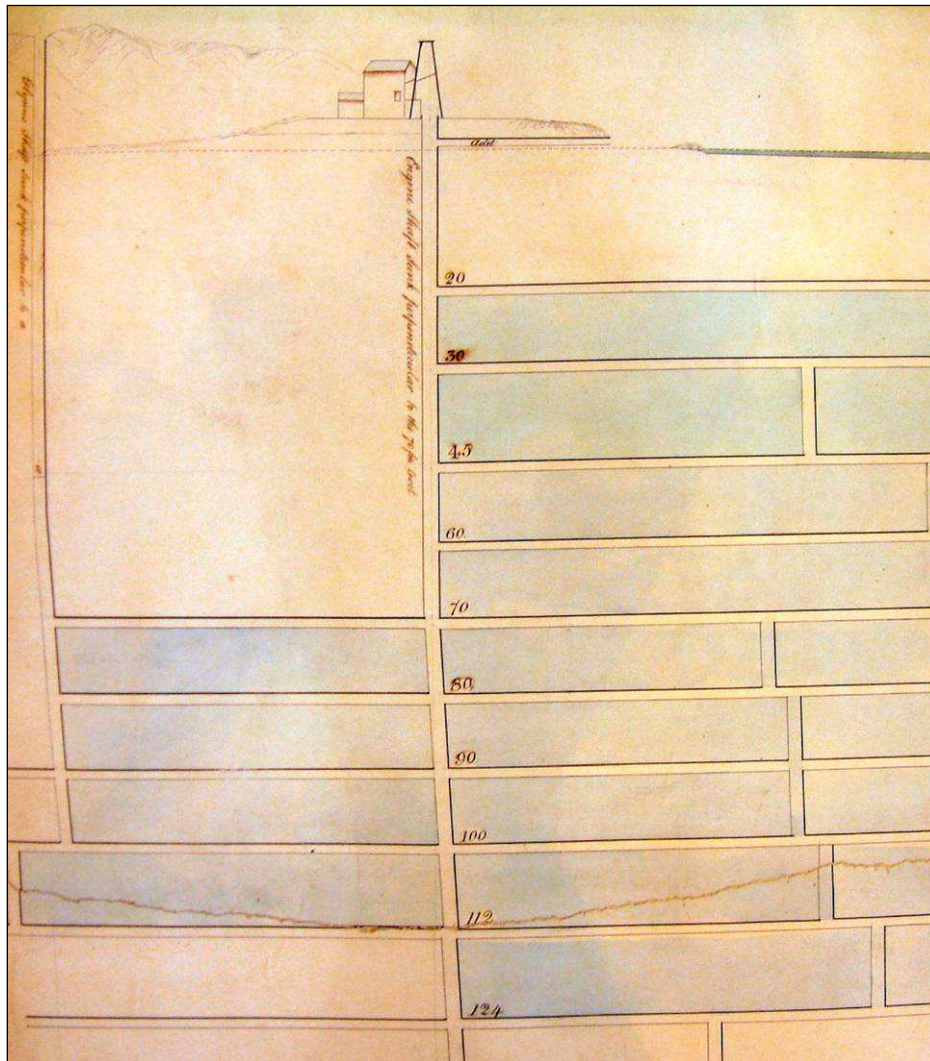


# South Tamar Consols, Bere Alston Devon

## Archaeological Assessment



**Historic Environment Projects**



Report No

2010R042

Report Name

South Tamar Consols, Devon,  
archaeological assessment

Report Author

Colin Buck

Event Type

Assessment

Client Organisation

Devon County Council

Client Contact

Bill Horner

Monuments (MonUID)

5493

48784

48785

76228

76229

Fieldwork dates (From)

March 2010

(To)

March 2010

(Created By)

Colin Buck

(Create Date)

29/3/10

Location (postal address; or general location and parish)

South Tamar Consols, South of Weir Quay,  
Bere Alston Parish

(Town - for urban sites)

Bere Alston

(Postcode)

(Easting) X co-ord

SX 43554

(Northing) Y co-ord

64445

### List of Figures

Front cover illustration is a Section of South Tamar Consols Mine (DRO R7C Plan 2/2)

#### Fig no Description

- 1 Location Plan
- 2 John Hobart manor map (1737)
- 3 Gardner's Map (1784-6)
- 4 Beerferris Manor Tithe map (1844)
- 5 OS First Edition map (1883)
- 6 OS Second Edition map (1907)



Historic Environment, Cornwall Council is a Registered Organisation with the Institute for Archaeologists

## Project background

A pre-application planning enquiry has been made by the Weir Quay Watersports Hub Club Development Group to Bill Horner (Devon County Council), regarding a wish to site a new building with close access to a new marina and mooring quay (SX 43554 64445). The proposed site (see Fig 1) was formerly part of South Tamar Consols, a mid 19<sup>th</sup> century silver lead mine. The site likely to have been used for mining purposes in earlier centuries, initially as part of the medieval Bere Ferrers Royal Silver Mine.

The site lies within a constituent part of the Tamar Valley Mining Area of the Cornwall and West Devon Mining World Heritage Site (Site A10), and the Tamar Valley AONB. In addition, the site is within the Weir Quay/Bere Ferrers Conservation Area, and the River Tamar is part of the Plymouth Sound and Estuary Special Area of Conservation

HES (Projects) has been asked by the client (email brief sent on 18/3/10), to produce a short summary report detailing the background history of the mine and historic map regression in order to inform the site's significance, and potential for sub-surface archaeological remains. The client (Bill Horner – Devon County Council), will then decide if a further more detailed archaeological assessment is needed.

