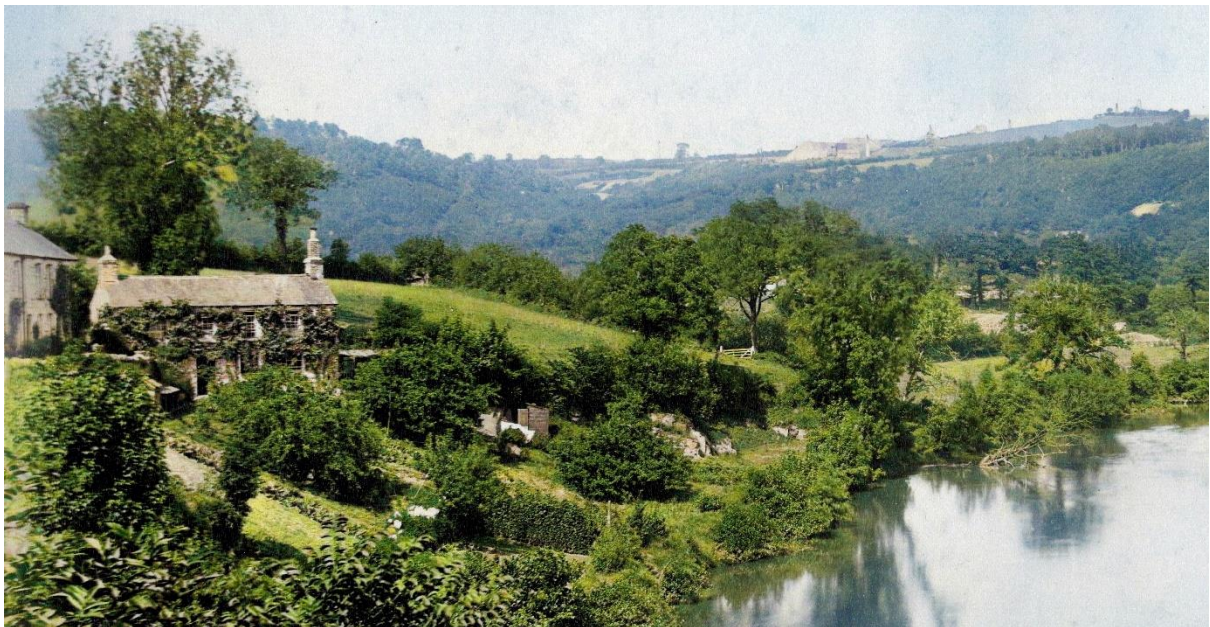




Mineworkers' Smallholdings within the Tamara Landscape Partnership area



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Cover image: View from New Bridge, Gunnislake looking towards Devon Great Consols Mine - 1880s - Hudson's Series

(Image: Stephen Colwill Collection)

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1 Summary

This study was commissioned by the Cornwall and West Devon Mining Landscape World Heritage Site Office on behalf of the World Heritage Site Partnership, the Tamara Landscape Partnership and the Tamar Valley Area of Outstanding Natural Beauty. The assessment was undertaken to record smallholding mineworkers within the Tamara Landscape Partnership scheme area, in the mid-nineteenth century, using parish Tithe data and Census Returns. A total of 77 smallholding mineworker case studies were produced across three parishes, with genealogical histories created for each.

The Cornwall and West Devon Mining Landscape World Heritage Site is a member of the Tamara Landscape Partnership scheme, which constitutes a five-year programme of activities that encompass a range of outcomes in the Tamar Valley focusing on the four themes of 'People and communities', 'Heritage', 'Access and sustainable tourism', and 'Farming and land management'.

2 Acknowledgements

This study was undertaken by Stephen Colwill under the aegis of the Tamara Heritage theme and was managed by Ainsley Cocks on behalf of the World Heritage Site Office. Gary Lewis, Senior Heritage Officer for the Tamara Landscape Partnership, facilitated the project on behalf of Tamara and the Tamar Valley Area of Outstanding Natural Beauty. The research was made possible through support from the Heritage Fund.

The Tamara Landscape Partnership and Cornwall and West Devon Mining Landscape World Heritage Site Partnership Board are grateful to Stephen Colwill for delivering this detailed and challenging research, and to such a high standard.

The views expressed in this report are those of Stephen Colwill and Ainsley Cocks, except where indicated, and are presented in good faith on the basis of professional judgement and on information currently available.



Calstock village and viaduct, within the Tamar Valley (Image: Barry Gamble)

3 Purpose of the research

With a total area of 19,710 hectares, the Cornwall and West Devon Mining Landscape World Heritage Site, as inscribed by UNESCO in 2006, is the largest industrial World Heritage Site (WHS) in the UK. It is defined by a suite of seven landscape 'attributes' (or components) which together express the Site's *Outstanding Universal Value* (OUV), or international importance. Mineworkers' smallholdings i.e., small subsistence farms, comprise one of these seven landscape attributes of the WHS and are the focus of this study.

The purpose of the research is to increase knowledge of mineworkers' smallholdings within Area A10 of the World Heritage Site, i.e. 'The Tamar Valley Mining District with Tavistock', and also across the wider Tamar Valley and Tamara Landscape Partnership scheme area (Fig 1). This work is primarily a genealogical study of those individuals that managed smallholdings alongside working in mines. The identification of mineworkers' smallholdings in this manner will enable a better understanding of those who pursued smallholding within the valley, with the resulting information being available to inform a range of uses. These include spatial planning responses made in relation to the World Heritage Site and revisions to local Neighbourhood Development Plans (NDPs) and other landscape strategies. Together these can serve to enhance the protection and conservation of the World Heritage Site. Identifying the smallholding mineworkers present in the valley in the mid-nineteenth century will also be beneficial for those interpreting and presenting it historically, in addition to those undertaking genealogical research into their own families. This research does not aim to capture all of the mineworkers present within the Tamar Valley and Tamara scheme area in the mid-nineteenth century, though this would constitute useful future work.



