

Scorrier, Chacewater – Archaeological Appraisal and Impact Statement

South West Archaeology Ltd. 23.05.17

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Project Background

South West Archaeology Ltd. was engaged by Russell Dodge of Business Location Service Ltd. (the Agent) on behalf of Jactamial Properties Ltd. (the Client) to undertake an archaeological appraisal of a site at Scorrier, Chacewater, prior to its proposed redevelopment. In consideration the size and location of this site, and with due emphasis on proportionality, this rapid appraisal of secondary sources and cartographic evidence is intended to inform and guide any subsequent archaeological work on the site.

Site Location

The site consists of a small irregular triangle of land covering c.0.8ha, located where the A30 dual carriageway and the Cornish Main Line railway converge north of Scorrier. It is on a south-west facing slope at an altitude of c.115m AOD. The soils of this area are the well-drained fine loamy or silty soils of the Manod Association, bordering the well-drained fine loamy over slate or slate rubble soils of the Denbigh 2 Association (SSEW 1983). These overlie the partly-metamorphosed mudstones and sandstones of the Porthtowan Formation (BGS 2017).

Site History

The site and surrounding area has been the subject of a range of largely desk-based reports:

- The area is discussed in the *Mineral Tramways Conservation Management Plan* (CAU 2004);
- The site was part of the *Wheal Busy Archaeological Impact* report (CAU 1989);
- Hallenbeagle Mine was the subject of an *Archaeological Impact Assessment* (CAU 2011);
- Hallenbeagle Mine was the subject of an *Environmental Statement* (Business Location Services & IHC Consultants 2004).

The site lies within a detached part of the ancient ecclesiastical parish of Kenwyn and the modern civil parish of Chacewater (created 1828). In 1840 it lay within unenclosed ground adjacent to the cottage of Tregargus and its small fields; these were owned in 1840 by Lord Falmouth, implying they either belonged to his part of the Manor of Allet/Edelet/Edles, or his Manor of Boscawen. The 1841 Census indicates four families lived at Tregargus: Richard Rabey and his family of 12, Philip Pearce, John Hocking and Simon Kinsman; eight of these people are listed as *copper miners*, presumably at Hallenbeagle. There are documentary references to the tin bounds at Tregargus for 1694, 1731 and 1748 (CRO: EN/389; PL/88/2-4).

A substantial proportion of the land between Chacewater and Redruth was unenclosed in the mid 19th century: enclosure and settlement accompanied the industrialisation of this landscape, with deep mines at Great Wheal Busy, Killifrith, Wheal Chance, Wheal Rose, Eastdowns, Boscawen and Hallenbeagle. The Cornwall and Scilly HLC characterises the fields in this area as *post-medieval enclosed land*, although a substantial minority of these fields should be classed as *recently enclosed*.

The site lies within the area of the former Hallenbeagle Mine. This copper mine was exploited from the early 18th century (see documentary references above), but peak production was achieved in the late 18th – early 19th century. The early 19th century iteration of the mine is associated with an innovative inverted double-acting beamless engine designed and installed by James Watt in 1795. The mine was reworked in the mid 19th century and employed c.200 people; in the period 1835-46 it produced 30,850 tons of copper ore. Between 1850 and 1852 the West Cornwall Railway was built through the centre of the mine. However, the Mine continued to be worked in the later 19th century, as part of Boscawen and later, Great Wheal Busy. By 1870 the lower levels had been abandoned and

a handful of miners were reworking the waste dumps for copper, tin and arsenical ores, and by 1878 the 1st edition OS maps show the mine as abandoned. Aerial photographs indicate the spoil heaps were levelled in the 1940s; in other areas this was undertaken to accommodate temporary camps for troops in the build up to D-Day, but camps do not seem to have been established at Hallenbeagle. The A30 dual carriageway, opened in 1988, destroyed the northern part of the mine, isolating the proposal site and Tregargus.

The mining heritage of the area is reflected through designation. There are two Listed buildings (GII), both engine houses, within 500m. The edge of the Cornwall and West Devon Mining Landscape World Heritage Site (Gwennap District) (WHS) lies c.150m to the south-east.

HER No	Site Name	Description
DCO3922	Engine House at Read's Shaft part of Great Wheal Busy	Beam engine house ruin. Circa late C19. Killas rubble with granite quoins and some granite jambstones.
DCO3923	Engine House Chimney at approx. 50m east of Read's Shaft	Beam engine house ruin. Circa late C19. Killas rubble and brick. Originally rectangular single-cell plan with chimney to north east corner but now only chimney and some attached walling survives