## Aims and objectives

1. To identify, describe and assess the significance of the existing visible archaeological resource in the study area.
2. To research the background history of the site by documentation and map research, in order to produce an historic map regression overview.
3. To produce an outline statement of the direct/indirect impacts of any new development.
4. To describe how impacts of any proposed development can be mitigated (to standing structures and buried archaeology).
5. To produce archaeological recommendations (if necessary) for more detailed site evaluation.

## Working methods

All recording work has been undertaken according to the Institute of Field Archaeologists *Standards and Guidance for Archaeological Recording*. Staff followed the IFA *Code of Conduct* and *Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology*.

This archaeological assessment consists of three stages: desk top assessment; fieldwork; followed by report.

### Desk top assessment

A desk-based assessment of the mine site was undertaken. The desk study involved inspection of the following sources. This provided historical background to the study area and an understanding of its context in the mining landscape.

- Devon Historic Environment Service (DHES) Sites and Monuments Record including secondary sources in Cornwall's and Devon's HES library as referenced.
- Devon Record Office (Specific map sources), Exeter (DRO R7C and Bere Ferrers TM DRO 4/2R).
- Westcountry Studies Library (Brookes Parochial Mines Index).
- Cornwall Record Office (Specific map sources), (CRO ME 242).
- Relevant historic map sources at DHES, including c 1840 Tithe Maps, OS c 1880 and 1907 25" maps, etc.

- Published secondary sources (Booker 1971, Hamilton Jenkin 2005, Barton 1964, Buck 1998, 2008, 2009)
- Local Journals/archives – Friends of Morwellham Journals.
- Existing (statutory and non statutory) designation records

### **Field survey assessment**

The purpose of the rapid field survey was to provide a summary descriptive record of the study area, and to assess its potential for buried archaeology. It was intended to record information about sites identified in the desk study and to identify and describe any additional ‘new’ sites. The nature and condition of the site has been described in detail in this report with reference to colour digital site photographs.

Preparation for the field survey included:

- Preparation of base maps with known sites.
- Risk assessment (to be carried out with project manager).

The field survey achieved the following:

- Description of the study area.
- Assessment of condition, survival
- The identification of areas which are likely to contain buried archaeological remains (mainly industrial relating to the functioning of the mine).
- An understanding of the mitigation options available to the client in terms of the proposed impact of any new development to the site and character of the former mine site
- An assessment of the need for further archaeological evaluation.

## **Historical background**

The site lies at the edge of the South Tamar Consols silver-lead mine, within the wider Bere Alston mining district.

### **Summary background history of the Bere Alston Mines**

The Bere Alston mines form one of three main documented royal lead-silver mines in medieval England (the others being Combe Martin in north Devon, and the ‘silver mines of Carlisle’ at Alston Moor in Cumbria). However, *‘The silver-lead mines of the Tamar Valley have probably been more profitably worked over a longer period than any other mines in England’* (Booker 1971, 54).

There are three main parallel north-south lead courses across the Bere peninsula of West Devon. The west lode included the later 19<sup>th</sup> century mines of South Hooe (SX 425 657), North Hooe (SX 427 661) – both known as Tamar Consols, and Ward Mine (SX 427 687). The main central lode included the 19<sup>th</sup> century mines South Tamar Consols (SX 435 645), Furzehill (SX 517 629), Lockridge (SX 439 665) and Buttspill mines (SX 437 678). The eastern lode (somewhat shorter and underlying the River Tavy) included Wheal Maristowe (SX 471 648), extending north from Lopwell up the floor of the valley. However the main silver-lead production in the 19<sup>th</sup> century appears to have been from the central lode followed by the western lode.

The lead ore in these lodes had a high silver content which was richest near the surface; at deeper levels a greater percentage of lead predominated. Thus *‘some of the Bere mines, as they were collectively known, returned between 80 and 100 oz and even as much as 140 oz to the ton. The ore*

*was remarkably free from impurities and in some workings was found associated with fluorspar, mined in considerable quantities in the 1870s for the manufacture of glass*' (Booker 1971, 54).

In the final decade of the late 13<sup>th</sup> century Beeralston mine attracted the attention of King Edward I (1293), when William de Wymondham, the king's *factotum* accounted to the Treasury 270 lbs of refined silver. In the following two years over 500 lbs and over 700 lbs was produced. *'This silver was probably obtained from argentiferous lead ores, and was mainly produced by the labours of 'foreign' miners, of whom more than three hundred were imported from Derbyshire and twenty five from Wales'* (Brookes 1986 Devon Parochial Mines Index, Westcountry Studies Library). For the next half century silver production continued, either in royal or leased to private entrepreneurs. Technologically, mine drainage was improved by digging adits (or levels), and shafts with horse whims – the earliest documented mention of these mining techniques in English mines. No doubt a result of the increasing population, Bere Alston had become a borough after 1295, and it is likely this section of the River Tamar had become an important route for the import of supplies and export of ore (probably quays at Calstock, Weir Quay and Lopwell). However, the Black Death of 1355 may well have restricted large scale mining for many years in the area.