3.1 Mineworkers' smallholdings and the World Heritage Site

While metalliferous mine sites with their component Cornish-type engine houses and other features are readily recognisable within the landscape, mineworkers' smallholdings are much less so. These are often mistaken as simply small fields, or clusters of small fields, associated with arable farms, but their origins are markedly different and, in many areas, directly attributable to the growth of metalliferous mining.

While the initial proposed target of the research was the A10 Area of the World Heritage Site, i.e. 'The Tamar Valley Mining District with Tavistock' alone, the investigation of adjoining landscapes was considered useful in order to provide a wider landscape context. This issue is addressed specifically in Sections 4 and 5, where smallholding in the Tamar Valley and the Tamara Project research are discussed.

It is useful at the outset to present a brief overview of smallholdings in relation to mineworkers in Cornwall and west Devon. To this end, the research reproduced below in Section 3.2 - prepared by Dr Sharron P. Schwartz in 2001 to inform the World Heritage Site Nomination (2001-2005) - is provided by way of an introduction. This sets out how mineworkers and their families adopted a dual-occupancy response by utilising small-scale farming for subsistence alongside mineworking, as mining populations burgeoned.

3.2 Mineworkers' smallholdings: an historic overview (Dr Sharron P. Schwartz)

Around a fifth of the Cornish landscape - over 80,000 hectares (c.198,000 acres) - is in upland rough ground, commonly treeless, exposed, and very wet, with thin acid soil. This ancient landscape was once heathland, then the site of prehistoric farmland and, subsequently, the upper margins of the medieval farming zone. Until the late eighteenth century, it was largely uncultivated and used for common grazing.

Over 50,000 hectares (c.124,000 acres) were taken into cultivation during the eighteenth and nineteenth centuries and the impact on the landscape was considerable, especially between areas of concentrated mining.

In west Cornwall the best of the arable land was probably enclosed by the seventeenth century and concentrated in the hands of a few large landowners in the process. Yet much of the rougher land within the large estates was enclosed sporadically and temporarily.

3.2.1 Mining and land usage

Landscape change was directly related to mining and not just because of mineral exploitation. The physical effects of mining on the landscape are obvious - heaps of 'deads' and the engine houses, buddles, and other industrial buildings. But more subtle evidence exists of the ways in which mining transformed the landscape with the remains of thousands of mineworkers' smallholdings which were created to accommodate the mining population that was largely rural and dispersed around the mines.

Landlords leased small plots of land, usually from 3-5 acres (c.1-2 hectares) in extent to mineworkers on which to build one or two cottages. This is thought to have been the optimal size of holding for one mineworker and his or her family to effectively manage. The leaseholder agreed to clear the land and erect a dwelling upon it, to pay a rent and to maintain the property. The landlord agreed to lease the land for a specified amount of time under the lives system - a period of time determined by the total remaining years of the life of three named persons, usually including the lessee. The ground rent – referred to as a ‘head rent’ – was fixed for the three lives’ period. Each time a life dropped off, a fine or heriot was payable. After the death of the last name the surviving lessee, if there was one, had to relinquish the land and property in a good condition, unless the landlord allowed him or her to stay, usually on the payment of another fine. This system of land tenure was only common in parts of rural southwest England and parts of Wales.

Although apparently weighted in favour of the landlord, the arrangement was actually symbiotic:

- Landlords who also owned the mineral rights, did well out of mine leases and property leaseholds.
- Thousands of acres of marginal land, not considered worthy of cultivation by larger farmers, were cleared and improved by mineworkers.
- Virgin land that needed to be cleared without dwellings was leased for a nominal rent which the mineworker could afford.
- Mineworkers could build their cottages upon land relatively cheaply using materials that were essentially free by customary right i.e., moor-stone and cob, and sometimes even materials from the mine such as wood, by arrangement with the landowner. This kept the costs of building a new house, estimated to have been in the region of £50-£80 in the mid nineteenth century, to well below the selling price of a dwelling in a town. This was a sum that most mineworkers could raise without recourse to a mortgage by pooling the monthly earnings of all the family and saving larger sums of money earned on tribute labour (sometimes in the region of £6-£8 in a month, and very infrequently, several times this amount).

3.2.2 Comparisons

- In the eighteenth century the number of smallholders in Cornwall grew at a time when that class was under pressure elsewhere in Britain.
- In 1895, in Cornwall as a whole, there was a much higher proportion of land in smallholdings than recorded across England. While holdings of from five to 20 acres were more widely diffused through all of Cornwall, including purely agricultural districts, these were not at all characteristic in the mining districts. The large number of holdings of between one quarter of an acre to five acres in districts dominated by mining appears to provide a link between mining and the allocation and usage of land.

- In England in 1895, only 17.2% of smallholdings under 5 acres were freehold owner-occupied, so the 1889 figures for holdings less than 5 acres for Redruth (21.8%) and St Agnes (48.8%) are significantly high.
- In 1895, Cornwall as a whole had a higher proportion of holdings of 1-5 acres of mixed arable/pasture, when compared to England. This suggests a higher intensity of cultivation for personal use.
- In the Parish of Gwennap in 1888, about half of the homes were mineworkers' self-built dwellings.

3.2.3 Why the prevalence of smallholdings?

- Company built housing, such as that constructed in other industrial parts of Britain to attract a workforce, did not occur in Cornwall. No speculative market existed for the building of mineworkers' housing. As many mining ventures were speculative, adventurers did not want to tie up their capital in workers' housing. One notable exception was the construction in 1845 of about 250 cottages on the Duke of Bedford's land in west Devon, to house his estate workers and the mining workforce of Devon Great Consols. These purpose-built, uniformly designed dwellings were considered far ahead of their time (Bridge et al, 1995, 152-3).
- A standard of living above subsistence could be maintained through the smallholding, supplemented through mine wages and access to non-commodity methods of production, i.e., rights of turbarry and pasture.
- By the mid nineteenth century access to smallholdings was becoming more difficult and mineworkers were increasingly being housed in terraces and rows. By 1840 Tremenhoe's *State of Education in the Mining Districts of West Cornwall* found that just under a quarter of the 685 mineworkers in three districts – St Just, St Blazey and Redruth, had cottages built by themselves on smallholdings. This suggests access to smallholdings was no longer widespread. Barham makes no mention to smallholdings in his report on Children's employment in 1842, just continuing customary access to methods of non-commodity production. Deacon has found that in the manor of Trewellard, St Just, the number of smallholdings of ¼ to 5 acres was much smaller than the fifth of households in Boscawell that had access to smallholdings. The crucial difference lay in the size of the smallholdings that would have been let to mineworkers, rather than full-time or virtually full-time farmers (Deacon, 1997).

