Reserve** that can still tell a tale or two. The Liskeard Mining District has no mention of it at all, and it is outside the main Caradon Mining and World Heritage Site areas. Perhaps the record here will at least try to correct some of these omissions.



**View of the site of Wheal Victoria Copper Mine in Draynes Wood from Redgate**

## 3: "All hail! Victoria!"

*" All hail! Victoria! yet thy star is set - thy existance was but brief, and not even royalty could protect thee from thy fate. Alas! Victoria is no more! for, notwithstanding the aid of sovereigns, the pit which was sunk by those who most lauded thee whilst living, has closed upon thee for ever. No longer shall the pick and gad resound in cheerfulness - no more the count-house punch be handed round to wish thee brighter days; nor shall the yule log blazon on the now deserted hearth. Thy glory has fled! the lustre which thou shed around in thy halcyon days is forever gone, and now, alas! we mourn the loss of the last sovereign, so much endeared to us. Reader, be not alarmed, it is simply that 'the bal is knacked'. "*

...excerpt from the Mining Journal (11th July 1846).

## 4: The First Excavations (1844 to 1846))

Wheal Victoria was started in 1844, and at the first meeting of the Mine "Adventurers", or investors, held at Webb's Hotel in Liskeard, it was reported that the mine contained eight lodes, of which five were three feet wide. During the first year, an adit (referred to here as the "First Adit") was cut that crossed two small branches of copper, and it was claimed that the copper discovered was an extension of the rich lodes recently found at both the South Caradon and West Caradon Mines on Caradon Hill. In 1846, after 2 years and a cost of £4000, the mine was abandoned with the above announcement.

In the words of A.K. Hamilton Jenkin in "Mines and Miners of Cornwall" (1966), he states:

*"In Draynes Wood on the western bank of the River Fowey, an old and now much overgrown shaft shown on the OS Map 27SE marks the site of Wheal Victoria. This hitherto unrecorded mine was started in 1844, the first meeting of the company being held at Webb's Hotel, Liskeard, when the property was reported to contain eight lodes, five of which were three feet wide. During the following year a cross-cut adit intersected two small branches of rich copper ore underlying towards the main lode. This discovery aroused much interest, the copper being claimed as an extension of the rich, and then but recently developed lodes of South and West Caradon Mines, some two miles to the east. In 1846, however, after an expenditure of about £4,000, the mine was abandoned, its demise reported by the Mining Journal with the valedictory remark "All hail! Victoria! Yet thy star is set!" "*

It has been previously thought the first adit driven in was the apparently larger adit that can be found down by the waterside of the Golitha Falls, but it now seems much clearer that this **"First Adit"** (page 33) is in fact the one that can be seen along the track from the entrance to the nature reserve, as shown on the **Map** (page 5). It is also not clear at this time that any shaft had been sunk during these first excavations. It has not been found to be stated in any record that there had been, and it is therefore assumed that there was not, and all known shafts were sunk as a part of the second and final excavations. The second (lower) adit by the waterside is associated also with the drainage of the mine, which was only introduced with the sinking of deeper shafts, and the construction of the wheel-pits and waterwheels that powered the flat-rods working the shaft pumps, that took place during the second excavations.

## 5: The Second and Final Excavations (1851 to 1855)

In March 1851, a fresh lease was granted, and by the following year, a 30 feet diameter water wheel was operating 150 fathoms of flat-rods, to a shaft sunk to 30 fathoms (180 feet) from the surface. The old First Adit was cleared for 70 fathoms (420 feet), and a new adit (referred to here as the **"Second Adit"** (page 35) that can be found down by the waterside) was driven to 100 fathoms (600 feet). A further underground cross-cut was extended towards the Lark Holes copper lode.

Again in the words of A.K. Hamilton Jenkin in "Mines and Miners of Cornwall" (1966), he states:

*"The "setting" as it proved, was not of long duration, and in March 1851 a fresh lease was granted. By the following year a 30ft diameter water-wheel, 7.5ft breast, was operating 150 fathoms of flat-rods to a shaft sunk to 30 fathoms from surface, whilst the old adit had been cleared for 70 fathoms, and a new adit had been driven 100 fathoms. A cross-cut was also extended at this time in the direction of the Lark Holes copper lode. In September 1853 the Victoria Engine Shaft was stated to be down to 57 fathoms (40 below adit), "a depth quite sufficient for proving the productive, or unproductive character of the different lodes". A considerable amount of cross-cutting was subsequently carried out but apparently with no success, and by 1855 the mine had again stopped. The massive walls of its two wheel-pits may still be seen in a fine woodland setting adjacent to the cascades known as Golitha falls. Their purpose, however, is difficult to explain since they do not appear to have been employed for stamping, whilst if used for operating pumps they seem unnecessarily far removed from the only shaft which is now visible."*

A report in the London Daily News of 25 December 1851 states:

*"At Victoria mine, in the cross-cut adit, a lode has been cut, which is supposed to be the Larkholes lode, it is about 25 or 30 fathoms south of shaft, and is composed of gossan and spar, presenting the usual appearance of lodes of the district. At the point of intersection by the cross course, the wheel is progressing favourably".*

In the Mining Journal of 5 June 1852, it is recorded that:

*"During the past week the shaftsmen have sunk 3ft 6in making altogether 13 fathoms and 3ft below the adit. The winzemen in the bottom of the deep adit have sunk in all about 5ft. The lode in the bottom of the winze is improved in size, and still continues to produce good stones of ore. Our carpenters and smiths are employed about the capstan and shears, the new balance bob behind the wheel, and other work as usual."*

The winze written of here may well relate to the winze evident in the **Second Adit** (page 35), and the capstan and shears may relate to lifting gear or a whim that would have operated on the Engine Shaft, required to bring the ore to the surface, and the new balance bob behind the wheel (water-wheel) likely relates to a balance bob required for operating the flat-rod run.

With the **Engine Shaft** (page 22) down to 57 fathoms (342 feet), and 40 fathoms (240 feet) below the level of the horizontal adit, the cross-cutting was carried out on cross-coursing viens that ran north-south, which lay across the main lodes which ran east-west. These cross-cuts were carried out to over 7 fathoms (42 feet) in each direction, but with little success. It becomes clear from the following Mining Journal reports that there is perhaps a little conflict of reality and optimism between those reporting. In a report in the Journal of 10 September 1853, progress on the cross-cuts is recorded by J. Barkel (Sept 6) that:

*"The south end men have driven 2 fathoms 2ft, making altogether 10 fathoms, and the north end men have driven 3ft, making altogether 6 fathoms. We cannot say anything more about the lode than we reported last, only that we have commenced driving west on it; we hope to give you further particulars respecting it in our next report."*

In a further report in the Mining Journal, dated only a week later on the 17 september 1853, it is recorded by J. Barkel (Sept 12) that:

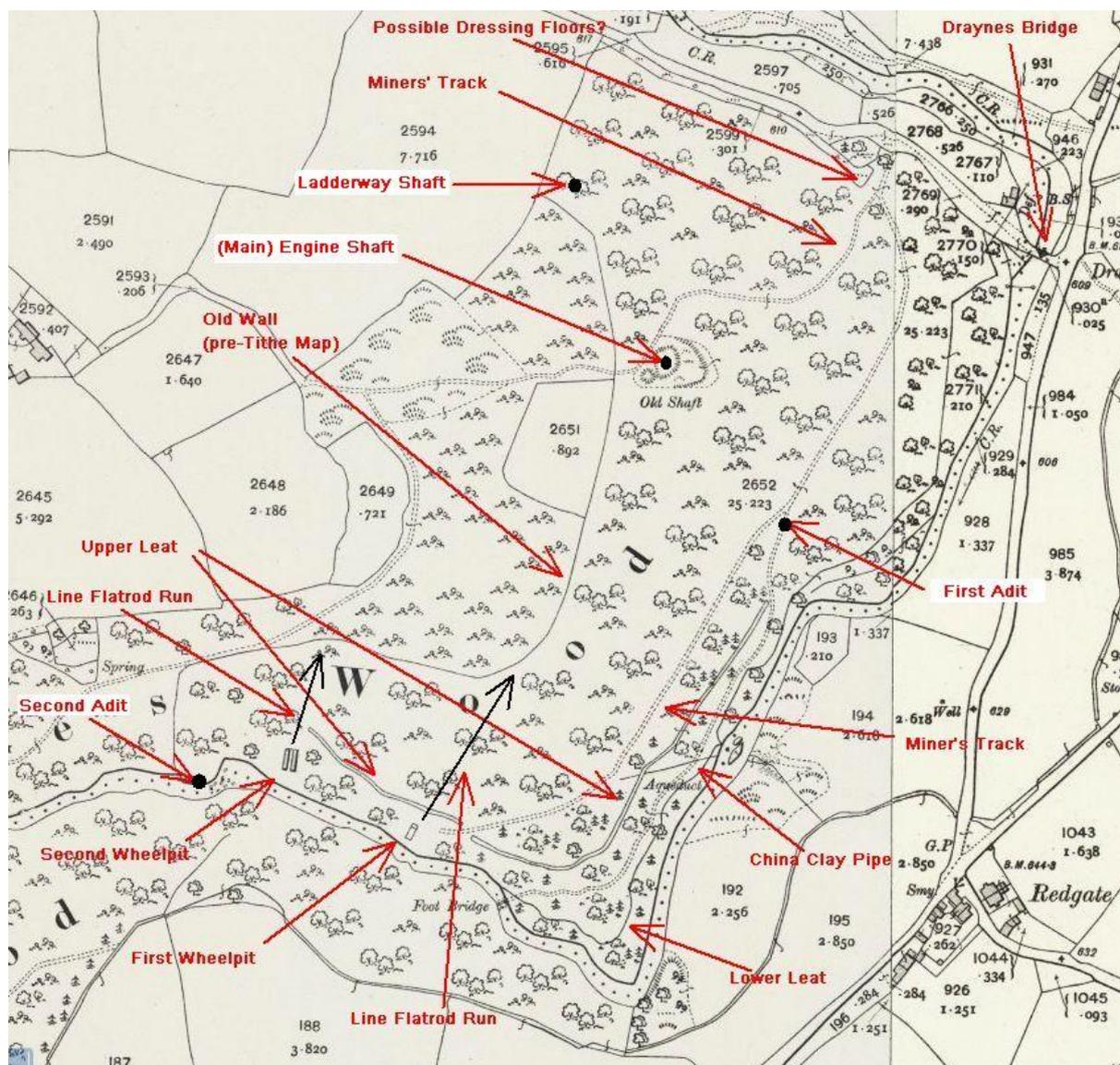
*"On reporting on the operations of the last week, I beg to inform you that the south end men have driven 2 fathoms, making altogether 12 fathoms; and the men in the north end have driven 4ft on the lode, which is about 2ft wide, and composed of spar, prian, can, mundic, and spots of copper."*

As an addendum to this report in the same Journal, and under J. Barkel's report dated 12 September 1853, it is optimistically stated by Oliver O. Trewren from an earlier written report that was dated the 2 September 1853, that:

*"On visiting this mine, I find the engine-shaft has been sunk about 40 fathoms below the adit level, which is 17 fathoms deep, making the entire depth from surface 57 fathoms, a depth quite sufficient for proving the productive or unproductive character of the different lodes. The cross-course on which the shaft has been sunk runs nearly north and south, so that nothing can be done better than to force on the cross-cuts now in progress at the bottom level, which can be done speedily while the ground continues as it now is in each of*

the ends; they are already extended about 7 fathoms each way from the shaft, and in the north end there is a lode now being laid open, which is composed of gossan, quartz and peach, with spots of copper ore and mundic, but owing to its proximity to the cross-course, it is strongly impregnated with iron, and much cannot be said about its character until some distance has been driven on its course. However, I consider the mine a fair speculation, and in regular course of development. The sett itself is a continuation of the Caradon granite, which together with the cross-course and lodes, is of a character precisely similar to that of the mines of the district, and a few months of spirited perseverance will prove the value of the property."