Documentary sources give the impression that after the middle of the 14<sup>th</sup> century, mining on such a large scale did not re-occur. Perhaps the easily available silver ore had been found. However, mining did continue, albeit fluctuating intermittently, especially in the middle of the 15<sup>th</sup> century, whilst later Elizabethan works appear to have reworked the waste from earlier workings (Booker 1971, 60). The extraction of ore from these 'hard rock' workings needed a relatively high capital outlay, and so if easier silver lodes were found elsewhere (in the Mendips or North Devon for example), these would have been preferred.

The 18th century saw for the first time larger scale 'industrial' mine workings in the Tamar Valley, although this was more often than not related to the search and dressing of copper ores. In the 1720's Kahlmeter noted the 'Royal Lead Mine' had yielded silver from re-working old waste dumps (Brookes 1986). The 1780s saw the first large scale development of the lode (by Christopher Gullett), later known in the following century as South Hooe Mine and South Tamar Consols – both at the southern (River Tamar) end of each of the principal silver-lead lodes. *'... between 1784 and 1785 the South Hooe mine on the western lode is recorded as producing 6,500 oz of silver out of ore containing 140 oz of silver to the ton – one of the richest pockets of ore ever to be found in the district'* (Booker 1971, 60).

## **Summary background history of South Tamar Consols**

The methodology of using a timeline has been used to illustrate the history, fortunes and failures of this mine. A variety of sources have been used to compile this history (see Bibliography).

**1737** John Hobart's map (CRO ME 2424 - Fig 2) of Bere Ferrers shows a long line of mine workings titled '*Silver Mines*', with the later site of South Tamar Consols labelled '*Mouth of the Silver Mines*'. Presumably there was an adit that drained the mine and gave access/egress to the workings. The Cleave settlement consists of three houses and is tenanted by William Grills.

**1780s Beer Ferrers Mine** was advertising for '*20 good lusty hands*' and by 1795 it was announced that 76,000 ounces of silver and 1,400 tons of lead ore had been returned from this mine in the previous seven years, realising a sum of £45,000 (Hamilton Jenkin 2005, 22). However in 1785 the silver lead mines of Whitsum, Lockridge and Furzehill had stopped working (Lysons 1822).

**1784** Gardner's map (Fig 3) does not show the mine site very well; the site is shown as wooded – and no buildings shown (in red). However, a small quay (or Hard), jutting out into the River Tamar, is shown south of Cleave settlement (mine site). This appears to be related to the functioning of the Lime Kiln (DHES 5494 at SX 43420 64620), also shown on later maps (Figs 4-6).

**1788 Beer Ferrers Mine** workings were equipped with a 20" Boulton & Watt steam engine which continued in use until late 1791, when it caught fire (Hamilton Jenkin 2005, 22).

**1795** By this year it was announced that 76,000 ounces of silver and 1,400 tons of lead ore had been returned from this mine in the previous seven years, realising a sum of £45,000 (Jenkin 2005, 22).

**1808/9** Abandoned Mine Plan R79E at Devon Record Office. *'Plan drawn up to advertise all abandoned mines in Beer Old mines lode which stretched from the Tamar to Calstock, presumably in an attempt to sell them off. The shares proved unattractive and eventually the project was abandoned... There do not appear to be any engine shafts or other evidence of access at this point (although quite a bit at Cleavelands)... The plan shows the limekiln and possibly a track connecting to Weir Quay, but nothing south of the limekiln. Cleave is shown (but not the barn) as belonging to (or tenanted by) Mr J Grills. Note the reproduction is poor'* (Robin and Betsy Gallup undated text).

**1809** *'Extensive preparations were made for opening the Beer Alston mines again, and the undertaking was divided into 3000 shares of 100l. each. It has been said, that some time after the last re-opening, 6000 ounces of silver were procured in six weeks. The mines are described as 110 fathom deep, and running under the Tamar ... They have not answered to the adventurers, and the whole has been again abandoned except the mine called South Hooe''* (Lysons 1822).

**1812** The **Beeralstone Mine** changed hands to a company consisting entirely of London shareholders (Hamilton Jenkin 2005, 22). The lease comprised Birch and Cleave mine (later South Tamar Consols), and Furzehill (later East Tamar Mine).

**1814** *'Beeralston Mine is still very rich and the shares sell high from £90 to £100 per share ...'*. In April the shares were advertised for auction a further auction held in January 1815 (Brookes 1986)

**1816** The company bought a boiler through Richard Trevithick, at one time the mines were large producers of lead.

**1820** In this year **Beerferris Mines** (comprising the Birch and Cleave Lode ie the eastern lode), merged with South Hooe Mine (ie the western lode) to form **South Tamar Consols**. The South Hooe silver content of the western lode was exceptional and occasionally ran as high as 180 oz. and the lead (metal) content of the ore averaged 11 to 12 parts in 20 (Jenkins 2005, 22). Thus, Beerferris Mine now included both east and west (north-south aligned), silver lead lodes.

**1820s** A small silver-lead smelter was established by the newly established **Beeralston Mining Company** (1812-1822) with five furnaces (Gallup 1991, 30) at Weir Quay to smelt the mine's own ores. This mine leased nearby Birch and Cleave mines (later South Tamar Mine Sett), and Furzehill Mine (later East Tamar Mine).