3.2.4 Why the decline of smallholdings?

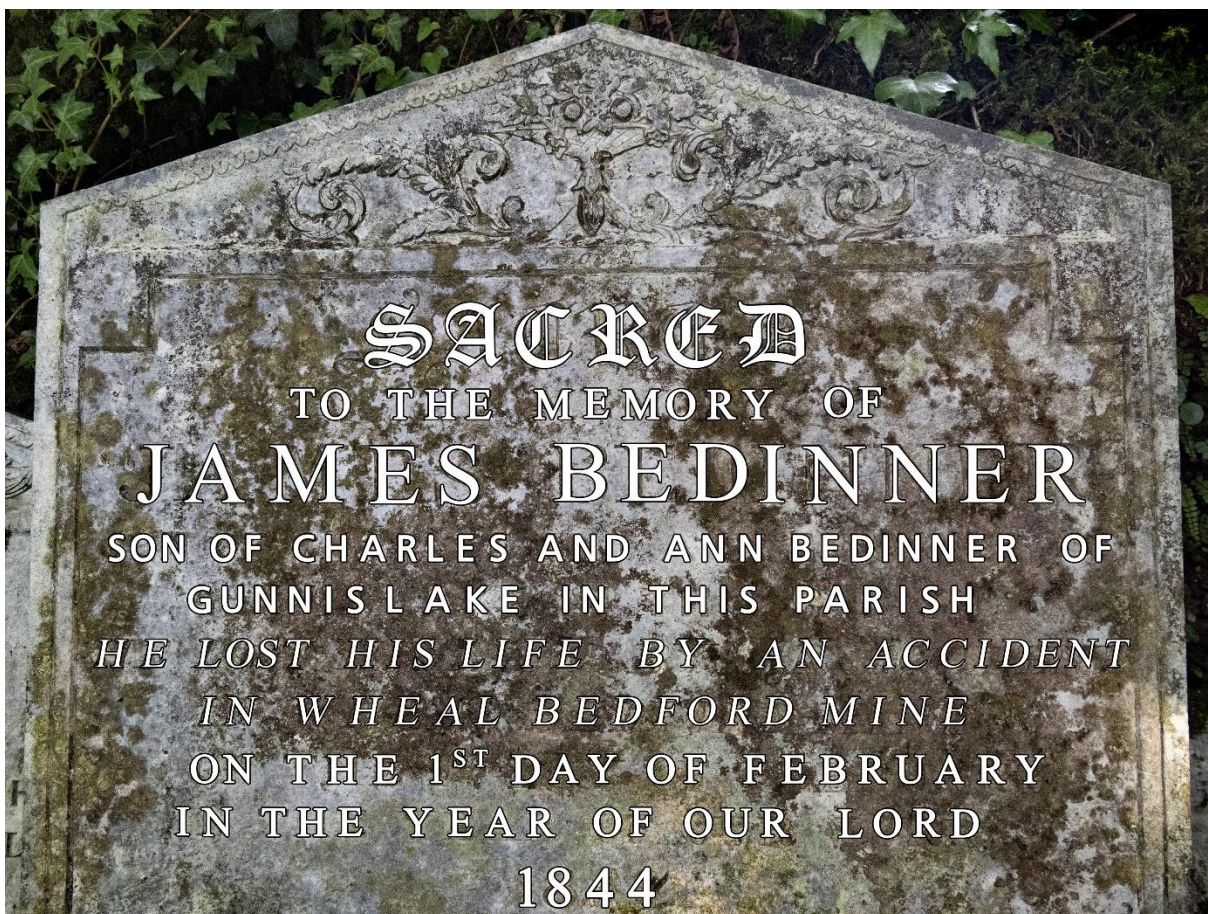
This had much to do with the restructuring of the mining industry – less tribute and more contract work with regulated hours of work: men had less time at their disposal to work plots in their out of core time. Barham noted in 1842 that attempts to combine small scale farming with mining was seldom productive and men who tried to do so were likely to be looked on unfavourably by mine employers as prospective employees. However, the echo of former access to land is reflected in the provision of the long gardens of many terraced cottages: examples may be seen at Lanner Moor and Carharrack, where occupants could still grow potatoes and other

vegetables or keep fowls or a pig. But in the towns and some larger villages, cottages without gardens increasingly became more the norm. Thus, access to customary forms of non-commodity production were lessened. In some towns such as Camborne, society became less rural-industrial and more urbanised.

Dr Sharron P. Schwartz, 2001

4 Smallholding in the Tamar Valley Mining District

Many of the mining districts across Cornwall experienced significant enclosure through smallholding during the eighteenth and early nineteenth centuries, with the St Agnes and Camborne-Redruth areas being, perhaps, the most notable. The Tamar Valley Mining District, by contrast, appears to have experienced only limited smallholding development and certainly much less so than other areas within Cornwall. Upon initial consideration it may be thought that the concentration of mining was correspondingly less, thereby placing fewer demands on land to produce the required subsistence crops and livestock. While metalliferous mining in the Tamar Valley could be described as being lower in density than some other districts, notably the Central Mining District of Camborne and Redruth, it was certainly not limited in the number of individual mines. While being somewhat more geographically dispersed than within the Central Mining District, analysis of the mines named on the Ordnance Survey First Edition 25 inch to 1-mile scale map of c.1880 indicated 117 individual mine workings within the wider valley, across both sides of the Tamar (WHS Office, 2014).