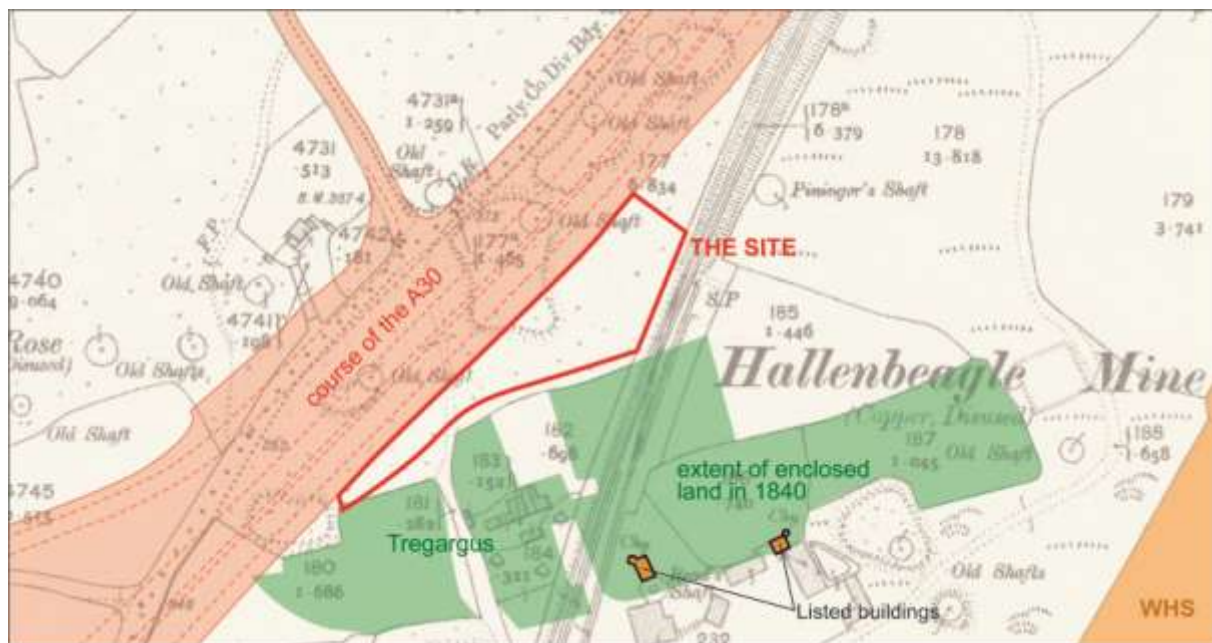


FIGURE 1: 2ND EDITION OS MAP (1906 PUBLISHED 1908; CORNWALL SHEET LVI.16) SHOWING THE LOCATION OF THE SITE (IN RED) IN RELATION TO ENCLOSED LAND IN 1840, THE A30, THE LISTED ELEMENTS OF HALLENBEAGLE MINE, AND THE WHS (CRO).

Discussion of the Site in Context

The site consists of an irregular triangle of land sandwiched between the Cornish Main Line and the A30 (see Figure 1). This remaining sliver of undeveloped land was not enclosed until the 20th century, and the historic OS maps indicate the presence of spoil associated with Hallenbeagle Mine and Wheal Rose. It is probable that any archaeological features that might predate the 19th century would be buried beneath later mine waste, which itself may have been reworked in the later 19th century, bulldozed in the 1940s and likely to have been disturbed during the building of the A30. Recent aerial photographs indicate the proposal site is covered in gorse/scrubby vegetation, which would tend to suggest it had not been returned to agricultural use. The Hallenbeagle site to the east of the railway, and that to the south, have been cleared and prepared for development, leaving only the two Listed engine houses intact (see Figure 2).



FIGURE 1: RECENT AERIAL PHOTOGRAPH SHOWING THE DEVELOPMENT OF THE ADJACENT HALLENBEAGLE SITE, WITH THE SITE (SHOWN IN RED) AND THE LISTED ENGINE HOUSES INDICATED (IN YELLOW) (© DIGITALGLOBE 2017).

Impact Assessment

In terms of the direct effect of the proposed development, this site is likely to be covered with a variable depth of mine waste, variously reworked and landscaped several times in the last 150 years. This mitigates against the likelihood of encountering meaningful archaeological remains.

In terms of the indirect effects of the proposed development, there are several factors to consider. Firstly, the potential impact on the setting of the two Listed engine houses located c.100m to the south and south-west, the proximity of these buildings to the site, and the historical associations between them.

However, the redevelopment of the area around the structures has comprehensively disassociated them from both their original industrial/extractive setting and the ruinous decrepitude that replaced it. There is undoubtedly some benefit arising from the repair and maintenance of these buildings, but it is within a setting wholly divorced from what has gone before. The preservation of a small area of scrubby wasteland, separated from the site by the Cornish Main Line and hemmed in by the A30, that is directly associated with the site and may contain mineralogical evidence relating to the extractive history of the site, should be taken into consideration during the balancing exercise, but is of questionable merit given the circumstances of its location and post-extractive history.