**1821** The sale of **Beeralston Mine** included a lead smelting house in 1821 (Barton 1964, 97), which was probably the Weir Quay smelter. It is doubtful if this mine included mine setts on the north side of the peninsula of the same lode (Green Valley/Buttspill/Tamar Valley Mine). In May the materials at Birch and Cleave Mine were put up for sale. They included a 42" Boulton & Watt (double) steam engine and a 36" single steam engine (each with capstan and shears). Included in the items was an old iron barge of about 40 tons burthen. In this year the mine also sold 7 tons of copper ore (1 ton metal) for £51 (Brookes 1986).

**1822** The mines were 120 fms. deep. In September the unsold items were put up for auction, the items included the 42" engine, a 30' water wheel and six head of stamps, with a 'punching engine' etc (Brookes 1986).

**1833** In March a Report on South Hooe Silver Lead Mine made the following observations (CRO CY/6766): *'This mine ... was worked by the Beeralston Mining Company from 1811 to 1824 inclusive, with considerable success. The amount of profit cannot be stated; the accounts being*

*blended with those of the Beeralston mines generally... The other mines of the Beeralston Company were unsuccessful, and in order to close their accounts, they sold the South Hooe Mine in September 1824 to Mr Geo. Bartly one of their directors...*

**1844** The Plan of the Manor of Beerferris (Property of the Lord Viscount Valletort - PWDRO 81T, reproduced in Fig 3), is undated but a similar map has been stamped with the date 1844, and is taken as the Parish Tithe Map. This shows two sites with what appears to be developed mine buildings at Cleave (See Fig 5) – formerly Beeralston Mine, and for the first time at the site of what became South Tamar Mine. At the latter there is a large building which may have been a steam engine house with boiler house. The Tithe Map apportionment numbers the site 1464a and describes it as a ‘Mine’. The steam engine may have been a crushing engine – if ore was being brought of the old adit. To the east of this is a small building – perhaps a powder magazine, if the adit was being used/formed/enlarged to access and work the lodes – but at deeper levels than in the preceding decades.

**1844** The **East Tamar Mining Co.** worked the setts of Lockridge, Whitsun and Furzehill. However, it appears this also included the sett to the south of Cleave and the future South Tamar site at the mouth of the old adit workings. Steam engines were being used but work was suspended in 1847.

**1846** The **South Tamar United Mining Co.** was formed to work the southern third of the East Tamar Mining Co. sett, which was held under a 21 year lease at 1-15<sup>th</sup> dues from 30<sup>th</sup> April 1846 from Earl Mount Edgcumbe. This company worked a sett that now included ground under the River Tamar (held from the Duchy at the same terms), following the lode southwards. At this time Cowie’s Shaft (on the banks of the Tamar) was already 90 fms. deep and another shaft was 70 fms deep.

**1847** In May a 60” steam engine was being erected at Cowie’s Shaft and the adit had been cleared between 200 and 300 fms. ‘*J.Y. Watson, reporting on the mine at this time, stated that it had been worked about 30 years earlier by the Beer-Alston Mining Company, but that bad financial management and the high prices of materials led to its closure. The Mining Journal, which listed the shares until December 1847, quoted a report that the recent suspension of operations was not likely to last long and that Percival Norton Johnson (see Buck 2008, 17 and Buck 2009, 13), of Tamar Consolidated, was negotiating a reopening... nearly £30,000 were said to have been expended on this mine and on East Tamar*’ (Brookes 1986). The mine company ceased trading shares at the end of January 1848.

**1848** **South Tamar Consols Mining Co.** was formed in July to continue the operations (with additional capital) of the previous company, with same dues paid to the mineral owners. Work in earnest started in August, the first sale of ore being a year later, and two years later was running at a small monthly profit (Brookes 1986).

**1849** An outbreak of Cholera in the district severely affected the operational capacity of all mines.

**1851** During the year the monthly output of ore rose from 45 tons in March to 80 in December. At the end of the year ore reserves were estimated at 663 tons worth £10,608, sufficient for 8½ months working (Brookes 1986).

**1853** £400 was spent on another steam engine, and in the following year’s accounts £100 for ‘balancing’ an engine (presumably the same one).

**1854** During this and next year the mine produced its highest annual totals of ore production (averaging) 1397.65 tons of ore, 840 tons of lead and 60689 ozs of silver (Burt, Waite and Burnley 1984, 107). 301 persons were employed this year, 140 underground, and 90 at surface. The mine produced profits of £20, 125 this year alone (Barton 1964, 101).



**1856** In the summer of 1856 the machinery on the mine was valued at £15,000 and an average of 144 men were employed underground and 130 men, women and children at surface (Brookes 1986).

**1856 (August)** *'The mine had proved profitable, the shares, which had cost the adventurers £1 1s. 6d. each, having returned in profits more than double that amount. The bottom was 120 fathoms deep, the shallow level immediately under the river bed being at 30 fathoms... In the river bed, about half-a-mile from the engine house, there was a 'slide' (as shown on the Abandoned Mine Plan section (R7C) and the location of the collapse) – a section of soft ground running down through the whole depth of the workings – and it appears that this, living up to its name, ran inwards at the time of the accident after having been undermined from beneath... About 8 o'clock on that fateful Sunday evening two engine-men and two watchmen on duty at surface were startled by an explosion whose effects resembled an earthquake shock, a mile away the sound was likened to thunder. Recovering from their fright, the men went to investigate the cause, and found that the trap-hatches on some of the covered shafts had been blow up by the air, which was issuing from them with such force that they were obliged to beat a precipitate retreat. Later, it was discovered that the explosion had resulted from the mine having become inundated with water which had burst in through the bed of the river.... The general opinion was that the South Tamar had been irredeemably destroyed (filled with water within five minutes)...The district was stunned by the news. Less than a fortnight afterwards Bere Alston was described as almost a deserted village...As for the miners, fifty were preparing to emigrate to Chile, thirty to New Zealand and fifty to America, whilst many of the shopkeepers had already left or were arranging to do so. The rest of the miners had gone into other districts to seek employment'* (Noall 1989, 102 – 104).