The headstone of mineworker James Bedinner in Calstock Churchyard. The son of mineworker Charles Bedinner (see case study), James was killed (aged 22) in an accident at Wheal Bedford in February 1844 (Image: Ainsley Cocks)

5 Tamara Landscape Partnership smallholding research

It has been noted that the creation of smallholding fields within the Tamar Valley was somewhat limited in comparison with other mining districts in Cornwall, such as at Camborne-Redruth and St Agnes. In order to achieve an enhanced understanding of the role of smallholdings in the lives of mineworkers in the Tamar Valley, a research project has been carried out under the aegis of the Tamara Landscape Partnership which identifies the latter using a range of historical records.

5.1 Methodology

5.1.1 Nominal record linkage

The mineworkers featured within this study were identified by undertaking individual nominal record linkages using Parish Tithe Maps and Apportionments (c.1840), the decennial Parish Census Returns from the mid nineteenth century and other historical records including parish registers of baptisms, marriages and burials, wills and probate records and nineteenth century newspapers. Data captured within the parish Tithe Maps, Apportionments and Census Returns are the only means by which mineworkers can be identified as smallholders; the research presented here is entirely dependent upon this historical mid-nineteenth century coincidence of land management record-keeping and nationwide population survey.

The research methodology uses accepted genealogical research practice and has adopted a nominal record linkage approach. This can be described as follows. The occupiers of land plots recorded within the respective parish Tithe Maps and associated Apportionment books (c.1840) are identified in turn within the corresponding parish Census Returns for 1841. The land plots for those occupiers which are recorded as being miners or similar (within the Census) are then captured via mapping, and their identities confirmed using parish records and subsequent decennial Census Returns etc. as above. The resulting case studies each include the name of the miner that is the householder/occupier in each instance, the genealogical background for the miner householder concerned and a map regression to indicate the smallholding as this appears within the parish Tithe Map and how the site/area appears at the time of the research (2022-2023).

5.1.2 Definition of a smallholding for the purposes of the study

While the generally accepted definition of a mineworkers' smallholding is understood to be usually from 3-5 acres (c.1-2 hectares) in extent (see Section 3.2.1), for the purposes of this research, a mineworkers' smallholding has been defined as a holding totalling at least 10 perches in extent (252.9m²). Results show that the majority of the smallholdings recorded are considerably in excess of this figure (see Section 5.3.4).

5.1.3 Documentary sources

The principal documentary sources used in this research were accessed online and are as follows.

- <https://www.thegenealogist.co.uk/>

(Subscription required) Used to access the parish Tithe Maps, Tithe Apportionment books (c.1840) (currently uniquely so) and the decennial parish Census Returns (i.e., for 1841 and subsequent). The “Keywords” feature when searching Census Returns is particularly useful, and superior to those offered on both ancestry and findmypast.

- <https://www.findmypast.co.uk/>

(Subscription required) Especially useful for access to a large (and increasing) collection of detailed scans (searchable) of 19th and 20th century newspapers and a very comprehensive collection of Devon Parish Registers - fully indexed and in most cases links to excellent scans of the original documents - and transcripts of Registers. Also useful for transcripts of many Cornish Parish Registers originally indexed by the Cornwall Family History Society. Full selection of Census Returns available which includes (exclusively) the 1921 Census. An excellent search engine for the Civil Registration Indexes, with all records linked to very detailed source pages.

- <https://www.cornwall-opc-database.org/>

(Free - donations accepted) An extremely useful database for Cornish Parish Records, particularly good on post-Civil Registration (1837) Baptisms, Marriages and Burials, a period often overlooked by the main Genealogical websites. Many pages of links to further data within the site. Each parish has its own page with more records and transcriptions, including an index of surviving parish Wills and Administrations available at Kresen Kernow, some of these have been transcribed, and given the index number provided, scans (greyscale) of most can be downloaded from familysearch (see below).

- <https://www.ancestry.co.uk/>

(Subscription required) Census Records, Parish Records (some with original page images) and the Civil Registration indexes. Generally, good quality scans of Census pages. Scans (greyscale) of many Cornish parish records are available, also available on the familysearch website (free). Published online Family Trees can also be useful in quickly finding images of original documents associated with an individual. Any such documents found, must of course be independently verified. There are a large number of pedigrees containing erroneous details published on this site, which often increase in number when an inexperienced family researcher recognises a family as their own, and simply adds the new found information, assuming it is all correct.

- <https://www.familysearch.org/ united-kingdom/>

(Free, registration required) Uniquely has scans (greyscale) of the vast majority of Cornish Wills and Administrations held at Kresen Kernow. The images are displayed alphabetically over a period of years in batches and not individually indexed. Find the correct batch from the reference number given either through a search on Kresen Kernow's website or from the list of Wills available on the Cornwall Online Parish Clerks parish pages and scroll thorough the scans until the required one is found. Also has the scans (greyscale) of Cornish Parish Registers, now also available on ancestry.

Links to Cornish Wills:

<https://www.familysearch.org/search/catalog/329778?availability=Family%20History%20Library>

<https://www.familysearch.org/search/catalog/1132062?availability=Family%20History%20Library>

- <https://kresenkernow.org/our-collections/search-the-catalogues/>

(Free) Kresen Kernow (formerly Cornwall Record Office) - Cornish Archives, catalogue search. There is a huge amount of information contained in the online catalogue, even if the records are not fully transcribed individuals can still be readily identified with the index details alone. Essential for ascertaining the correct reference numbers (prefixed with KK in the notes) for parish register volumes (scans viewed on 'ancestry' or 'familysearch').

- https://archive.org/details/pub_mining-journal?tab=about

(Free) The Mining Journal (1835-2012) on the Internet Archive. Digital scans (greyscale) from the most important publication detailing mining generally, and individual mines and miners in the nineteenth century. Not complete, but a vast amount of detail on UK and World mines and mining.