It is recorded in the Royal Cornwall Gazette on the 5 January 1855, under sales of copper ores, that copper ore sold at Cornwall Ticketings for the quarter ending 31 December 1854, included: "Victoria Mine, 1 lot, 15 tons, £42 7s 6d".



**A map of the main extant features of Wheal Victoria,  
as marked on the 1892 to 1914 OS Map (post 1908 in this case)**

**Map courtesy of NLS National Library of Scotland online mapping**

Unfortunately, any renewed optimism was found to be a little too over-optimistic, and the Mine Adventurers' either started to lose their money, or were not convinced and withdrew any further financing. By 1855, the

Wheal Victoria copper mine had shut down for the second and final time. Not without acrimony it appears, as it is recorded on the 26 February 1855, that a case was heard in the Vicewardens' Court of Stannaries of Devon and Cornwall; Stannary Court Petitions in Equity (Cornwall), between James Bishop, miner and merchant of East Looe (Plaintiff), and Robert Dunstan, miner and managing agent of Wheal Victoria Mine, of Liskeard (Defendant). The description of the case states:

*"with affidavit of the plaintiff on which to ground motion for an Injunction, and cropped copy of The Times newspaper of Saturday, February 24, 1855, No. 21,986, with reference to a notice for the sale of Wheal Victoria Copper Mine".*

The outcome is unknown.

## 6: The China Clay Pipeline



The purpose of the overhead pipeline that can be seen running across the woods at Golitha Falls was to transport china clay (or kaolin) slurry from the Parsons Park Clay Pit up on Bodmin Moor down to the China Clay Dries at Moorswater for processing. The pipeline was constructed in or just after 1908, and there are also a number of other items and associated features that can be found in the woods that are connected with this china clay pipeline, and none of them are connected in any way to the Wheal Victoria Copper Mine.

See [Appendix 2](#) for more specific information about the China Clay Pipeline, and photographs of the associated features.

## 7: The Wheal Victoria Mine Buildings

Near the entrance to the Golitha Falls nature reserve, was this perhaps the site for some of the old copper ore dressing floors, other associated mine buildings, or the count house or hut? This is conjecture only, as the site here has a number of landscape forms that could lead to this conclusion.



*Site of the old dressing floors,  
or where the various old mine buildings of Wheal Victoria were sited?*

## 8: The Miners' Tracks

From the above site, can also be found the well used "Miners' Tracks" that lead to the main shafts and adits. One track (the upper track) leads up to the Engine Shaft that can still be found in the woods above the falls to the left of photo, and a second track (the lower track) leads round to the two wheel-pits by Golitha Falls, and also gave access to the two Adits.

The upper track to the [Engine Shaft](#) (page 22) has now sadly been getting more and more rutted and damaged by water run-off during heavy rain, but evidence still remains of a previously more made-up surface.



***The upper Miners' Track leading up to the Engine Shaft in the woods***



***Higher up the upper track, leading round past the Engine Shaft (to the left of the track)***



*The lower Miners' Track leading out towards the wheel-pits*

## 9: The Wheel-pits, Flat-rod Runs and Leats (1851 onwards)

The massive walls of the two wheel-pits are really all that now remain of the old Wheal Victoria copper mine, or at least they are the most obvious remains that can still be found at Golitha Falls, aside from the two adits and the two shafts that are hidden away in the woods. These more obvious mining features do take a little hunting for, but can be found with a little perseverance.

The wheel-pits housed wheels 30 feet in diameter, which were worked by water fed along a series of leats, or water channels, feeding into the back of the wheels in "undershot" or "under-flow" fashion. The wheels then operated, via "balancing bobs", a series of flat-rods that linked to either the main shaft, or a nearby adit, for pumping out ground water from the mine sump.

The exact purpose of the two wheel-pits has been difficult to explain, as on the face of it, they do not appear to have been employed for copper ore stamping (there are no obvious sign of remains of any ore stamps, nor even any obvious location for them), and if conversely, they were used for pumping, they seem to be unnecessarily far removed from the mine shafts that are visible further up the hill. Or are they? See the chapter on the [Flat-rod Runs](#) (page 13).

## 10: The First Wheel-pit

Following the old Miners' Track along the side of the river and past the upper falls, you will come to the First Wheel-pit. A closer inspection will reveal where the wheel axles would have been supported. The large tree growing out of it in the first photo has fortunately since been removed!



*The First Wheel-pit as it was in 2004 with a large tree still growing out of the inside wall!*



*The First Wheel-pit with tree now removed, and a lot safer for preserving the structure*



***Looking inside the First Wheel-pit; this wheel-pit has not stood up to the test of time quite as well as the second wheel-pit***

## 11: The Second Wheel-pit

The Second Wheel-pit can be found a little further along the side of the falls, and will be seen to be in a slightly improved state of repair to the first, and perhaps a little less encumbered by trees. The reason for this wheel-pit is far less clear, though its purpose must have been significant.

So why two wheel-pits rather than one? Perhaps there were stamps nearby. What purpose did the small structure at the water's edge near the wheel-pits serve (see page 13)? Some kind of site office for the water-wheels? However, the best access to remove the ore would have been, and indeed evidence suggests overwhelmingly that it was, from the Engine Shaft up on the hill, and then down the access path to the road/track over [Draynes Bridge](#) - or the Ford, as the existing bridge was only built in 1876 (page 37).

It is very unlikely that any ore was removed by way of the lower adit (the Second Adit), if indeed this adit had any evidence of a tramway into it, which it doesn't. The idea of bringing out the ore from way down in the woods by the wheel-pits, and from the lower, far less accessible, Second Adit, defies both logic and practicality. This adit provided access, but was primarily for drainage of water from the mine pumps, as evidenced by pipework within the adit; pumps that would have been powered by the wheel-pit water-wheels.



*The Second Wheel-pit*



*Looking into the Second Wheel-pit*



*The building structure by the water's edge close to the water-wheels*

## 12: The Flat-rod Runs

It has been documented that at least one water wheel was used to operate 150 fathoms of flat-rods, and the adits were only 70 fathoms and 100 fathoms deep. This leaves a good 50 to 80 fathoms (300 to 480 feet) between the wheels and the adit or shaft. The lower Second Adit is in fact relatively close to the wheel-pits, but it lies at a very inconvenient angle to enable a flat-rod link to be made to it; indeed as discussed previously, the visible flat-rod runs themselves do not on the face of it suggest a link to this adit at all.

However, more recent research and LIDAR mapping has now shown that the first wheel-pit was almost certainly linked to the Engine Shaft up on the hill - see the chapter on the [Engine Shaft \(1851 to 1853\) and Flat-rod Run](#) (page 18) for more details and evidence of this.

Part-way up the First Wheel-pit Flat-rod Run, there is an embedded uncapped "pipe" sticking up out of the ground on the right hand side (looking up). This is nothing to do with the mine, but is a vent / survey access pipe for the China Clay Pipeline, which was constructed long after the Wheal Victoria Mine ceased working. For further information on this, see [Appendix 2](#).



***Looking down the Flat-rod Run towards the First Wheel-pit***



***Looking up the Flat-rod Run from the First Wheel-pit  
(past the China Clay uncapped vent / survey access pipe)***

From new evidence discovered, it appears that the Second Wheel-pit may also in fact have been used for pumping out the mine, but via a now hidden Third Shaft possibly situated either up, or on, the hill above the Second Wheel-pit. The discernible route of this second Flat-rod run is both limited and confused in its length, which would leave the purpose of this second wheel-pit very much in question and unresolved. However, there is a possible and a very likely solution to this conundrum which is investigated further, using LIDAR evidence, in the chapter [A Possible Third Shaft 1851 onwards - conjecture?](#) (page 29).

## 13: The Leats

The various leats and paths at Golitha Falls and the Wheal Victoria Mine have now blended into a small maze of their own. What were originally leats, or water channels for the water wheels and mine drainage, have now become paths, which has confused them with the original miners' tracks and access paths that would have been used to service the mine and perhaps even to remove ore.

Some parts of the leats that are not paths are dry, and much of what has been identified as the "lower leat" has remained a water channel, and has been severely scoured on occasion by flooding from the river.



***The Upper Leat, not on the left, but what is now the path on the right, tracing its course towards supplying the wheel-pits***

The Lower Leat appears to lack real purpose. It feeds back into the river above the wheel-pits, and was not used, it seems, to provide any motive power for the mine. It is possible that it was an "overflow" leat for the upper leat when it was previously connected in some way, to take excess water away from the water-wheels feed, in times of heavy rain and high flow rates entering it from the river.



*The Upper Leat as it passes the first wheel-pit,  
and crosses the line of the flat-rod run that would have passed over it*



*The Upper Leat*



*The Lower Leat after being scoured by floods in late 2012*



*The Lower Leat and a new bridge over it in 2016*



*The Lower Leat re-enters the river some way above the Wheel-pits*

## 14: The ENGINE SHAFT (1851 to 1853) and FLAT-ROD RUN

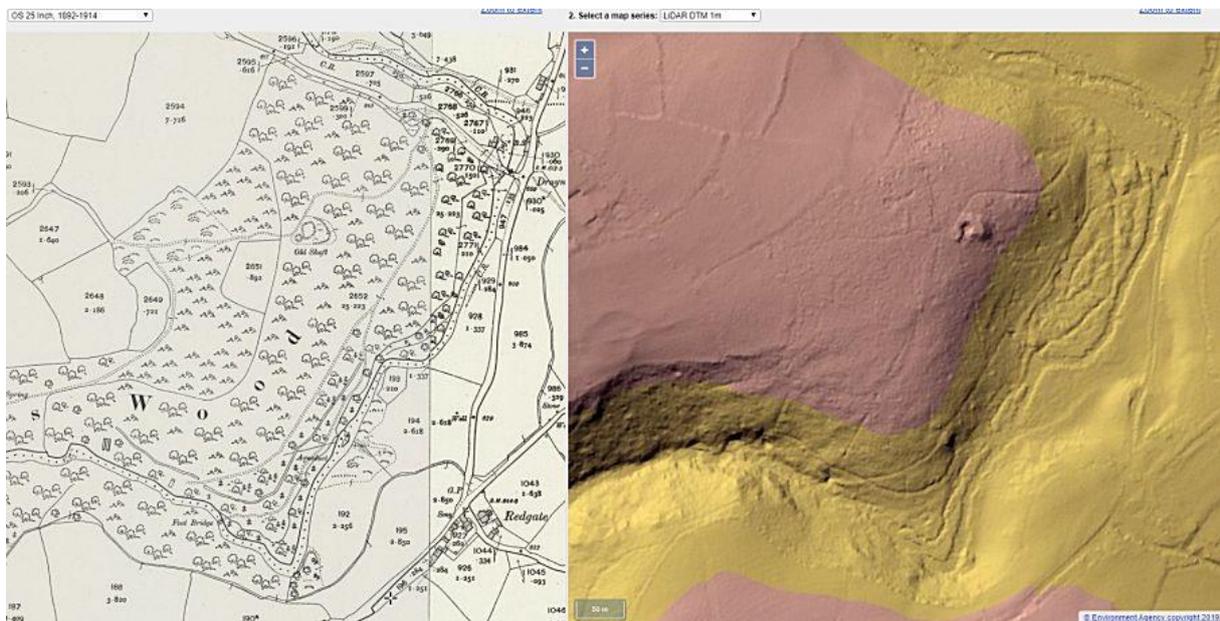
The main Wheal Victoria mine shaft, referred to in reports as the Engine Shaft, lies up the steep track and up the hill, that leads from the open area at the entrance to Golitha Falls. As detailed in the Cornish Mining Journal records that have been quoted previously, the shaft was sunk sometime between 1851 and 1853, to a maximum shaft depth of 57 fathoms (342 feet), and latest research has now shown that it is virtually beyond doubt that it is this Engine Shaft that was directly linked by a flat-rod run from the First Wheel-pit and water-wheel. These flat-rods would have then operated the mine pump down in the sump of the Engine Shaft, which would have been, and is, linked up at lower levels with the Second Adit that was driven during the same time period, and from which water from the mine was then discharged into the river.

