Mining in the Tavy Valley, West Devon: An Assessment of Archaeological Potential

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South-West Landscape Investigations
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Acknowledgements
Thanks to staff at the Devon HER, including Stephanie Knight and Marrina Neophytou for assistance with various sources held by DCC. Robert Waterhouse supplied much information on the Canal Mines and Wheal Crebor. Chris Kelland provided many useful newspaper references. Figs 2, 5-8 and 10-12 are reproduced with permission of the Devon Record Office, all rights reserved. OS extracts are reproduced under licence number 100050698.
Introduction
The industrial archaeology of the Tavy Valley in west Devon has, until now, been the focus of less attention by archaeologists than that of the Tamar valley to the west or Dartmoor National Park to the east, consequently the archaeological evidence of mining is poorly recorded by comparison. Organised campaigns of fieldwork by Buck (1998) in the Tamar valley and by English Heritage on Dartmoor have greatly enhanced both the Devon HER and the National Monument Record (NMR), but the Tavy remains as a gap in the data. However, there are exceptions: an important programme of fieldwork and documentary research by Robert Waterhouse and Rick Stewart has provided a very detailed record for the Tavistock to Morwellham Canal and many associated mine features, including Wheal Crebor. The results of this work will be published but in the meantime data from the project has been deposited with the Devon HER. For some other mines in the area, reports of surface and underground workings were made by C F Barclay in the first quarter of the 20th century. His aim was to assess the potential for re-opening some of these mines but his sketches and observations are of great value archaeologically (Barclay 2004; Barclay & Toll Mss, PCL).

The aim of the current survey, commissioned by Natural England in conjunction with Devon County Council, is to establish from a range of sources what the potential for fieldwork within the project area might be. This is undertaken with a view to enhancing and adding to the known record of mining sites in the HER but also highlighting possibilities for future management, including considerations arising from existing and planned public access routes in the area. No fieldwork has been undertaken as part of this commission, but for all sites which have been collated for this process, prioritised recommendations for future investigations are included.

The Tavy Valley – Topography and Mineralization

The project area (Fig 1) is focussed specifically on the valleys of the Rivers Tavy and Walkham to the south of Tavistock, including the tidal waters as far south as Warleigh Point. The sources of both rivers lie on the high northern moorland of Dartmoor, near Fur Tor, which, after following very different courses, form a confluence on the edge of Dartmoor National Park at Double Waters 3.5km south of Tavistock. From this point the combined waters of the Tavy follow an essentially southern route, though with many acute meanders, before widening to meet the tidal waters of the Plym and Tamar estuaries.

Included within the project area are the valley sides and parts of the upper plateaux, plus notable areas of higher ground at Morwell Down, West Down, parts of Roborough Down and the west slopes of Tiddy Brook to the north. Lower lying lands to the south include Buckland Abbey estate on the east side of the Tavy and a large area of farmland to the south of Maristow, bounded on the south by the tidal inlet of Tamerton Lake, which also marks the northern fringe of urban Plymouth. The area covers the six modern civil parishes of Tamerton Foliot, Bere Ferrers, Buckland Monachorum, Tavistock, Gullworthy (historically part of Tavistock), Whitchurch and the majority of the ground lies within the Tamar Valley AONB, though a small section of Roborough Down is within Dartmoor National Park.

The landform is one of steeply-sloping river valleys, which level into rounded hills on the higher ground, most of which have been formed by the meanderings of the Tavy and Walkham rivers. The river valleys are heavily wooded along the lower and middle slopes, some extending to the higher ground, including large areas of conifer plantation on Morwell Down. Beyond the wooded areas, pasture fields dominate the landscape, associated with numerous isolated settlements, hamlets and small villages. In contrast, the slopes of Roborough Down and West Down are areas of open heathland.

The project area lies to the west of the granite mass of Dartmoor where the predominant country rock comprises Devonian slates, known locally as killas. The economic minerals occur in a series of narrow metalliferous veins or lodes trending mostly WSW – ENE or WNW – ESE – collectively termed east-west lodes. They extend intermittently
Fig 1. Map of the project area showing location of mine sites recorded in Section 2 (centred NGR) and miscellaneous mine evidence collated in Section 3.

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across the Tavy watershed from Tamarside to the west and transect the Walkham Valley to the east. These produced copper, tin, a small amount of lead and some arsenic. Towards the south of the study area, Lopwell and Maristow mines were working a N-S lode for lead (Dines 1956, 702) making up the eastern outliers of the Bere Ferrers silver-lead district.

Archaeological Potential

It is likely that the earliest metal extraction in these valleys, particularly in the northern sector of the project area, was for tin, probably from the medieval period onward. A tinwork was mentioned at ‘Bukter’ (Bucktor) in 1508 and another at ‘Crowndelham’ (Crowndale) in 1539, representing the earliest documented evidence for tinworking (Greeves 1981, 309; 313), though earlier activity is very likely. Field evidence for tin streamworking, dating from the medieval or post-medieval period, has been reported in Langham Wood (T Greeves pers comm), and near Double Waters where a stream works has been archaeologically surveyed (Greeves and Passmore 1999, 3-4). Other areas of alluvial deposits may have been exploited in these valleys which are yet to be recorded, though they are less likely at locations where the valley is steep-sided and the river bed lies on solid country rock, especially as the river gains momentum in the lower reaches.

Evidence for early surface extraction of tin lodes is known at several locations. These include openworks, or linear rock-cut trenches, and outcrop workings comprising alignments of shallow pits (often referred to as lodeback works). These have been recorded on Morwell Down (site 63) (R Waterhouse pers comm) and are known to exist on West Down (site 64) and on the west side of the Walkham Valley at Devon Poldice Mine (site 15). A large and notable openwork is known at Wheal Crowndale, depicted on the 1st Ed OS 25” map (site 58), which is likely to have long preceded the documented copper mining episodes at this site (site 25), and could represent the field evidence of ‘Crowndelham’, mentioned above. This category of working may date from the 15th century to the early 18th century and a number of openworks or ‘beamworks’ in which Henry Warne claimed a one-forth share are recorded in a 17th-century document. These include several on Morwell Down such as Walter’s Beam, Hatchway Beam, Blackmore Beam and others (DRO L1258M Letters & Papers 18th Century B/7). The precise dates and locations of these workings are not known; many may lie to the west of the project area though some are likely to be within it. Blackmore Beam could well have been located in or near Blackmoorham Wood. Other 17th and 18th-century named tinworks have had their locations identified with more confidence, including: Downland 1760 (Morwell Down); Hocklake, Hocklake Lane and Hocklakeridge; Holming Beam (in Morwell Down Plantation) and Littleholt, all of which were recorded in the early 17th century or in 1760 (Greeves 1981 appendix 1). It is not known if any of these tinworks were actually at work at the time of these records, and any field remains at these location have yet to be verified.

There is subtle surface evidence in the farmlands around Crebor to suggest that many more outcrop workings once existed but the remains became mostly effaced when land was returned to farming. However, the discovery of further unrecorded outcrop workings and openworks would be a highly likely outcome of field reconnaissance in the comparatively undisturbed woodlands of the Tavy and Walkham valleys.

A thriving silver industry was recorded in medieval times in the southern zone of the Tavy Valley, particularly within the Bere Ferrers peninsula on the west side of the river, much of which lies outside the project area. However, inferential documentary evidence exists for bole hearths, for smelting lead and silver, to the west of Milton Combe and possibly near Pound in the parish of Tamerton Foliot (Rippon et al 2009, 89). It is likely that others existed in the area, though none have been identified in the field. In the 1290’s and the early 14th century a refinery and furnace were recorded on the east bank of the Tavy at Maristow, though its remains are believed to have been swept away by the construction of the later Lopwell Mill (Rippon et al 2009, 93).
A major heritage asset surviving from the medieval silver industry is the Lumburn Leat. This artificial watercourse diverted water from the River Lumburn, to the west of Tavistock, over a sinuous 16km distance to the silver mines of Bere Ferrers to the south. The course of the leat survives in part within the project area where subtle earthwork evidence and tunnels, which cut through the undulating terrain, still exist in Shillamill Wood, Particliff Wood and Ramsham Wood (Claughton 1996, 35).

The working of copper and lead in any economically viable sense did not commence until the early 18th century, when a small number of copper mines were recorded as in work following the advent of deeper mining in the area (Brooke 2000). A second bout of activity occurred just before and after 1800 when tin, copper and lead mines were working, though many proved non-enduring at that time (Lysons 1822). The so-called ‘canal mines’ Crowndale and Crebor were prosperous in the period following the construction of the Tavistock Canal from 1803. The majority of the known mines within the area began or re-started work on a commercial scale between the 1840s and 60s. Most continued intermittently into the 1880s, and a few remained in work until the early 20th century. A few of the mines in the valley were re-examined in the 1920s to ascertain any further potential (Barclay & Toll Mss, PCL; Richardson 1992, 138-9).

These mines were worked underground using shafts and adits as a means of access, drainage and haulage and it is the remains of these workings that form the major evidence of underground operations at surface. Most shafts are likely to have been capped, though some remain open and fenced, but their positions are often visible by the presence of large spoil heaps made up of waste material. Adits are also usually associated with spoil heaps; although some adits are blocked or collapsed, a large number remain open providing continued drainage, access and important bat habitats.

Surface evidence that would be anticipated at these 19th- and early 20th - century mine locations would include waterwheels for powering pumping, hoisting and crushing installations; steam engine houses and chimneys; stamping mills; dressing floors with buddles; crusher houses; calciners (burning houses) with flues and chimneys; tramways and inclines; leats; ancillary buildings including offices, smith’s shops and magazines. Many such installations have been recorded in the documentary and cartographic record and are identified, along with their potential for survival, in the individual reports below.

**Methodology (1) – Data Gathering**

The following methodology has been used to establish a starting point for a programme of fieldwork aimed at investigating the mining-associated archaeology within the project area and to provide some historical context to the known remains.

1. A literature search of publications known to include the history or archaeology of mines within the project area. Of particular importance are Lysons (1822), Williams (1862), Collins (1912), Hamilton Jenkin (1974), Burt (1984), Barclay (2004).

2. Examination of 1st (1882-6) and 2nd (1906) edition OS 25-inch maps from which mining features, including un-annotated earthworks and structures, have been transcribed and plotted on Fig 1.

3. Other cartographical sources including the OS 6-inch surveyors drawings of 1784; the Tithe maps of the 1840s; map of the Duke of Bedford’s lands showing individual mine sets (Figs 2; 5-8).

4. Examination of 1940s RAF series aerial photographs held by DCC. Unfortunately most mining evidence lies beneath tree cover, though some remains were still extant and are visible.

5. Rapid search of Devon and Cornwall county record offices. This has produced a high volume of relevant historical material, including legal documents, deeds, indentures, correspondence, sale particulars, maps etc. A small
Fig 2. Map of the project area showing the outlines of mining setts depicted on a map of 1859, excluding Bere Ferrers (DRO DRO DI508M/Tavi/Maps/2).

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proportion of this material is included in the summary site histories below. However, due to limitations of time it has not been possible to transcribe all but a small number of these documents, though the potential for this task to further inform the project is noted as a future aim. The West Devon Record Office at Plymouth is particularly well endowed with maps and deeds for mines within the Maristow Estate (PWDRO 874/48/1-64; /49/1-45). A substantial portion of time will need to be allowed to examine and interpret this material. Both the Bedford and Courtenay estates also have a number of mine related documents relevant to this district, which have been deposited in the Devon Record Office at Exeter.

6. Examination of Abandoned Mine Plans (AMP). These have demonstrated the likely underground layouts of a number of mines and this has been useful in identifying the location, purpose and names of shafts and adits. Some also include details of surface installations. However, of the 25 named mines in the project area, only 14 have known AMPs and most of these are undated. These plans do not necessarily reflect the final layout of the mine depicted.

7. Rapid searches of newspapers and the *Mining Journal*. Some of these are housed in Plymouth City Library and have been transcribed by Chris Kelland, who kindly supplied the author with a number of useful references. Others are searchable online through the British Library website. This search has not been exhaustive.

8. Personal communications with other researchers, including Tom Greeves, Robert Waterhouse and Chris Kelland, from whom some additional knowledge as to possible extent of surface evidence and condition has been gleaned.

9. Author’s own field notes, including for work undertaken as an investigation project for English Heritage (2007 unpub)

*Other sources investigated include:*

- The Devon HER. Basic information on a limited number of mine sites.
- Cornwall and West Devon World Heritage online data-base. Very little data on Tavy mines.
- English Heritage Monument Protection Programme (MPP).
- The National Monument Record (NMR) AMIE reports.
- Dartmoor National Park Historic Environment team (Andrew Crabb).

Data is divided into two sections:

a. **Mine Assessments**: Twenty-five records of individual named mines within the project area. These are historically recorded mines for which site summaries are possible from existing documentation. Most are known to have surviving field evidence and assessment of the likely surface remains and potential for further research are included. The priority for further research is based on an objective scoring system (described below).

b. **Miscellaneous (probable) Mine Sites**: An additional list of 46 sites recorded from either early OS maps, APs or personal communications. These are spatially separate earthworks or structures, or linear features in the case of leats, which may or may not be associated with the recorded mines; many lie within the boundaries of known mine setts. Some already have HER designations, though most do not. Their likely associations and archaeological importance are suggested along with recommendations for further action.
Methodology (2) – Prioritization

The suggested prioritisation of work in Phase 2 (summarized in Table 1) of the project is based on the following considerations. For each of the headings below a score is provided and added to make a total, from which those mines scoring 1 to 5 rate as **Low** priority; 6 to 10 rate as **Medium** priority and 11 to 15 rate as **High** priority for future investigation:

1. **Potential for enhanced understanding through fieldwork**: What is the known extent or potential for survival of field evidence? This has been established through previous episodes of fieldwork and/or local knowledge, aerial and satellite imagery, or from less reliable means such as evidence from large scale OS map depictions. Many sites depicted on the historic OS maps, particularly those lying within woodland on private estates, are likely to have remained undisturbed for a very long period of time. Where good field evidence is known or suspected such sites should be considered of high priority for investigation and survey as a means of HER enhancement or for informing conservation management and any future programme of designation. In terms of access by the public and the need for interpretation and outreach, sites with a high level of well-preserved remains would be of more interest than those partly or mostly destroyed and would be better understood if properly researched in the field. However, survival and integrity of remains cannot be fully verified until the recommended minimal level of fieldwork at Phase 2 takes place. Where the priority rating for fieldwork at a site is marked as low, this should not preclude visiting the site, even if merely to establish the extent of effacement.

2. **Potential for enhanced understanding through historical research**: All the mine sites in the Tavy valley would benefit from further historical research, although this is likely to be a time-consuming task. For some more information is currently known than others, and detailed narratives may be possible, following assessment of the documentary resource. However, when other factors in this list are considered, an *a priori* judgement can be made regarding which sites would provide the greatest overall benefit to the project if further research were undertaken. These considerations include how well the field remains might complement the historical resource and a need for greater interpretive data for the public.

3. **Current access and proximity to existing or proposed routes**: Does the site have a current access agreement? Is the site close to existing or proposed routes with public access or would major provision or route diversion be needed to gain access to them? Sites within farmland, often heavily effaced and not close to public rights of way, have been given a low score, although fieldwork and documentary research could still be rewarding in serving other priorities.

