

Loggans Moor

Hayle, Cornwall

Archaeological Assessment

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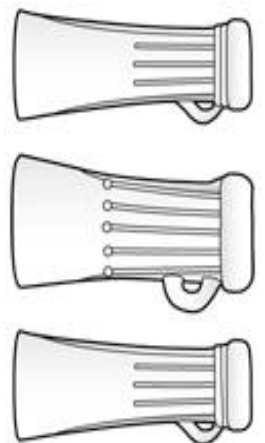
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This study was commissioned by Simon Burgess of Poynton Bradbury Wynter Cole Architects Ltd on behalf of Montgomery Property Group and carried out by Archaeological Consultancy Ltd.

The Project Manager was Matt Mossop whilst the fieldwork was undertaken by the author assisted by Paula Castle. Help with the historical research was provided by staff at the Cornwall Record Office, Cornwall Studies Library and Cornwall Council Historic Environment.

The views and recommendations expressed in this report are those of Archaeological Consultancy Ltd and are presented in good faith on the basis of professional judgement and on information currently available.

Cover illustration

Loggans Moor looking southwest towards Loggans Mill and the modern developments in Hayle.

Loggans Moor

Hayle, Cornwall.

Archaeological Assessment

Report No: N/A
Author: Hayley Goacher BA (Hons) PIfA
Report Date: August 2013

Project No: AC13001E
Project Officer: Hayley Goacher BA (Hons) PIfA
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Client: Montgomery Property Group
Proposal: Construction of business park
Planning Reference: PA12/02581
Statutory Protection: Partial Area of Great Scientific Value and partial Site of Special Scientific Interest

National Grid Reference: SW 5754 3868
Townland/Tenement: N/A
Civil Parish: Hayle
District: West 1
Postal Address: Loggans Moor, Loggans Road, Hayle
Postcode: TR27 4PL

Fieldwork Dates: July 2013
Licence/Accession No: N/A

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Abbreviations

AC	Archaeological Consultancy Ltd
ADS	Archaeological Data Services
AEL	Anciently Enclosed Land
AGLV	Area of Great Landscape Value
AONB	Area of Outstanding Natural Beauty
BGS	British Geological Survey
CAU	Cornwall Archaeological Unit (now the HES)
CC	Cornwall Council
CRO	Cornwall Record Office
DBA	Desk-Based Assessment
EH	English Heritage
HEPAO	Historic Environment Planning Advice Officer
HER	Cornwall and the Isles of Scilly Historic Environment Record
HES	Historic Environment Service, Cornwall Council
HLC	Historic Landscape Characterisation
IfA	Institute for Archaeologists
LBS	Listed Building Number
LPA	Local Planning Authority
NGR	National Grid Reference
NMR	National Monuments Record, Swindon
OASIS	Online Access to the Index of Archaeological Investigations
OD	Ordnance Datum
OS	Ordnance Survey
RCM	Royal Cornwall Museum, Truro
SMR	Sites and Monuments Record
WHS	World Heritage Site
WSI	Written Scheme of Investigation

1 Summary

AC Ltd was commissioned by Simon Burgess of Poynton Bradbury Wynter Cole Architects Ltd on behalf of Montgomery Property Group to undertake an archaeological assessment in advance of works associated with the construction of a business park.

The site is located at SW 5754 3868 (NGR).

This fieldwork was undertaken in July 2013, it assessed:

- The location of the business park, in which no archaeological remains were discernable.
- The surrounding World Heritage Sites, Scheduled Monuments, Listed Buildings and other undesignated sites.
- The intervisibility and other possible effects of the business park upon the designated and undesignated sites.

The site is not considered to have high potential for any significant surviving archaeological deposits and no further archaeological work is recommended for it.

2 Introduction

2.1 Project Background

Outline planning for the proposed business park was submitted in March 2012 and is pending consideration. An archaeological assessment has been requested by HE Advice to provide information on the significance and potential of archaeological remains on the site and the impact the proposals are likely to have on that significance.

A brief for archaeological assessment was provided by Phil Markham (2012), Historic Environment Planning Advice Officer (HEPAO). AC was commissioned to undertake the archaeological assessment in line with an approved Written Scheme of Investigation (Goacher and Mossop, 2013).

2.2 Site Location

Loggans Moor lies within Hayle civil parish, approximately 2 km northeast of Hayle town centre.

2.3 Topography

The site is currently rough grassland on a plateau behind the extensive sand dunes, known as the Towans, which line the coast to the north. It is surrounded by modern developments.

2.4 Geology

The landscape is characterised by the Mylor Slate Formation of sedimentary slate and siltstone bedrock formed approximately 354-370 million years ago in

the Devonian Period. These were formed on the ocean floor from fine microscopic pelagic organisms. The superficial deposits over the bedrock are categorised as alluvium of clay, silt, sand and gravel formed 2 million years ago in the Quaternary Period from river terrace deposits, floodplains and bogs. In this area the influence of estuarine and coastal plain deposits is highly relevant. (www.bgs.ac.uk/geologyviewer).