It has been documented that at least one water wheel was used to operate 150 fathoms of flat-rods, which would then put any linked shaft at around a 900 foot-length between the wheel-pit and the shaft. The First Adit is in fact relatively close to the wheel-pits, but it lies at a very inconvenient angle to enable a flat-rod link to be made to it; indeed the visible flat-rod runs themselves do not on the face of it suggest a link to this adit at all, and this is considered as just plain impractical to have achieved. The measured map distance between the First Wheel-pit end of the flat-rods and the access to the Engine Shaft is around 280 metres, which equates to around 918 feet. This matches the requirement of distance.

The evidence that effectively proves the case however, is more recent research with LIDAR mapping (Light Detection And Ranging, sometimes referred to as Laser Imaging Detection And Ranging). This is essentially 3D mapping of the landscape and underlying terrain, that effectively "sees through" vegetation and structures, to reveal the natural and archaeological features of the ground surface. The technique is very revealing. Using LIDAR mapping that is now freely available online, it can now be shown that the First Wheel-pit was almost certainly linked to the Main Engine Shaft.

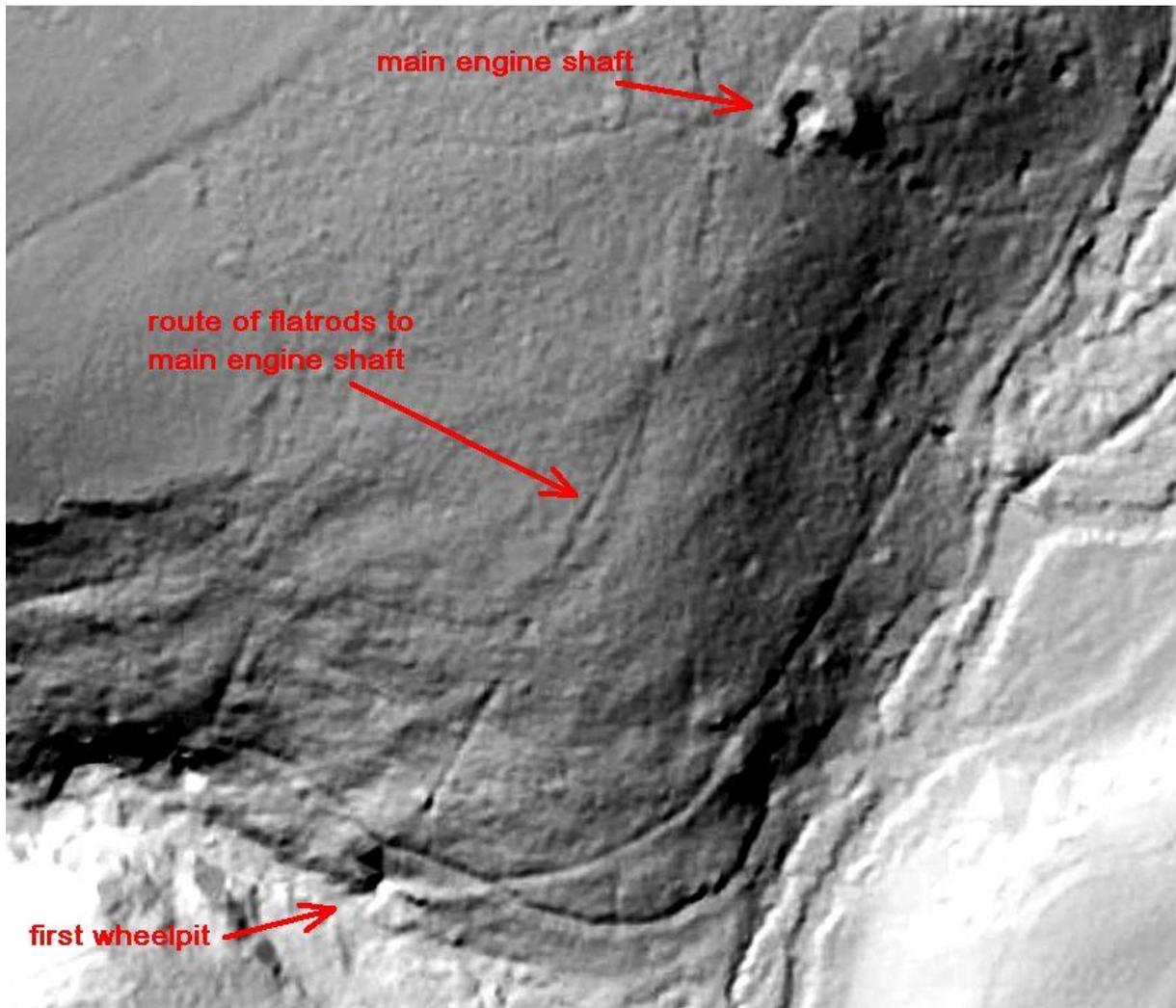


***The Main Engine Shaft looking towards the cutaway in the side of the hollow (in 2006). This hollow allowed access for the Flat-rod Run coming up from the First Wheel-pit***



***Side-by-side mapping showing the old 25 inch OS Map and LIDAR map of the same area. The flat-rod run has started to reveal itself.***

***Maps courtesy of NLS National Library of Scotland online mapping***



***This LIDAR map shows more clearly the alignment of the Flat-rod Run***

***LIDAR mapping is courtesy of [LIDARfinder](#) online 1m DTM (Digital Terrain Modelling)***

The LIDAR map above shows more clearly, with annotation, the direct alignment of the First Wheel-pit and the opening to the Engine Shaft up on the hill. The flat-rod run can also be clearly discerned leaving the wheel-pit and progressing in direct line up the hill, and beyond the old wall in the woods. The flat-rods cross the line of the wall in two places, and the evident line becomes less clear in the upper section, but the destination, with the length of flat-rods, becomes inescapable.



***Remains of the Flat-rod Run going up from the First Wheel-pit, towards the top of the hill***



***The old wall on top of the hill in Draynes Wood, that the flat-rod run would have crossed.***

The line of the flat-rods in fact runs along in the middle distance, at right of the photo in a slight dip, but without the LIDAR, it was not readily discernible or convincing on the ground.



***The old wall, with its foundation still able to be identified on the LIDAR mapping, is a wall that pre-dates the Wheal Victoria mine, and is clearly identified on the Tithe Map of 1842***

## 15: The ENGINE SHAFT (the Main or "First" shaft; 1851 to 1853)

There is no sign or indication that there was ever an engine here, although this may refer only to a simple horse driven whim - although there is precious little space nearby for that! There is however a small additional hollow adjacent to, and linked to the shaft hollow, that may have accommodated some form of whim or lifting gear that would have served the shaft head, as well as allowing access for the flat-rod run.

Access to the mine down the main shaft is most likely to have been via ladders and timber stagings though, rather than by any "man-engine" that could have been operated on the back of large timber rods, as would have been used for the pumping out of water from the mine, pumped out via a lower level, through the Second Adit. This shaft is of substantial size, and would have accommodated a method (hence the need for a whim) to haul up the mine spoil and ore in buckets or kibles. The flat spoil ground above the natural hillside that can be clearly identified on the east side of the shaft, is also evidence of this.

The shaft itself has been stated to have been sunk to 57 fathoms (342ft) originally, though this would have long since flooded, and has possibly been part filled with debris, though it has not in any obvious way been significantly run-in.



***The Engine Shaft in 2006 showing the spoil ground behind***

The shaft top is in a gentle hollow by the side of the track, and unusually, it is not capped with concrete, or "choked" (run-in). A grill covers it, and it is possible to peer down into its murky depths. At the top of the hollow is a large flat area overlooking the valley, and across to Redgate, that would have been the top and edge of the mine "dumps", or spoil heaps. This would have been where the waste material was literally dumped at the surface, close to where it was brought up, that had been extracted from both the shaft (when it was sunk), and the mine "levels" (where the "lodes", or veins of ore were worked).

Any ore would also have likely been brought up this way in kibles, unless it was possibly trammed out through the, then, more open First Adit (see details below).

Looking down the shaft, it can be seen that it would have been large enough for the extraction of mine waste and ore by buckets or kibles, as well as access for the pump rods, powered via the flat-rod run from the water-wheel in the First Wheel-pit. There is also an extra area of shaft excavated to one side at the top, perhaps to a depth of 10ft, the purpose of which is unknown.

Given that the shaft was sunk to 57 fathoms (342 feet), there appears to be a good level of rubbish and likely flood water at the visible "bottom", so a good deal of rubbish and possible spoil has gone down here, as well as being flooded from being sunk below the level of the river and water table.

The mine shaft itself is now a home to the bats that live in the mine, and this now forms a part of what is now known as the [Goltha Falls National Nature Reserve](#) (or NNR), managed by English Nature.



*Looking down the Wheal Victoria Engine Shaft*



*Another view down the Engine Shaft.*

*The shaft from Cornish Mining records was stated to be down to 57 fathoms (342 feet)*



***The Engine Shaft has now been caged (2016) to prevent access and to provide further protection for the resident bats***

Further inspections by Stuart Dann have indicated that this large main shaft is choked with rubbish about 30 feet (5 fathoms) down, and that it was most likely used for hoisting out waste material and spoil, and perhaps later on, ore. Due to its size, such a big shaft may well have incorporated a double skip-way, and also perhaps ladders for the miners' access. The whim for the skip-ways would have been located in the adjacent smaller hollow as previously suggested. The Engine Shaft became, perhaps when completed around 1853, the new primary access shaft to the mine, with its larger skip-ways and ladder-ways, and again perhaps, taking over from the smaller access-only "second" Ladderway Shaft (see below).

Importantly, the Engine Shaft also housed the pumping gear operated by the flat-rod run from the First Wheel-pit. Water would not have been pumped all the way to the surface at the top of this shaft, but would have been discharged via pipework out of the lower [Second Adit](#) (page 35) by the river. This is also evidenced by runs of rusting pipework still visible inside this adit (see below).

## 16: The LADDERWAY SHAFT (the "Second" shaft; likely also 1851 to 1853)

There is also a second shaft that can be found hiding itself away, quite well back, and further up into the woods above Golitha Falls. Its location also makes it quite difficult to locate - it is easier in the spring when it is less overgrown, though in recent years it has become very easily identifiable by the rather massive cage now resident over it! The purpose of this shaft was originally unclear, but it is not thought to be as significant as the main Engine Shaft. It lies in a small depression near the edge of Draynes Wood, and is covered by a strong metal grills that allows access for bats, in the same manner as the Engine Shaft. Whether this shaft preceded the Engine Shaft, and was chronologically the first shaft at Wheal Victoria, is also unclear.

There is no documented evidence of a shaft being sunk during the first excavations of 1844 to 1846, but that is not to say there was not one. However, given the scale of the Engine Shaft, and the ease of access that would have been facilitated by it, what would have been the purpose of an additional shaft sunk afterwards? This is not a question with any clear answer at this point, other than to present the likelihood of its purpose being solely for mine access, down what would have been some form of Ladderway, whether sunk during the first excavations, or early on in the later excavations.