**1856 (December)** *'The value of submerged and irrecoverable machinery was put at £30,000. In December, the materials at surface were offered for sale, including a 22" horizontal (whim) engine, 24" pumping, stamping and crushing engine, 26" pumping and drawing engine, and 28" horizontal stamping engine (working 24 heads). No effort was ever made to rework the enterprise'* (Noall 1989, 104). In addition a 60" pumping engine was working at the mine (Barton 1964, 101). All of these engines were auctioned in Plymouth on 6/12/1856 (pers comm. Ken Brown).

**1860** Up to this year the machinery was auctioned, most being bought by Rosewarne and Herland United Mines, and William West of St Austell (who re-auctioned the items - (Brookes 1986).

**1863** In August, the liquidator declared a final distribution of 4s. 8d. per share. Total records of output from 1849 – 1860 are 7,140 tons of 64% lead ore, 350 tons of fluorspar; and from 1852 – 1860 262,470 oz. of silver (Dines 1956, 684).

**1883** The First Edition Ordnance Survey Map (Fig 5) shows most of the mine (and all of the study area). The mine is labeled as **South Tamar Mine** (*Silver & Lead disused*). The mine had been abandoned for approximately 26 years – and this shows on the map. Only two chimneys are shown (SX 43605 64449 and SX 43583 64487), the remainder of the site shown as dumps, terraces and tailings ponds etc.

Within the study area the site of a tailings pond (SX 432522 64463) is shown near the present lay-by. If this feature is contemporary with the mine up to 1856, it may have been a tailings pond, used to cleanse the dressing floor water before it was sluiced into the River Tamar.

The outline of the study area extends into the River Tamar, as the form and shape of the silt build-up may represent the former site of a timber quay or 'Hard' used for unloading materials for the mine (mainly coal for the steam engines). The lead ore is likely to have been processed at the nearby Weir Quay Lead Smelter (see Buck 2008, 17).

**1907** The Second Edition Ordnance Survey Map (Fig 6) labels the mine in the same fashion. However, comparing Fig 5 to this map, there is a further reduction of visible features and general deterioration of the former mining landscape. Only one chimney is visible, and the tailings pond is now not visible.

**2010** The site location plan (Fig 1) shows the site as it is today. It consists of two car lay-by areas (on rough ground), and an area in between the lay-bys of a combination of small fly-tip dumps and mine waste dumps.

## Site description

A walk-over field survey was undertaken on 12<sup>th</sup> March 2010, and two photographs taken (Figs 7 and 8 respectively) within the study area. The small section of ground within the study area (Fig 1) that does not consist of the road or River Tamar (up to high tide mark), consists of rough ground made into two laybys and an intervening wooded section that appears to consist of small fly tip dumps and mounds of mine waste. The site is relatively securely fenced on its east side with barbed wire – restricting public access to the core of South Tamar Consols Mine. Visible, just inside the barbed wire (ie outside the study area), there is evidence of a small number of walled remnants of former mine buildings, aligned parallel with the fence – one or two more than 5.0m long and up to 1.5m high. The site visit did not reveal any masonry archaeological features, with the exception of an adit shaft at SX 43604 64412 (Fig 8), which is covered with rotting timber and a loose wire fence. The adit drains under the road and into the River Tamar via a small defined rivulet through the riverine silt/grass.

The shape and form of a possible ‘quay/hard’ was not visible and is not shown on recent OS maps (see Fig 1). The high tide mark of the River Tamar, close to the road, is partly grassed.

## Summary of sites and archaeological potential

No visible extant archaeological features have been identified within the study area (except for the site of the shallow adit shaft), as defined in this report (Fig 1). However the low walled remains of former mine buildings can be seen just within the barbed wire fence boundary running along the north east boundary of the site (see Fig 1). The former reservoir pond clearly shown in Fig 5 can no longer be seen at ground level.

Unfortunately the desk based historical map research has not revealed a detailed site plan of South Tamar Consols during its heyday (1848 – 1856). This is often provided by a combination of Abandoned Mine site plans. The mineral owners (Mt Edgcumbe Estate) mine plans were destroyed by a fire during the Second World War. As the mine was destroyed in 1856 by the River Tamar breach, by the time of the OS First Edition mapping (1883) the site was little more than rubble. It is not certain where there may be site plans of the mine and study area, in order to define and characterise the nature and extent of the archaeological potential of the site.

However, it can be stated with certainty that there is potential for sub-surface archaeological features – these are likely to relate to underground drainage water courses/leats/the shallow adit, and perhaps site of tram lines leading to a possible ‘hard/quay’ jutting out into the River Tamar, all of which would have crossed the study area. The parallel alignment of the lower walls of extant mine buildings just outside the barbed wire fence, may well be indicative of the termination of the mine’s building line. In addition, there is potential (based on anecdotal map evidence only - Fig 5), for the site of a possible quay and ‘hard’, formed in the late 1840’s and used until 1856.