4. **Group value**: Clusters of mines in close proximity, or reachable via a single linear route would be more suitable for public exploration than spatially separate or outlying locations, although the latter would each need to be considered on merit, especially in places easily accessible as in 3 above.

For outlying features, which have collectively come to the fore as a result of this report (see b above and Section 3 below), at this stage their importance can only be gauged by their spatial associations with known mine sites and actions are suggested on that basis. It should be noted that all comments regarding public access in this report are made without any consultation with landowners and should be considered only as suggestions for further discussion. Although some comments regarding public safety are included, for any site where a policy of public access is to be developed, a re-appraisal would be needed as part of Phase 2. Implications for biodiversity cannot be suggested without field-based knowledge. However, locations likely to have bat roosts are highlighted as are sites which currently see little human visitation, as they are assumed more likely to be environmentally diverse.
This has been a worthwhile exercise which has brought together a broad range of literary, documentary and cartographic evidence as well as some previously recorded site information and the personal accounts of other researchers familiar with the area. The research has enabled historical summaries for each of the 25 known mines within the project area to be drawn up and has added a large number of smaller sites to be considered for further survey. These results will provide an update for the HER, enhancing existing records and adding several new ones. The work has also highlighted the potential for field investigation as a means of informing future landscape management projects, and any characterization or designation programmes.

Analysis of the data strongly suggests that field investigation at a high proportion of the mines would be very rewarding. However, this is not so in all cases as some mines have been effaced or radically altered in the period following their disuse. An attempt is made in this report, to establish where resources for future research could be most effectively targeted (Fig 3).

The known field evidence, as may be established from the available sources, is dominated by 19th century mines. However, earlier evidence of probable pre-1700 tin working is known at some of these sites and is likely at other locations. Fieldwork would confirm this assertion. As much of the area continues to be covered by woodland, so the prospect for further discovery of mining remains, particularly early outcrop and surface workings within the Walkham and Tavy river valleys, is high and should form part of any future fieldwork strategy.

The project area is divisible into four spatially distinct zones. The mines sited in the farmlands to the south of Tavistock and associated with the Tavistock to Morwellham Canal, form a northern group. This includes West Wheal Crebor (site 9), Wheal Crebor (site 24), Wheal Crowndale (site 25), East Wheal Crebor (site 7), Rixhill (site 22) and Anderton (site 1). All are sited within private, farmed land with either no public access, or in the case of Wheal Crebor, highly restricted public access along the canal footpath. Apart from Wheal Crebor and Wheal Crowndale, where a small degree of surface evidence has survived, mine remains appear to have been levelled at the majority of these sites to accommodate later management of the areas as farmland or as dwellings. Wheal Crebor is, nevertheless, the only mine within the project area to have been the focus of detailed archaeological recording (R Waterhouse pers comm). Although these mines combined have a group value, the known level of effacement may render them unrewarding for field investigation beyond a cursory visit. For the same reason public access through stewardship, argued on the basis of industrial heritage, would be questionable. This, coupled with the fact that this group of mines is within seriously farmed land where negotiation may be less straightforward, makes public access probably less achievable or justifiable than in other areas of the project and, therefore, less of a priority for the allocation of future resources. An exception is the eastern section of Anderton Mine, which lies just outside the project area in the valley of Tiddy Brook and adjacent to the National Cycle Network (NCN) Route 27, where field evidence of structures and earthworks have survived. Survey and historical research would be of great benefit towards interpretation of this site.

Further south the mines located in the steep, wooded valleys of the rivers Tavy and Walkham have endured much better in land that has seen little alternative use other than woodland and plantation. In particular the mines of the Walkham Valley – Walkham and Poldice (sites 12 and 15), Gem (site 19), Virtuous Lady (site 16), Westdown (site 21) – form one of the most interesting groups. These are all located within Dartmoor National Park (with the exception of Westdown, which is nevertheless within Access Land), with free public access, and all are known to have a good level of field evidence, including ruined structures and earthworks. However, like many mines in the project area they have been subject to minimal field recording and should be considered a high priority for further attention. Public
access is well established here via riverside footpaths and, more recently, via NCN Route 27 which passes nearby. Research and investigation and some site management would enhance the amenity value of these sites. A further recommendation is to include the Gem Mine (site 19), which lies only a few metres outside the project area, but is known to possess almost intact dressing floors. It greatly enhances the group value of the Walkham mines and must be a high priority for survey and protection. Conversely Wheal Franco, which sits on the extreme eastern tip of the project area and somewhat out on limb, appears to have been largely absorbed by the urban spread of Horrabridge. Although vestiges of ‘Old Wheal Franco’ survive on Roborough Down, these remains are outside the area of interest.

The Tavy Valley mines are South Crebor (site 8), William and Mary (site 20), Little Duke (site 13) and Tavy Consols (site 23), on the west side of the valley, and Devon and Courtenay (site 11), Wheal Bedford (site 2), Lady Bertha (site 4) and East Lady Bertha (site 5) to the east. Apart from Wheal Bedford, for which no information on field evidence is available, all of these mines are known to have surviving remains, the extent and understanding of which would be much enhanced by field recording and the majority should be seen as fieldwork priorities. All of these mines are within private woodland with no public access but some, on the western side of the valley, are within a short walk of the proposed Bere Alston to Tavistock railway cycle route, so there is good reason to investigate their suitability as sites which could be of interest to walkers. This would involve landowner consent and an assessment of health and safety as some features at these mines are located on perilously steep slopes. There is also likely to be open workings, including shafts, and unsafe structures. Consolidation works and safety fencing might therefore be necessary at some of the sites.

The most southerly of the mines are the lead mines in Bere Ferrers parish on the west bank of the Tavy, Wood (site 6), Lopwell (site 17) and Wheal Maristow (site 18). Field remains have previously been recorded for these mines, including structures, though detail is lacking and further investigation is needed. These three sites together have a high group value and are reachable from areas of current public access, and although they have no right of access of their own, this could be pursued. Historically they have associations with Lopwell Quay, a tidal river quay on the east side of the Tavy, which since the building of a dam in 1956, has been radically redeveloped, though probably retains some archaeological features.

The sources available in the production of this report have failed to establish the existence of mines in the southern portion of the project area around Buckland Abbey and Milton Combe and to the south of Maristow House. Documentation suggests that extractive activity did not occur within these areas, certainly in the 18th to 20th centuries. However, medieval low level prospecting, extraction and smelting of silver-lead is a definite possibility in this area and should not be ruled out at this stage, although field evidence is likely to be subtle.

Historical research
A high proportion of the recorded mines collated for this exercise have demonstrated potential for further documentary research, though not in all cases are these mines that are likely to have extensive surviving field remains. For the latter category research into their history would be helpful in the interpretation of what may once have existed where field evidence has been partly or completely effaced. For the mines likely to possess more complete field remains, documentary evidence will help unravel details of what does remain and perhaps contribute to establishing site chronologies, as in the case of Lady Bertha Mine (Fig 9). The known documentation, together with the fruits of future searches will then need to be integrated with the results of fieldwork to gain the fullest elucidation of these mines. Priorities should include, a thorough search of the Mining Journals, which would provide more operational details of mines post-1836, and transcription of relevant documents held by record offices in Devon and Cornwall. Both of these tasks would represent considerable effort, and if resources were very limited, would be best targeted at
Fig 3. Map of the project area showing the location of the major mine sites and highlighting priority for further investigation and the routes of current and proposed NCN trackways.

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the eleven mines that are assessed below as of overall 'high' priority. However, those of medium value are of no lesser importance historically and the case for researching them is as strong. If resources permit, our understanding of the historical context of mining in this district and more widely, would be greatly enhanced through research into all 25 of the mines listed.

**Biodiversity issues**

Without field investigation, it is not possible to accurately assess any impact on biodiversity that may come about through wider public access. However, there is one overriding fact and that is that some of the mines and archaeological sites within private woodland currently enjoy a low level of human visitation, from which the natural environment may currently be benefitting. This would need to be a consideration in the opening up of many sites.

It is known also that bats will occupy parts of the surviving underground sections of mines as roosting and hibernation sites if accessible to them. This means that a very high population of bats is likely in the project area as a whole. Although bat hibernation and roosting sites have been recorded in the Tavy valley, this information is not up to date. Also, some bat sites have been gated or grilled but it is uncertain who, if anyone, has a comprehensive list of sites where this level of protection has taken place (Helen Sinnet [DBG] pers comm). It is recommended that for any of the mine sites that are in the future recorded archaeologically as a result of this report, locations with accurate grid references of all underground entry portals are passed on to an appropriately qualified person to assess the bat activity, together with information on grill or gate status and comments regarding accessibility etc.

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**Section 2**

**Major Mine Assessments**
Brief Site History
Anderton, together with Rixhill mine, exploited an approximate E-W tin bearing lode running across land between Tiddy Brook and Tavy. The mine commenced work in the early 1840s, probably on a site of earlier tin working (Long 1984, 11). Agreements regarding water courses for the site are known from 1842 (L1508M/SS/Mining/1). In 1844 the mine had two water wheels but insufficient water to drive them (MJ 6-Jul-1844). A steam engine was erected in 1847 for hoisting and stamping (PDWJ 9-Dec-1847). In 1850 the sett was amalgamated with Tavistock Consols, comprising Wheal Ash and Rixhill mines (MJ 18-Jul-1850). Following a period of inactivity in the 1870s it was reported that Anderton had reopened in 1881 (WMN 3-Jan-1881). The mine was again separated from Tavistock Consols in about 1882 (BL, Buck Mon) after which it was known as Wheal Anderton. A new engine was installed in 1882 for pumping and stamping (TG 22-Jun-1883) but the mine began to fail in the 1880s and despite an attempt to reconstruct it as a limited liability company in 1888, work stopped in 1889 (TG 15-Feb-1889) and the company was struck from the register in 1891 (TLG 17-Nov-1891). By the time of closure the mine had reached a depth of 80fms (TG 7-Dec-1888). This mine is very well-documented and there is good map coverage. A particular impressive prospectus from 1888 has 4 photographs of the surface installations showing headgear, engine house, water wheel, stamping mill, buddles and tramways (FW 1-Dec-1888) (see Fig 4).

Bibliography: Collins 1912, 403; Dines 1956, 692; Hamilton Jenkin 1974, 66; Harris 1968, 56; Long 1984

Location
Anderton mine has a split location with surface evidence at both sites to the south of Tavistock. The Old Mine is in the valley of the Tiddy Brook, to the east of the modern A386. The later section is at Anderton, a farm to the west of the road. Only the latter section lies within the current project area.

AP Evidence: Farm buildings show clearly. Areas of spoil covered by vegetation (CPE/UK/1890/ Dec 46/ 1283)

Previous fieldwork: None known.

Likely Site Features (known to have existed from documentary sources)
- Engine House (ruined structure)
- Shaft 91 (cut feature)
- Spoil (earthwork)

Remarks
Dressing floors and other structures survive on the east side of the A386, but on the west side (i.e. within the Tavy project area) no evidence of mining is believed to have survived, beyond levelled spoil heaps and building rubble (Long 1984). Documentary research for this site would be worthwhile, especially as the Old (eastern) section of the mine lies alongside the Drake Trail, although outside of the current project area, and information for the public would be useful. Field survey would also be rewarding at the eastern section to aid interpretation. For the Anderton (western) section fieldwork is likely only to determine the extent of effacement.

Priority Levels

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Actions: Documentary research; cursory field visit
Biodiversity implications: None likely
Site No: 2
Devon HER UID: --
NMR UID: 4726 6993

Civil parish: Tavistock Hamlets
NGR (SX): 4726 6993

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Mine Name: Wheal Bedford (Cu)
Alternative and Associated Names: Virtuous Lady & South Bedford

Brief Site History:
A poorly documented copper mine which is first recorded in 1807 when shares were for sale by John Taylor (Morn Post 4-Mar-1807). By 1812 it was abandoned and remained so in 1822 (Lysons 1822). The mine was again being promoted in 1837 (PDWJ 20-Apr-1837). A 28ft x 8ft breast water engine (i.e. waterwheel) was for sale at Wheal Bedford in 1848 (Barton 1968, 173) when it has to be assumed the mine was again either closing or re-organising. In 1857 Wheal Bedford appears to have been acquired and worked with Virtuous Lady (site 16) as one concern (BI, Buck Mon) and the two sets are depicted on the same abandoned mine plan (AMP R80b [n.d]). The extent of the sett is shown on a map of 1859 between North Tavy and William and Mary Mines (DRO D1508M/Tavi/Maps/2), though on a later sett map of 1867 the sett is absent (DRO 1258M/E14b) although a number of shafts and adits are marked in the southern section which was later incorporated into the Little Duke Mine.

Bibliography
Lysons 1822, 275; Barton 1968 173

Location

AP Evidence
Obscured by trees.

Previous fieldwork
None known.

Likely Site Features (as suggested by documentary and cartographic evidence only)
- Shafts 105 (cut features)
- Spoil heaps (earthworks)
- Wheelpit (possible 28ft x 8ft breast - i.e. unusually wide)

Remarks
Fieldwork is necessary to establish the extent, character and survival of surface mining remains, if any. At least part of the site is in dense woodland and on steep terrain and field reconnaissance would be necessary to establish suitability as an area for public access. Some outlying surface features, if surviving, could be less than 200m from the Bere Alston railway track.

Priority Levels

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Actions
Archaeological survey to Level 1; documentary research

Biodiversity implications
The site is located in private woodland and consequently human visitation may currently be infrequent. Public access could compromise any advantages to wildlife that result from the status quo.
Site No | 3 | Devon HER UID | 52870 | NMR UID | 1478670

**Civil parish:** Buckland Monachorum | **NGR (SX):** 4776 6902

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<td>PWDR 874/48/42 1859</td>
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**Mine Name:** East Lady Bertha (Cu)

**Alternative and Associated Names:** East Wheal Bertha, East Bertha Consols Mining Co

**Brief Site History**
A small prospect which was explored between 1856 and the early 1860s, being wound up in 1862 (Bl, Buck Mon). The mine represents an attempt to exploit copper lodes alleged to be extensions of the Lady Bertha Mine lodes which existed to the west. Three NW – SE lodes are were depicted on a plan of the sett in 1859 (DRO D1508M/E/Tavi/Maps/2). The mine was sunk to at least 30fms and possessed a horizontal steam engine, the location of the chimney was depicted on early OS maps.

**Bibliography**
Burt et al 1984, 12; Collins 1912, 414; Dines 1956, 701; Hamilton Jenkin 1974, 52

**Location**
The remains are located on the moderate south slope of Berra Tor, a few metres south of the main outcrop at SX 4775 6901. The mine falls within the border of Dartmoor National Park.

**AP Evidence**
Only a single spoil heap is visible (CPE/UK/2149/June 1947/4455)

**Previous fieldwork**
Newman, P 01-Sep-2007 EH Archaeological Field Investigation (AMIE Record, Level 1 Survey)

**Main Site Features:**
- Ruins of probable horizontal engine house and chimney stack. Thoroughly demolished (ruined structure)
- Blocked adits (cut features)
- Site of shaft and spoil heap (earthworks)
- Possible dressing floor with 2 x round buddles (earthwork)
- A ruined building (ruined structure)

**Remarks**
Accessible from a major footpath route and located close by a large prehistoric earthwork. However, the undeveloped nature of the mine and the poorly preserved remains make this site of medium priority for further archaeological fieldwork or survey.