The second factor to consider is the proximity of the WHS site, the interrelationships between the site and components of the WHS, and the potential effect on the setting of the WHS. The mine was active in the early 18th century, had an association with James Watt and technical innovation, and later formed part of Great Wheal Busy, one of the most important mines in the Gwennap district. In those terms it is difficult to understand why the boundary of the WHS deviates to exclude the mine. However, development in the immediate area (i.e. the A30, Blackwater industrial estate, and latterly the Hallenbeagle development) renders this, and the other issues, a moot point.

TABLE 1: MAGNITUDE OF IMPACT (BASED ON DMRB VOL.11 TABLES 5.3, 6.3 AND 7.3).

Factors in the Assessment of Magnitude of Impact – Buildings and Archaeology	
Major	Change to key historic building elements, such that the resource is totally altered; Change to most or all key archaeological materials, so that the resource is totally altered; Comprehensive changes to the setting.
Moderate	Change to many key historic building elements, the resource is significantly modified; Changes to many key archaeological materials, so that the resource is clearly modified; Changes to the setting of an historic building or asset, such that it is significantly modified.
Minor	Change to key historic building elements, such that the asset is slightly different; Changes to key archaeological materials, such that the asset is slightly altered; Change to setting of an historic building, such that it is noticeably changed.
Negligible	Slight changes to elements of a heritage asset or setting that hardly affects it.
No Change	No change to fabric or setting.
Factors in the Assessment of Magnitude of Impact – Historic Landscapes	
Major	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
Moderate	Changes to many key historic landscape elements or components, visual change to many key aspects of the historic landscape, noticeable differences in noise quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Changes to few key historic landscape elements, or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access: resulting in minor changes to historic landscape character.
Negligible	Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.
No Change	No change to elements, parcels or components; no visual or audible changes; no changes arising from in amenity or community factors.

TABLE 2: SIGNIFICANCE OF EFFECTS MATRIX (BASED ON DRMB VOL.11 TABLES 5.4, 6.4 AND 7.4; ICOMOS 2011, 9-10).

Value of Assets	Magnitude of Impact (positive or negative)				
	No Change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large
High	Neutral	Slight	Moderate/Slight	Moderate/Large	Large/Very Large
Medium	Neutral	Neutral/Slight	Slight	Moderate	Moderate/Large
Low	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/Moderate
Negligible	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

TABLE 3: SCALE OF IMPACT.

Scale of Impact	
<i>Neutral</i>	No impact on the heritage asset.
<i>Negligible</i>	Where the developments may be visible or audible, but would not affect the heritage asset or its setting, due to the nature of the asset, distance, topography, or local blocking.
<i>Negative/minor</i>	Where the development would have an effect on the heritage asset or its setting, but that effect is restricted due to the nature of the asset, distance, or screening from other buildings or vegetation.
<i>Negative/moderate</i>	Where the development would have a pronounced impact on the heritage asset or its setting, due to the sensitivity of the asset and/or proximity. The effect may be ameliorated by screening or mitigation.
<i>Negative/substantial</i>	Where the development would have a severe and unavoidable effect on the heritage asset or its setting, due to the particular sensitivity of the asset and/or close physical proximity. Screening or mitigation could not ameliorate the effect of the development in these instances.

Summary

The site is located just below where the A30 and the Cornish Main Line converge north of Scorrier. It is a surviving remnant of the landscape formerly associated with the mine at Hallenbeagle, and is likely to be covered with a varying depth of mine waste. This is unlikely to be of any great value given successive periods of reworking, and the survival of early or pre-industrial archaeological remains is unproven but unlikely. The impact of the proposed development on the setting of the nearby Listed engine houses and the WHS (Gwennap District) is not significant (**negligible** impact) in the context of the development that has already occurred.

TABLE 4: SUMMARY TABLE.

Asset	Type	Distance from site	Value	Magnitude of Impact	Assessment	Overall Assessment
Enginehouse Reade's Shaft	GII	75m	Medium	Negligible	Neutral/Slight	Negligible
Chimney 50m east of Reade's Shaft	GII	110m	Medium	Negligible	Neutral/Slight	Negligible
Gwennap District	WHS	150m	Very High	Negligible	Slight	Negligible

References:

- BGS Geology Viewer 2017: <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>
- Buck, C. 2004: *Mineral Tramways Conservation Management Plan*. CAU
http://map.cornwall.gov.uk/reports_event_record/2004/2004R066.pdf
- Business Location Services/IHC Consultants 2004: *Proposed Industrial/Warehousing Development Within Use Classes B1 (B & C only), B2 and B8. Land to the South of the A30 at Scorrier, Redruth. Volume 2. Environmental Statement*.
- CAU 1989: *Wheal Busy: The Archaeological Impact, part 1*
http://map.cornwall.gov.uk/reports_event_record/1989/1989R006.pdf
- Design Manual for Roads and Bridges (DMRB) 2016: *Volume 11, Cultural Heritage*
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- ICOMOS 2011: *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*. International Council on Monuments and Sites.
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- SSEW 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.
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<https://www.gov.uk/guidance/transport-analysis-guidance-webtag>