## Potential developmental impacts

**Any new development is likely to affect sub-surface archaeological features within the study area.** The site of the probable tailings/reservoir pond (as shown on Fig 5), if it functioned as the former, would result in elevated levels of heavy metals and other localised contamination. Other impacts relate to the possible site of the quay/hard area. It has not been positively confirmed that the study area outline was in fact a quay or ‘hard’ area. However, many timber

quays (with vertical timber piles as foundations), were built along the river when needed. If so, there may be remnants of the timber piles *in situ* – and certainly, if the ground was built up to form a ‘hard’, this would be visible during a more thorough site analysis.

## Recommendations for further evaluation and recording

The nature, extent and character of the archaeological potential and the nature of any impacts on archaeological remains could be clarified by excavating a small number of evaluation trenches across the site. Given the likely contamination element of the site, it may be necessary for the developer to arrange geotechnical investigation as part of the prerequisites for a planning application. There could be an archaeological element incorporated into the site evaluation scheme at the same time. This comment would equally relate to the site of the quay. The necessity for further archaeological recording relates to The findings of the evaluation trenching would determine whether any further archaeological recording was appropriate.

## References

### Primary sources

Devon Record Office (Exeter):

Tithe Apportionment for Tavistock Hamlets Parish (1843)

MRO (R7C)

Cornwall Record Office:

Mt Edgumbe site plan ME 242 (1737 John Hobart Plan of Bere Ferrers Manor)

West Country Studies Library (Exeter):

Brookes (1986) Parochial Mines Index: Bere Ferrers Parish

### Publications

Barton, D.B., 1964, *Historical Survey of the mines and mineral railways of East Cornwall and West Devon*, Truro

Booker, F., 1971, *The Industrial Archaeology of the Tamar Valley*, Newton Abbot

Brooke, J., 2001, ed *Kalmeter Journal*, Twelveheads Press, Truro

Buck, C., 1998, *Preliminary assessment of industrial sites of archaeological importance in the Tamar Valley*, CAU

Buck, C., 2008, *Weir Quay Smelters, Devon – Impact and Conservation Assessment*, HES Report

Buck, C., 2009, *South Hooe Mine, Bere Alston, Devon – Archaeological Assessment*, HEP Report

Burt, R., Waite, P., and Burnley, R., 1984, *Devon and Somerset Mines*, Univ of Exeter

Collins, J H., 1912, *Observations on the West of England Mining Region*, 1988

Dines, H G. and Phemister, J., 1956 (reprinted, Beer, K.E., 1988), *The Metalliferous Mining Region of South-West England*, HMSO

Gallup, R., 1991, *Weir Quay and Hole's Hole* (Tamar Journal Vol 13)

HMSO., 1911, *The Geology of the Country around Tavistock and Launceston*, Memoirs of the Geological Survey, Sheet 337

Jenkin, A.K H., 2005, *Mines of Devon, Landmark Collector's Library*

Lysons., 1822, *Magna Britannicae, Vol 6, Devonshire*

Noall, C., 1989, *Cornish Mine Disasters*, Dyllansow Truran

Patrick, A., 1983, *Copper production in the Tamar Valley in the Eighteenth Century*, Tamar Journal, Vol 5

Rippon, S, Cloughton PF, and Smart C., 2009, *Mining in a medieval landscape: the royal silver mines of the Tamar Valley*, Exeter University Press

## **Project archive**

The HE project number is **2009115**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration (file no 2009115).
2. Electronic map drawings stored in the directory: L:\Historic Environment (Data)\HE\_Projects\Devon\South\_Tamar\_Consols
3. Digital photographs stored in the directory: R:\Images\HES images\Devon\Sites\South Tamar Consols
4. This report text is held in digital form at HE CC as: G\Historic Environment (Documents)\HE Projects\Sites\Devon\South Tamar Consols 2009115
5. English Heritage/ADS OASIS online reference: cornwall2-77090