- <https://www.cornwallfhs.com/>

(Subscription required) Cornwall Family History Society Website. A number of online databases covering parish and census records and some unique datasets, including a very useful Monumental Inscriptions database, recording details from churchyard and cemetery headstones.

- <https://map.cornwall.gov.uk/website/ccmap/>

(Free) Cornwall and the Isles of Scilly's Historic Environment online mapping. Particularly useful for address location and parish Tithe Map views overlain atop Ordnance Survey vector and raster mapping.

- <https://www.devon.gov.uk/historicenvironment/projects/national-mapping-project/>

(Free) Devon County Council Environment Viewer. Particularly useful for address location and parish Tithe Map views overlain atop Ordnance Survey vector and raster mapping within west Devon.

- <https://maps.nls.uk/os/25inch-england-and-wales/index.html>

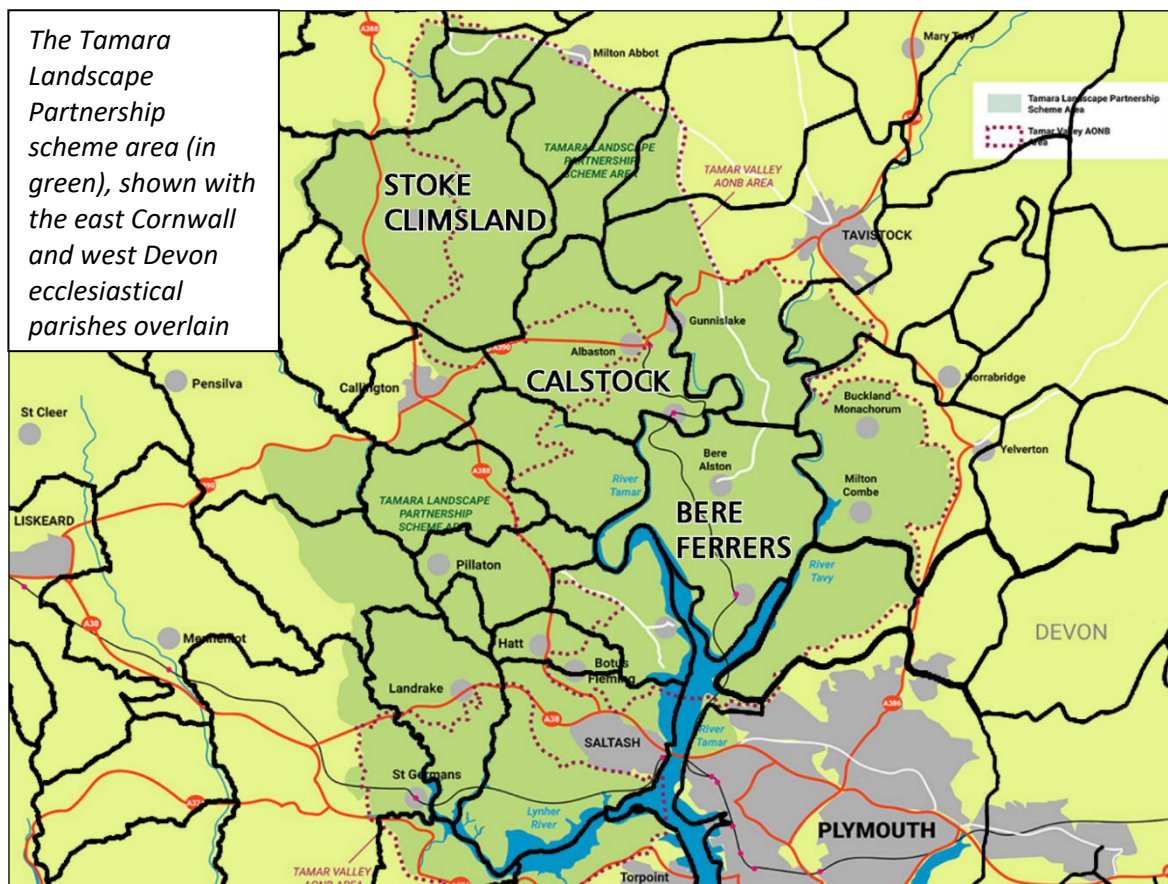
(Free) The National Library of Scotland's online collection of nineteenth century 25-inch to 1 mile scale (1:2,500) Ordnance Survey maps.

5.2 Research delivery and constraints

5.2.1 Pilot case studies

A number of individual pilot case studies were undertaken in advance of the main project study in order to gauge the effectiveness of the research methodology and to estimate the timescale required in order to assess all of the parishes within, or overlapping, the Tamara Landscape Partnership scheme area that experienced metalliferous mining to any significant extent (see map below). The pilot studies were to indicate that three parishes were suitable for the targeted study, with these being Calstock, Stoke Climsland and Bere Ferrers.

Some weeks into the work it became appreciated that the estimated timescale for delivery was a significant underestimate of time that would eventually be required. Relying on the Tithe Map/Census combination as the principal means of identifying the smallholding mineworkers, required that each mapped land plot had to be researched in turn in order to ascertain if a mineworker was nominally associated with it. This process proved to be particularly time consuming but was necessary in order to ensure the respective identities of the presumed mineworkers are entirely reliable.



Six individual mineworker case studies were produced in total as part of the initial pilot study and these individuals were selected from the parish of Calstock as this was thought to have the greatest target concentration. The mineworkers chosen were Charles Bedinner, Richard Chynoweth, Noah Coward, John Hoskin, James Richards and William Statton, and the case studies for these can be found within Section 8 of the report.

5.2.2 Parish Tithe Maps in west Devon

Much of the land within the parish of Tavistock, i.e., between the Tamar in the west, the Tavy in the east, and between the latitudes of Chip Shop in the north and Maddacleave House (formerly Great Gawton) in the south, was in the ownership of the Russell family (the Dukes of Bedford) by the mid-nineteenth century. This extensive landscape ownership led to an accommodation - a 'declaration of merger' – in 1842, between Francis Russell, 7th Duke of Bedford, and the Tithe Commissioners for England and Wales. The arrangement led in turn to an agreement for the Commutation of Tithes for the parish in April 1843, as described in the extract from the Tithe Map introduction, below. The practical outcome of this arrangement is that most of the landscape located between the Tamar and Tavy, as described, was not mapped by the Tithe surveyors.