**Priority Levels**

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**Actions**
Documentary research; cursory site visit
Site No: 4  
Devon HER UID: 5462; 5463  
NMR UID:  

Civil parish: Buckland Monachorum  
NGR (SX): 4710 6889  

OS 25-inch 1st Edition 1882-4  
OS 25-inch 2nd Edition 1906  
AMP Ref No: R183A; 1601  
Other Map Evidence: DRO D1508M/E/Tavi/Maps/2  

Lady Bertha Mine  
(Copper)  

Other Map Evidence  
Lady Bertha Mine  
(Copper, disused)  
Lady Bertha Mine  
(Copper, disused)  

Mine Name: Lady Bertha (Cu, Sn, As)  

Alternative and Associated Names: Bertha Consols, Bertha Consols Ltd  

Brief Site History  
This mine is well documented and has good surviving cartographic and photographic material available. In particular the 1906 OS 2nd edition 25-inch map shows most if not all the salient features and the Abandoned Mine Plan shows the underground workings particularly clearly. A series of business records survive in the Cornwall CRO at Truro, including cost books, cash books, dressing records and ledgers.  

This was a new mine in 1855 and worked until 1868 before closing down, to be reopened in 1880 and finally closed in 1899, when a change in the lode direction produced lesser grades of ore (Barclay & Toll MS Jan 1919). The mine was fully water-powered with at least four medium to large waterwheels known at the site. Water was supplied by a leat from the Walkham, taken off at Grenofen Bridge. This leat had also served Virtuous Lady Mine (site 16). The mine was 53 fms deep when abandoned and the wagons and much of the gear were said to be left underground (Barclay & Toll MS Jan 1919). In the 1890s a bridge was constructed across the Tavy to provide access to the dressing floors at Tavy Consols (site 23) on the east side of the river, where the tin from Lady Bertha was calcined. There are four recorded shafts including Moyle’s and Eastern, recorded on the AMP. Before 1882-4 machinery at the site comprised a large pumping waterwheel and a water-powered crusher house, depicted on the OS map of that date, as was the bridge across the Tavy. The site was redeveloped after 1884 and by the time of the OS revision in 1906 an additional hoisting waterwheel and tin dressing floors housing six round buddles had been added. The Bridge by this time appears to have been removed. However, a series of undated photographs of it survive (DA 001751-4). A photograph of the dressing floors also survives depicting the period following redevelopment in the 1890s and shows a stamping mill, crusher house, buddles and hoisting wheel and many of the workers. This has been published by Hamilton Jenkin (1974, 74).  

Bibliography  
Burt et al 1984, 12-13; Richardson 1992, 129; Hamilton Jenkin 1974, 50-5; Dines 1956, 70; Barclay & Toll MS Jan 1919  

Location  
On the east bank of the River Tavy on a gentle bend in the river. The steep valley side is very craggy and wooded at this point with vertical outcrops and cliffs, but along the riverside there is a narrow, level plain which accommodates the dressing floors.  

AP Evidence  
Partly obscured by trees in 1947 but major components visible including a wheelpit and round buddles (CPE/UK/2149/June 1947/4455)  

Previous fieldwork  
P Newman 2010 (unpub PhD)  

Main Site Features  
- Large stamps wheelpit (standing structure)  
- Crusher house (standing structure)  
- Hoisting wheelpit (structure)  
- Bob pit (structure)  
- Dressing floors with 6 round buddles (structures)  
- Spoil heaps with tramway timbers (earthwork)  
- Other wheelpit (structure)  
- Ancillary buildings (ruined structures)  
- Limited underground access (cut features)  
- Dry leat from River Walkham (earthwork)  
- Blocked shafts (114-5)
Remarks
This site is known to have outstanding field remains and an unusually high survival of documentation. The main shafts and the large wheelpit were backfilled following abandonment, however many surface features at the site are known to have survived in extremely fine condition, including the crusher house, hoisting wheelpit, and dressing floors. Public access is currently denied but with landowner (Maristow) agreement, could be possible as a diversion from the access lands from the east at Berra Tor. This would however unleash several H & S issues, as the structures are unstable and there are many steep drops, and would have ecological consequences (below).

Priority Levels

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Actions
Archaeological survey to minimum Level 1 (but Level 2 recommended); documentary research; biodiversity survey.

Biodiversity implications
This site, within private woodland, is scarcely ever visited by humans apart from fisherman who have licensed access to the river bank. The benefits of public access would need to be offset against any disturbance to wildlife.
Mine Name: South Lady Bertha (Cu) (Fig 11)

Alternative and Associated Names: Ludbrook

Brief Site History
This short-lived mine was opened in 1857 and by 1858 was reported to be working three copper-bearing lodes using water power (TG 24-Sep-1858). The sett and two lodes are depicted on a map of 1859 extending from the River Tavy, west to Didham (D1508M/E/Tavi/Maps/2). Hamilton Jenkin (1974, 52) claimed the mine sold 147 tons of ore between 1859-61 but no sale is recorded in Hunt’s Mineral Statistics for the years the mine operated. By 1861 the mine had reached a depth of 40fms and employed 30 people (Williams 1861, 95-6) but was probably closed by 1862 and wound-up in March 1864 (MJ 5-Mar-1864). Some of the associated legal papers survive in Cornwall RO (DD/STA/I/12 1864-80) summarised by Justin Brooke (Bl, Buck Mon). An undated Abandoned Mine Plan and section, shows an engine shaft with pumps and hoisting, operated by a waterwheel, and an unmarked building (DROAMP R1B).

Bibliography
Williams 1861, 95-6; Collins 1912, 415; Burt et al 1984, 13; Dines 1956, 701; Hamilton Jenkin 1974, 52

Location
On the east bank of the River Tavy on a broad bend in the river, south of the settlement of Ludbrook.

AP Evidence
Buildings standing in June 1947 though the site was redeveloped as a dwelling (CPE/UK/2149/June 1947/3455)

Previous fieldwork
None known

Likely Site Features (as suggested by documentary and cartographic evidence only)
- Wheelpit (ruined structure)
- Shaft 116 (cut feature)
- Various buildings (ruined structures)
- Spoil (earthwork)
- Leat (earthwork)

Remarks
The site is now occupied by a private dwelling (GE) and would be an unsuitable candidate for public access. Survival of mine features is unknown.

Priority Levels

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Actions
Documentary research. A site visit to establish if any mine features remain.
Site No: 6
Devon HER UID: 43152; 43151
NMR UID: 4770 6613

Civil parish: Bere Ferrers
NGR (SX): 4770 6613

Site Name: Wood Mine (Pb)

Alternative and Associated Names:

Brief Site History
The origin of mining within this area of woodland on the west bank of the Tavy is not known, but Hamilton Jenkin reported a number of open gunnises between Lopwell Mine in Blindwell Wood and Wood Mine in Great Whiterock Wood (Hamilton Jenkin 1974 56-7), extending for a distance of over 830m. These would almost certainly be pre-18th century workings, probably for silver-lead. In the 19th century, the site was worked as the Wood Mine, a small undeveloped prospect, documented only between 1851 and 1857, which explored the northern section of the lead cross-course, also exploited by Lopwell and Maristow Mines to the south (n.b. some confusion exists over the exact locations of these two mines – see Lopwell Mine, site 17). Work was underway by November 1851 when the adventurers were considering sinking a shaft to the 20fm level, where they anticipated good results, and a smith's shop had also been constructed by that date (MJ 15-Nov-1851). An earlier underground episode of unknown date is indicated by mention of the clearing out of an old adit which had been abandoned by the 'former adventurers' (MJ 6-Dec-1851) and some shafts were also cleaned. In 1853 it was intended to continue the adit from the south part of the sett, through South Shaft and Middle Shaft to Whiterock Shaft a distance of about 400fms (MJ 25-Jun-1853). Later references to the mine mention that an engine was in use powering pumps in Middle shaft using flatrods (Hamilton Jenkin 1974, 57). Recorded ore sales were in 1852 and 1857-8 totalling a meagre 12.7 tons (Burt et al 1984). At a meeting of the Wood Mine adventurers in July 1857, a resolution was adopted to abandon the adventure (LLC 1-Aug-1857)

Bibliography
Burt et al; 1984, 117; Hamilton Jenkin 1974, 56-7

Location
On the west slopes of the River Tavy within Great Whiterock Wood.

AP Evidence
Obscured by trees

Previous fieldwork
None Known

Likely Site Features (as suggested by documentary and cartographic evidence only)
- Shafts 118 (cut features)
- Spoil (earthwork)
- Adit (cut feature)
- Engine house (mentioned in documentation but location not known – may be part of Lopwell Mine)
- Dressing floor (mentioned in documentation but location not known – may be part of Lopwell Mine)
- Smithy (may be roofless building depicted on OS)

Remarks
A document of 1853 records that the dressing floors were 'nearly opposite Lopwell Quay', which is approximately where Maristow Mine is located, and implies that the Wood Mine adventurers may have been dressing their ore at Lopwell. Although the known components of the mine are served by forest tracks in Great Whiterock Wood, the current lack of access and isolated location make it a low priority for negotiation of public access. However, fieldwork may demonstrate the site to be more important than revealed by the limitations of the current exercise.
Priority Levels

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**Actions**
Archaeological survey to Level 1; documentary research

**Biodiversity implications**
None foreseeable, but monitoring of bat roosts should continue.
Mine Name: East Wheal Creber (Cu, Sn, As)

Alternative and Associated Names: East Crowndale, South Crowndale

Brief Site History
According to Hamilton Jenkin (1974) this mine began life under the name of East Crowndale, and a farm of that name once existed some distance to the south, marked on the 1st Ed OS 25" map. The latter named mine was in work by 1806 (EFP 24-Apr-1906). It was working tin and copper by 1811 when described as still in its infancy (EFP 21-Mar-1811), although it had sold over £6000 worth of ore (Hamilton Jenkin 1974, 65). By 1813 £9000 had been spent on machinery (EFP 22-Apr-1813). The heyday of East Crowndale was in the 1840s and 50s, with over £2000 worth of ore sold in 1853 (Burt 1984, 33, 35). The East Wheal Crowndale sett is also delineated on a map of 1859 (DRO D1508M/E/Tavi/Maps/2) and an engine and stamps were recorded in 1849 (M/20-Jan-1849). In 1854, East Crowndale was worked in conjunction with Rix Hill Mine when all the materials for both sites were for sale, including a 56" pumping engine and a 30ft waterwheel (DRO L1508M/SS/Mining-7). East Wheal Crebor, as marked on the 1st Ed 25" OS map of 1884-5, is the name under which the mine is known to have been operating in the 1880s, when a small amount of copper and arsenic were sold and between 10 and 30 people were working there (Burt 1984, 33). The abandoned mine plan shows a mine which although penetrating to 70fms on the North Lode, served by a steam engine, was not greatly developed underground (DRO AMP 1342). The disused mine, as depicted on the OS map, shows shafts, spoil, and a range of buildings as well as a probable drainage adit to the west.

Bibliography
Collins 1912, 459; Dines 1956, 691; Hamilton Jenkin 1974, 65-6; Burt et al 1984, 33

Location
The site now lies only 300m south of the Tavistock still surrounded by fields and just to the east of the River Tavy.

AP Evidence
Site levelled.

Previous fieldwork
None known.

Main Site Features
None likely to have survived. However, the sett was large and Site 47 to the south may be associated with this mine.

Remarks
The site of the mine appears to have been completely effaced and a large residence with a range of outbuildings, and complete with tennis court, now occupies the area (GE). Further documentary work would be useful but fieldwork is unlikely to be productive, although there is a possibility that fabric from mine buildings was incorporated into the more recent structures.

Priority Levels

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Actions
Documentary research.
Mine Name: South Crebor Mine (Fig 6)

Alternative and Associated Names: South Wheal Crebor, New East (Wheal) Russell

Brief Site History:
Little documentary material has come to light regarding the origins and history of this mine but undated ground disturbance, caused by surface workings, has been recorded in the woods and fields to the west of the mine on Morwell Down, probably representing medieval and post-med tin working (R Waterhouse pers comm). Hamilton Jenkin claims that 19th century work commenced between 1830 and 1840 (Hamilton Jenkin 1974, 63) and in the 1860s the mine was worked by a Capt Goldsworthy (Barclay 2000). In 1867 the ‘South Wheal Crebor Sett’ was worked under the name of New East (Wheal) Russell (DRO 1258M/E14b) (see Fig 6). The sett extended west from the River Tavy and included lands of Rumonsleigh Farm (Hartshole), though the mine plan and section of 1869 shows New East Russell to be un-developed, both on the surface and underground (DRO AMP R105B). A small output of copper was recorded from South Crebor in 1880, 1881 and 1883 (Burt 1984, 33) although in the latter year the mine was wound up voluntarily (LG 25-Au-1882). Attempts were made to reconshape the company in 1883 (TG 23-Feb 1883) though with what level of success is unknown. The OS 1st Ed 25” map of 1884 does not show the mine as abandoned. In 1922-3 C F Barclay was actively exploring this site and in his notes he lists the following features as surviving: old smiths stores, dressing floor with wheelpit, shafts dumps adits, a section of tramway, hut (Barclay 2004, 68). The site would also have been served by a leat. Recent reported visits to the site suggest a good level of survival of some of these features (C Kelland, pers comm 11-Mar-2011).

Bibliography: Hamilton Jenkin 1974, 64; Burt et al 1984, 33; Barclay 2004

Location: Particliffe Wood on the western bank of the River Tavy at the foot of Lazy Bench Hill.

AP Evidence: Obscured by vegetation

Previous fieldwork: C F Barclay (2004)

Likely Site Features (suggested from cartographic evidence and C F Barclay’s notes)
- Shaft 92, 93(cut feature)
- Spoil heaps (earthwork)
- Wheelpit (structure)
- Adits (cut feature)
- Ancillary buildings including smith’s shop (structures)
- Tramway (earthwork)
- Dressing floor (structure/earthwork)

Remarks
This mine is sited close by the road and only a few metres from the Tavistock to Bere Alston railway in a wooded area with a riverside footpath. The proposed bypass route for the Shillamill Tunnell touches the edge of the mine remains. Good remains are known to survive including the outline of an engine house and a cobbled dressing floor. It must rank highly as a site for further investigation.