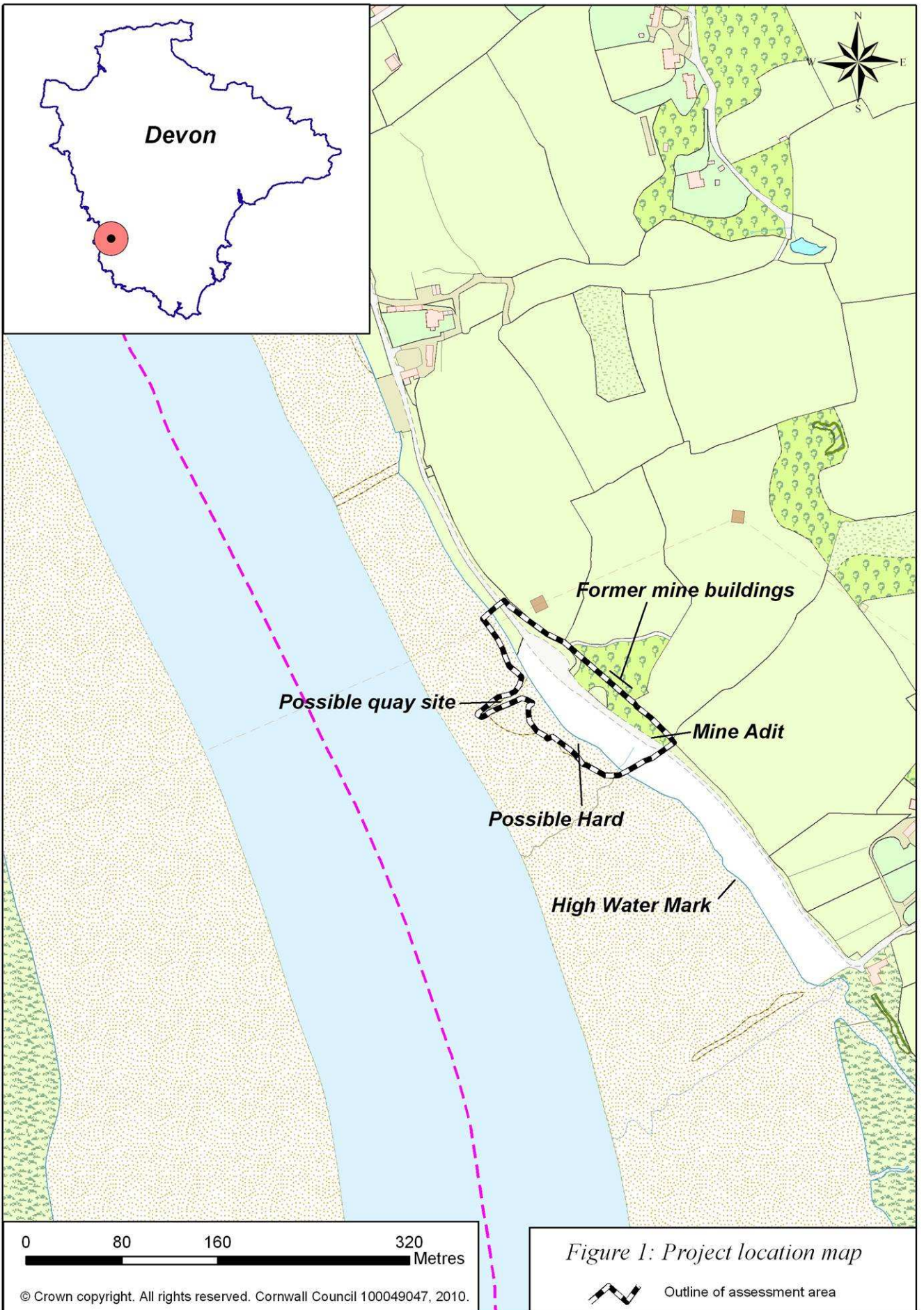


Figure 1: Project location map



Outline of assessment area

0 80 160 320 Metres

© Crown copyright. All rights reserved. Cornwall Council 100049047, 2010.




Outline of assessment area

Figure 2. John Hobart Manor Map (1737)

0 50 100 200  
Metres



 Outline of assessment area

0 100 200 400  
 Metres

*Figure 3. Gardner Map (1784-1786):*

(MAPS K.TOP XI 80-80a. By Permission of The British Library)