8th April 1843

'Apportionment of the RENT-CHARGE in lieu of TITHES, in the Parish of Tavistock, in the County of Devon.

Whereas a declaration of merger bearing the date fifteenth day of April in the year one thousand eight hundred and forty-two has been duly executed by the said Duke of Bedford, whereby he declared that all Tithes arising from the lands in the said Parish which he the said Duke is owner, shall be absolutely merged and extinguished in the freehold and inheritance of the said Lands, when Lands comprise Ten Thousand and Seven hundred Acres, and are well known by metes and bounds, and are referred to in the said declaration of merger, which declaration was duly confirmed by the Tithe Commissioners for England and Wales, on the twenty-second day of April, in the said year one thousand eight hundred and forty-two.'

Tithe Map introduction - the Parish of Tavistock, in the County of Devon (Paragraph two)

The parish Tithe mapping and Apportionment records are required to initiate an historic link between a land plot and a mineworker, but other documentary evidence suggests that for this part of west Devon the absence of Tithe data has not limited the accuracy of the study.

The Devon County Council Historic Landscape Character (HLC) mapping for the area indicates that the land here is predominantly 'post-medieval enclosures with medieval elements' and that the 'enclosures are probably based on medieval fields, but the many straight field boundaries suggest they were substantially re-organised in the post-medieval period'. The HLC also defines the usually steep slopes down to the Tamar River as being mantled in 'ancient woodland' which may date to the medieval period. This indicates that the means required for the creation of mineworkers' smallholdings appear largely absent

within the area immediately east of the Tamar, as all the landscape is already in cultivation as post-medieval farmland or comprises steeply sloping woodland, owned by the Duke of Bedford. This area appears devoid of the privately owned uncultivated land noted elsewhere in Cornwall in the eighteenth and early nineteenth centuries which was therefore not available for improvement as smallholdings by suitably motivated mineworkers and their families. It is also noted that the Ordnance Survey 25-inch scale mapping of c.1880 indicates that the field plots as then depicted in this part of west Devon do not resemble the small scale and irregular forms of mineworkers' smallholding fields observed in Cornwall.

5.2.3 Research delivery

Following the successful completion of the pilot studies the research commenced in July 2022, but family bereavements and illness suffered by the contractor over the coming months were to add to the time constraints imposed by the methodology adopted and delay the work significantly, with this continuing into the spring of 2023.

Notwithstanding the delays encountered in delivering this work, the research constitutes an excellent temporal 'snapshot' of smallholding mineworkers living in the Tamar Valley in the mid-nineteenth century. This will aid understanding of the smallholding landscape in the valley and fulfils the initial research objective of providing a database of historic landholdings to inform future spatial planning responses made on behalf of the World Heritage Site Office. The exhaustive genealogical detail contained within the respective case studies will also be of considerable benefit to those undertaking genealogical research into families that have links with the valley and also those wishing to interpret this aspect of mining history.

5.3 Mineworker case study overview

The smallholding research has produced 77 detailed mineworker case studies across three parishes that are within the Tamara Landscape Partnership scheme area. While 28 parishes are located wholly or partially within the scheme area, only three of these were found to have resident mineworkers/smallholders within the geographical boundary.

There were instances where mineworkers/smallholders were found in the Tithe Apportionment and the 1841 census in parishes located partially within the scheme area, but the actual residences and land occupied by the mineworkers were outside the Tamara designated area. For example, copper mine (probably Wheal Franco) Captain Joseph Collum, who lived at Walkham Cottage, Bedford Bridge (occupying over 3½ acres) near the eastern boundary of the parish of Buckland Monachorum, where it borders Whitchurch and Horrabridge. Such cases, with the limitations of the above have necessarily been excluded from the Study.

By far the most significant parish for mineworkers/smallholders is Calstock, for which 53 case studies have been produced. The second most significant is Stoke Climsland, adjoining Calstock to the north west, for which 16 studies have been prepared. The remaining 8 case studies relate to the parish of Bere Ferrers (all living in Bere Alston), east of the Tamar. The research has served to confirm existing understanding in relation to west Devon, in that no

significant mineworker smallholding was being pursued on the Devon side of the Tamar Valley during the mid-nineteenth century.

5.3.1 Use of the Tithe Maps and Census Returns

As referred to above, the Tithe Maps and Apportionment Books (c.1840) and the first nationwide Census to name individuals (1841), present a unique opportunity to compare land ownership, occupation and usage with a complete survey of residents in every parish.

However, from a genealogical perspective it is not without its difficulties. The 1841 Census was much more limited than any of the subsequent Returns. Perhaps the greatest problem was that exact places of birth were not requested or given, individuals were asked whether they were born in the same county in which they were currently residing, so a simple Y or N. The Census Enumerators were also instructed to accurately record the ages of children up to the age of 15, but for adults this was not considered necessary, and any person over the age of 15 should have their age rounded down to the nearest multiple of 5. Occasionally the Census Enumerator did accurately record a person's age, but in most cases the instruction was carried out. So, in an age when people were often not entirely sure of their year of birth, together with the rounding down of their stated age (unless it was already a multiple of 5), calculating someone's year of birth from the 1841 Census is an educated guess, by 1851 these issues were remedied.

The lack of a birth location in the 1841 Census, especially given the mobility of mining populations, necessitates much trawling through parish registers and subsequent Census records to establish, with absolute certainty, an individual's identity.

There are also numerous examples of people with exactly the same name, and again required some in-depth research and careful cross-referencing of records to firmly identify family groups. In many cases this has uncovered both extended family connections and perhaps more interestingly, suggestions that there may be evidence of some sort of migration network from mining districts in the western half of Cornwall.