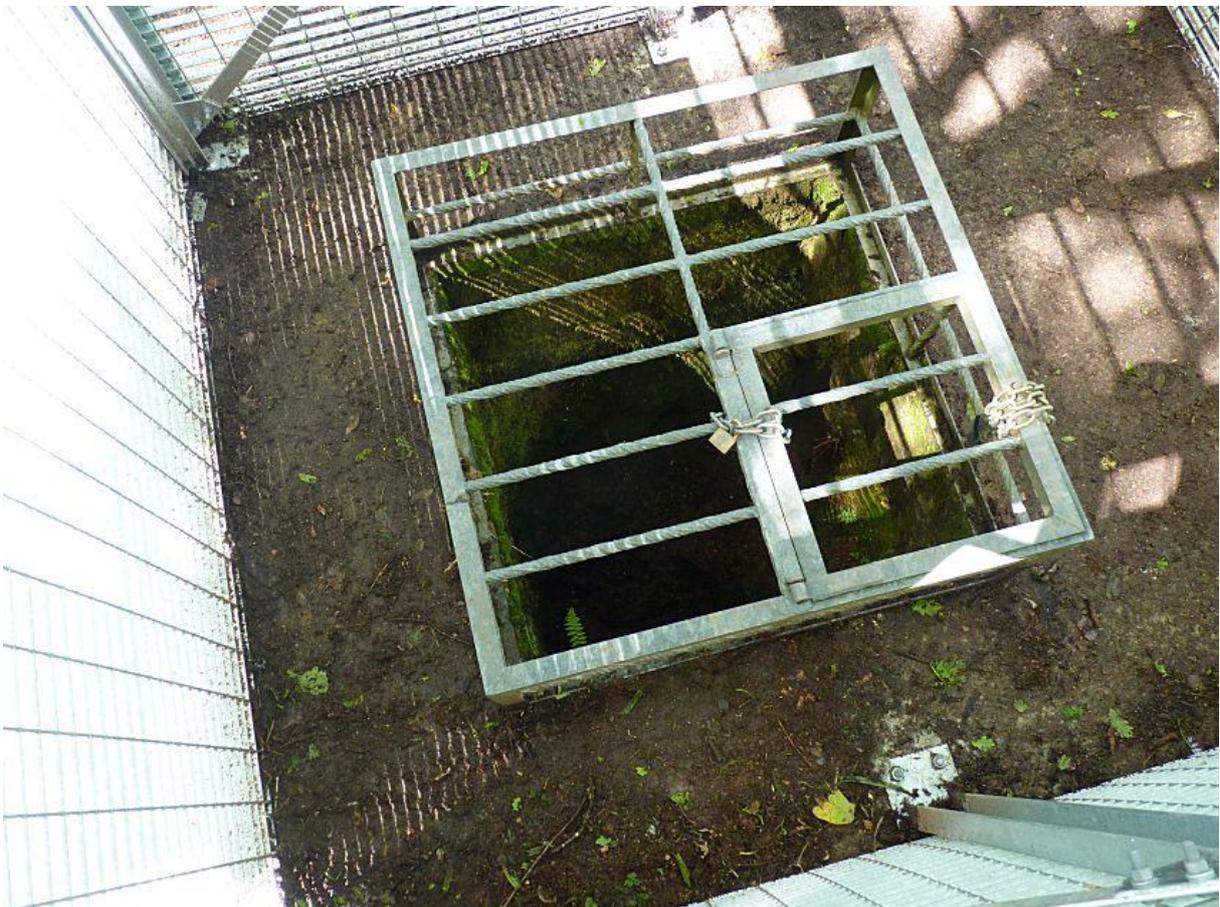


***The Second Shaft in 2006 - the Ladderway Shaft - with its caged top nearly overgrown***

Looking down the shaft itself, the narrow opening lower down implies the shaft was only ever used for limited access by miners themselves - there would have been only just enough room to climb down, if the hole was no bigger originally than it is now - or it was used solely for ventilation. It may have been an early exploratory shaft to determine the extent of the ore-bearing lodes, or to allow access to the First Adit workings that were driven during the early 1844 to 1846 excavations. Either way, it appears a lesser shaft than the Engine Shaft.



***The Ladderway Shaft has also now been caged (2016),  
to prevent access and provide further protection for the resident bats***

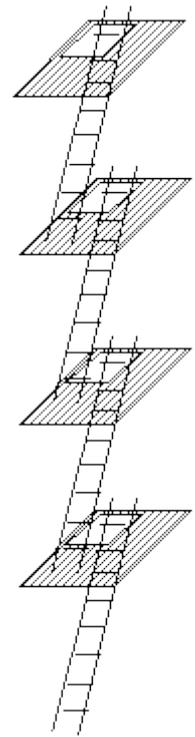


***Looking into the shaft through the new protective cage***

Correspondence with Mine Explorer Stuart Dann has suggested that the Second shaft is in fact a very nice condition "footway" (or Ladder-way shaft), with its wooden "sollars" (or wooden platforms supporting the staged ladders) in place. The ladders would have gone down the shaft in the manner illustrated on the right, with each successive platform being placed around 20ft apart. Stuart fully expects all the ladders to be still in place.

On closer inspection of the photograph below, which was taken looking directly down the Second Shaft, on first sight it just seems to be a tight hole, but it is in fact very likely to be what remains of the ladder-way hole in the first sollar, which has been considerably run in with loose material. This has been increased in the past by a number of animal diggings near the shaft, likely the activity of badgers. A much clearer view of this ladder-way access would then be possible (theoretically) if all the earth was removed from the top sollar, thus revealing the extent to which the old miners' footway is still in place, and how much of the old nineteenth century timbers and woodworking may have survived.

*Representation of a Ladder-way*



Stuart has said he expects that all the underground and Second Adit-level workings would then connect to this ladder-way shaft, and presumably also to the main Engine Shaft. Whether or not these workings connect to the earlier lower level **First Adit** (page 33) workings of the earlier excavations during 1844 to 1846, or also extended to the later Second Adit and Engine Shaft workings is purely conjecture.

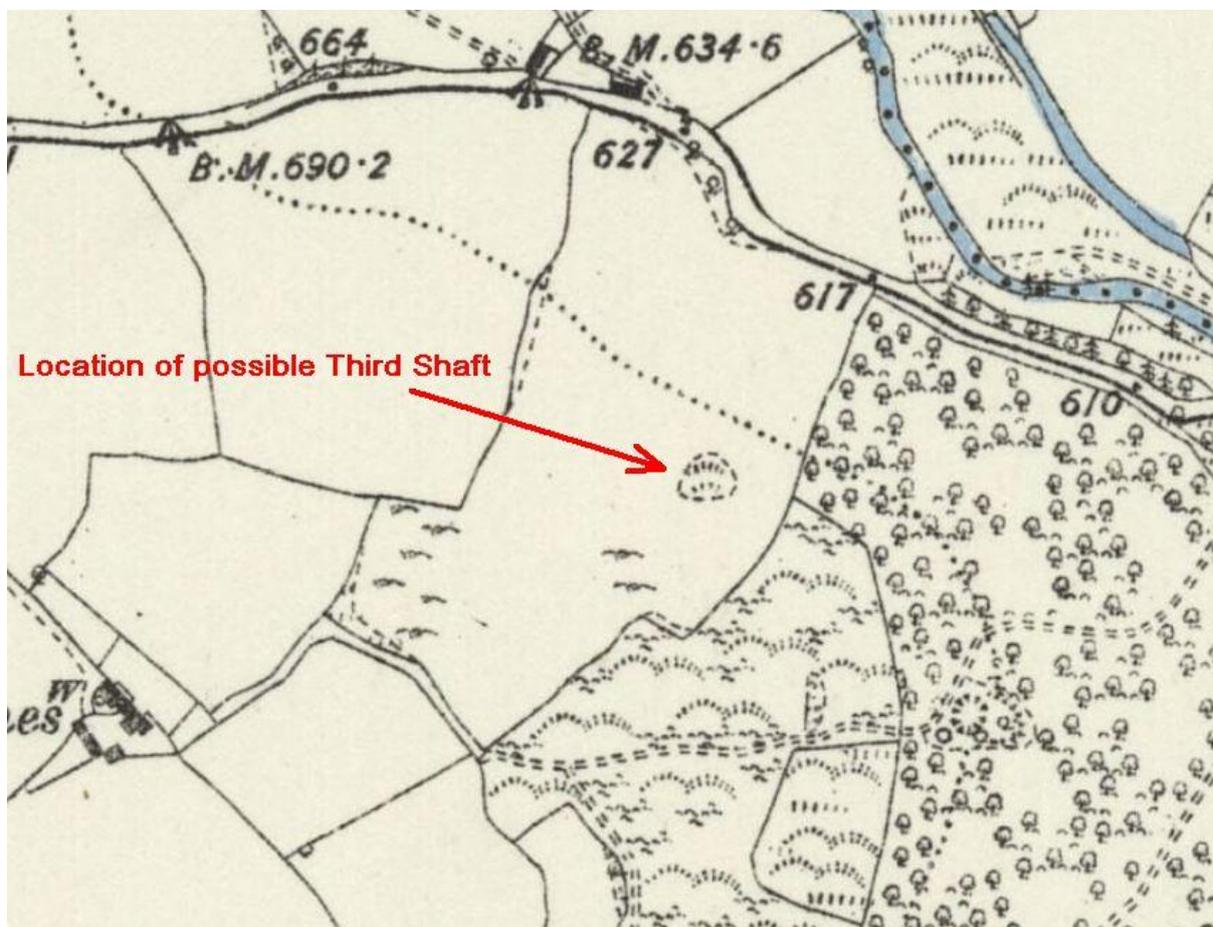


***Looking down the Ladderway Shaft showing the hole in the possible first sollar, overtopped with earth back-fill, due likely at least in part, to the action of badgers previously burrowing nearby, and part choking it***

## 17: A Possible THIRD SHAFT (1851 onwards - conjecture)?

According to local knowledge, there was a third shaft that existed somewhere up in the fields above Draynes Wood, that is now on local farmland, which has now presumably been run-in or choked, as there is no obvious marked location evident in the landscape without much closer inspection. The shaft was apparently a substantial affair that over the past century was used as a general dump, and within living memory was eventually filled in for safety, and thereafter the land over and around the old shaft and any workings, reverted back to pasture. This would in itself limit the location to open fields, or at least up on top of the hill on the edge of Draynes Wood. Local first-hand knowledge, from neighbours now sadly passed, can be very valuable in revealing realities on the ground, and there is some evidence that does in fact tie up with this oral record.

There is a slight dip in the ground in the field adjacent to Draynes Wood, that is also highlighted as on the 1882 OS Map (Sheet Cornwall XXVII.SE), but as rough ground, which does not so appear on later OS Maps (as do many a mine shaft find themselves unmapped!). This was investigated on the ground during a walk around Golitha and Draynes Wood with John and Cheryl Manley in 2011.