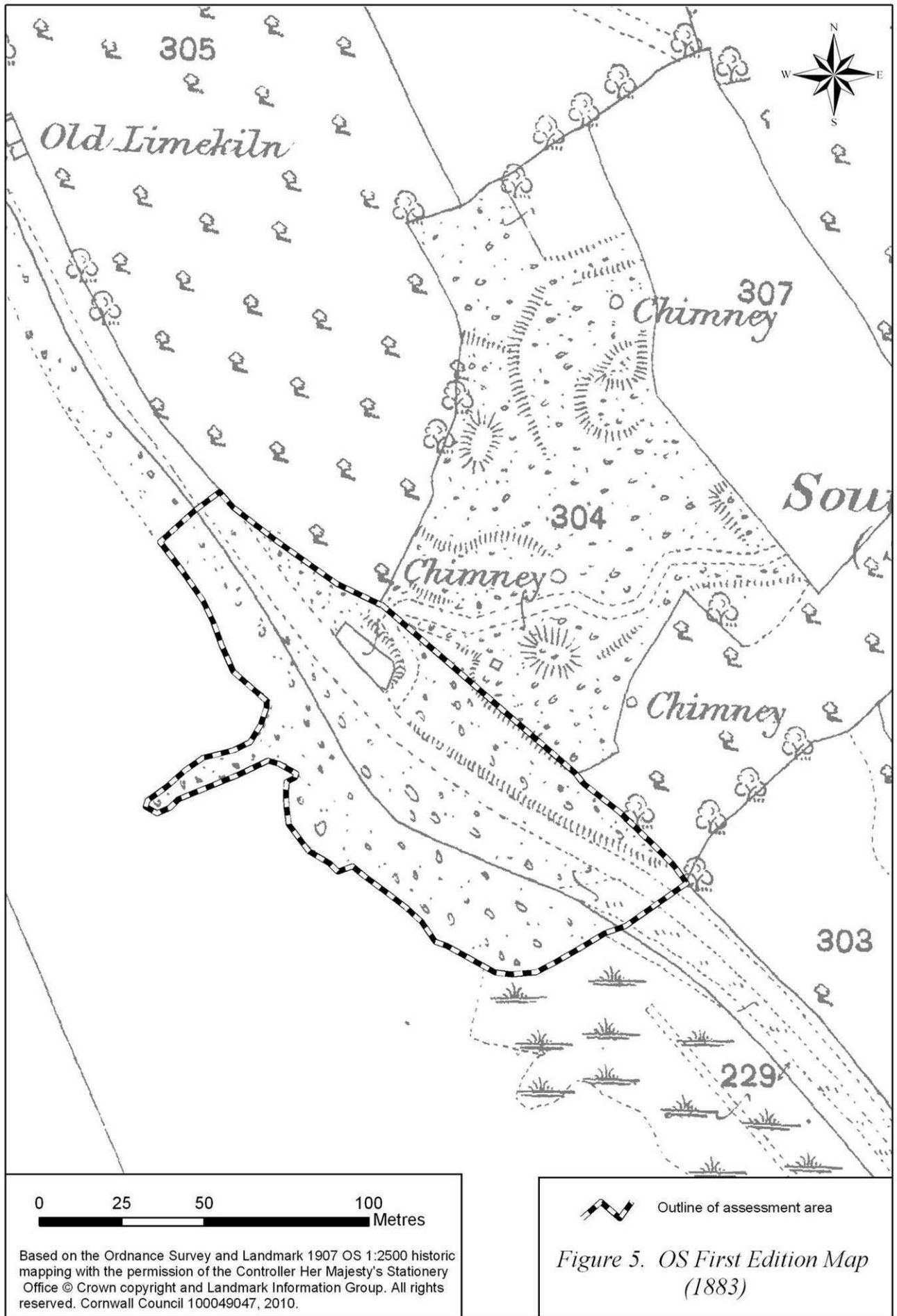
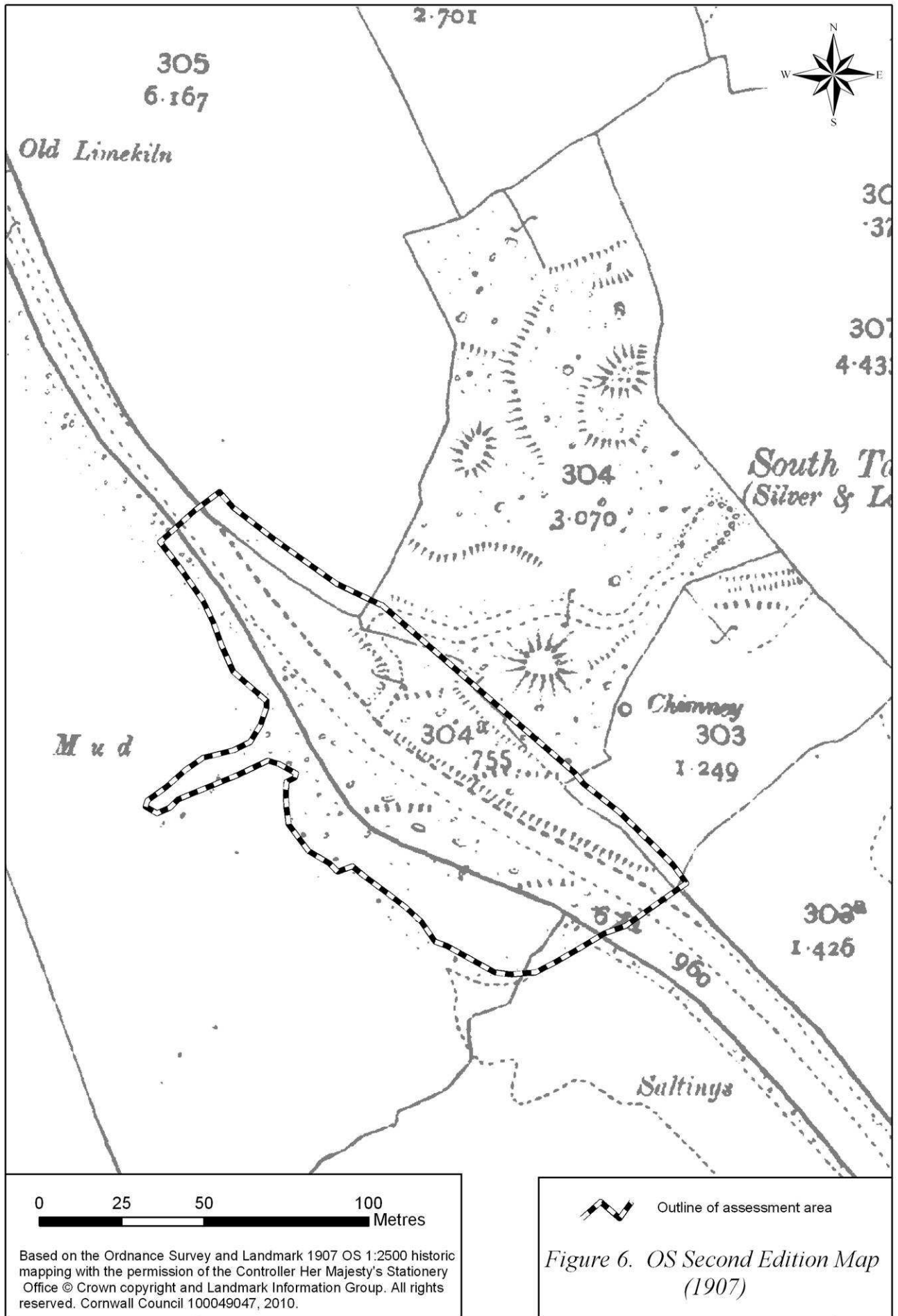
 Outline of assessment area

Figure 4. Beerferris Manor Tithe Map (1844)

0 50 100 200  
 Metres









*Fig 7 South Tamar Consols study area (between road and former mine site)  
C Buck 2010© CHE(P)*



*Fig 8 An adit shaft on south side of study area  
C Buck 2010© CHE(P)*