5.3.2 The mineworker case studies

It is worth noting that a number of families with west and mid Cornwall origins were establishing themselves in the Tamar Valley Mining District in the second half of the eighteenth century. Indeed, many of the subjects of our case studies were born in the district around the turn of the nineteenth century, but in so many of the cases one or both of their parents were from much further west.

Therefore, the case studies of the 77 identified smallholding mineworkers reveal far more than simply the lives and property of those named. There are many references to well-known mining families in the district who perhaps were not smallholders themselves, but whose lives intertwined with those we have identified as such. Examples include the Cocking and Trebilcock families of Gunnislake, both of whom feature in the section on William Treloar. A place name and surname index are included at the end of the report so that all of this information is readily accessible.

Although not usually referred to explicitly, it is clear from the Tithe Map and subsequent Ordnance Survey Maps that during this period, land on the edges of Hingston Down, and at Chilsworthy, North Dimson and Latchley Plain was being enclosed and farmed for the first time.

In 1840, James Paul's land at St Ann's Chapel was literally on the edge of Hingston Down. In William Ralph's Will of 1843 his three houses at "North Prospect" (now Highfield, St Ann's Chapel) were described as "*my houses situate on Hingston Down*".

Richard Dingle at Downgate, Stoke Climsland, the Tithe Map shows his land on the north eastern edge of Hingston Down. By 1861 Richard had moved to farming permanently, with his acreage greatly increased, likely as a result of the further enclosure of the downs.

Ann Buckingham and family at Chilsworthy rented two huge fields (over 11 and 7 acres each) on the edge of the downs, both named "Lower Newtake", which does seem to allude to the "taking" and enclosing of downland.

Joseph Allen at Latchley Plain was one of the few featured miners who mentioned his smallholding in the Census, in 1851 describing himself as "Miner occupying 3 acres land". The land he farmed in 1840 (close to 4 acres), was clearly newly occupied, again on the edge of the downs. Note the straight boundaries and the field names, which look newly minted.

Similarly with John Bunt Dyer at North Dimson, the Tithe Map clearly shows a newly enclosed smallholding within unenclosed land. Note also the enclosure names, which again look recent and lack the more descriptive qualities often found in old field names.

The genealogical work has also revealed some fascinating and sometimes tragic stories in the lives of our smallholding mineworkers and their families. Some examples include:

From Calstock:

Noah Coward of Lower Dimson - from his origins as a partner in a Drapery business in Bath, to life as a Mine Adventurer, Agent, Purser and "Gentleman", often without much commercial success and latterly heavily criticised in the pages of "The Mining Journal".

Richard Williams of Gunnislake - who in his early twenties, lost his sight in a gunpowder explosion at Gunnislake Mine. Yet remarkably managed to continue working, raise a family and keep them from the Workhouse.

Elizabeth Cocking of Gunnislake (wife of case study William Treloar) - a quite remarkable life story. Born into relative comfort as the daughter of Joseph Cocking (Mine Captain, Mine Adventurer and Farmer). She was married and widowed four times, was once temporarily "removed" from the parish with husband John Trebilcock to his home parish of St Dennis in mid-Cornwall. She lost her son John Trebilcock in a mining accident in 1863, was latterly a Schoolmistress and a Dressmaker, and died aged 95 in Tavistock Union Workhouse in 1900.

John Sims (and sons) of Gunnislake - it appears that the Sims family were unusually wealthy, and they may have been extracting gold from purchased ores.

Henry Kellaway and his wife Sarah (née Grills) of Drakewalls - this couple were the aunt and uncle of renowned Cornish Mathematician and Astronomer (and discoverer of the planet Neptune), John Couch Adams. It is quite a juxtaposition thinking of John Couch Adams as a Fellow of St John's College, Cambridge while in distant Cornwall his first cousins, still children, were working at a copper mine.

David Cock of Albaston - probably the only Miner turned Butler!

From Stoke Climsland:

Thomas Martin Penaluna of Lucket - Captain of a number of local mines on both sides of the river. Court appearance as an Insolvent Debtor and subsequently served a three-month prison sentence for the "Appropriation of Partnership Property". He returned to work as a Mine Agent in the area.

John Rowe Floyd of Downgate - Miner and Mine Agent, resigned as Captain of Wheal Tom (on Kit Hill) in 1851, and faced criticism as his positive report on the mine's prospects turned out to be "entirely misleading". John (with his sons) ended up living at Dolgellau in North Wales, where in 1863 he was fined for being "drunk and riotous", he died of "dropsy" at Dolgellau just a year later.

William Peters of Winsor, Holmbush - Miner, Innkeeper and Farmer. Despite his stated occupations in consecutive Census Returns, William continued to be employed at nearby Holmbush Mine, and after what was evidently a tiring day operating the horse whim, he collapsed and died at home in the evening. His eldest son William Henry Peters, also a miner/publican predeceased his father by two years, he was killed in a gunpowder explosion at Kelly Bray Mine in 1860.

John Spargo (and sons) of Downgate - John was a Mine Agent, and he and his wife Mary Ann (née Dingle) had 10 children born in the parish, eight sons and two daughters. Tragically in 1858, second son John Spargo was killed in a firearm accident following an altercation with one of his brothers. Remarkably, at least four of John Spargo's sons went on to become Mining and Quarrying Engineers, in the last quarter of the 19th century they could all be found in the mines and quarries on the Llŷn Peninsula, Caernarfonshire, and on Anglesey.

From Bere Ferrers:

Nathaniel Robins of Bere Alston - Miner, who in 1866, in an unusual case, took one of the Shareholders (Thomas Vosper) of East Tamar Silver Lead Mine to the County Court in Tavistock for non-payment of wages. Thomas Vosper claimed not to be a Shareholder and therefore not liable for the mine's debts, however, the Judge found in favour of Nathaniel Robins.