2.5 Archaeological and Historical Background

Identified Prehistoric activity around Loggans Moor seems concentrated at Phillack to the west and at Godrevy Towans to the northeast. Godrevy Towans (MCO771) conceal a palimpsest of Prehistoric settlement and agricultural evidence dating from the Mesolithic to the Bronze Age. The settlement includes ditched circular enclosure, structures, a midden and at least two cremation mounds in addition to artefacts including flint tools, Bell Beaker ceramic fragments and a saddle quern. Surrounding Phillack is a Neolithic occupation site (MCO16297), two Bronze Age barrows in the Towans (MCO3315; MCO3316) and a cist cemetery (MCO33521). Additional findspots of Prehistoric tools, flint, stone and horn (MCO41555; MCO1170) are also recorded on the SMR.

It is not clear which manor Loggans Moor was part of at the time of the Domesday Survey in 1086 but it was most likely to be 'Connerton,' located to the northeast. 'Connerton' was a large holding held by the King. The Domesday entry specifically records a mill which pays 30d, although this cannot be attributed to a specific mill known today.

Medieval activity was very limited and consisted predominantly of small rural settlements such as Angarrack, Carwin, Guildford and Lethlean which are all recorded in this period. The Medieval Parish Church at Phillack (MCO27832) is believed to have been a substantial cruciform structure but was almost entirely rebuilt in 1856. It does however retain a granite Norman altar (MCO27881) and a probable Early Medieval lann (MCO27830).

The origin of the name 'Loggans' is not clear though similar Cornish examples include Logan Rock, near Porthcurno and Illogan parish to the east. 'Logan' is English in origin and means 'to rock' whilst Illogan derives from Saint Illoganus of which nothing is known (Padel, 1988; 99, 111). Hayle derives from the river on which it is situated and is a Cornish word meaning estuary. The name 'Heyl' was first recorded in 1265 although only a single house of the same form was recorded in 1813 across the causeway from the present town. 'Hayle' in the modern form originates in the early 19th Century with the industrial development of the estuary.

The Tithe Map and Apportionment for Phillack Parish, surveyed in 1842, show the considerable expansion and industrialisation of the area of, and surrounding, the town of Hayle. The Loggans Mill and garden and the adjacent Mill Fields, Higher, Lower, North and South Moors were owned by the Reverend William Hockin and William Backwell Praed and were occupied by William Hosken. William Hosken owned Loggans Mill and farmed the arable fields and moors.

Both the Harrods Directory of 1878 and Kelly's Directory of 1883 list 'W. Hosken and Son' as millers and merchants of Loggans Mill. Their products included corn, flour, cake, manure and seeds and they were also agents of the Royal Fire and Life Insurance Company, Copperhouse. Kelly's also records that the Hoskens were farmers of the 'famous Loggan herd of short horns, now numbering 190 head, of the Bates and Bective breed.' Loggans Mill (MCO27848) is possibly built on or close to the site of Wheal Dream (MCO12244), operational from 1770, and/or Loggans Mine dated to 1851. In line with the industrialisation of Hayle and the fortunes of associated industries, Loggans Mill became part of a conglomerate that included Copperhouse Tide Mill (MCO7) The SMR records:

Listed building (No. 9/135). Loggans mill is first recorded in 1688, when a millhouse at "luggan" is mentioned (Unknown, 1752, Praed papers, CRO), although it probably has medieval antecedents. In 1752 it is recorded as a grist mill (J. Phillips, 1688 Will, at CRO). The Hosken family, local millers and farmers (Carwin Farm), owned and ran the mill. The mill was rebuilt along modern lines following a fire in 1852 (Unknown, 1974, Old Cornwall 8, 127). It was reorganised as a roller mill in 1884. An illustration of the pre-1852 layout appears in a History of HTP Motors (19- -, HTP Motors). On maps, "luggans mill" is shown in 1813 (1813 OS 1-inch map). It is shown in detail on the tithe and the first and second editions of the OS 25-inch maps (1842 Tithe Award Phillack; 1876 OS 25-inch map; 1907 OS, 25-inch map). IN 1890, Hosken and Son combined with J.H Trevithick, formerly part of the Harvey's group, and S. J. Polkinhorne of Truro, and Loggans Mill was the base of HTP Ltd. HTP ceased milling in 1930. (C. Noall, The Book of Hayle, 1984, p 83). Current OS maps show the site as an extant works; the mill leat is still shown (1979 OS 1:10000 map). The main structure of the mill, the largest in Cornwall in the late C19/early C20, is still standing but the machinery has been removed and the remainder of the site has been demolished. The listing is as follows: Dating to the early C19 this corn mill was extended in 1852 for Mr. W. Hosken and again extended in 1884. It is constructed from granite rubble with granite dressings to the older parts, rockfaced granite to the later C19 part. It has corrugated asbestos roofs with gable ends which is coped on the right side. There is a scantle slate roof over the rear wing. It follows a large rectangular plan with a square tower towards the left and a single storey wing at right angles to rear right. The waterwheel was originally at the rear left. It was entirely refurbished in 1884 as a very advanced steam-driven roller mill with electric lighting. All the machinery is now gone. The building is four and five storeys high. To the left is the taller late C19 block with a large round-arched doorway. In front of the right hand corner of this block is a four-storey roofless tower of similar date. The tower has a wide segmental arched doorway on the ground floor and windows to each floor above. The older part to the right, is a regular 1:4:3 window range. Large window openings in the left-hand bay, otherwise smaller. Two openings been made into loading doorways and many of the openings have been blocked but there are some late C19 four-pane sashes and some small-paned casements survive. See PRN 31943. CAU carried out a survey in

1998. (b14). Fenestration almost entirely missing November 1999. Site overgrown. (b13) - Pearson, A, 198-, Pers Comm (Trevithick Soc).