***Possible location of a third shaft on the 1882 OS Map***

***Map courtesy of NLS National Library of Scotland online mapping***



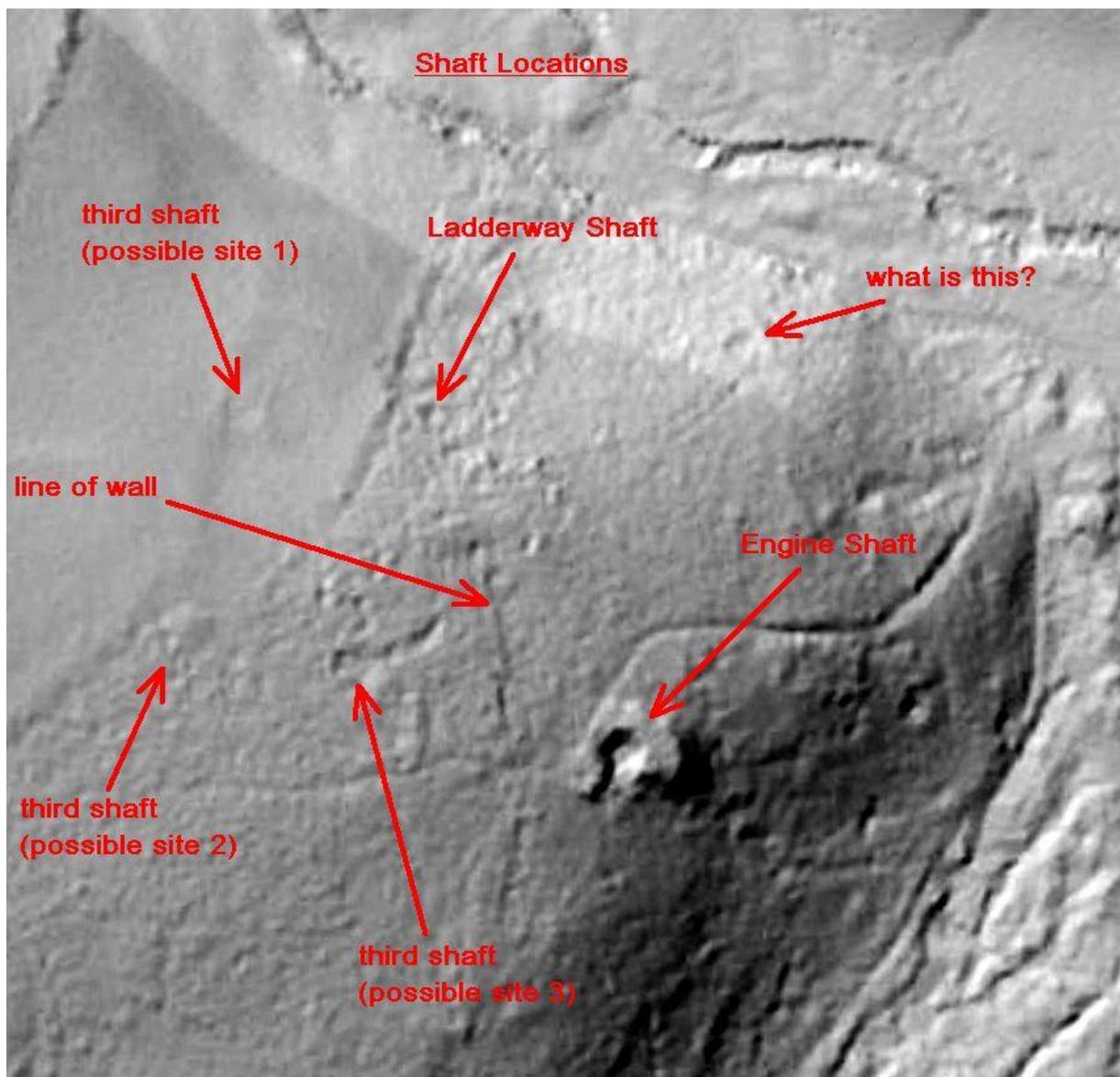
***Possible location of the third shaft on the ground, looking out from Draynes Wood***

It has previously been suggested that there was also a Fourth Shaft, but this has been pure speculation, and has I think, got itself confused and mixed up with locating any Third Shaft. I do not believe at this time that there is any case for a fourth shaft, and given the lifespan of the Wheal Victoria mine, I think four shafts would be pushing the reality.

Previous suggestions received that suggested that a possible Third Shaft was sited under an aluminium pole and vent pipe above the Second Wheel-pit, that showed signs from other reports received, of being hollow below, is not now believed to be true. This particular vent pipe is shown in a photograph in [Appendix 2](#), as relating directly to the Parsons Park China Clay Pipeline that runs through Golitha Falls Nature Reserve, which has no connection whatsoever with the Wheal Victoria mine, and indeed its position is only part-way up the flat-rod run, which would not make sense.

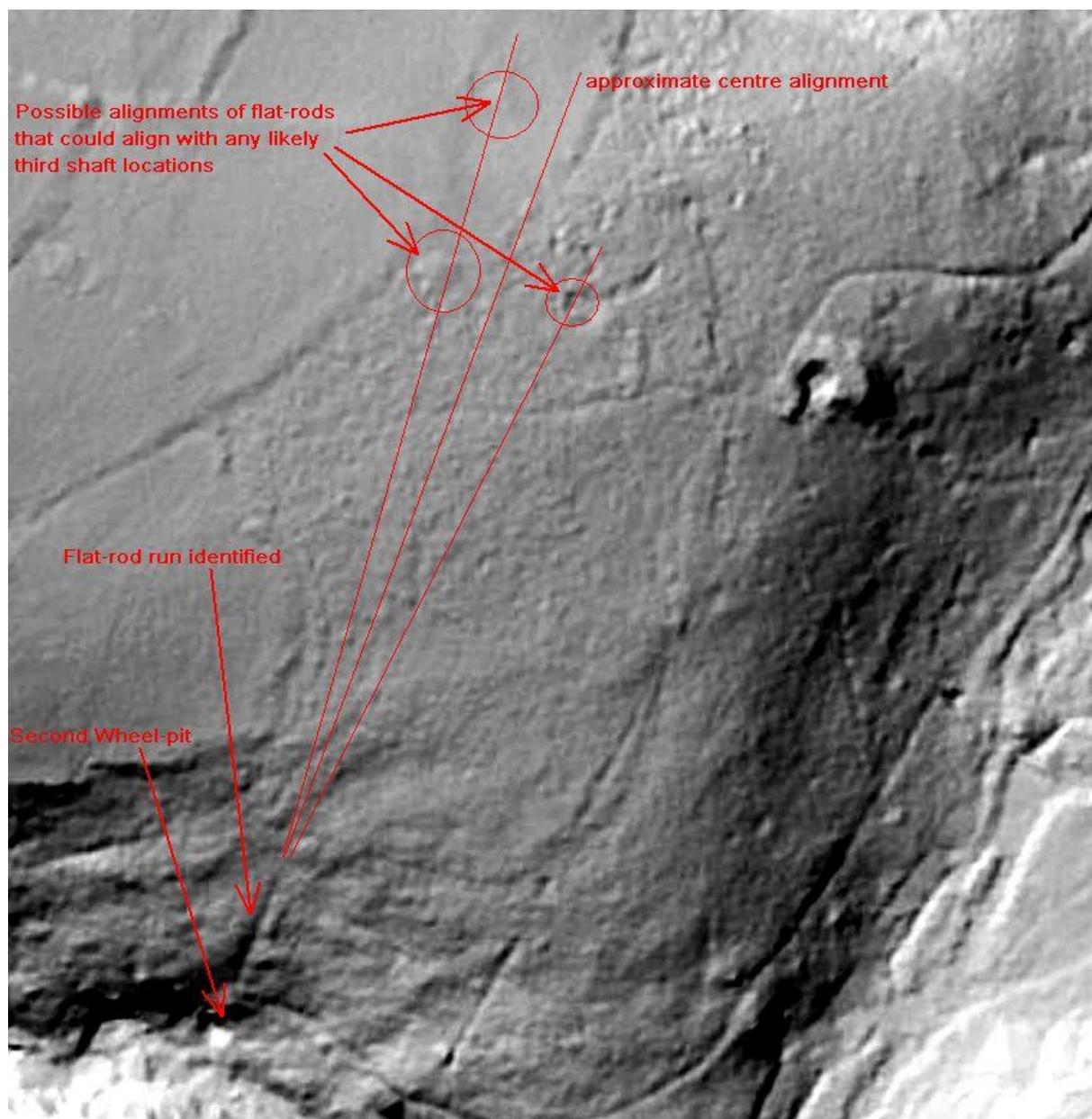
There also remains the mystery of the flat-rod run from the Second Wheel-pit. On closer inspection of LIDAR DTM (Digital Terrain Modelling) mapping, it is possible to see alignments with likely locations of any Third shaft. Did this Second Wheel-pit service this possible Third Shaft? Nothing has so far been proved, but circumstantial evidence is building a case for it. There are also a couple of other possible locations of this third shaft, as revealed by LIDAR, but none are as yet so convincing as the location suggested here.

## LIDAR MAPPING of POSSIBLE THIRD SHAFT



*Alternative possible locations of any Third Shaft fro LIDAR - Site 1 is most likely.*

*LIDAR mapping is courtesy of [LIDARfinder](#) online 1m DTM (Digital Terrain Modelling)*



***The Second Wheel-pit Flat-Rod alignments with any possible Third Shaft location.  
This would certainly explain the purpose of the Second Wheel-pit.***

***LIDAR mapping is courtesy of [LIDARfinder](#) online 1m DTM (Digital Terrain Modelling)***

Despite the limited amount of documentary evidence relating to the old Wheal Victoria mine that has been found to date, and its apparent smallness in size, the mine itself appears to have had a significant impact on the local landscape, with several shafts, adits, water-wheel pits, and other surface features either present today or known to have existed previously. Golitha Falls, Draynes Wood, and the area around what is now South Draynes, must have had a very different look and feel in the 1850s to the lovely wooded valley and nature reserve that it is now, and the immediate geography of the old working mine, with all of its mine and industry and all the undergrowth cleared, would have appeared far removed from its appearance today. It is through over 160 years of reverting to nature, historical archaeology lost or removed, and now overgrown with undergrowth and trees, that we are left to search for the remaining evidence of what has gone before.

## 18: The FIRST ADIT (1844 to 1846 - and the first you will discover)

Thought previously to be the second adit, this has now been identified as the First Adit, driven during the first Wheal Victoria mine excavation between 1844 and 1846. The entrance to this adit can be found not far into the lower woods of the Golitha Falls National Nature Reserve, along the lower paths and tracks, following what has been identified as the lower "Miners' Track". The adit also seems to be very small, and the access cutting is now be blocked by the courses of old leats (water channels) and new paths, and the gated adit itself is now home only to bats. The adit is likely to be well run-in and possibly severely choked further in, but this is difficult to determine as the adit is now well flooded. It appears that it curves slightly to the right and downwards, and likely in the direction of where the two shafts up on the hill were later sited. This adit may well be the full extent of the first excavations, as no shaft is identified as being sunk during these excavations. It is therefore likely that the height of the adit before run-in was at least of man height.



***The First Adit is tucked away by the meeting of paths, with the old Miners' Track over it***

Looking inside the First Adit, flooding is immediately apparent. The adit appears to curve to the right and down, and seems small for regular human access, but this is likely deceiving as, if this was the only access to the early excavations, man-height would have been a requirement. From Mining Journal records, this adit was cleared during the second later excavation of 1851 to 1855 to 70 fathoms (420ft). Was this adit once used to remove ore, as well as likely mine spoil and waste?

Since my initial researches, I have had further information and correspondence from the experienced Mine Explorer and enthusiast Stuart Dann, who has also looked at this site and suggested that this adit was also in fact one of the main draining points of the mine, and was perhaps also used for tramming materials in, and ore out. For the adit to be used for drainage, and indeed tramming, it would need to be draining on a slope to function, with a larger portal, and much material now present would need to have not been there when in use.