Priority Levels

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Actions
Archaeological survey to Level 1 (but Level 2 recommended); documentary research; assessment of suitability for public access (H & S); biodiversity survey.
**Biodiversity implications**

The site is close to the road and a footpath and probably has a moderate number of human visitors already (dog walkers etc). The site is unlikely to be sensitive but a survey would confirm this. Any remains are likely to be overgrown. Continued monitoring of bat roosts and/or re-assessment of status required.
Site No: 9
Devon HER UID: 3954
NMR UID: 

Civil parish: Gulworthy (historically part of Tavistock) NGR (SX) 4623 7234

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<td>Wheal Crebor (Copper, disused)</td>
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<td>Symons 1848 DRO T1258M/E14b (see Fig 5) DRO D1508/E/Tavi/Maps/2</td>
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Mine Name: Wheal Crebor (Cu, Sn, As) (Fig 5)
Alternative and Associated Names: West Crebor, Huel Crebor

Brief Site History
Wheal Crebor, which is the largest mine sett within the project area at 190ha (DRO D1508/E/Tavi/Maps/2) (see Fig 5), exploited a series of approximately east-west lodes which extended for over 3km between the Devon side of the River Tamar and Whitchurch. The lodes also supported West and East Crebor mines and Wheal Crowndale. It is likely that the un-named ‘Tin Mine’ referred to on Donn’s map of 1765 at approximately this location, was at the same site as the later Wheal Crebor (Ravenhill 1965). Although evidence of earlier surface mining, probably for tin, survives sporadically along the alignments of the lodes, 19th-century copper mining commenced at Wheal Crebor shortly after 1803 when a copper lode was discovered during the cutting of the Tavistock Canal tunnel. The mine was still in work in 1822 (Lysons 1822) but had halted for a while after 1828 (Hamilton Jenkin 1974, 62). Following reported efforts to reopen in 1844 (MJ 6-Jul-1844) it recommenced in about 1850 (MJ 26-Jan-1850). Reports on the total depth of the mine vary, Hamilton Jenkin claiming 200fms while Bawden, the last mine agent at Crebor, says 110fms (Bawden 1914, 256). Detailed descriptions of the lodes, shafts (many named) and levels are set out in Dines (1956, 671-3), and many survey drawing of the underground workings survive, including one of 1810 (DRO/T1258M/E100[171]). The mine continued in use until the 1890s, apparently carrying the same name for its entire working life. Tin and arsenic were later exploited as well as copper (Booker 1974, 136). According to Barclay (2004, 45) the main lode was worked by a total of seven shafts. These are named on section surveys, where also there is a distinction between West Mine and East Mine (DRO AMP 5124; R224D). The mine is well represented in both newspaper reporting and Hunt’s Mineral statistics.

Bibliography
Collins 1912, 460; Dines 1956, 671-2; Hamilton Jenkin 1974, 60-3; Burt et al 1984, 33; Lysons 1822, 273; Burt 1977, 18-19; Booker 1974, 133; Bawden, M 1914, 256; Ravenhill 1965

Location
Remains are spread in an intermittent linear fashion in farmland to the east of Buctor.

AP Evidence
Large area of spoil, partly tree covered, and isolated shaft remains to the east (CPE/UK/2149/June 1947/4145)

Previous fieldwork
Fieldwork and surveys by Waterhouse (unpublished – see below)

Likely Site Features (pers comm. R Waterhouse)
- Spoil heaps – in some cases partly or fully levelled (earthworks)
- Capped shafts 74-81
- Blocked and open adits (cut features)
- Wheelpits (backfilled structures)
- New Shaft wheelpit (cut feature) (R Waterhouse pers comm)
- Underground waterheal chamber
- Features associated with the Tavistock Canal (Waterhouse forthcoming)
- Inclined adit
- Flat rod channels (R Waterhouse pers comm)
- Capstan round (earthwork) (R Waterhouse pers comm)

Remarks
The mine is located mostly in an area of farmland, though some parts are within private gardens. The remains are tree covered and much has been effaced (pers comm. R Waterhouse 16-Mar-2011). Only the canal footpath currently provides public access to the eastern end of the site while the land surrounding has no public access. Much of the site would be unsuitable for increased access, though enhanced information regarding features immediately adjacent to the canal could be beneficial. Thorough research has been undertaken on this mine by Robert Waterhouse, including documentary searches, field investigation and measured survey – including underground – in preparation for a forthcoming book on the Tavistock Canal. Collaboration with Robert would be an essential starting point for future investigation at this site.
### Priority Levels

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**Actions**
Consult Robert Waterhouse for further information – addition survey unlikely to be necessary.
Mine Name: Denham Bridge (Cu)

Alternative and Associated Names:

Brief Site History
A small prospect worked briefly from about 1857 in an attempt to exploit the alleged western end of the South Lady Bertha (site 5) copper lode, by driving adits into the hillside at river level (Bl, Bere Alston). From December 1858 the mine was operated by the Denham Bridge Mining Co. Various reports in the Mining Journal mention progress at the site from 1858-60 and the mine sold 7 tons of copper ore in 1860 (TG 24-Aug-1860). The sett, which was modest in scale, was depicted on a map of 1859 on which it was shown bounded on the east by the River Tavy extending west in an approximate rectangle within Skithead Wood (DRO D1508M/E/Tavi/Maps/2). The mine ceased to operate in about 1863 (Spargo 1868, 170). No major items of surface machinery were recorded as having been installed in known sources.

Bibliography
Hamilton Jenkin 1974, 55

Location
In Skithead Wood, on the west side of the River Tavy to the north of Denham Bridge and Denham Bridge Mill.

AP Evidence
None

Previous fieldwork
None known

Likely Site Features (as suggested by documentary and cartographic evidence only)
- Shaft 117 (cut feature)
- Spoil heap (earthwork)
- Adits (cut features)

Remarks
The remains stand in private ground and are unlikely to be spectacular. Open adits have been reported in hillside (C Kelland pers comm)

Priority Levels

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Actions
Cursory site visit.
Site No: 11
Devon HER UID: 4073; 4080
NMR UID: 
Civil parish: Whitchurch
NGR (SX): 4718 7167

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<td>Devon &amp; Courtenay Mine (Copper, Disused)</td>
<td>R164B (see Fig 10)</td>
<td>DRO D1508M/Tavi/Maps/2</td>
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Site Name: Devon and Courtenay (Cu, Pb) (Fig 10)

Alternative and Associated Names: Birchwood, Wheal Courtenay

Brief Site History:
The earliest activity at this mine appears to be in the 1840s when trading of Devon and Courtenay shares was first recorded (PDWJ 16-Oct-1845) and shortly afterwards it was reported that a 36” cylinder steam pumping engine was to be installed to enable the adventurers to prove the mine at greater depth (MJ 7-Feb-1846). By 1847 the Engine Shaft was 25.5fms deep (MJ 23-Jan-1847). The mine worked a main lode, which was an eastern extension of the South Crebor lode, and a lesser lode to the north (Dines 1956, 694). By 1861-2 fifty people were employed (Williams 1862), although one commentator considered the mine to be very near its end ‘after many years of struggling’ (MJ 18-May-1861). However, production of copper is recorded consistently between 1852 and 1862, then again in 1869. Peak year was 1854 when 17 tons of metal was produced. Lead was also produced between 1859-60 (Burt et al 1984, 36-7). A petition to wind up the company was given on the 12th May 1869 (LG 14-May-1869) but it was still in work in 1877 under the name of Wheal Courtenay, in which year it was described as a ‘young’ mine, suggesting that it had been subject to a re-organization (TG 26-Oct-1877). The last ore sales were recorded between 1877-8 (Burt et al 1984, 36-7). The boundary of the mine sett was depicted on a map of 1859, where it is shown as covering 71.5ha (DRO D1508M/Tavi/Maps/2). The undated abandoned mine plan section shows an engine house, horse whim and another large building at the head of Engine shaft which had reached 70fms. Other shafts (some named) and adits are also depicted, though the mine appears undeveloped underground (DRO AMP R164) (see Fig 10).

Bibliography
Collins 1912, 468; Dines 1956, 693; Hamilton Jenkin 1974, 64; Burt et al 1984, 37; Rowe 1896, 269; Ramsden 1952, 93

Location
To the west of Middle Tor Farm and within Birch Wood as far west as the banks of the River Tavy. Much of this area comprises conifer plantation.

AP Evidence
Large spoil heap visible but mostly obscured by trees.

Previous fieldwork
None known

Likely Site Features
- Engine house (demolished structure)
- Spoil Heap (dispersed earthwork)
- Adits and spoil heaps reported in Birch Wood (C Kelland pers comm)
- Earthworks recorded on OS large scale maps
- A wheelpit at river level. Believed to be well preserved (C Kelland pers comm)
- Features associated with a flat-rod system (R Waterhouse pers comm)
- Leat (not recorded but necessary for the waterwheel)

Remarks:
Features which once stood in the vicinity of the engine shaft, are believed mostly to have been effaced, though to what extent needs verification. More likely to be worth investigation are the components in Birch Wood to the west.
## Priority Levels

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### Actions

Archaeological survey to Level 1; documentary research; investigate access.

### Biodiversity implications

Not known, though a number of bat roosts are likely in the open adits, for which monitoring should continue plus re-assessment of status if required.
Brief Site History
Although Walkham United is split between two locations on the 1884-5 OS 25" map, this shows a probable later configuration of this company after having absorbed the Devon Poldice Mine to the south east, and possibly the Gem Mine (West Sortridge Consols) on the north side of the river at SX 4945 7058. Much confusion has been caused by the various renaming and consolidations of these three companies. A map of the Walkham and Poldice sett, drawn sometime after 1856 (WCSL px622.34 BUC WAL), shows that by then this company was also working Devon Poldice. In 1859 this combined sett was depicted on a map as Huel Walkham (DRO D1508M/E/Tavi/Maps/2), totalling 62ha of land. Walkham and Poldice was launched in 1862 but it was wound up only seven years later in 1869 having reached a depth of at least 50 fms (Bl, Buck Mon). A prospectus with attached map shows the extent of the sett, which included a large area of Roborough Down and Sticklepath Wood on the south side of the River Walkham, bounded by the river. Walkham United – a later re-organization of the same sett. – is equally poorly documented and all three of these mine locations have been neglected by previous researchers, including, surprisingly, Hamilton Jenkin (1974) who makes no mention of them. The field remains described below probably date to no earlier than 1856. (n.b. additional material exists in the Cornwall CRO referring to the period 1882-5 but is as yet unseen). Devon Poldice (site 15) and Gem (site 19) are described separately.

Bibliography
Collins 1912, 612; Dines 1956, 695; Burt et al 1984, 115

Location
At the foot of a steep slope on the south bank of River Walkham in Sticklepath Wood. The mine remains are on the sharp bend in the river opposite Grenofen. The mine falls within the border of Dartmoor National Park.

AP Evidence
Obscured by trees.

Previous fieldwork
Barclay & Toll MS Apr-1917
Newman, P 28-Sep-2007 EH Archaeological Field Investigation (AMIE Report, Level I Survey)

Main Site Features
- An engine shaft (103) (cut feature)
- Rock-cut bobpit and capstan platform (cut feature/ earthwork)
- Large flat-topped finger dumps (soil heaps)
- Ruined wheelpit and associated ruined structures
- Blocked adit (underground access with permission)
- Dressing floor (structure/ earthwork)
- Flatrod channel (earthwork)
- Tramway (earthwork)

Remarks
This mine is adjacent to the riverside footpath on the access lands of Roborough Down, within the National Park. It is therefore freely accessible by the public. Although possessing large and impressive spoil heaps, other surface components are not easily interpreted by the uninitiated. However, its group value as a heritage asset is high when considered in conjunction with Devon Poldice (site 15), Gem Mine (site 19), and other individual features nearby within Sticklepath Wood.
Priority Levels

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**Actions**
Archaeological survey to Level 1 minimum (but Level 2 recommended); documentary research

**Biodiversity implications**
None foreseeable, but monitoring of bat roosts should continue.
**Little Duke (Cu, Sn, As)**

*Alternative and Associated Names*: Raven Rock, North Tavy

**Brief Site History**

Little Duke was operating but not productive in 1815 and may have been closed by 1822 (Lysons 1822), though in 1824 it had clearly resumed and produced 40 tons of copper (Bl, Tavistock). In the late 1850s the mine was often referred to as Raven Rock Mine, and in 1858 it was stated that the main shaft being operated was Gill’s and there was stamps and burning ovens present at the site (TG 18-Oct-1858). The mine was also known as North Tavy at times in its career, in the early 1850s. Two tons of tin were sold in 1858 (Bl, Tavistock) though activity had been suspended before July 1859 and operations were said to be limited at that time (TG 21 and 29-Jul-1859). Materials listed at an auction following closure in September 1860 included a water wheel and 12 heads of stamps, 200fms tram iron and a horse whim (MJ 15-Sep-1860). Work must have resumed because the mine was again going through the process of winding up only three years later in February 1863 (MJ 21-Feb-1863). The adits and dressing floors were depicted, though unnamed, on a map of 1867 (Fig 7), on which the shafts are all referred to as ‘old’ suggesting abandonment at that time (DRO T1258M/E14b). The mine is also shown as disused on the 1882 OS 1st Ed 25” map. Attempts to re-open the mine along with Tavy Consols and Lady Bertha were in progress in 1886 (TG 3-Dec-1886). The mine was re-opened for a brief period in 1907 for tin and arsenic (Hamilton Jenkin 1974, 49).

Shocks, spoil heaps and a building are delineated on the OS 1st Ed 25” map of 1882, and an area of possible dressing floors may survive closer to the river, as depicted on the OS and on the map of 1867 (site 49). C F Barclay’s notes include a section drawing of the underground workings, which show the main shaft reaching a depth of 70 fms and that the mine was not worked below adit level (Barclay 2004). This is confirmed on the undated abandoned mine plan which also shows horse whins at the heads of two shafts and an incline for transporting material from the shafts near the top of the hill, down to the dressing floor at river level (DRO AMP R300E). Cartographic evidence suggests that two shafts were effaced by the track bed of the Bere Alston Railway.

**Bibliography**

Dines 1956, 679, xxvii; Burt et al 1984, 48; Lysons 1822, 274; Barton 1968, 107; Hamilton Jenkin 1974, 49; Barclay 2004; Ramsden 1952, 93

**Location**

The mine location was originally within agricultural enclosures, which have since been absorbed into Blackmoorham Wood, west of the River Tavy. The main surface evidence of extraction is transected by the trackbed of the Bere Alston to Tavistock Railway, south of Raven’s Rock.

**AP Evidence**

Shocks, spoil a building and general surface disturbance visible in 1947 (CPE/UK/2149/June 1947/4454; 4455)

**Previous fieldwork**

None known.

**Likely Site Features** (as suggested by documentary, AP and cartographic evidence only)

- Wheelpit (structure)
- Dressing floor (structure/earthwork)
- Burning house (structure) [the reference to a burning house may be to a shared facility at Tavy Consols]
- Shafts (109-12)(cut features – capped)
- Adits (cut features)
- Ancillary building (structure)
- Leat (earthwork) [likely to have used the Tavy Consols leat (site 28)]
- Tramway/ incline (earthwork)
Remarks
The western part of the site is transected by the Bere Alston to Tavistock Railway. It is worth investigation to establish the status of any surviving surface mine features. The possible unrecorded dressing floors by the river currently have no public access. It is known that the terrain here is very steeply sloping.

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Actions
Archaeological survey to Level 1; documentary research; field investigation to establish access to dressing floors; biodiversity survey

Biodiversity implications
Not known but it is likely that parts of the site are infrequently visited by humans.