The construction of the Hayle Railway in 1837 (MCO55494) greatly influenced the operation of the town though it was abandoned in favour of the opening of the West Cornwall Railway in 1852. Around 1907 the Great Western Railway significantly altered the railways around Hayle by replacing, realigning and doubling it, as typified by the Nanpusker Road bridge (MCO55346).

The port of Hayle flourished in the late 18th and 19th Centuries and supported several foundries including the famous Harvey's and Copperhouse in addition to a ropewalk (MCO33411), an extensive dock constructed of granite ashlar and cast copper slag (MCO33402) dating from 1702 and an Arsenic Works in the Towans (MCO28833). The Arsenic Works closed in the 1880s as a response to the downturn in the mining industry on which it relied. The site was taken over by an explosives factory in 1899 (MCO28594) which became nationally important in providing cordite and other munitions for World War 1.

The importance of the Hayle industries, although much diminished by the 20th Century, is indicated by the positioning of multiple pillboxes to defend against an attack on the beaches to the north of Loggans Moor during World War 2. Three such examples can be found at Carwin (MCO43153), Hayle (MCO42957) and at Loggans Moor (MCO34051) though the latter is obscured by dense vegetation. Further camps and air defence bases were also located all along the North Cornish coast. Most recently the rebuilding of the A30 slightly further north in the 1980s and the adjacent retail developments have intruded on Loggans Moor and the view of its industrial surroundings.

2.6 Project Aims and Objectives

The principal aims were to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Inform whether historic/architectural features should be retained.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.

To achieve these aims this report will:

- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the

'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in the NPPF.

2.7 Methodology

2.7.1 Desk-Based Assessment

This concentrated on searches of the Sites and Monuments Record, Cornwall Record Office and Heritage Gateway data. A map regression exercise was also undertaken using resources at the Cornwall Studies Library.

2.7.2 Walk Over Survey and Archaeological Assessment

A walk over survey was conducted to record any extant visible remains on the site. The site is currently open with quite dense rough grassland and is used for dog walking and cycling. Two trenches had been excavated by digger with an approximately 2m wide bucket, possibly test trenches for development purposes or jumps for cycling. The extant leat defines the northern extent of the site (described in Table 4). A stream defined the south side, probably redirected alongside new A30 road route. It was very overgrown and not maintained although parts were lined with stone or had concrete walls. The former field boundaries were no longer evident and no other archaeological features were identified.

Modern developments were quite clearly visible as was Loggans Mill; the upper storeys prominent from Loggans Moor. The site is quite low lying resulting in minimal visibility and appreciation of Hayle and the World Heritage Site at just above ground level.

2.7.3 Report

This report describes the results of the archaeological work. Copies of the final archive report will be submitted to: the client; the County Historic Environment Record; Royal Cornwall Museum; National Monuments Record in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation. The final report will be uploaded to the online OASIS library and the online OASIS record will be completed when the final report is submitted.

2.7.4 Site Archive

The site archive will be prepared in line with the brief and deposited with the Cornwall Record Office following completion of the final report and confirmed in writing with the Historic Environment Planning Advice Officer. A summary of the contents of the archive shall be supplied to the Historic Environment Planning Advice Officer.

3 Results

Sites of archaeological significance identified within the study area are located on the site plan, numbered from 1-137 with the Scheduled Monuments and Listed Buildings numbered first followed by the Sites and Monuments entries.

The significance of each site is graded as follows:

WHS- World Heritage Site

- S Scheduled Monument
- L Listed Building
- A Site of National Importance
- B Site of Regional Importance
- C Site of Local Importance
- D Natural Feature or non-antiquity

The condition of each site was assessed where possible during the walk over survey from 1-4:

- 1 No surviving remains evident above ground
- 2 Poor preservation
- 3 Fair preservation
- 4 Good preservation

Where it was not possible to visit a specific site, its condition was assumed from its designation or SMR entry, indicated with the prefix 'A'.

In addition to the above descriptors the Overall Impact is determined using the combined result of a Sensitivity rating and Magnitude of Impact rating (DMRB Vol.11; 2/1-5).

The Sensitivity ratings are:

Sensitivity Rating	Typical Descriptors
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Table 1 Sensitivity ratings and descriptions.

The Magnitude of Impact ratings are:

Magnitude of Impact rating	Typical Descriptors
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
No Change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 2 Magnitude of Impact ratings and descriptions.

The sites have been given one of five Overall Impact grades in advance of any recommended mitigation measures; from Very Large which approximates to damage and loss of the site's integrity and which represents a key factor in the decision-making process, to neutral which equates to no perceptible effects (DMRB Vol.11; 2/1-5).

The full scale is:

Impact Category	Typical Descriptors of Effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 3 Overall Impact categories and descriptions.