James Mankin of Bere Alston - A truly Dickensian story of a man with no criminal past, convicted of a minor crime and sentenced to a hugely disproportionate punishment. James was sentenced to seven years transportation for stealing a length of wooden pump rod he found in the road near Wheal Charlotte Mine, in neighbouring Buckland Monachorum. He was not transported but was held for much of the four and a half years he served on the notorious Prison Hulk "Leviathan" at Portsmouth. The Petitions and Appeals (which still survive) from his family and many of the parishioners of Bere Ferrers are a compelling read.

5.3.3 Further research notes and details

The Maps used were the original Tithe Commissioners copies held at The National Archives (available online through The Genealogist), supplemented by the local copies available through Cornwall Council and Devon County Council (see 5.1.3 Documentary sources).

The OS 25 Inch Map 1892-1914 was chosen because the large scale allowed for a more accurate aligning of plot boundaries drawn from the Tithe Map. The date of the map also meant that there were sometimes buildings, enclosures etc. still extant from the time of the Tithe but subsequently demolished or built on, so not appearing on the modern map. The accuracy of the OS Map survey also made transferring the plot outlines to the modern map a relatively straightforward task.

The modern map selected was from Cornwall Council's Historic Environment Interactive Map. The Map also includes (with the same level of detail) a large part of west Devon, and for the sake of continuity, Cornwall Council's Map was used for the mapping of Bere Ferrers.

The Statute Measure of plots recorded in the Tithe Apportionment Books were as follows:

Acres - Roods - Perches

40 Perches = one Rood
4 Roods = one Acre

The word "sojourner" appears frequently in parish marriage registers, and perhaps an explanation as to its meaning is necessary. The word "sojourner" alone describes a person not of this parish, whilst "sojourner of this parish" means a person originally (and technically) not of this parish but is a resident of this parish.

The purpose of recording that a person was a "sojourner" was to note that the individual did not have settlement rights in the parish. In practical terms this meant that if such a person was ever in need of poor relief, then the parish was not obliged to provide it and the individual (or family) could be removed to their parish of origin.

There were two instances of Appeals against Removal Orders that came up in the research, both in the parish of Calstock. As noted above, John and Elizabeth Trebilcock and children (see William Treloar), and Jane Perry and child (see Isaac Perry).

5.3.4 The size of mineworkers' smallholdings within the Tamara scheme area

An analysis of the 53 individual case studies produced for Calstock parish indicates the average smallholding size to be 2.51 acres (1.0 hectares) per smallholding. When calculated as a median value, however, the smallholding area falls to 0.8 acres (0.32 hectares) per smallholding. A similar analysis of the 16 studies prepared for Stoke Climsland parish indicates the average smallholding size to be 1.23 acres (0.5 hectares) per smallholding, or 0.49 acres (0.2 hectares) when expressed as a median value. The calculations for Bere Ferrers parish give an average figure of 0.90 acres (0.35 hectares) and a median value of 0.15 acres (0.06 hectares), per smallholding. It can be seen from these three parishes that smallholdings in the Tamar Valley were somewhat smaller in area per mineworker-occupier when compared with the average value given for Cornwall in Section 3.2.1 (i.e., 3-5 acres or c.1-2 hectares per holding). The total smallholding areas per parish are – Calstock: 133.12 acres (53.87 hectares); Stoke Climsland: 19.64 acres (7.95 hectares); and Bere Ferrers: 6.99 acres (2.83 hectares). The overall total smallholding figure for the three parishes combined, and therefore the Tamara scheme area, is 159.75 acres (64.65 hectares).

The reduced average and median smallholding sizes in this part of east Cornwall are most probably due to the limited land available for first-time cultivation east of Hingston Down during the eighteenth and nineteenth centuries. The presence of well-established arable farms adjoining the Tamar in west Devon appears also to have presented few opportunities for smallholding development, and access to land would have been further limited by the extensive ownership control exerted there by Francis Russell, 7th Duke of Bedford, on behalf of the Russell family. The Tithe declaration of merger agreement described above (Section 5.2.2) gives some indication of the means of the Russell family to dominate the landscape within Tavistock parish, between the Tamar in the west and the Tavy in the east. Further research will be required to examine the above assertions, and other causal factors influencing or limiting smallholding development in the Tamar Valley during the eighteenth and nineteenth centuries. Such research is beyond the scope and means of this study.

5.4 Future research

It is noted that the average smallholding sizes recorded are significantly smaller than the accepted size for elsewhere in Cornwall, and land availability and ownership/leasing restrictions are thought to be the limiting factors. Further research into historic land usage in the Tamar Valley may reveal the detail of this and constraints which influenced the decision making of mineworkers considering subsistence farming as a supplementary means of supporting their families.

While the purpose of the current research is to address mineworkers with smallholdings particularly in the Tamara scheme area, future research could address the remaining mineworkers (obviously a much greater number) that appear within the various parish Census Returns, decennially from 1841. This would enable a useful understanding of how many mineworkers were resident in total across the various parishes in the mid-nineteenth century, on both sides of the Tamar. The resulting genealogical details would also add to the current understanding of internal migration in Cornwall, to east Cornwall and west Devon in the eighteenth and nineteenth centuries.

As noted above, the influence of mineworkers from mid and west Cornwall in the Tamar Valley is significant, and although always readily acknowledged, the extent of internal migration has been underestimated. One might expect that our case studies were more likely to feature established local families, given that tenancies and leases were often inherited, however, whilst there are certainly examples of this in the research, the majority of our subjects do have connections with the western half of Cornwall. For example, of the eight Bere Ferrers cases:

1. Ambrose Barrett - born Gwennap
2. James Bennett - parents from Camborne
3. Hugh Eva - born Kenwyn
4. John Gregory - mother from Redruth
5. James Mankin - born Mylor
6. Nathaniel Robins - father from Redruth
7. Edward Stephens - born Calstock? - parents married at Calstock? (Origins not known)
8. William Trathen - paternal grandparents from Redruth

A surname mapping project would uncover the full extent of mineworker movement to the Tamar Valley, and perhaps reveal evidence of migration networks.

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