Continued monitoring of bat roosts and/or re-assessment of status required.
**Site Name:** Wheal Franco (Sn)

**Alternative and Associated Names:** Wheal Franco Consols, Wheal Robert

**Brief Site History:**
Wheal Franco was one of the principal mines of western Dartmoor, producing both tin and copper. Pre 18th-century tin workings are present within the southern ‘Old Wheal Franco’ sett on Roborough Down at SX 5141 6847 and field investigation would undoubtedly confirm the location of others. The 19th century Wheal Franco first appears in documentation in the 1820’s and it is known that a leat was cut to the mine in 1824-5 (Dickinson 1974). This may represent the earliest episode of 19th-century activity as the mine is not listed in Lyon’s (1822). By 1843 the mine had produced £60 000 worth of ore (Hamilton Jenkin 1974, 82). In 1844 the focus of the mine had moved to the new northern section where two waterwheels were powering pumps, stamps and a crusher, although three other wheels were still in place and usable on the ‘Old Mine’ (MJ 25-May-1844). Returns for copper production were consistent between 1852 and 1861 (Burt et al 1984, 55-5). In the latter year the mine had reached a depth of 120 fms and employed 50 people (Williams 1861, 98). However, all the machinery was up for sale in September 1861 (WMN 14-Jan-1862). In 1870 both of the former sets were taken on to be worked under the name of Wheal Franco Consols and reorganized a year later to form Franco Consols Tin and Copper Co (Bl, Horrabridge) but following very poor returns in 1872-3 the company went into liquidation in March 1875 (LG 19-Mar-1875). The abandoned mine plan shows that the main hub of the mine was located at SX 5091 7006, to the NW of Engine Shaft, where the pumping and hoisting waterwheel, crusher house, stamps, smithy and carpenter’s shop are illustrated. Some of these items a survived by the time of the 1885 1st Ed 25” map but the area has since been levelled as a housing development has encroached over part of it. To the south of Bedford Bridge, the OS map has a series of earthworks and structures annotated with West Devon Works (Brick, disused). Very little is known of this enterprise but according to Harris, some ruined structures are to be seen and ‘stray bricks with the HORABRIDGE brand’ (Harris 1968, 200). Some shafts are also marked in this vicinity which are likely to be associated with Wheal Franco.

**Bibliography**
Collins 1912, 484; Dines 1956, 698-699; Hamilton Jenkin 1974, 82-3; Burt et al 1984, 55; Rowe 1896, 269; Harris 1968, 60; Williams 1861, 98

**Location**
This is a large sett made up of a southern sett called Old Wheal Franco, on Roborough Down to the west of the Tavistock Road, and Wheal Franco to the north, bounded by the southern bank of the River Walkham. Only a small section of the latter lies within the project area.

**AP Evidence**
Very little survives in 1947. Some disturbed areas and possible shafts south of Magpie Bridge (CPE/UK/2149/June 1947/4450)

**Previous fieldwork**
None known

**Main Site Features**
Mostly levelled though some capped shafts and spoil heaps survive to the south of the Tavistock road. It is also known that the Shallow Adit remains open. A substantial building located at SX 5095 7010, depicted on the OS 1st Ed 25” map and currently occupied as a dwelling, may have formed part of the mine complex but is absent from the undated abandoned mine plan.
**Remarks**
Although field investigation may reveal some surface evidence of Wheal Franco’s operation, what remains is unlikely to be spectacular, given that the main focus of the site has been swept away.

**Priority Levels**

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**TOTAL** (1-5 = Low; 6-10 = Med; 11-15 = High) 5 Low

**Actions**
Documentary research; cursory site visit
Brief Site History
This site was worked much earlier than others in the vicinity and two deep, rock-cut openworks are known to traverse the slopes to the west of the mine, though they are as yet undated. These are depicted as 'old workings' on a plan of Devon Poldice of c.1860-80 (CRO ME 2463). East Poldice Mine, referred to by Lysons (1822) as abandoned after 1815, may be an early 19th century manifestation of this mine. It was claimed that a leat was cut to Poldice Mine in 1825 (Dickinson 1974). Further attempts to re-open the site are recorded in 1860, when men were exploring the old workings (PDWJ 5-Jan- 1860) and in 1861 the mine was 20 fms deep employing 20 persons (Williams 1861, 90). The mine plan of that period shows the leat, dressing floor, ancient workings and adits (CRO ME 2463). During the 1860s (or at least sometime after 1856) Devon Poldice was incorporated into a new sett called Walkham and Poldice, which included more land near Grenofen Bridge (WCSL px622.34 BUC WAL). Poldice may also have been working in conjunction with Virtuous Lady (site 16) for a period in the 1870s (BI, Buck Mon). The date of closure is not known but it was reported in 1886 that the mine had not been working for several years (TG 10-Sep-1886). Small amounts of copper, tin and lead are recorded in the 1860s, and in 1880 (Barclay & Toll MS). The precise relationship with Walkham United, as annotated on large scale OS maps has yet to be clarified, but this is likely to be a later manifestation of Walkham and Poldice. The 1884-5 OS 25" map shows, shafts, leat, structures including the stamping mill, four round buddles and a spoil heap.

Bibliography
Collins 1912, 468; Burt et al 1984, 44; Rowe 1896, 269; Lysons 1822; Barclay & Toll MS; Williams 1861, 90; Dickinson 1974

Location
Within Sticklepath Wood on the south bank of the River Walkham. Surface workings extend to the west up the moderate slopes of the valley. A dressing floor is at river level. The site is to the west of the line of the former Grenofen Viaduct.

AP Evidence:
Obscured by trees.

Previous fieldwork
Newman, P 2007 EH Archaeological Investigation (field notes)

Main Site Features (from field notes above)
- Stamping mill, with well-preserved wheelpit and attached dressing floor (structures)
- 2 x stone-lined round buddles (sunken structures)
- Leat (earthwork)
- Openwork x 2 (cut feature)
- Spoil heaps (earthworks)
- Shafts (104) and adits (cut features)
- Evidence suggestive of firesetting technology has been recorded within the old openworks (R Waterhouse pers comm.)
- Trial adits (cut features)

Remarks
This mine is adjacent to the riverside footpath on the access lands of Roborough Down, within the National Park. It is therefore freely accessible by the public. The riverside structures are clearly discernable and in good condition (2007). Information to enhance the experience of this heritage asset could be achieved through documentary research and an archaeological survey at Level 2 or above. Consolidation of mining remains may be a future consideration at this site and also H & S, as there are several open workings, though they are currently fenced.
Priority levels

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**Actions**
Archaeological survey to Level 2; documentary research; assess H & S

**Biodiversity implications**
Continued monitoring of bat roosts and/or re-assessment of status required.
Site No | 16  
Devon HER UID | 5458  
NMR UID | 1468710

Civil parish: Buckland Monachorum  
NGR (SX) | 4731 6981

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<th>OS 25-inch 2nd Edition</th>
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| Virtuous Lady Mine (Copper disused) | R80B | Donn 1765  
DRO D1508M/Tavi/Maps/2  
PWDRO 874/48/57 1869 |

Mine Name: Virtuous Lady (Cu) (Fig 12)

Alternative and Associated Names: Wheal Bedford

Brief Site History
Despite claims that Virtuous Lady Mine has origins in the Elizabethan period (Harris 1967, 60; Hamilton Jenkin 1974, 47), there is no definite evidence for this. The first explicit documentation is from Kahlmeter in 1724 (Brooke 2001, 13) who states only that the mine was established by that date. The mine was depicted on Donn’s map of Devonshire, published 1765 (Ravenhill 1965) but details of the mine’s 18th century fortunes are not known. By 1807 Lysons (1822) claims it had ceased to work and was still disused by 1822. Brooke claims the mine was again in work by 1825 and a succession of companies worked it between then and 1879, when it was finally closed (BI, Buckland Monachorum). From about 1850 the mine was, for a period, worked in conjunction with Wheal Bedford on the north side of the river (AMP R80B).

Bibliography
Collins 1912, 608; Dines 1956, 700; Hamilton Jenkin 1974, 47-8; Burt et al 1984, 113-4; Lysons 1822, 275; Rowe 1896, 269; Brooke 2001, 13; Harris 1968, 60; Barton 1968, 173; Ramsden 1952, 100

Location
The remains of the mine are dispersed over a moderately large area (centred SX 4730 6980) on the south side of the River Tavy where it makes an acute turn to the west of Double Waters, forming a peninsula. Much of the earlier evidence appears to be at the western end of the site, at the foot of a craggy outcrop by Tavy Cottage. The mine falls within the border of Dartmoor National Park.

AP Evidence (RAF Verticals 1946-47)
Spoil heaps only visible beside the river (CPE/UK/2149/June 1947/4455)

Previous fieldwork
Newman, P 28-Sep-2007 EH Archaeological Field Investigation (AMIE Record, Level 1); MPP proposal (copper)

Main Site Features (from NMR AMIE records, see Fig 12)
- Shafts (106-8). At least 7 shafts with associated spoil have been recorded, including named shafts (William’s Engine, Eastern Engine, Season). Others are likely.
- A number of adits, including trial adits have been recorded, several are sited at the foot of the cliff face west of Tavy Cottage by the River Tavy.
- Revetted cobbing floors
- Large spoil heaps extending along the river bank
- Crusher House SX 4737 6988. A partially ruined building constructed from killas (see cover photo).
- Wheelpit SX 4738 6984. Sited just south of the track a wheelpit of 10.5m by 1.6m. Constructed from killas
- Pumping wheelpit (only the hollow survives) at SX 4746 6981 with large leat launder embankment above
- A wheelpit which housed a waterwheel to power pumps in Eastern Engine Shaft at SX 4746 698.
- Capstan pit at Eastern Engine Shaft and possible whim plat
- A leat which brought water from the River Walkham near Grenofen Bridge. A later rock cut tunnel conveyed the leat to Lady Bertha Mine
- A dressing floor at SX 4721 6970 comprising ruined wheelpit and revetted dressing areas
- A ruined building SX 4730 69984
- Underground access (by permission only)

Remarks
The mine has several impressive surviving structures and other interesting features and is within access lands of Dartmoor National Park. There is current footpath access through the site and the remains have long been the subject of exploration by the public. Tavy Cottage, situated near the river at the centre of the mine, is a private dwelling. A good selection of documents area available for this mine in the PWDRO.
Priority Levels

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Actions
Documentary research; archaeological survey to Level 2.

Biodiversity implications:
Continued monitoring of bat roosts and/or re-assessment of status required.
Site No: 17
Devon HER UID: 12629
NMR UID: 

Civil parish: Bere Ferrers
NGR (SX): 4747 6525

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**Brief Site History**

There is some confusion among previous writers regarding locations and relationships of the three small lead mines on the west bank of the Tavy named Lopwell, Maristow and Wood, which collectively represent attempts to work the Maristow Lead Lode. Barclay and Toll (Mss 1923) have Lopwell and Maristow as separate setts. The latter they place on the west bank of the Tavy opposite Maristow House while Lopwell is 0.5 miles to the east [sic – probably meaning NE]. Dines (1956, 702) also recorded these two as separate named setts though has their locations the opposite way round to Barclay and Toll. Hamilton Jenkin (1974, 56) assumed these two were actually the same sett, and that the northern section was part of Wood Mine (site 6), though did not describe the remains, and Buck (1998, 59) also described Lopwell and Maristow under the same heading. Frustratingly, although remains are depicted on the 1st Edition OS map of 1884 at all three sites, none are named. However, the undated abandoned mine plan of Huel Maristow Mine (DRO AMP Devon 3) places this mine as the most southern of the three at SX 4712 6491; Lopwell therefore is to the north at SX 4747 6525 and Wood mine must be the northern of the three at (centred) SX 4770 6612. It is possible that Lopwell was an independent sett initially, later to be worked alongside Maristow. Documentary research has revealed little about Lopwell Mine and it is not mentioned in Burt’s mineral statistics (Burt 1984).

**Bibliography:**


**Location**

On the west bank of the Tavy in Blindwell Wood.

**AP Evidence**

Obscured by trees

**Previous fieldwork**

Buck 1998, Site 80(b)

**Likely Site Features**

- Shaft (119) with stone fence (cut feature and structure)
- Spoil heap (earthwork)
- Building depicted on OS (ruined structure)
- old processing sites (reported by Buck 1998)

**Remarks**

Although not far from the Tamar Valley Discovery Trail, the mine remains are sited within private woodland outside of any access lands. The mine may be reached via forest tracks. A more precise historical understanding of all three of the mines that worked the Maristow Lode is required and a search for further documentary sources is a priority

**Priority Levels**

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**TOTAL (1-5 = Low; 6-10 = Med; 11-15 = High)** 10 Medium

**Actions:** Archaeological survey to Level 1; documentary research

**Biodiversity implications:** Continued monitoring of known bat roosts.
**Brief Site History**

See Lopwell (site 17) for discussion of location and associations. Activity is first recorded in the 1820s, when Capt Williams was manager and a map of 1822 shows the engine shaft sunk to 40fms (Bl, Bere Ferrers). The mine is also mentioned on a release document in 1832 (PWDRO 874/48/16). Previous writers’ historical research at this mine has also been sketchy and Burt (1984) found no recorded output, which suggests its apogee was pre 1850s, although no date for closure has been recorded. The undated abandoned mine plan shows the main features of the site, including the two cross-courses, the position of the shaft and engine house and the chimney stack some distance to the NW (AMP Devon 3), so sited to obscure it from view at Maristow House (Bl, Bere Ferrers). A lead smelting house was also depicted on the plan, though Brooke stated that no trace of it remains. Two chimney stacks are depicted, one from the boiler house and the other, possibly, from the smelter and flues were constructed to convey the fumes. Barclay and Toll visited the mine in 1923 and reported the engine house still standing plus the remains of two old flues leading to the chimneys, which had been demolished, and the position of a whim or capstan round (Barclay and Toll Mss PCL 1923). The engine house was still partly standing in 1998 (Buck 1998, 59).

**Bibliography:** Buck 1998, 59; Barclay and Toll Mss 1923;

**Location:** The west bank of the River Tavy opposite Maristow House

**AP Evidence:** Obscured by trees

**Previous fieldwork**

Buck 1998, Site 80(a)

Manning and Dyer (1998) Devon SMR Record Sheet

**Likely Site Features**

- Engine house (ruined structure)
- Flues and chimney stacks (ruined structures)
- An open shaft (cut feature)
- Smelting House – not believed to have survived (ruined structure)

**Remarks**

The Tamar Valley Discovery Trail runs close to this site and visible from it. Although preliminary fieldwork was undertaken in 1998, the record is lacking detail and would benefit from further investigation. Historical research should be a high priority for this mine which appears, so far, to be under-represented in the documentary record.

**Priority Levels**

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**Actions**

Archaeological survey to Level 1; documentary research

**Biodiversity implications:**

Continued monitoring of known bat roosts.
Site No: 19
Devon HER UID: 
NMR UID: 7055 4948

Civil parish: Whitchurch
NGR (SX): 7055 4948

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Site Name: Gem Mine (Sn)

Alternative and Associated Names: West Sortridge Consols, Walkham Valley, Little Gem

Brief Site History:
The date of earliest activity at this site is a little vague but a Wheal Grenofen was recorded in Whitchurch parish by Lysons (1822); abandoned between 1815 and 1822, and the site later occupied by Gem would be a likely location for it. In 1855, this mine was operating as West Sortridge Consols, under which name it was depicted on a map of mine sets in the district in 1859 (DRO D1508M/Tavi/Maps2). In 1855 West Sortridge produced 6 tons of tin valued at £632 but this was the only recorded output (Burt 1984, 103). However, in 1873 the mine was re-launched as the Gem Tin Mining Co (Bl, Whitchurch) which produced small quantities of tin with a maximum of 11.5 tons in 1872 (Burt 1984, 65). Proceedings to liquidate the company were in progress from 1874 after which time the mine became disused. In 1880 the sett was acquired by the Walkham Valley Tin Mining Company (MJ 31-Jan-1880), which in turn was absorbed into Walkham United in 1881. This company survived only until 1883 before being struck from the register. The 1885 OS 1st edition map depicts an extraordinarily high number of surface features associated with this mine and a fine photograph of the dressing floors and shaft, set against the backdrop of the viaduct, has been published on several occasions (i.e. Harris 1968). Dines records that two lodes were worked, North and South, on a roughly E-W strike (Dines 1956, 695).