Excerpts within the descriptions are taken from the relevant SMR, Listed Building or Scheduled Ancient Monuments records. Information within the brackets refers to sources used in the compilation of, and listed at the end of, the SMR/LB/SAM records.

Site No.	Site Name	NGR (SW)	Description and Condition including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
1	Loggans Mill Leat	57544 38798	Defines the northern boundary. Consists of earth banks and a sandy-silt base. Short section had been formalised with concrete walls possibly for a flow control system. Evidence for recent cleaning and removal of vegetation. Average width 2m and average depth 0.4m.	Post Medieval	C	3	Negligible	Minor	Slight
2	Loggans Mill DCO1390	57362 38549	Granite and cast slag block construction with some brick in upper storeys. Little seems to remain of the internal structure and it is extremely overgrown with vegetation, especially small trees and ivy. Surrounded by scaffolding and significant modern concrete repair and mortar repointing. No direct access to the site possible. Completely surrounded by high metal fence with modern housing on the north and east sides and supermarket to the south. Highly intervisible with these developments. Partially visible with the Hayle World Heritage Site and other heritage assets, especially the upper storeys. West side of the mill is substantially intervisible with Loggans Moor.	Post Medieval	L	3	High	Minor	Moderate
3	DCO1322 Earthwork	58421 38800	Banks upstanding but very overgrown, access into the interior was too overgrown to be passable, interior not inspected. On high ground overlooking Hayle. The industrial park, shopping facilities and a wind turbine visible but not Loggans Moor. Possibility the upper storeys of the proposed Loggans Moor development will be visible. This area, including Loggans Mill not visible due to screening provided by mature trees, including some evergreen.		S	3	High	No change	Neutral
4	DCO1184 Trevarnon Round	58758 40203	Not upstanding – curved hedge marked on the maps not pronounced on the ground. On high ground overlooking Hayle. The industrial park, shopping facilities and a wind turbine visible but not Loggans Moor. Possibility the upper storeys of the proposed Loggans Moor development will be visible. This area, including Loggans Mill not visible due to	Iron Age / Romano-British	S	1	High	No change	Neutral

Site No.	Site Name	NGR (SW)	Description and Condition including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			screening provided by mature trees, including some evergreen.						
5	Phillack Church/ Village	56517 38391	Church wall and some housing constructed of cast slag blocks. Properties and Church as per Listed Building descriptions. On high ground but screened by substantial mature trees; deciduous and evergreen. Church tower intervisible with parts of Hayle.	Post Medieval	L	4	High	No change	Neutral
6	World Heritage Site	57144 38298 (eastern extent of area)	Surrounded by modern buildings/dwelling and traffic on busy main road access to Hayle. Highly visible with upper storeys of Loggans Mill. Loggans Moor not visible but top of a 4-5 storey building probably would be. Significant heritage assets included or defining the World Heritage Site not immediately visible from its eastern boundary.	Post Medieval	WHS	3	Very High	Negligible	Slight

Table 4 Fieldwork results of assessed designated sites surrounding Loggans Moor (Figure 6).

4 Statements of Significance

Many of the sites have already had their significance assessed by Scheduling or Listing. Where sites are Scheduled or Listed they have not been considered under the Sites and Monuments Records category below, even though they feature on that list, to avoid duplication.

4.1 Local Significance (Site 1; Figure 1, Plate 1, Plate 2)

The upstanding remains of the leat and field boundaries are considered of local significance and low or medium rarity.

Boundary features are the most abundant archaeological feature to be found in Cornwall. Whilst some may be of recent origin, many have older origins and are thus of considerable importance in telling the story of the development of agriculture in the rural landscape, their layout, inter-relationships and phasing allowing sequences of land clearance and enclosure for agriculture to be read. They are important visually (as landscape features) and archaeologically. The extant boundaries are not considered “important” hedgerows under the Section 97 (hedgerows) of the Environment Act 1995 as they have not existed for more than 30 years and incorporate archaeological features recorded in the Sites and Monuments Record. Although the west boundary is close to a site on the Sites and Monuments Record this is a modern fence not a hedgerow.

4.2 Listed Buildings (Sites 2 and 5; Figure 7, Plate 3)

Sites are Listed to mark their special architectural and historical interest; they are protected by law and Listed Building Consent must be granted for any alterations to the building. Site 2 has been designated Grade II status which means it is considered ‘nationally important and of special interest’ (English Heritage Website).

4.3 Scheduled Monuments (Sites 3 and 4; Figure 6)

Scheduled Monuments have Statutory Protection under the Ancient Monuments and Archaeological Areas Act 1979. These are sites that have been identified by English Heritage, the Government’s archaeological advisory body, as being of national importance, and are included in the County Lists maintained by the Secretary of State for Culture, Media and Sport. A schedule has been kept since 1882 of monuments whose preservation is given priority over other land uses. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of Scheduled Monument Consent for any work to a designated monument.

Likely subsurface and associated remains are of equal significance.

4.4 World Heritage Site (Site 6; Figure 5)

These sites are designated and defined by UNESCO (UNESCO website):

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

Sites inscribed on the World Heritage List benefit from the elaboration and implementation of a comprehensive management plan that sets out adequate preservation measures and monitoring mechanisms. In support of these, experts offer technical training to the local site management team.