***The First Adit entrance, now well run-in***



***Inside the First Adit, clearly well choked with debris  
(the unidentified white rocks have been partly exaggerated by flash)***

## 19: The SECOND ADIT (1851 to 1855)

As with the identity of the other adit, this "Second Adit" was previously thought to be the first adit, but has now been identified as the second adit, driven during the second and final Wheal Victoria mine excavation between 1851 and 1855. This adit is not easily found, being sited in what appears to be a quite inaccessible position by the waterside, in a cleft right down by the edge of the lower falls. It is not in fact very far from the Second Wheel-pit, and can be located right by the water's edge, hidden from immediate view behind the rocks. Again it is well protected, and home now only to the bats. It is very unlikely that any ore was removed by way of this lower adit - there is certainly no evidence of any tramway into it - and the idea of bringing out any ore from way down in the woods by the wheel-pits from here defies both logic and practicality. This adit provided access, but was primarily for drainage of water from the mine pump, in association with the wheel-pits, and flat-rod run to the Engine Shaft, pumping water from the mine sump. This is further evidenced by the rusting pipework still visible within the adit entrance.

As far as access to the adit is concerned, this may well have been via some form of wooden structure providing safer access from the waterside closer to the second wheel-pit. The adit was certainly a significant access portal to the mine, given its walk-in dimensions. It is certainly the best preserved adit, albeit in a precarious location right by the river, but due likely also to its apparently well concealed location.



***The cleft in the rock by the side of the river hiding the main Wheal Victoria Second Adit. Precariously placed, but there was possibly a timber structure added for safer access***



***Looking into the cleft and the entrance to the Second Adit hewn into the granite***

## 20: UNDERGROUND in the Second Adit

It is possible to see inside the entrance of this second adit, and into the dark hard-won world of the Wheal Victoria miners of 150 years ago. The access into the adit is man-height, and it is possible to make out where the granite has been drilled and hewn away by hand, and there are old ironwork remains just inside. The amount of work required to open up a simple adit such as this one on the Wheal Victoria mine, where hand chisels, hammers and drill bits were the only tools available, is hard now to appreciate in today's modern age. The remains of old piping and iron work that can still be seen on the floor of the adit, may well have been a part of the equipment used for pumping out the mine workings and mine shafts further in.

According to local knowledge, there is a large deep area dug out further within the adit, that is now filled with water that may well have been an "underhand stope" or winze. An underhand stope is a section of a lode that has been dug out downwards and along the lode, to extract the copper ore, and a winze is in effect an internal mine shaft dug to give access to deeper levels and interconnection to other parts of the mine further in.



***Looking into the Second Adit and the ghosts of the past.***

The height of the Second Adit is clearly made for miners' access, and the old pipes are likely part of the old pipework for expelling the pumped out water from the mine, out of the adit and into the river.

The deep flooded area inside the adit did indeed turn out to be a winze, as far as could be identified, as was discovered by experienced Mine Explorers. See [Appendix 1: Wheal Victoria Copper Mine Underground](#) for photographs that were taken during their explorations, and to see inside the Wheal Victoria mine itself,

## 21: DRAYNES BRIDGE and the OLD FORD

It is a misconception that Draynes Bridge was built to service the Wheal Victoria mine. The mine closed in 1855, and the date carved in granite on the centre stone of the bridge clearly states the date of 1876. It may well have been the case that the presence of the mine contributed to reasons for building it in the first place, but the mine certainly never benefited from it. Before the bridge, the old ford just below it appears to have been in common use, and mapping shows the ford in line with the old road or track of the day. This is clearly shown on the Tithe Map of 1842.

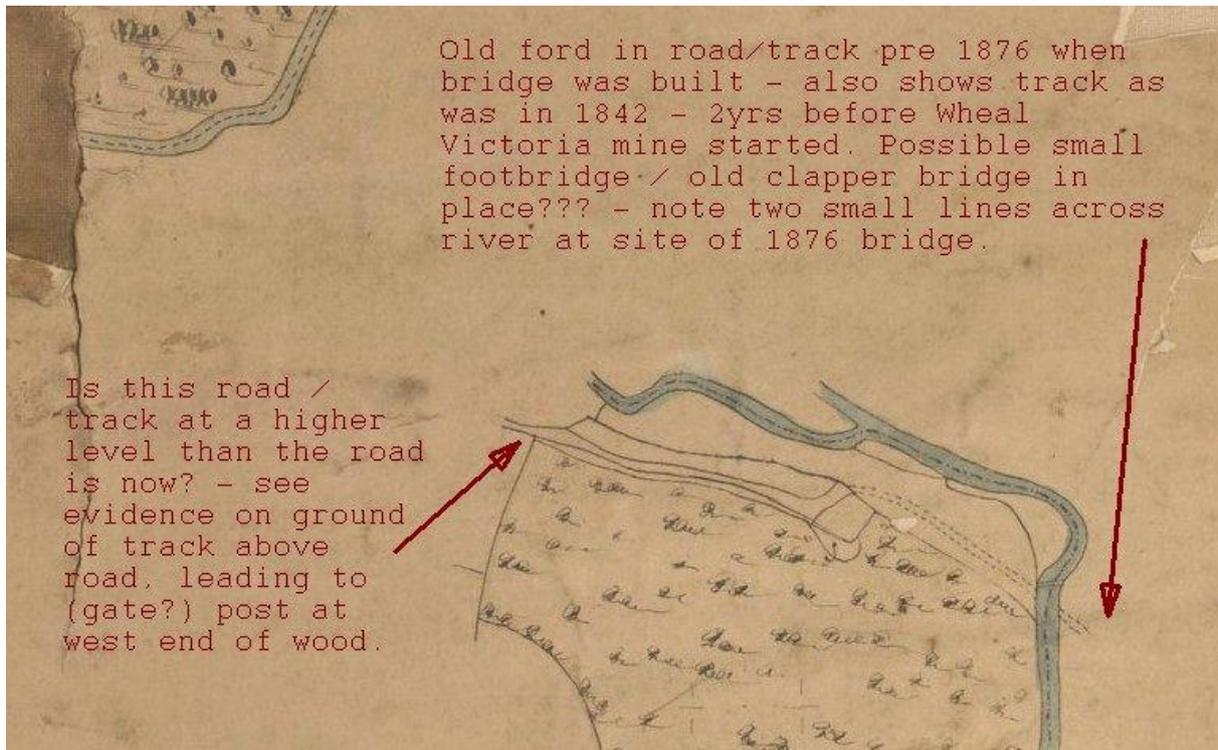
What is also clear on the Tithe Map, is that another smaller bridge appears to have existed in place of the 1876 bridge, but this certainly would not have been vehicular, and would at most have catered for foot traffic and possibly horses. The earlier bridge is mentioned in historical records, but no evidence is as yet presented here, other than that of the Tithe Map.



***Draynes Bridge - built 1876, by then it was 21 years after the closure of the mine***



***The Old Ford just below Draynes Bridge - this would likely have been in use at the time the Wheal Victoria mine was operating***



***The Tithe Map of 1842 showing the old ford and a possible smaller, perhaps foot-only bridge, that was previously in place of the present 1876 bridge***

## 22: And a Curious Plate...



***This mysterious circular plate can be found on the ground adjacent to Draynes Bridge. What is it, what was it for, and what, if anything, lies under it???***

# Appendix 1

## Wheal Victoria Copper Mine Underground

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Photographs (see credits given)

### Underground Exploration of the lower Second Adit

Firstly, a serious note of warning: Underground exploration is not for the casual tourist, and the access to underground workings is not normally permitted, and is usually restricted by locked barriers. Such activities should ONLY be undertaken with permission from the relevant landowners, and ONLY with experienced cavers and mine explorers, usually through a specific Caving or Mine Exploration Association or Club.

However, now we have the internet, and the wonders of digital photography, armchair exploration is also possible, and there are a number of very interesting websites with photographic exploration records. The following three websites are good places to start:

[Mine Explorer](#) ~ Mine exploring, history, archives and an extensive photographic database.

[Mine Explorer Society](#) ~ Mine exploration society in Cumbria (not Cornish, but a very good site!)

[AditNow](#) ~ Mine exploration and information sharing resource, and discussion forum.

With regard to the underground workings of Wheal Victoria, I have been contacted by an experienced Mine Explorer - Stuart Dann - who has kindly provided me with some exploratory (and explanatory) information and photographs of what he has found out about the mine. There are also some excellent photographs taken by another mine explorer "Orphan" from the AditNow website who ventured further in to the mine with a camera. By piecing all the information together, a clearer picture can be gained of the interesting history of the Wheal Victoria Copper Mine.

### A1: What was Discovered in Wheal Victoria (photographs copyright and courtesy of Stuart Dann c.2009)

The photographs taken by Stuart were exceedingly hard to get, as the humidity was 100%, and in Stuart's words, "breath hangs around like clouds", but they are nevertheless a very interesting record.

The [Second Adit](#) (page 35), down by the river, was Stuart's entry point, and progress inwards was a trial, but what was revealed were the various branches off to the sides of this access adit, that were dug to see if the strings of ore discovered by the nineteenth century miners were "pinching" or "swelling" (getting smaller or larger as progress is made).

Not far inside, there is a pool in the floor of this Second Adit, which is called a Winze, which is an internal shaft sunk along a lode to see if it proved in depth. The depth of this winze, and whether or not it "goes", could be tested by bailing a few buckets of water out of it, but this was not able to be done. If the water level in such a shaft doesn't change, then the drowned workings are extensive.



*View inwards, taken from further inside the main Second Adit, at an adit junction, and beyond the winze found in the adit floor (photo S.Dann)*



*Looking down at the flooded winze in the floor of the Second Adit (photo S.Dann)*

The pipes that are visible in the water suggest by their presence that the winze was originally (and still is presumably) quite a deep hole, but that it can't have been very wet, due to the size of the bores. It is very likely that, as this adit was used for expelling pumped out water from the mine, and there is evidence of pipework descending into this winze, that the winze gives access to other levels that connect with the main Engine Shaft where the pump rods descend to the mine sump, recorded as being at a shaft depth of 57 fathoms (342 feet) from grass (shaft surface).



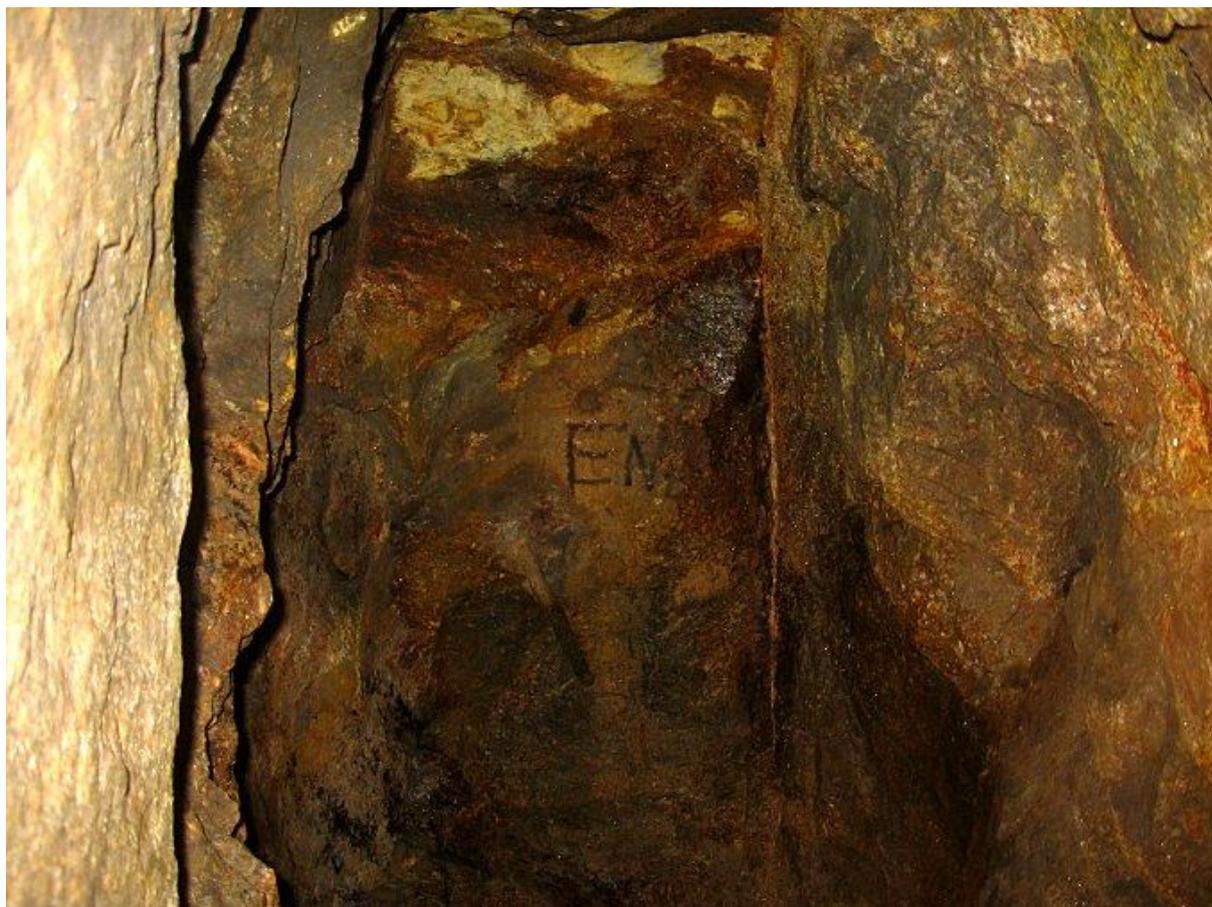
*Looking closer at the pipes remaining in the winze (photo S.Dann)*