Bibliography:
Lysons 1822; Dines 1956, 695; Burt 1984, 65 and 103; Harris 1968

Location
On the east bank of the River Walkham at Grenofen, almost opposite Devon Poldice (site 15). Within DNPA.

AP Evidence
Obscured by trees

Previous fieldwork
Level one survey conducted by PN in Sept 2007 as part of an (unfinished) EH project.

Main Site Features (from PN notes above)
- The main shaft was Lucy's, sited at SX 4952 7061.
- spoil heap (earthwork)
- Adit (cut feature)
- Tramway (earthwork)
- Stamps wheelpit (structure)
- Hauling wheelpit (structure)
- Burning house (reverberatory calciner) (ruined structure)
- Leat (earthwork)
- Whim round (earthwork)
- Buddle wheelpit (structure)
- Round buddles (earthworks/ structures)
- Dressing floor (structure/earthwork)
- Building
Remarks
Although outside the project area by just a few metres, this site represents one of the most remarkable examples of surviving surface remains in the vicinity. Nearly all the structural features on the dressing floors have survived without damage, collapse or demolition. The site is less than 100m from the NCN Route 27 cycleway and has excellent group value due to its nearness to Devon Poldice and Walham and Poldice Mines. It is strongly recommended that the project area is modified to include this mine in any future investigations, especially any exploration of public access and designation. The site is within Dartmoor National Park but previous attempts to identify the owners (i.e. by PN in 2007) have failed.

Priority levels

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Actions
Archaeological survey to Level 2; documentary research; investigate land ownership

Biodiversity Implications
The site is currently quite overgrown. One adit is known to be open and likely to contain bats.
Site Name: William and Mary (Cu) (Fig 8)

Alternative and Associated Names: George and Charlotte; Devon and Cornwall United; Old William and Mary

Brief Site History
William and Mary was recorded by Kalmeter in 1724, when it was claimed the mine had been 'found' only six years previously in 1718 (Brooke 2000, 12). The mine worked east-west lodes that extended from the Tamar to the Tavy Valleys. The western Tamar sections of these lodes were exploited by George and Charlotte mine, while the eastern Tavy section was worked by William and Mary. Shares for George and Charlotte and William and Mary Mines, were available for purchase in 1800 (EFP 9-Oct-1800) and both mines were on Lyson’s 1822 list which claimed the mine was operating in 1815 but probably given up by 1822 (Lysons 1822). A 27ft diameter waterwheel was for sale in 1837 (Barton 1968, 171) when the mine may have been closed. From 1851, the two mines were amalgamated to form Devon and Cornwall United Mines (Hamilton Jenkin 1974, 35) under which company they continued in work until 1871. Copper output was recorded between 1862 and 1871, the best year being 1865 when £9912 worth of metal was produced (Burt 1984, 36). In 1861 the concern employed 100 people (Williams 1861, 89). In 1872 a 30ft by 8ft breast waterwheel was for sale at D&C 'taken under distress for rent' though from which part of the mine is not stated (TG 30-Aug-1872). C F Barclay recorded the remains at the site in 1923 and his sketch shows an engine house beside a shaft to the west of the railway cutting, which at that time was in use as a cow shed, and a number of small, closely-set shafts on the slope to the east of the railway. To the east of the Tavy, a wheelpit contained a wheel which Barclay considered provided the power for all pumping and hoisting at the mine (Barclay 2004). Barclay also depicted a dry leat, which had formerly provided water to the above, and he stated that it was in good condition. The leat is also shown on the OS 1st Ed 25” map. The wheelpit is marked on a map of the William and Mary sett of 1867 (Fig 8), although the land in which it is located, on the east side of the river, is not within the mine sett (DRO T1258M/E14b). Many other rectangular features, probably buildings, are also depicted on this map together with a footbridge across the Tavy to give access to the waterwheel area.

Bibliography
Lysons 1822, 274; Brooke 201, 12; Barton 1968, 171; Hamilton Jenkin 1974, 35; Barclay 2004

Location
The majority of the site is within Broadwell and Ramsham Woods on the western slopes of a sharp meander in the River Tavy. A small part of the mine is on the eastern bank of the river.

AP Evidence:
Obscured by trees

Previous fieldwork
C F Barclay 2004 (notes made in 1923)

Likely Site Features (as suggested by documentary and cartographic evidence only)
- Engine House (ruined structure)
- Wheelpit on east side of River Tavy (structure)
- Leat on east side of River Tavy (earthwork)
- Shafts (95-102 see Fig 1; Fig 8)
- Ancillary buildings
- Outcrop working on east side of River Tavy mentioned by Barclay 2004 (cut features)
- Adits (cut features)
Remarks
A good level of field remains may have survived at this steeply sloping isolated and possibly undisturbed site within private woodland. Part of the site is bisected by the Bere Alston to Tavistock Railway trackbed and therefore has potential as a stop-off for those using the track. Its group value is enhanced by the fact that other important sites are situated along this line.

Priority Levels

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Actions
Documentary research; archaeological survey to Level 1.

Biodiversity implications
Continued monitoring of bat roosts and/or re-assessment of status required.
Mine Name: Westdown (Sn)

Alternative and Associated Names: Sortridge and Bedford

Brief Site History
The earliest date for mining activity on West Down is not recorded although 'early' tin trial pits have been reported (Devon HER UID 21889) and an 1850's report refers to early costean pits existing on the Downs (DRO L1508m/SS/Mining/14). An openwork has also been recorded by the DTRG (Greeves & Passmore 1999, 3-5). West Downs Consolidated Mining Company started work at the site in 1847 and digging the foundations for a steam engine house commenced in 1850 (MJ 28-Aug-1850). The sett was re-launched as Sortridge and Bedford Mine from November 1854. Descriptions of the sett in the prospectus (DRO L1508m/SS/Mining/14) seem to vary between different correspondents although one places it on the down to the south of Tavistock bounded on the SE by the River Walkham and on the west by the Tavy which precisely describes West Down. There is no mention of the steam engine, although a stamping mill, dressing floor, account house, smithy and burning house (calciner) were said to be in existence. The mine closed in 1857 having expended £7000 with no result (LLC 1-Aug-1857). In December 1858 the mine was reported as having been suspended for some time and the shafts were being made safe (TG 3-Dec-1858). The OS 25" 1st edition map of 1884, shows a large spoil heap on the SE slopes of the Down with roofless building and adjacent chimney at SX 5879 7053. The dressing floors and site of the burning house are to the south not far from the north bank of the River Tavy at SX 4858 7028 and have been partly recorded by the DTRG (Greeves & Passmore 1999, 3-5; HER UID 63693). The undated Abandoned Mine Plan shows an undeveloped mine worked by two shafts, one referred to as 'Engine' (DRO AMP R221C).

Bibliography
Dines 1956, 694; Greeves & Passmore 1999, 3-5

Location
Mining remains are spread along the southern slopes of West Down, an area of open moorland with public access bounded by the River Walkham to the east and the River Tavy to the west.

AP Evidence
Spoil heap visible (CPE/UK/2149/June 1947/ 4452).
A good deal of surface disturbance, including banks and pits, some caused by mining, was recorded as part of the National Mapping Programme, though it is unclear what the remains represent.

Previous fieldwork
DTRG plane table survey and fieldwork covering selected areas (Greeves & Passmore 1999, 3-5)

Main Site Features
- Spoil heap SX 4879 7055 (earthwork)
- Chimney base and associated buildings (possible engine house) SX 4879 7054 (ruined structures)
- Dressing floor (structure, earthworks)
- Stamping mill (ruined structure
- Burning house (ruined structure)
- Ancillary buildings (ruined structures)
- Adits (cut features)

Remarks
This site has potential for further discovery; its location with public access and within the National Park makes it a good candidate for public information enhancement. The DTRG possesses an unpublished 1:500 scale survey of parts of this site which it undertook in 1999. Sight of this would be useful before proceeding with further fieldwork.
Priority Levels

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**Actions**
Archaeological survey at Level 1 minimum (but Level 2 recommended); documentary research

**Biodiversity Implications**
Likely need for discrete areas of heathland and scrub cutting to reveal archaeological features. Potential for community project.
Site No | Devon HER UID | NMR UID
---|---|---
22 | 4078 | NGR (SX) 4820 7233

**Civil parish:** Whitchurch

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**Mine Name:** Rixhill Mine/ East Crowndale Mine (Cu, Sn) (Fig 4)

**Alternative and Associated Names:** Anderton United, East (Wheal) Crowndale, Tavistock Consols, West Rixhill, New Crowndale

**Brief Site History**

Tin bounds were renewed for a tinwork at Rixhill in 1789, though it is not known what level of activity, if any, was taking place (DRO 1508M/SS/Mining/11). For much of its working life Rixhill Mine was worked as part of East Crowndale Mine, which Lysons claimed was at work for copper in 1810 (Lysons 1822), though is known to have been active in 1806 (EFP 24-Apr-1806). However, documentation for both mines exists and it is often not easy to discern which site was being discussed. This is further complicated by associations with Anderton United, West Rixhill and Tavistock United all of which were worked alongside Rixhill at various periods. Rixhill Mine was certainly working in the 1850s, when respectable returns were made on black tin (Burt 1984, 94) as was East Crowndale which was producing Copper (Burt 1984, 35). All materials at East Crowndale Mine were for sale in 1854, this included equipment from Rixhill Mine and it is likely that the 56-inch pumping engine mentioned was sited at Rixhill (DRO 1508M/SS/Mining 7). The mine was still operating in 1856 (DN 14-May-1856). It was in later years that Rixhill was worked in conjunction with Anderton Mine and was probably abandoned by 1880 when in 1886 it was reported that the machinery had been sold some years previously (TG 10-Sep-1886).

**Bibliography**


**Location**

In farmland south of Tavistock and to the east and west of Rixhill Farm.

**AP Evidence**

No evidence of mining visible. Farm buildings to west show clearly. Areas of former spoil covered by trees (CPE/UK/1890/ Dec 46/ 1283)

**Previous fieldwork**

None known.

**Likely Site Features** (As suggested by documentary and cartographic evidence only. Little is likely to survive)

- Engine house and chimney (ruined structures)
- Capped shafts (90)
- Spoil heaps (earthwork)
- Burning house

**Remarks**

The site of Rixhill, in farmland with no public access, is unlikely to have surviving surface features. The spoil heaps and buildings depicted on the OS 1st edition 25” map appear to have been levelled (GE). Documentary research would be useful in unravelling the complications of these sites but fieldwork is likely only to confirm the levels of effacement.

**Priority Levels**

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<td>DRO 1258M/E14b (see Fig 7)</td>
</tr>
<tr>
<td>(Copper &amp; Mundic)</td>
<td></td>
<td></td>
<td>DRO D1508M/Tavi/Maps/2</td>
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<tr>
<td>(disused)</td>
<td></td>
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</tbody>
</table>

Mine Name: Tavy Consols (Cu, Sn, As) (Fig 7)

Alternative and Associated Names: Hocklake, (?)Great Duke, Wheal Tavy

Brief Site History
Hocklake (copper) Mine was visited by Kalmeter in 1724 when it was well established. There were five miners who had that summer raised 16 tons of ore (Brooke 2000, 13). One of the lodes was named ‘The Duke’ by Kalmeter and it may be that Great Duke copper mine, referred to in this vicinity by Lysons as abandoned in about 1813, was the same mine (Little Duke being located to the north), which had operated sporadically for almost a century by then (Lysons 1822). Other 18th-century references include ‘Hawkelake’, ‘Hocklake Lane’ and ‘Hocklakeridge’ all of c.1760 (Greeves 1981). It was recorded that work recommenced in 1845-6 under the name of Tavy Consols when the machinery listed included a ‘40 ft waterwheel, flat-rods to pump the mine; grinder-house, stamps, jigg machine, and a drawing-machine worked by a 24 ft. waterwheel; dressing floors laid out (PDWJ 24-Mar-1848). In the same year a map of the site shows four parallel NW – SE lodes and a waterwheel apparently connected to a flat rod system extending some distance to the NW (Simmons Map 1848). The mine had a good recorded output of copper throughout the 1850s and parts of the 60s and 70s, as well as sporadic returns for tin and arsenic. The mine appears to have been mainly producing arsenic in the 1880s and 90s (Burt 1894, 109-10). By 1861 the mine had reached a depth of 90fms (Williams 1861, 96), but in February of that year all the machinery and effects were up for sale by order of the Stannary courts (MJ 23-Feb-1861). It appears that the mine survived intact because the materials were again for sale in 1863 when a long list of equipment is itemised, including 4 waterwheels, stamp mill, arsenic mill etc (MJ 7-Mar-1863). Mining continued until 1895 when Tavy Consols was finally wound up in the Court of Chancery (Lon Gaz 12-Mar-1895), but further ore dressing activity was recorded in 1914-15 in conjunction with Little Duke (site 13) (Richardson 1992, 138). A bridge across the Tavy was constructed to move the materials between the two and a series of surviving photographs show the bridge with the remains of Tavy Consols in the background, including a disused waterwheel, buildings and spoil heaps (DA 001751-4). The first edition OS 25” map of 1882-4, just before closure, details several buildings, a flue and chimney, probably associated with a burning house, and a leat which diverted water from Tavy, about 400m west of Double Waters (site 28). The undated Abandoned Mine Plan shows the mine to be well developed at surface with water-powered crusher house, stamping mill, round puddles, water-powered flat rod system, arsenic works with flue and chimney (DRO AMP R44A). C F Barclay recorded his observations at the site in the 1920s and provided a sketch plan with annotations describing the purposes of the features which then survived (Barclay 2004). Although the calciners were in work before 1880, documentation suggests they may have been refurbished or upgraded after 1888 (PWDRO 72/1012).

Bibliography
Collins 1912, 585; Dines 1956, 680; Hamilton Jenkin 1974, 50-1; Burt et al 1984, 109; Rowe 1896, 270; Williams 1861, 96; Barclay 2004

Location
On the Western slopes of the Tavy Valley, SE of Hocklake. Dressing floors are near river level and other workings are spread up the slope.