The inscription of a site on the World Heritage List brings an increase in public awareness of the site and of its outstanding values, thus also increasing the tourist activities at the site. When these are well planned for and organized respecting sustainable tourism principles, they can bring important funds to the site and to the local economy.

5 Impacts

The impacts of the development are broken down into three phases; 1) construction, 2) operational and 3) end of use.

During the construction phase there will be visual and auditory impacts from the construction machinery on sites 1, 2, 5 and 6. There may be a physical impact to site 1 to allow for access and construction though given that the leat is planned to be retained and there is already basic access across it, this is not considered to be highly significant.

Although dependent on the use of the new buildings, auditory impacts will be negligible during the operational stage. The completed buildings will have a slight visual impact on sites 5 and 6 and a moderate visual impact on sites 1 and 2, obscuring the views to the sand dunes beyond and removing a portion of the vegetation bordering Hayle.

The end of use impacts are likely to be comparable to the construction phase though this is dependent on whether the buildings are removed. If they are removed there will be a visual and auditory impact from the machinery. If they are to remain, the visual impact from the operational stage will persist.

Loggans Moor already experiences significant auditory disturbance and a negative visual impact from the adjacent A30 and it is unlikely that any construction, operational or end of use impacts will add greatly to those.

Sites 3 and 4 are not currently intervisible with Loggans Moor and are a significant distance away. It is possible that the height of the new development could make it visible and that noise could carry on the wind though these would depend on vegetation growth and wind direction.

There is already a high proportion of modern development in this area of Hayle and this is the last green space around Loggans Mill to be developed. Whilst the cumulative impact of all these developments is significant, particularly on

the visual appreciation of the Mill, it is not considered to be a major impact that would prevent development. The most impressive and revealing views of the Mill have already been altered by development and it is unrealistic to appreciate the current remaining view from the A30.

6 Discussion

The map regression exercise highlights that Loggans Moor has been agricultural land for at least the last 200 years and field patterns and boundaries also suggest a Medieval or Post Medieval origin for the layout depicted (Figure 2-Figure 4). However the industrialisation and expansion of Hayle in the late 19th Century brought significant landscape changes in the form of roads and railways and the consolidation of parts of the estuary for trade use. The area referred to as Loggans Moor on the maps is of greater extent than the current study area and as such was truncated by the railway and roads extending east towards Truro. Whilst relatively recent, this industrialisation is highly significant in the history of Cornwall and its inextricable link to mining. Loggans Mill is an indirect part of this and it is archaeologically and visually significant. These values are realised and protected by the designated status of these assets.

The surrounding area is already highly developed with a retail park, supermarket and a wind turbine all clearly visible from Loggans Moor and Loggans Mill. These are also clearly visible from the other heritage assets highlighted in this study. The interaction between the World Heritage Site and the other heritage assets, including Loggans Mill, will not be substantially affected by the proposal. Currently Loggans Mill is in a poor state of repair which detracts from the modern surroundings and diminishes its cultural importance.

The leat parallel to the site boundary is an integral part of Loggans Mill. Although it will be obscured from general view the leat is on historic and modern mapping and will not be significantly altered by the current proposals.

7 Recommendations

- The leat to Loggans Mill is preserved.
- New buildings are sympathetic to Loggans Mill and do not substantially exceed the height of the Mill to minimise the impact on the views to and from the development site and Mill.

8 Conclusion

The historic mapping and walk over survey did not locate any archaeological remains visible at ground level or any indications to suggest surviving sub-surface remains. The visual and impact assessment did not indicate any substantial impacts to development at the site. Despite the nearby World Heritage Site, the most significant asset is the adjacent Loggans Mill. Whilst the existing modern developments set a precedent the negative impacts of the proposed development are negligible to minor and not considerable enough to prevent construction.

9 The Archive

The AC Ltd project number is AC13001E.

The project's documentary, photographic and drawn archive is housed at the offices of Archaeological Consultancy Ltd, Goodagrane, Halvasso, Penryn, Cornwall, TR10 9BX prior to transferral to the Cornwall Record Office.

The archive will consist of all primary record sheets and reports. A digital archive will be entered on OASIS once the report has been submitted.