It is possible that this winze was pumped by "flat rods" but this was thought probably unlikely, and not practically feasible given the respective positions of the adit and the wheel-pits. It is however much more likely that this winze was effectively pumped out via the main shaft - the "Engine Shaft" - and the water present here is simply due to the complete mine having since been flooded. See the chapter on the [Engine Shaft and Flat-rod Run](#) (page 18) for more details about the shaft being the source of pumping, given that the shaft and this adit meet at some deeper level. Another possible explanation comes from surface evidence outside on the hillside, where there are a number of possible locations that have been identified for any still undiscovered but postulated [Third Shaft](#) (page 29).

Associated with these discussions has been the presence of an aluminium pole, just further up from the [Second Wheel-pit](#) (page 11), which is hollow and drilled at the top, and whacking the top and listening reveals a possible ventilating pipe of a capped shaft, but features such as this turned out on later investigation to be linked solely with the old china clay pipeline that crosses the river in the woods above the Falls, which have no connection what-so-ever to the Wheal Victoria mine.

This un-discovered Third Shaft that was not found during my earlier surface feature researches, and given Stuart's findings, he suspected that this new shaft could have been the one that the pumps worked from. This theory has now been further updated by the findings from LIDAR mapping that have identified the likely links between the two wheel-pits, flat-rod runs, and the shafts locations – see the chapter on the [Engine Shaft and Flat-rod Run](#) (page 18). These are all big steps forward in solving the historical puzzles of Wheal Victoria.

It is possible then, that the winze in the Second Adit underlies into the Engine Shaft and likely also into the Third Shaft, with the pump gear going down the shafts, and the water then pumped out up through the winze (through the pipe in the photo, or other pipes) and thence out of the adit and into the river. It is also possible, given the relatively short life of the mine, that some of these works were incomplete, and all pumping arrangements were not yet fully in place when the mine closed. This all now seems very plausible.



***The word "End" written in Lamp Black (soot) probably from a carbide lamp or similar, at the end of one of the adit passages (photo S.Dann)***

From Stuart's findings underground in Wheal Victoria, and as with many other mines where it is similarly not evident from the surface workings, it is quite often the case that the old miners' tools and equipment are all still in place. Stuart expects Wheal Victoria to be one of these. The winze and lower adit still have pipes in them which suggest that the mine was simply abandoned, and not stripped for scrapping.

And one final point of note, using Stuart's words: "Caves are all well and good, but remember that these mines and their huge cavities were made by people with candles". A humbling thought.

## A2: Further Explorations inside the Second Adit of Wheal Victoria (photographs copyright and courtesy of “Orphan”; AditNow c.2011)

These further photographs taken by Orphan show even more detail of what lies within, venturing further down the main passage and down the two branches that revealed themselves off this.

From the view into the adit, there has clearly been some disturbance of pipes since my own photo here was taken back in 2004 [“Ghosts of the Past”](#) (page 37).



*The view into the adit entrance.*

*(photo courtesy of Orphan on [AditNow](#))*

The photographs on the next few pages explain further as Orphan ventured further in.



*Just inside the gate in the lower adit, with a small void just to the right.  
No pipework on the floor.*

*(photo courtesy of Orphan on [AditNow](#))*



*Further into the adit now, small amount of water running out. Good condition.*

*(photo courtesy of Orphan on [AditNow](#))*



*In the adit, ahead a shaft can be seen flooded.*

*(photo courtesy of Orphan on [AditNow](#))*



*The flooded shaft.*

*(photo courtesy of Orphan on [AditNow](#))*



*Looking down the flooded shaft, the pipework is still in place disappearing down the shaft. The adit continues further on past - (photo courtesy of Orphan on [AditNow](#))*



*Looking onwards past the flooded shaft - (photo courtesy of Orphan on [AditNow](#))*



*Moving further in...*

*(photo courtesy of Orphan on [AditNow](#))*



*More workings - (photo courtesy of Orphan on [AditNow](#))*



*The split - here the adit splits off into two branches.  
(photo courtesy of Orphan on [AditNow](#))*



*Looking right from where the two branches split to where the passage ends.*

*(photo courtesy of Orphan on [AditNow](#))*

*Some more photographs taken from within the main adit...*



*View of the main adit*

*(photo courtesy of Orphan on [AditNow](#))*



*View of the main adit*

*(photo courtesy of Orphan on [AditNow](#))*



*View of the main adit*

*(photo courtesy of Orphan on [AditNow](#))*



*View of the main adit*

*(photo courtesy of Orphan on [AditNow](#))*

## Appendix 2

# The 1908 Parsons Park China Clay Pipeline at Golitha Falls

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### Photographs taken 2011

When you start to explore [Golitha Falls National Nature Reserve](#), you will very soon realise that there is a rather strange large green pipe flying right through the middle of it. You might not notice it straightaway, as it is high up, and curiously manages to blend in somewhat with its surroundings. The pipe is a part of a long pipeline, about a foot in diameter, and contrary to a lot of peoples' belief, it does not carry water.

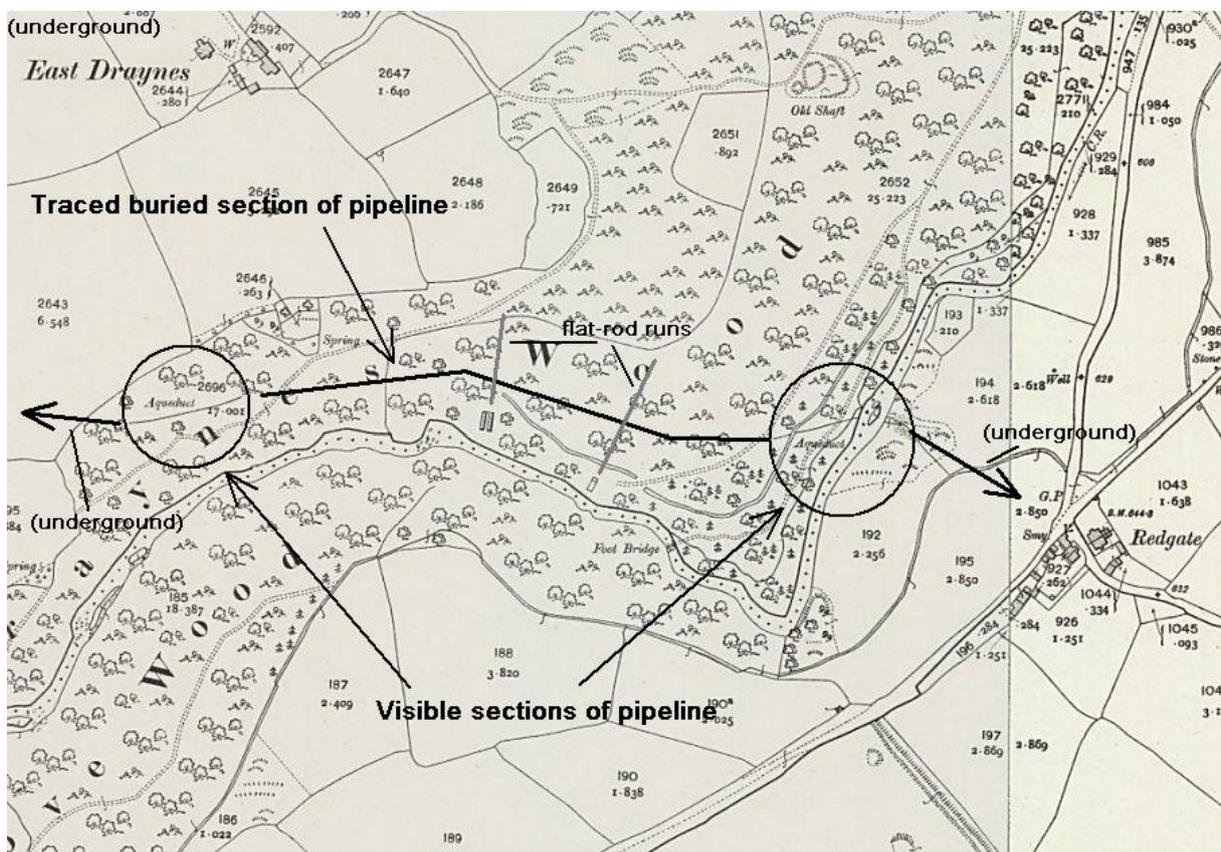


***The China Clay Pipeline at Golitha Falls***

The pipeline is in fact a China Clay Pipeline, that was built to transport china clay from a China Clay Pit up on Bodmin Moor, down to the China Clay Dries at Moorswater for processing. The pipeline ran initially from Northwood China Clay Pit, and then after a short while was also used by the nearby Parsons Park (sometimes known as Park, or Lords Park) China Clay Pit, and it passes through Draynes, underneath Redgate, and then along a slightly tortuous route, on down to Moorswater near Liskeard. It was used to pump liquid kaolin (or china clay "slurry") from the pit for drying, and after the slurry was processed in the dries, the china clay in powder form was subsequently transported by train to the ports of Fowey and Par. The pipeline was constructed in 1908, and has no connection whatsoever with the Wheal Victoria Copper Mine, the remains of which can also be found down at Golitha Falls.