AP Evidence
Several roofless buildings still standing and spoil spreads were visible in June 1947. (CPE/UK/2149/June 1947/ 3455)

Previous fieldwork
C F Barclay 1923 (see Barclay 2004)

Likely Site Features (as suggested by documentary, cartographic and pers comm evidence only)
- Shafts (113) (capped)
- Spoil heaps (earthworks)
- Adits (cut features)
- Wheelpits – 4 are recorded (structures)
- Stamping mill (structure)
- Crusher House (ruined building)
• Dressing floor (structure, earthworks)
• Calciner (structure)
• Flue and chimney (structures)
• Leat (earthwork)
• Flatrod system (?earthwork)
• Grinder house (ruined building)
• Capstan platform (earthwork)
• Tramways (earthwork)

Remarks
This site has great potential for a broad range of field evidence surviving, including some rarities and should be seen as a priority for field survey at Level 2 if possible. The mine is located in private woodland, access is apparently possible via a forest track from Hocklake beside the Tavistock to Bere Alston railway (not currently available to the public) but there may be potential for public access. Parts of the site are less than 250m from the railway and a public right of way from the south is currently less than 300m away at Anderton. Current level of human visitation or status of wildlife are not known.

Priority Levels

<table>
<thead>
<tr>
<th>Criteria</th>
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<tr>
<td>Potential for enhancement of knowledge through field survey</td>
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<tr>
<td>Potential for enhancement of knowledge through historical research</td>
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<td>Group Value – association with mines in close proximity, or reachable via a single linear route</td>
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<td><strong>TOTAL</strong> (1-5 = Low; 6-10 = Med; 11-15 = High)</td>
<td><strong>11 High</strong></td>
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</table>

Actions
Archaeological survey to Level 1 minimum (but Level 2 highly recommended); documentary research; investigate points of access, H & S issues; biodiversity survey.

Biodiversity implications
Not known. Underground access exists at this site so consideration of bats will be essential.
Site No: 24
Devon HER UID: 12637
NMR UID: 45047188

Civil parish: Gulworthy (historically part of Tavistock)
NGR (SX): 4504 7188

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<tr>
<th>OS 25-inch 1st Edition</th>
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<td>West Crebor Mine (copper)</td>
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<td>DRO 1258M/E14b</td>
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Mine Name: West Crebor (Cu)

Alternative and Associated Names: Wheal Beauford

Brief Site History
An alignment of pits in a wooded area to the south of the mine probably represents as yet undated pre-19th century surface working of (tin) lodes on this section of Morwell Down. However, for the 19th century, J H Hitchens had recently taken up this sett in July 1846, on the strength of it sitting on the same lode as Wheal Crebor and Bedford United (MJ 28-Mar-1846). The main working period of the mine was in the 1880s, though Booker (1974, 134) claims this was without great success. The mine employed over 26 people in 1881 (Burt 1984, 33) but only produced 19 tons of Copper in the single year of 1885 (Hamilton Jenkin 1974 63). The OS first edition 25-inch map of 1884, shows the site had three shafts, the westernmost served by a steam engine with chimney. The engine house was demolished in the 1960s or early 1970s. A photograph of the roofless engine house and chimney stack prior to demolition shows the structures apparently intact (Hamilton Jenkin 1974, 92). C F Barclay stated that the mine was worked from a single shaft (Engine) and that nearby Rundell’s shaft was the westernmost working of Creber Mine and not associated with West Crebor. The mine had no known adits and hoisting and pumping were performed by the same engine (Barclay 2004, 43)

Bibliography
Collins 1912, 460; Hamilton Jenkin 1974, 60-3; Burt et al 1984, 33; Rowe 1896, 270, Booker 1974, 134; Barclay 2004

Location
South-west of Hurlditch Horn on Morwell Down

AP Evidence

Previous fieldwork
R Waterhouse (n.d). Sketched annotations on OS base map showing surface evidence

Likely Site Features
Little is likely to have survived.

Remarks
The main site of the mine and engine house, marked on OS 1st edition, have been completely effaced. Two large shaft dumps survive, now tree covered. One is serving as a dump for old cars. Although close to the road, public access would probably not be beneficial. Field investigation is likely to be unfruitful.

Priority Levels

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<td>Potential for enhancement of knowledge through historical research</td>
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<td>Group Value – association with mines in close proximity, or reachable via a single linear route</td>
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<tr>
<td><strong>TOTAL</strong> (1-5 = Low; 6-10 = Med; 11-15 = High)</td>
<td>4 Low</td>
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</table>

Actions
None
Site No: 25  Devon HER UID: 3956  NMR UID: 3956

Civil parish: Tavistock

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<tr>
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<th>AMP Ref No</th>
<th>Other Map Evidence</th>
</tr>
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<td>Crowndale Mine (Copper, disused)</td>
<td>Crowndale Mine (Copper, disused)</td>
<td>R27C</td>
<td>DRO D1508M/Tavi/Map2</td>
</tr>
</tbody>
</table>

Site Name: Wheal Crowndale (Cu, Sn)33

Alternative and Associated Names: Crowndale Copper Mine, New Crowndale

Brief Site History

According to Hamilton Jenkin this was an old mine resuscitated in 1799 (Hamilton Jenkin 1974, 64-5). Tinworks were recorded at Crowndelham 1539 (Greeves 1981, 313) and it is known that a large tin openwork survives at the site of much earlier date than the 19th-century activity (site 58). Wheal Crowndale is one of the largest setts in the project area at 180 ha (DRO D1508M/Tavi/Map2) and the undated abandoned mine plan shows a well-developed mine with 10 shafts and reaching a depth of over 90 fms (AMP R27C). The lode was an eastern extension of the Wheal Crebor lode, which continued also into the set of East Crowndale. The mine was worked under the name of Wheal Crowndale or Crowndale Copper Mine between 1800 and 1831 (Bl, Tavistock) and was producing ore in 1811 when an output of 863 tons were recorded (Lysons 1822). However, figures available for 1821-31 suggest a much decreased output of only 712 tons for the entire decade (Bl, Tavistock). The mine enjoyed some notoriety in mining circles in this period when it was claimed that the manager of the mine, John Taylor, invented the crushing roller specifically to serve at this mine (Ferguson 1873, 138) and thereafter these machines were adopted worldwide. Tavistock Smelting Co was operating one of Devon’s very few tin smelting house at Crowndale in the 1830s though this episode is poorly documented and the precise location of the smelter is not known (Greeves 1996, 88). A succession of companies operated the mine between the 1850s and 70s, (Bl, Tavistock) though Burt’s figures show that it was not particularly productive in this period, (Burt 1984, 34-5) and the mine is absent from William’s directory of 1861 (Williams 1861) which strongly suggests it lay idle in that year. The mine re-opened during the Great War between 1914-18 under the management of R W Toll (Bl, Tavistock) and a further attempt to work the site for arsenic occurred in 1924-6 (Dines 1956, 673).

Bibliography

Lysons 1822, 273; Collins 1912, 464; Dines 1956, 673; Barton 1968, 169; Hamilton Jenkin 1974, 64-5; Burt 1977; Burt et al 1984, 34-5; Greeves 1996, 88

Location

In farmland south of Tavistock.

AP Evidence:

Tree covered spoil (CPE/UK/2149/3145; 3146)

Previous fieldwork

None known

Likely Site Features

- The main surface remains are capped shafts and levelled spoil
- Outline of a possible wheelpit (R Waterhouse pers comm.)

Remarks

Although the Tavistock Canal footpath passes through this mine sett, no part of the mine is accessible to the public and it is believed that there is little in the way of upstanding remains, though this could be confirmed by a field visit.

Priority Levels

<table>
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</table>

Actions: Documentary research; cursory field visit
### TABLE 1 Summary of Actions and Priorities

#### Major Mine Sites

Levels of archaeological survey (1-3) refer to the English Heritage guidelines and are a suggested minimal level of recording in any further investigations. Some sites may prove to have greater survival at surface and higher levels than suggested may be desirable in some cases.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
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<tr>
<td>1</td>
<td>Anderton Mine</td>
<td>Documentary research; cursory field visit</td>
<td>4</td>
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<tr>
<td>2</td>
<td>Wheal Bedford</td>
<td>Documentary research; archaeological survey to Level 1</td>
<td>7</td>
<td>Medium</td>
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<tr>
<td>3</td>
<td>East Lady Bertha Mine</td>
<td>Documentary research; cursory site visit</td>
<td>8</td>
<td>Medium</td>
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<tr>
<td>4</td>
<td>Lady Bertha Mine</td>
<td>Archaeological survey to Level 1 (but Level 2 recommended); documentary research; biodiversity survey.</td>
<td>11</td>
<td>High</td>
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<tr>
<td>5</td>
<td>South Lady Bertha Mine</td>
<td>Documentary research; cursory site visit</td>
<td>4</td>
<td>Low</td>
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<tr>
<td>6</td>
<td>Wood Mine</td>
<td>Archaeological survey to Level 1; documentary research</td>
<td>6</td>
<td>Medium</td>
</tr>
<tr>
<td>7</td>
<td>East Wheal Crebor</td>
<td>Documentary research</td>
<td>4</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>South Crebor Mine</td>
<td>Archaeological survey to Level 1 (but Level 2 recommended); documentary research; assessment of suitability for public access (H &amp; S); biodiversity survey.</td>
<td>13</td>
<td>High</td>
</tr>
<tr>
<td>9</td>
<td>Wheal Crebor</td>
<td>Liaise with R Waterhouse</td>
<td>7</td>
<td>Medium</td>
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<tr>
<td>10</td>
<td>Denham Bridge Mine</td>
<td>Cursory site visit</td>
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<td>Low</td>
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<td>11</td>
<td>Devon and Courtenay Mine</td>
<td>Archaeological survey to Level 1; documentary research; investigate access.</td>
<td>6</td>
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<td>12</td>
<td>Walkham and Poldice Mine</td>
<td>Archaeological survey to Level 2; documentary research</td>
<td>14</td>
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<td>13</td>
<td>Little Duke Mine</td>
<td>Archaeological survey to Level 1; documentary research; field investigation to establish access to dressing floors; biodiversity survey.</td>
<td>11</td>
<td>High</td>
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<tr>
<td>14</td>
<td>Wheal Franco</td>
<td>Documentary research; cursory site visit</td>
<td>5</td>
<td>Low</td>
</tr>
<tr>
<td>15</td>
<td>Devon Poldice Mine</td>
<td>Archaeological survey to Level 2; documentary research; assess H &amp; S for extended public access</td>
<td>15</td>
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<tr>
<td>16</td>
<td>Virtuous Lady Mine</td>
<td>Documentary research; Archaeological survey Level 1 minimum (but Level 2 recommended).</td>
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<tr>
<td>17</td>
<td>Lopwell Mine</td>
<td>Archaeological survey to Level 1; documentary research</td>
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<td>Maristow Mine</td>
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<td>20</td>
<td>William and Mary Mine</td>
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<td>21</td>
<td>Westdown Mine</td>
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<td>22</td>
<td>Rixhill/East Crowndale Mine</td>
<td>Documentary research</td>
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<td>23</td>
<td>Tavy Consols Mine</td>
<td>Archaeological survey to minimum Level 1 (but level 2 highly recommended); documentary research; investigate points of access and H &amp; S issues; biodiversity survey.</td>
<td>11</td>
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<tr>
<td>24</td>
<td>West Crebor Mine</td>
<td>None</td>
<td>4</td>
<td>Low</td>
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<tr>
<td>25</td>
<td>Wheal Crowndale</td>
<td>Documentary research; cursory field visit</td>
<td>5</td>
<td>Low</td>
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</tbody>
</table>
Fig 4. Map of Rixhill and Anderton Tin Mines, redrawn from OS 2.5-inch 1st edition map of 1884-5. Only the shaded area lies within the project area wherein most of the remains have been levelled. However, to the east along the Tiddy Brook, remains of the dressing floors are known to have partly survived. There was once an engine house (a), water-powered stamping mill (b) and a dressing floor with round puddles (c).
Fig 5. Extract from a map of mine setts in the Tamar and Tavy valleys in 1867 showing the extent of Wheal Crebor (DRO T1258/E1b) © Copyright Devon Record Office.

Fig 6. Extract from a map of mine setts in the Tamar and Tavy valleys in 1867 showing the extent of South Wheal Crebor and showing the New East Russel section of the sett (DRO T1258/E1b) © Copyright Devon Record Office.
Fig 7. Extract from a map of mine setts in the Tamar and Tavy valleys in 1867 showing the extent of Wheal Tavy (Tavy Consols). Parts of Little Duke Mine at Raven Rock were also included in this sett at that time (DROT1258/E1b) © Copyright Devon Record Office.

Fig 8. Extract from a map of mine setts in the Tamar and Tavy valleys in 1867 showing the extent of William and Mary (DROT1258/E1b) © Copyright Devon Record Office.
Fig 9. Comparative maps showing Lady Bertha Mine, redrawn from the OS 25-inch 1st (1884) and 2nd (1906) edition maps. The 1906 plan (after abandonment) shows the addition of a crusher house (a), hoisting waterwheel (b), tin dressing floors (c), a waterwheel (d) and the addition of several ancillary buildings. The stamping mill (e) remained in place and the large pumping waterwheel (f) had been removed leaving only a pit depicted as an earthwork.
Fig 10. Undated cross-section of Devon and Courtenay Consols, showing surface installations, including an engine house, horse whim and untitled building. (DRO AMP R164B)
© Copyright Devon Record Office.
Fig 11. Undated section drawing of Ludbrook (South Bertha) Mine, redrawn from the abandoned mine plan. Surface machinery comprised a waterwheel serving for pumping and hoisting (DRO AMP R1B) © Copyright Devon Record Office.
Fig 12. Annotated OS 25-inch 1st Edition (1884) map of Virtuous Lady Mine, highlighting surviving features. Annotations originally drafted to accompany English Heritage NMR reports.
SECTION 3
MISCELLANEOUS (PROBABLE) MINING EVIDENCE
(sources – various)

[N.B Unassigned Mine Shafts: Mine shafts numbered 74 to 119 on Fig i are associated with specific mines listed above (Sites 1-25) and are included in the itemised listing for the individual mine locations. The location of additional unassigned mine shafts compiled from OS 25” maps and a Bedford estate map of mine setts to the west of the River Tavy are included in the list below. Some have previously been recorded in the HER].