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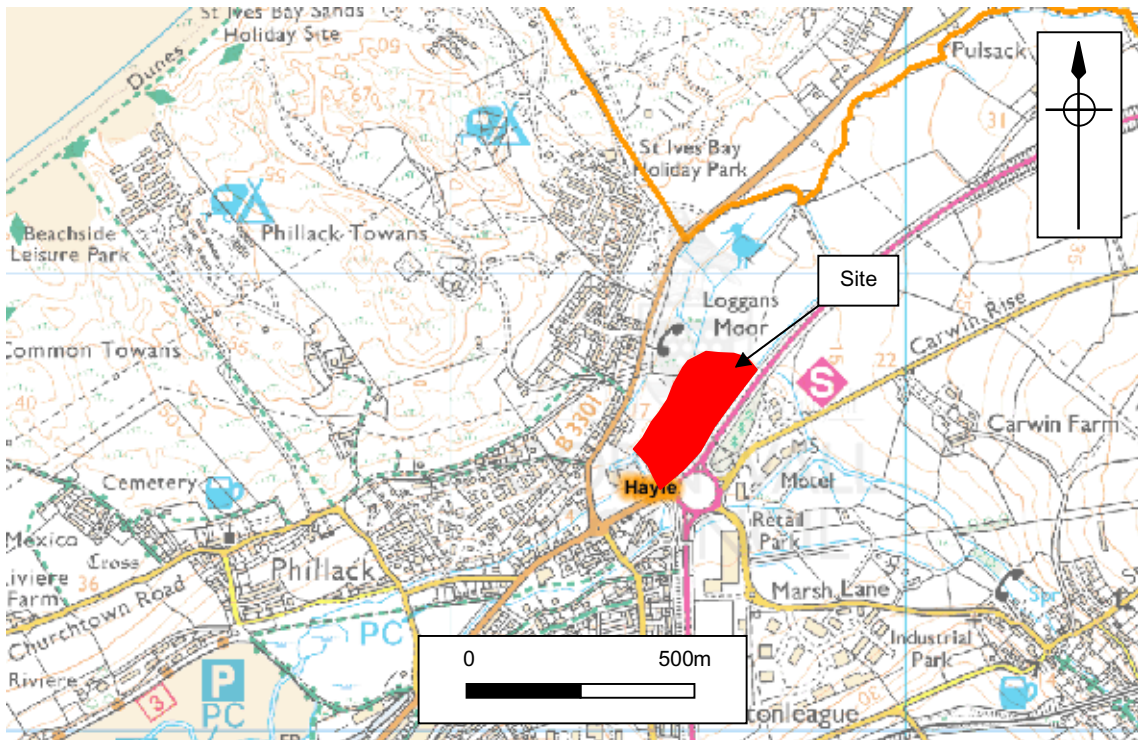


Figure 1 Location map. Courtesy of Cornwall Council.

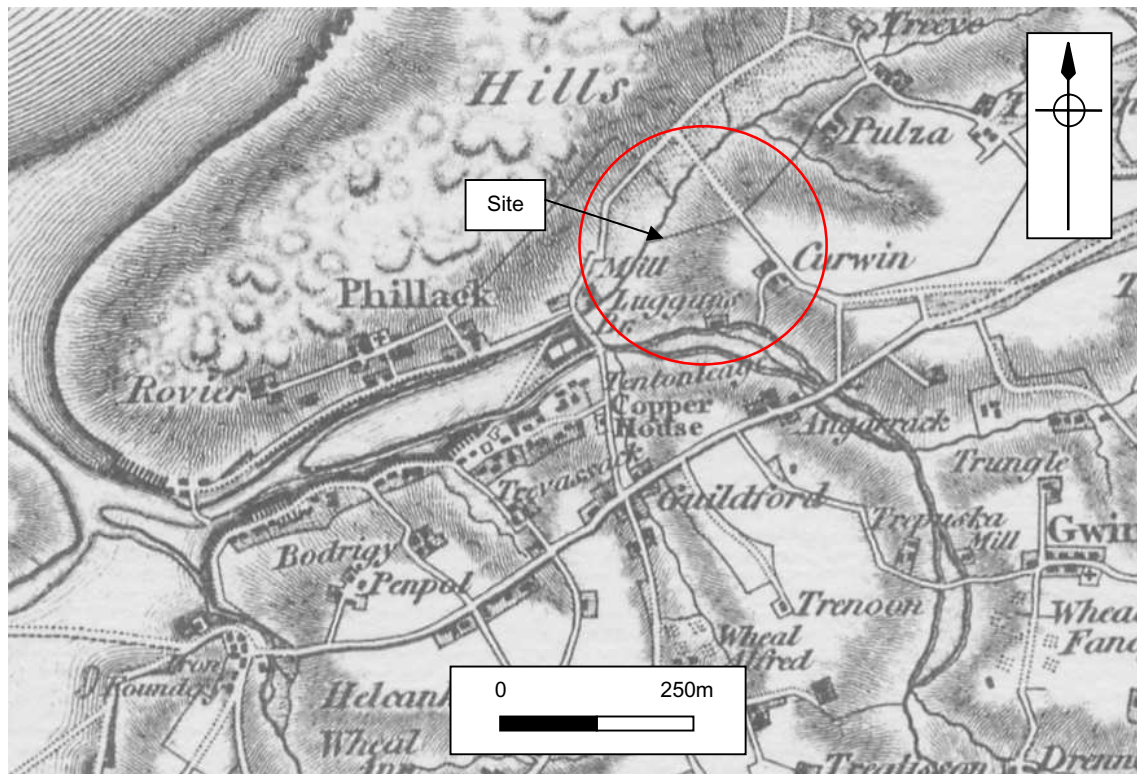


Figure 2 Ordnance Survey 1801 map showing Loggans Mill and 'Luggans'.