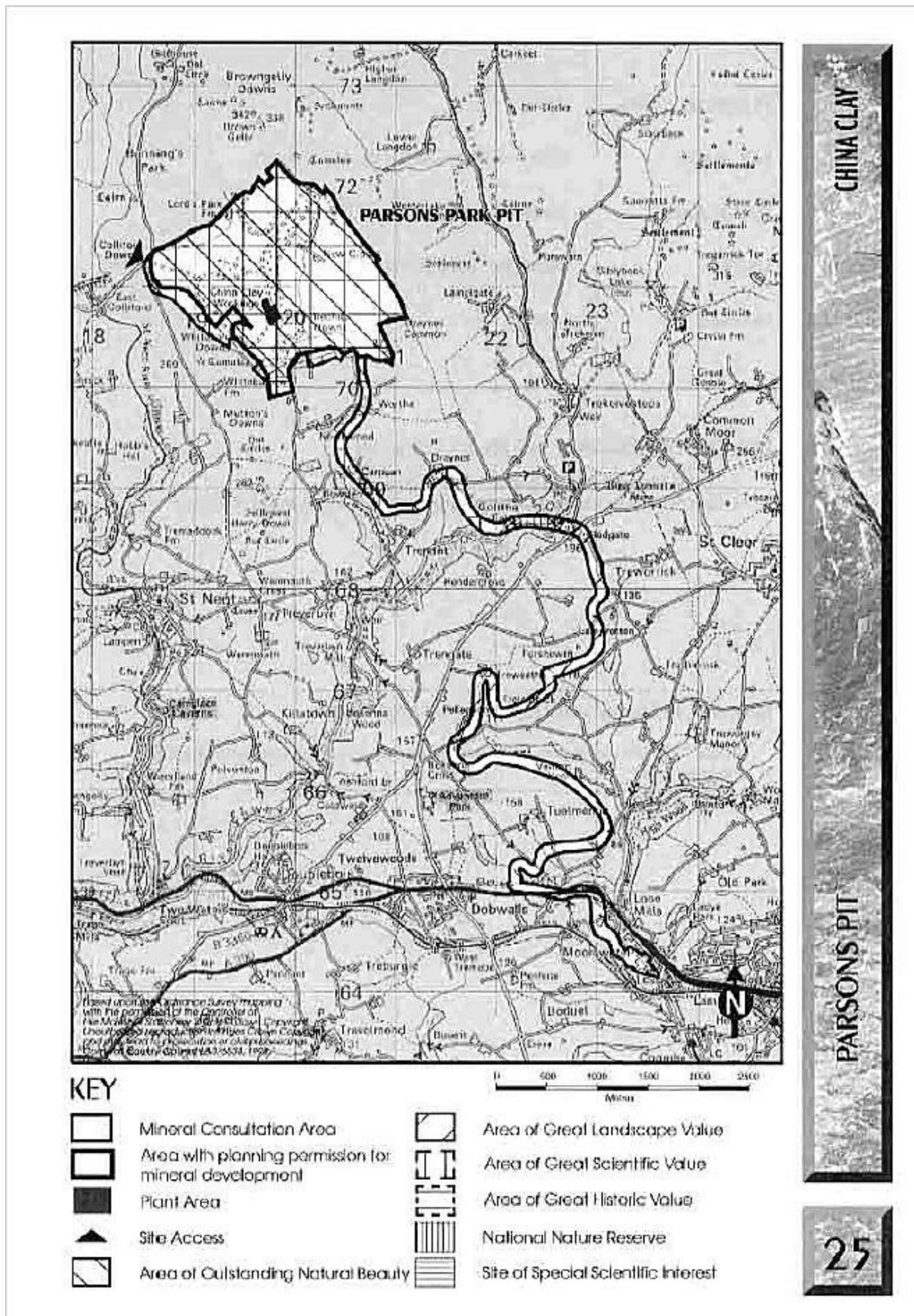


**Looking directly along the now disused China Clay Pipe during the winter**



**Approximate route of the China Clay Pipeline, showing exposed sections, and where it crosses the Flat-rod runs. (Online maps courtesy of NLS National Library of Scotland)**

Documentation about this china clay pipeline is very hard to come by, but one document still available in Cornwall Council archives, is the 1998 Cornwall County Council (as was then) Minerals Local Plan, which refers to Parsons Park Pit, and is the only source I have yet discovered, that maps the route of the pipeline.



**The China Clay Pipeline from the 1998 Cornwall County Council's Minerals Local Plan, approximately 8.5 miles in length - Courtesy of Cornwall Council Archives**

The 1998 Minerals Local Plan lists the Parsons Park Pit as 290 hectares, and situated SE of Colliford Lake, 3km north of St Neot, and within the elevated landscape of Bodmin Moor. The pit supplied china clay for multiple uses, including ceramics, paper filling and coating. The pit itself was closed in 1997. The map in the report (reproduced on the previous page) only shows the minerals planning and development area, but it does clearly show the route, which from rough map measurement appears to be approximately 8.5 miles long. The quality of the map copy on file at the Council is sadly a little poor, so is reproduced as best possible.

The excellent "Bodmin Moor Archaeological Survey; Volume 2: Industrial and Post Medieval Landscapes" has some further details on the history of the two pits and pipeline in question. Northwood Pit had a troubled start, and is shown as disused on the OS Maps of 1882 and 1907. However, there is considerable expansion of the pit evident between the two mappings, indicating that the pit was worked between the two dates. Northwood Pit was re-opened in 1908 and connected by pipeline to new kilns constructed alongside the railway depot at Moorswater, near Liskeard. The Northwood Pit closed again in 1921. Significantly from this information, the China Clay Pipeline running through Golitha Falls was therefore constructed in or around 1908.

The first reference to china clay workings at Parsons Park Pit is to a St Neot works in operation in 1869. The OS Maps of 1882 and 1907 do not show workings on the current site of Parsons Park Pit, and records are a little confused, but it is recorded that the Parsons Park works were re-opened in 1918, and used the same pipeline to Moorswater as the Northwood works. The works at Parsons Park closed during 1942, and re-opened again in 1945. Parsons Park continued to be a major producer of china clay (owners ECCI - English China Clays International), until it finally closed in 1997. The pipeline would then have fallen into disuse, and has now passed into our industrial heritage, never likely to be used again.



***Looking across the river, and following the pipe in the direction of Moorswater***



*Again seeing how the pipe can almost "blend" into the landscape!*



*The pipe disappears in a westerly direction towards St Neot, mostly underground*

There are various features identifiable in Draynes Wood above Golitha Falls that are connected with this pipeline, making the construction and use of it a very significant undertaking. Some of these features are shown below, before the pipeline temporarily re-appears from the hillside, before once again disappearing.

Once underground, the pipeline is then only accessible by a number of inspection access hatches distributed along its length, as the major part of the pipeline appears to be completely hidden from view, as it falls at a gentle gradient all the way from the pit down to Moorswater.

All the associated features evident in Draynes Wood are very clearly linked by a "pipeline track" on the ground that has, in the past, presumably been maintained for the purpose of accessing the various vent or survey pipes, or inspection hatches, along the pipeline's length. Some of these features are very clearly inspection points, with a large rectangular access hatch or cover, but some appear to be some form of vent or possible survey/monitoring pipe. Quite how these vents or survey pipes were used or monitored during the time that the pipeline was in use still remains a mystery. No documents have as yet been discovered that describe the operation and maintenance of the pipeline that would have been needed to keep the slurry flowing along its full length.



***The pipe disappears into the ground on the St Neot side via an inspection hatch***



*The First Vent / Survey access pipe close to the inspection hatch*



*The identifiable track from further back along the pipeline, seen from above and leading down to the pipeline as it emerges*



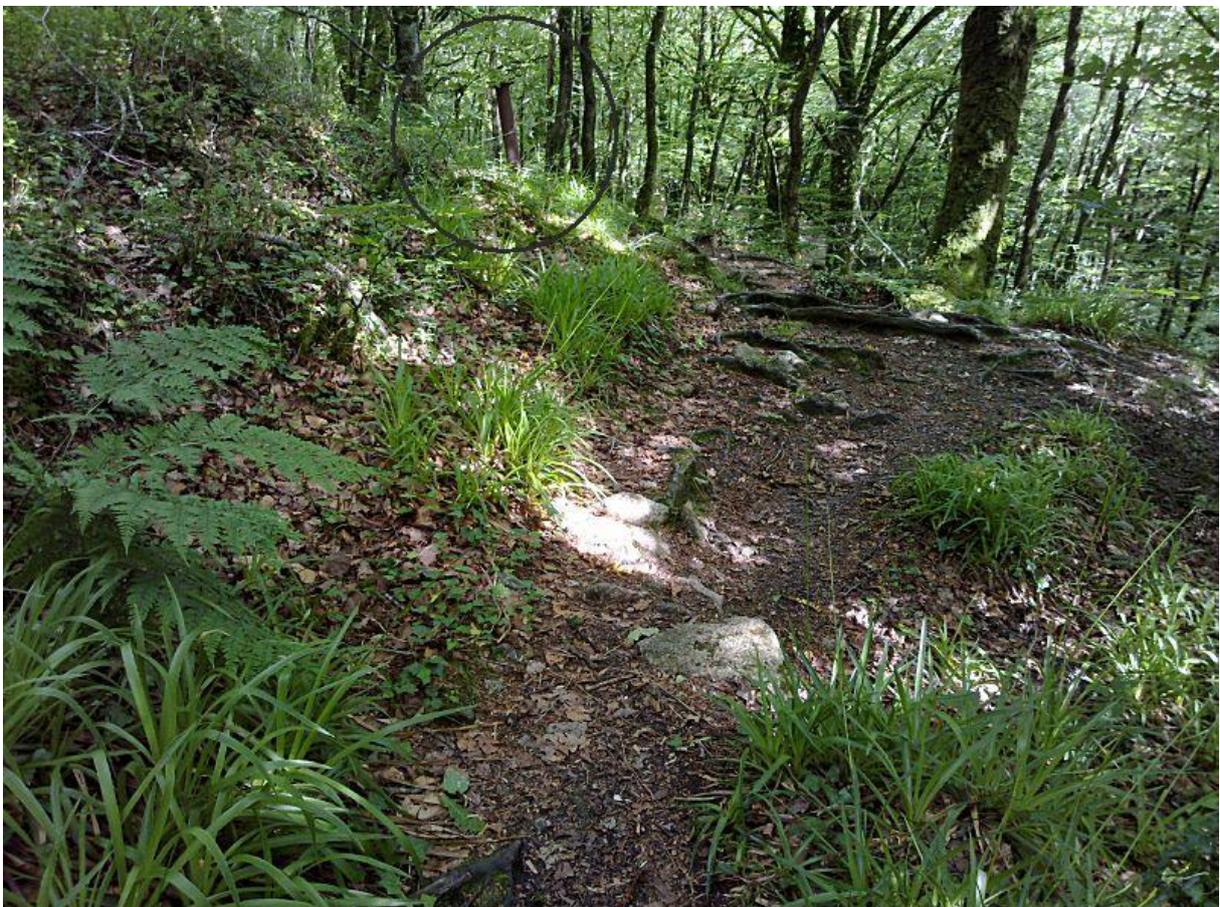
***Following the "pipeline track" away from the hatch and again looking back. This track in places looks very well made up - almost like the remnants of an old Roman road!***



***The Second Vent / Survey access pipe encountered, coincident with the first flat-rod run.***



*The Second Vent pipe as seen in c.2005, still complete with mesh. As with the other clay pipe features, this has nothing to do with the mine, which closed over 50 years earlier*



*Moving along the pipeline track, looking back towards the Second Vent pipe (ringed)*



***Crossing the flat-rod run coming up from the second wheel-pit, there is what looks like another "cut-off" Third Vent / Survey access pipe right alongside the pipeline track***



***Following along the pipeline track further along in the St Neot direction.***

The pipeline track seems in places to be very well established, even constructed, and is likely to have been used for maintenance checks during use after the pipeline was built, though now only maintained by walkers.



***Looking down to the Fourth Vent / Survey access pipe in the old wall***



***The Fourth Vent / Survey access pipe***



*Again, the Fourth Vent / Survey access pipe - a more recent part-plastic replacement?*



*A second inspection hatch discovered, now half hidden at the base of a tree, and looking back to the Fourth Vent / Survey access pipe (ringed)*



***Looking inside the inspection hatch, and the China Clay Pipe can be clearly identified (though now appears to have an apparently sawn hole in it)***



***The China Clay Pipeline emerges temporarily from the hillside from the direction of Parsons Park Pit, before once again disappearing underground (see [Map](#)).***