Site No: 27
Devon HER No:
NGR (SX): 4980 7038 (centred)
Location: Roborough Down, Walkham Valley (south side)
Description: A disused earthwork leat that drew water from the south side of the River Walkham below Bedford Bridge to supply waterwheels at Devon Poldice Mine (site 15). It was later extended to provide water to Walkham United Mine (site 12)
Remarks: The entire course of the leat was plotted on the OS 1st Ed 25” map.
Actions: Field investigation to check survival and record associated features (Level 1)

Site No: 28
Devon HER No:
NGR (SX): 4727 7917
Location: Blackmoorham Wood, Tavy Valley
Description: A disused earthwork leat which drew water from the River Tavy below Double Waters to supply waterwheels and processes at Tavy Consols Mine (site 23)
Remarks: The entire course of the leat was plotted on the OS 1st Ed 25” map.
Actions: Field investigation to check survival and record associated features (Level 1)

Site No: 29
Devon HER No:
NGR (SX): 4732 6977 (centred)
Location: Balstone Wood, Bucktor, Bymoor Wood, Sticklepath Wood
Description: A disused earthwork leat which drew water from the south side of the River Walkham near Grenofen to supply waterwheels and processes at Virtuous Lady Mine (site 16). A later extension supplied Lady Bertha Mine (site 4)
Remarks: The entire course of the leat was recorded on the OS 1st Ed 25” map, including the locations of two tunnels
Actions: Field investigation to check survival and record associated features (Level 1)

Site No: 30
Devon HER No:
NGR (SX): 4593 7200
Location: Field to the south of Wheal Creber
Description: Probable disused capped shaft depicted on OS 25” 1st Ed
Remarks: Tump visible on Google earth
Actions: None

Site No: 31
Devon HER No:
NGR (SX): 4604 7187
Location: Field to the south of Wheal Creber
Description: Probable disused capped shaft depicted on OS 25” 1st Ed
Remarks: Tump visible on Google earth
Actions: None

Site No: 32
Devon HER No:
NGR (SX): 4621 7194
Location: Field to the south of Wheal Creber
Description: Probable disused capped shaft depicted on OS 25” 1st Ed
Remarks: Tump visible on Google earth
Actions: None
Site No: 33
Devon HER No: 
NGR (SX): 4669 7161 
Location: East bank of River Tavy  
Description: Earthwork depicted on OS 25" 1st Ed  
Remarks: Probably associated feature of Devon and Courtenay Mine  
Actions: Field verification required  

Site No: 34
Devon HER No: 
NGR (SX): 4669 7150 
Location: East bank of River Tavy  
Description: Possible Earthwork depicted on OS 25" 1st Ed  
Remarks: Probably associated feature of Devon and Courtenay Mine  
Actions: Field verification required  

Site No: 35
Devon HER No: 
NGR (SX): 4665 7141  
Location: East bank of River Tavy  
Description: Possible Earthwork depicted on OS 25" 1st Ed  
Remarks: Probably associated feature of Devon and Courtenay Mine  
Actions: Field verification required  

Site No: 36
Devon HER No: 
NGR (SX): 4701 7149  
Location: Edge of enclosed land west of Lower Tor  
Description: Roofless buildings depicted on OS 25" 1st Ed  
Remarks: Possibly associated feature of Devon and Courtenay Mine  
Actions: Field verification required  

Site No: 37
Devon HER No: 
NGR (SX): 4668 7023  
Location: East bank of River Tavy near bend in the river at Point Wood  
Description: Roofless buildings depicted on OS 25" 1st Ed  
Remarks: Buildings possibly associated with mining. Could be a wheelpit described by C F Barclay (2004), part of William and Mary Mine (site 20)  
Actions: Field verification and (Level 1) recording required  

Site No: 38
Devon HER No: 
NGR (SX): 4689 7020  
Location: In open field on north-facing slope south side of River Tavy  
Description: Roofless buildings depicted on OS 25" 1st Ed  
Remarks: Buildings possibly associated with mining. Area now covered by trees  
Actions: Field verification required  

Site No: 39
Devon HER No: 
NGR (SX): 4703 6986  
Location: Blackmoorham Wood, north of Raven’s Rock  
Description: Un-annotated earthworks depicted on OS 25" 1st Ed  
Remarks: Possible shafts with spoil heaps. Potentially associated with Wheal Bedford (site 2)  
Actions: Field verification required (other examples may be present nearby)  

Site No: 40
Devon HER No: 
NGR (SX): 4802 7015  
Location: South slope of West Down  
Description: Un-annotated earthworks depicted on OS 25" 1st Ed  
Remarks: Shaft and spoil heap associated with West Down Mine (Site 21)  
Actions: Field recording required (Level 1)
Site No: 41
Devon HER No:
NGR (SX): 4812 7030
Location: South slope of West Down
Description: Un-annotated earthworks depicted on OS 25" 1st Ed
Remarks: Shaft and spoil heap associated with West Down Mine (Site 21)
Actions: Field recording required (Level 1)

Site No: 42
Devon HER No:
NGR (SX): 4818 7092
Location: South slope of West Down
Description: Roofless buildings depicted on OS 25" 1st Ed
Remarks: Roofless buildings depicted on OS 25" 1st Ed
Actions: Field verification and recording (Level 1) required

Site No: 43
Devon HER No:
NGR (SX): 4844 7015
Location: South slope of West Down. North bank of Walkham
Description: Un-annotated earthworks depicted on OS 25" 1st Ed
Remarks: Shaft and spoil heap associated with Westdown Mine (Site 21)
Actions: Field recording required

Site No: 44
Devon HER No: 63693
NGR (SX): 4858 7028
Location: SE slope of West Down near River Walkham
Description: Buildings and structures depicted on OS 25" 1st Ed
Remarks: Possible dressing floors and reputed calciner
Actions: Field verification and recording (Level 1) required

Site No: 45
Devon HER No: 63693
NGR (SX): 4744 6934
Location: West bank of River Tavy
Description: Buildings and structures depicted on OS 25" 1st Ed
Remarks: Possible dressing floors and wheelpit
Actions: Field verification and recording (Level 1) required

Site No: 46
Devon HER No: 43152
NGR (SX): 4766 6607
Location: White Rock Wood, west of Tavy
Description: Unnamed shaft depicted on OS 25" 1st Ed.
Remarks: Likely to be Whiterock Shaft and part of Wood Mine (site 6)
Actions: None

Site No: 47
Devon HER No:
NGR (SX): 4781 7222
Location: East Crowndale
Description: Area of surface disturbance, possibly mine related, depicted on OS 25" 1st Ed 1884-5
Remarks: Could be associated with either Rix Hill (site 22) or East Crowndale mines (site 22).
Actions: Field verification and recording (Level 1)

Site No: 48
Devon HER No:
NGR (SX): 4689 7045
Location: Point Wood
Description: A disused earthwork leat which drew water from the east side of the River Tavy to supply a waterwheel at a bend in the river opposite William and Mary Mine (site 20)
Actions: Field investigation to check survival and record associated features (Level 1)
<table>
<thead>
<tr>
<th>Site No:</th>
<th>49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devon HER No:</td>
<td></td>
</tr>
<tr>
<td>NGR (SX):</td>
<td>4732 6951</td>
</tr>
<tr>
<td>Location:</td>
<td>Blackmoorham wood</td>
</tr>
<tr>
<td>Description:</td>
<td>Earthwork feature</td>
</tr>
<tr>
<td>Actions:</td>
<td>Field verification and recording (Level 1)</td>
</tr>
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<table>
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<tr>
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<tbody>
<tr>
<td>Devon HER No:</td>
<td></td>
</tr>
<tr>
<td>NGR (SX):</td>
<td>4724 6956</td>
</tr>
<tr>
<td>Location:</td>
<td>Blackmoreham Wood, adjacent to west bank of Tavy</td>
</tr>
<tr>
<td>Description:</td>
<td>Adit</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Depicted on map of mine setts in the Tavy Valley (DRO 1258M/E14b)</td>
</tr>
<tr>
<td>Actions:</td>
<td>Field verification and recording (Level 1)</td>
</tr>
</tbody>
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<tr>
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<tbody>
<tr>
<td>Devon HER No:</td>
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</tr>
<tr>
<td>NGR (SX):</td>
<td>4714 6965</td>
</tr>
<tr>
<td>Location:</td>
<td>Blackmoreham Wood, adjacent to west bank of Tavy</td>
</tr>
<tr>
<td>Description:</td>
<td>Adit</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Depicted on a map of mine setts in the Tavy Valley (DRO 1258M/E14b)</td>
</tr>
<tr>
<td>Actions:</td>
<td>Field verification and recording (Level 1)</td>
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<table>
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<tr>
<th>Site No:</th>
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<tbody>
<tr>
<td>Devon HER No:</td>
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</tr>
<tr>
<td>NGR (SX):</td>
<td>4703 6963</td>
</tr>
<tr>
<td>Location:</td>
<td>Blackmoreham Wood, below Raven Rock</td>
</tr>
<tr>
<td>Description:</td>
<td>Adit</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Depicted on a map of mine setts in the Tavy Valley (DRO 1258M/E14b)</td>
</tr>
<tr>
<td>Actions:</td>
<td>Field verification and recording (Level 1)</td>
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<tbody>
<tr>
<td>Devon HER No:</td>
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</tr>
<tr>
<td>NGR (SX):</td>
<td>4731 7117</td>
</tr>
<tr>
<td>Location:</td>
<td>West of Walreddon</td>
</tr>
<tr>
<td>Description:</td>
<td>Tump and possible mine waste.</td>
</tr>
<tr>
<td>Remarks:</td>
<td>A tump is depicted on the OS 25&quot; 1st Ed map, which may delimit an area of disused mine working. There appears to be mine waste visible on recent satellite images (GE)</td>
</tr>
<tr>
<td>Actions:</td>
<td>Level 1 field investigation</td>
</tr>
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</table>

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<tbody>
<tr>
<td>Devon HER No:</td>
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</tr>
<tr>
<td>NGR (SX):</td>
<td>4845 7020</td>
</tr>
<tr>
<td>Location:</td>
<td>West Down, southern slope</td>
</tr>
<tr>
<td>Description:</td>
<td>Possible building platforms close to an adit</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Recorded by Greeves and Passmore 1999</td>
</tr>
<tr>
<td>Actions:</td>
<td>None</td>
</tr>
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</table>

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Devon HER No:</td>
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</tr>
<tr>
<td>NGR (SX):</td>
<td>4855 7035</td>
</tr>
<tr>
<td>Location:</td>
<td>West Down, southern slope</td>
</tr>
<tr>
<td>Description:</td>
<td>Openwork</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Recorded by Greeves and Passmore 1999</td>
</tr>
<tr>
<td>Actions:</td>
<td>None</td>
</tr>
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</table>

<table>
<thead>
<tr>
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<tbody>
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<td>Devon HER No:</td>
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<tr>
<td>NGR (SX):</td>
<td>4865 7035</td>
</tr>
<tr>
<td>Location:</td>
<td>West Down, southern slope</td>
</tr>
<tr>
<td>Description:</td>
<td>Adit</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Recorded by Greeves and Passmore 1999</td>
</tr>
<tr>
<td>Actions:</td>
<td>None</td>
</tr>
</tbody>
</table>
Site No: 57
Devon HER No: 63854
NGR (SX): 4845 7020
Location: West Down, southern slope
Description: Two adits that overlie a streamwork
Remarks: Recorded by Greeves and Passmore 1999
Actions: None

Site No: 58
Devon HER No: 
NGR (SX): 4733 7252
Location: Crowndale
Description: A tinwork is documented at Crowndelham in 1539 (Greeves 1981)
Remarks: A surviving openwork at Crowndale could represent field remains.
Actions: Level 1 field investigation

Site No: 59
Devon HER No: 
NGR (SX): 
Location: Near Bucktor
Description: A tinwork is documented at 'Bukter' in 1508 (Greeves 1981)
Remarks: Location or status of field evidence not known precisely
Actions: None

Site No: 60
Devon HER No: 
NGR (SX): 4568 7188
Location: Morwell Down
Description: Pits and surface working in a narrow band of woodland
Remarks: Recorded on annotated map by R Waterhouse 2010
Actions: None

Site No: 61
Devon HER No: 
NGR (SX): 4635 7195
Location: Morwell Down
Description: Pits and surface working in a narrow band of woodland
Remarks: Recorded on annotated map by R Waterhouse 2010
Actions: None

Site No: 62
Devon HER No: 
NGR (SX): 450- 715-
Location: Morwell Down
Description: Tinwork called Downland recorded in 1760 (Greeves 1981)
Remarks: 
Actions: Field verification and (Level 1) survey

Site No: 63
Devon HER No: 
NGR (SX): 4568 7158
Location: Morwell Down
Description: Pits and surface disturbance. Evidence of early tin outcrop working
Remarks: Recorded on annotated map by R Waterhouse 2010
Actions: None

Site No: 64
Devon HER No: 21889
NGR (SX): 48—70--
Location: West Down
Description: Trial pits
Remarks: Recorded by Harris 1968
Actions: Field verification and (Level 1) survey
Site No: 65
Devon HER No: 63695
NGR (SX): 4882 7062
Location: West Down, southern slope
Description: Ruined building possibly associated with medieval streamworks
Remarks: Recorded by Greeves and Passmore 1999
Actions: None

Site No: 66
Devon HER No: 63696
NGR (SX): 4884 7061
Location: West Down, southern slope
Description: Alluvial tin streamworks. Parallel ridges and waste heaps
Remarks: Recorded by Greeves and Passmore 1999. Surveyed by the DTRG
Actions: None

Site No: 67
Devon HER No: 63813
NGR (SX): 4894 7034
Location: Roborough Down, NW slope
Description: Adit approached by a long trench
Remarks: 
Actions: Field verification and (Level 1) survey

Site No: 68
Devon HER No: 63055
NGR (SX): 575- 655-
Location: Tavistock to Bere Ferrers
Description: The Lumburn Leat. A medieval leat, now dry and silted, which conveyed water from the Lumburn River west of Tavistock, to power waterwheels at the silver mines of Bere Ferrers.
Remarks: See Claughton 1996. The field evidence for the leat has never been metrically recorded.
Actions: None

Site No: 69
Devon HER No: 
NGR (SX): 575- 655-
Location: Great Whiterock Wood
Description: Outcrop workings
Remarks: 'old workings and shallow gunnises can be traced continuously... over a distance of one mile' (Hamilton Jenkin 1974, 56)
Actions: Field verification and (Level 1) survey

Site No: 70
Devon HER No: 
NGR (SX): 4745 6548
Location: 
Description: Spoil Heap depicted on 1" edition OS 25" map.
Remarks: Likely to be South or Middle Shaft and part of Wood Mine (site 6)
Actions: None

Site No: 71
Devon HER No: 
NGR (SX): 468- 688-
Location: Hocklake,
Description: Tinworks documented at Hawklake/Hocklake, Hocklake Lane, Hocklake Ridge in the early 17th century and 1760 (Greeves 1981)
Remarks: Precise locations to be established
Actions: Field verification and (Level 1) survey

Site No: 72
Devon HER No: 
NGR (SX): 45—71--
Location: Morwell Down Plantation
Description: A tinwork is documented at Holming Beam c. 1760 (Greeves 1981)
Remarks: 
Actions: Field verification and (Level 1) survey
Site No: 73
Devon HER No:
NGR (SX): 465-701-
Location: Ramsham (?) Wood
Description: A tinwork is documented at Ramsham in 1760 (Greeves 1981)
Remarks: Possibly at or near the site of William and Mary
Actions: Field verification and (Level 1) survey

REFERENCES

SOURCES (with abbreviations)
AMP – abandoned mine plan (Devon Record Office)
BI (with parish) Brooke Index (Westcountry Studies Library)
CRO – Cornwall Record Office (Truro)
DA – Dartmoor Archive
DBG – Devon bat Group
DN – Daily News
DNP(A) – Dartmoor National Park (Authority)
DRO – Devon Record Office (Exeter)
DTRG – Dartmoor Tinworking Research Group
EFP – (Trewman’s) Exeter Flying Post
FW – Financial World
GE – Google Earth
LG – London Gazette
LLC – Limited Liability Chronicle
MJ – Mining Journal
NMR – National Monument Record
OS – Ordnance Survey
PCL – Plymouth City Library
PDWJ – Plymouth and Devonport Weekly Journal
PWDRO – Plymouth and West Devon Record Office (Plymouth)
SYM – Sherborn & Yeovil Mercury
TG – Tavistock Gazette

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