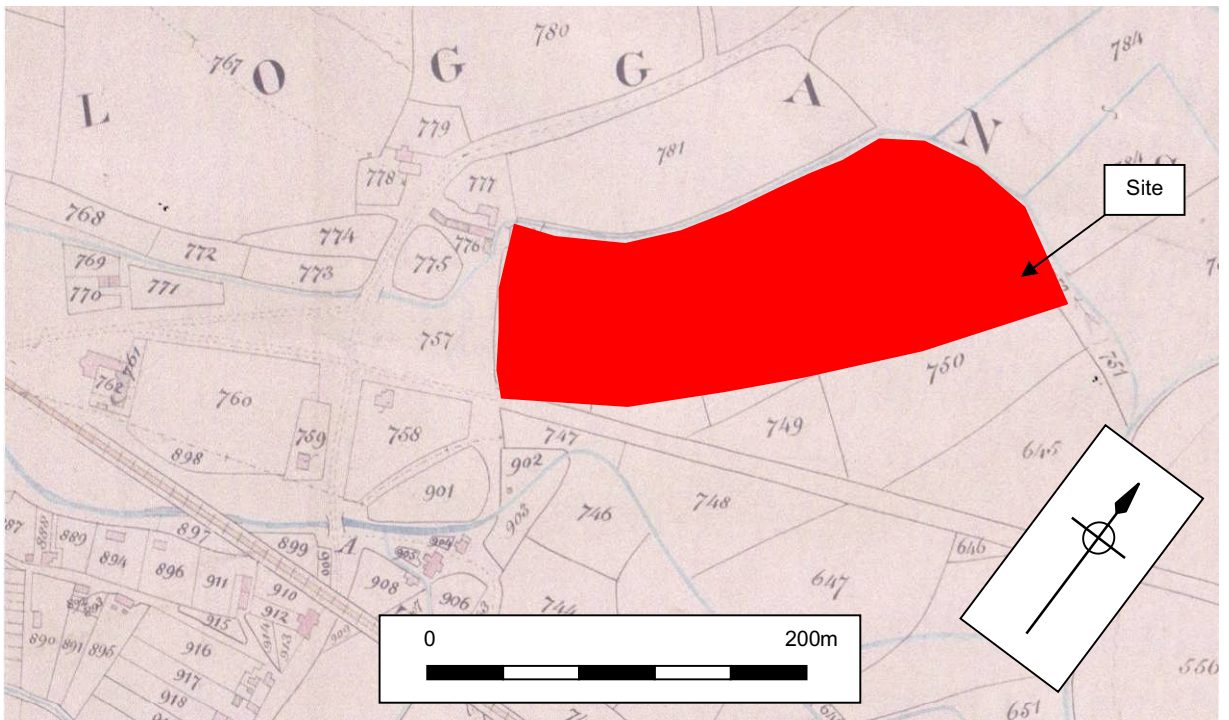


Figure 3 Tithe Map 1842 for Phillack parish.

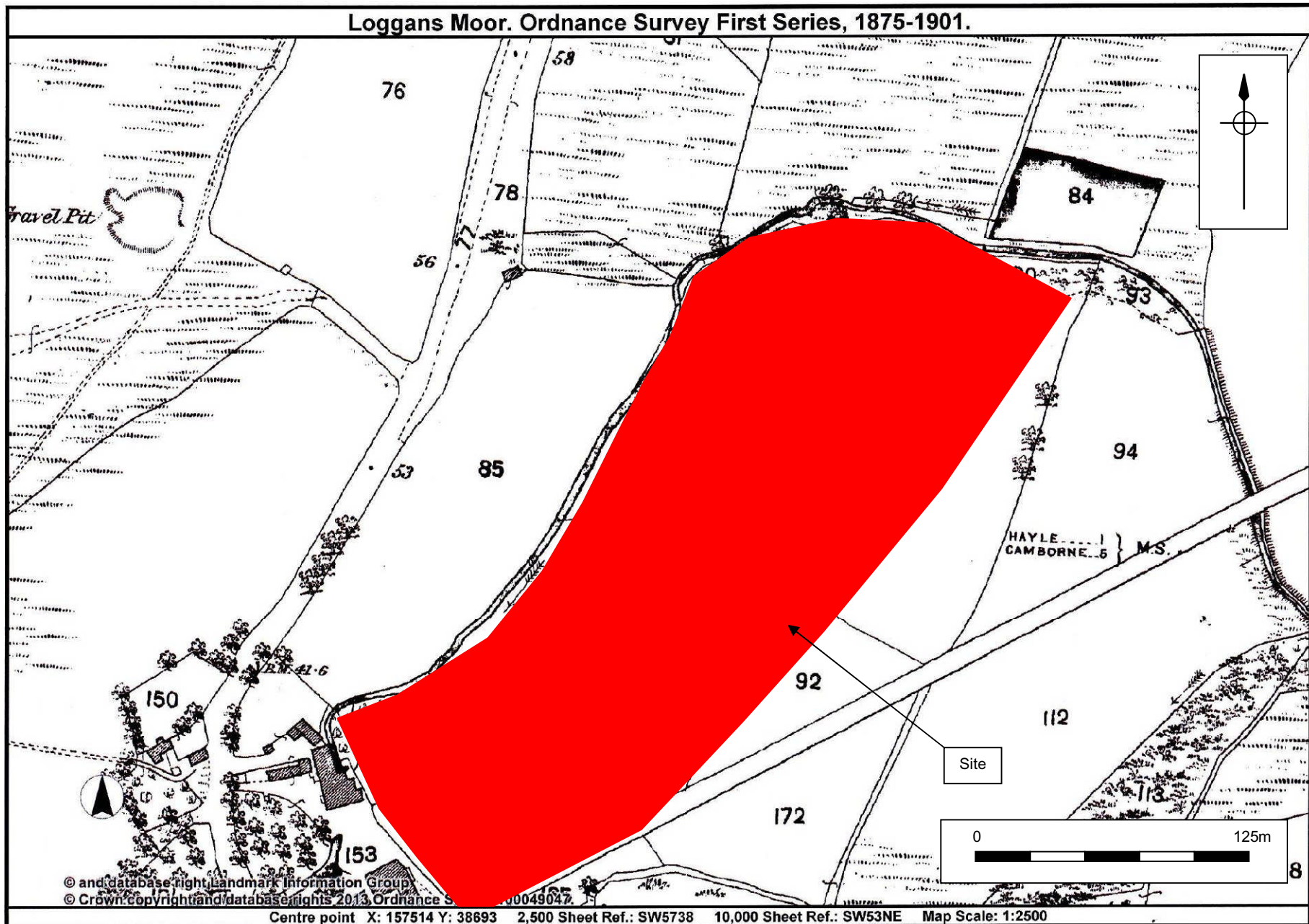


Figure 4 Ordnance Survey first edition map 1875-1901.

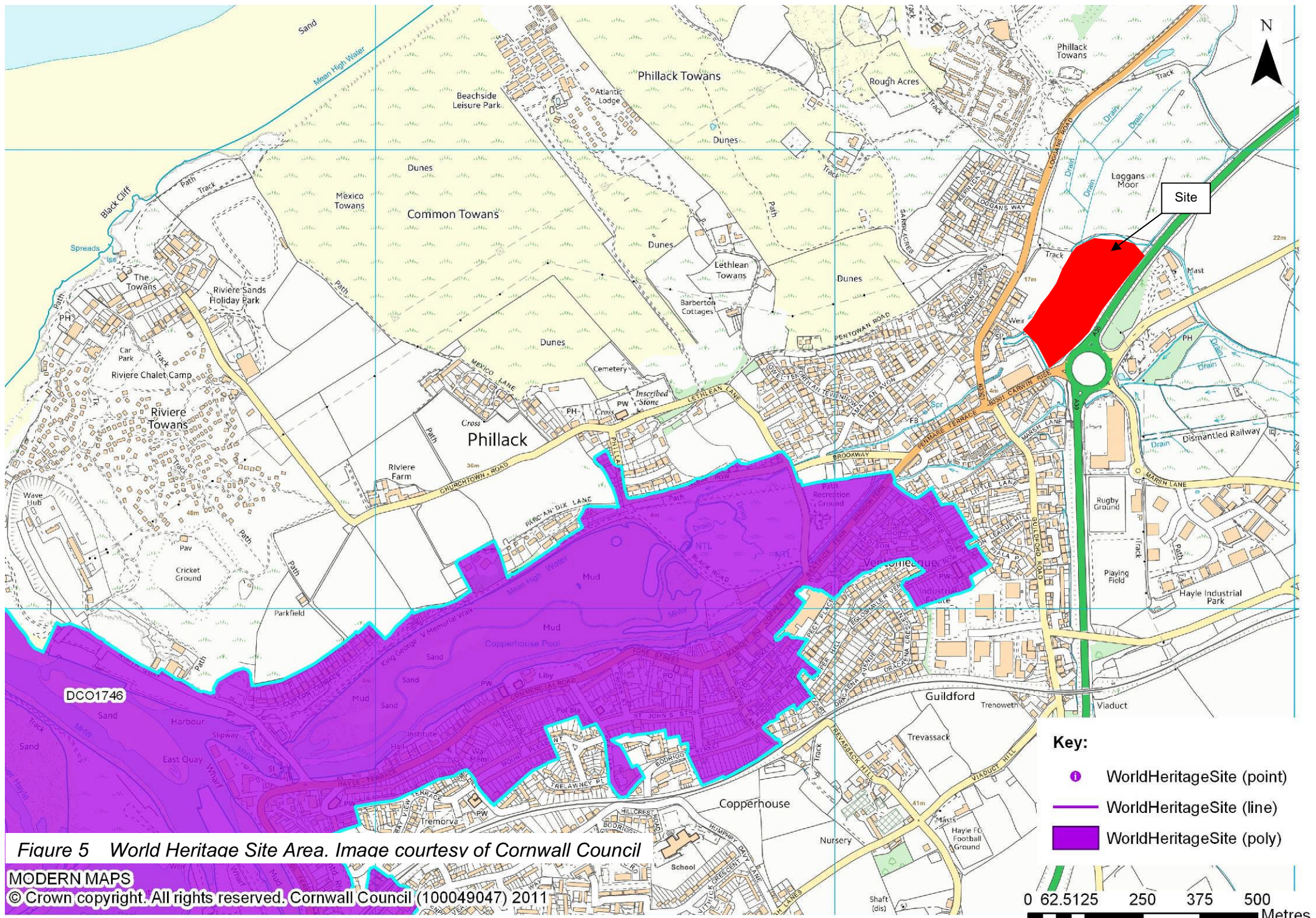


Figure 5 World Heritage Site Area. Image courtesy of Cornwall Council

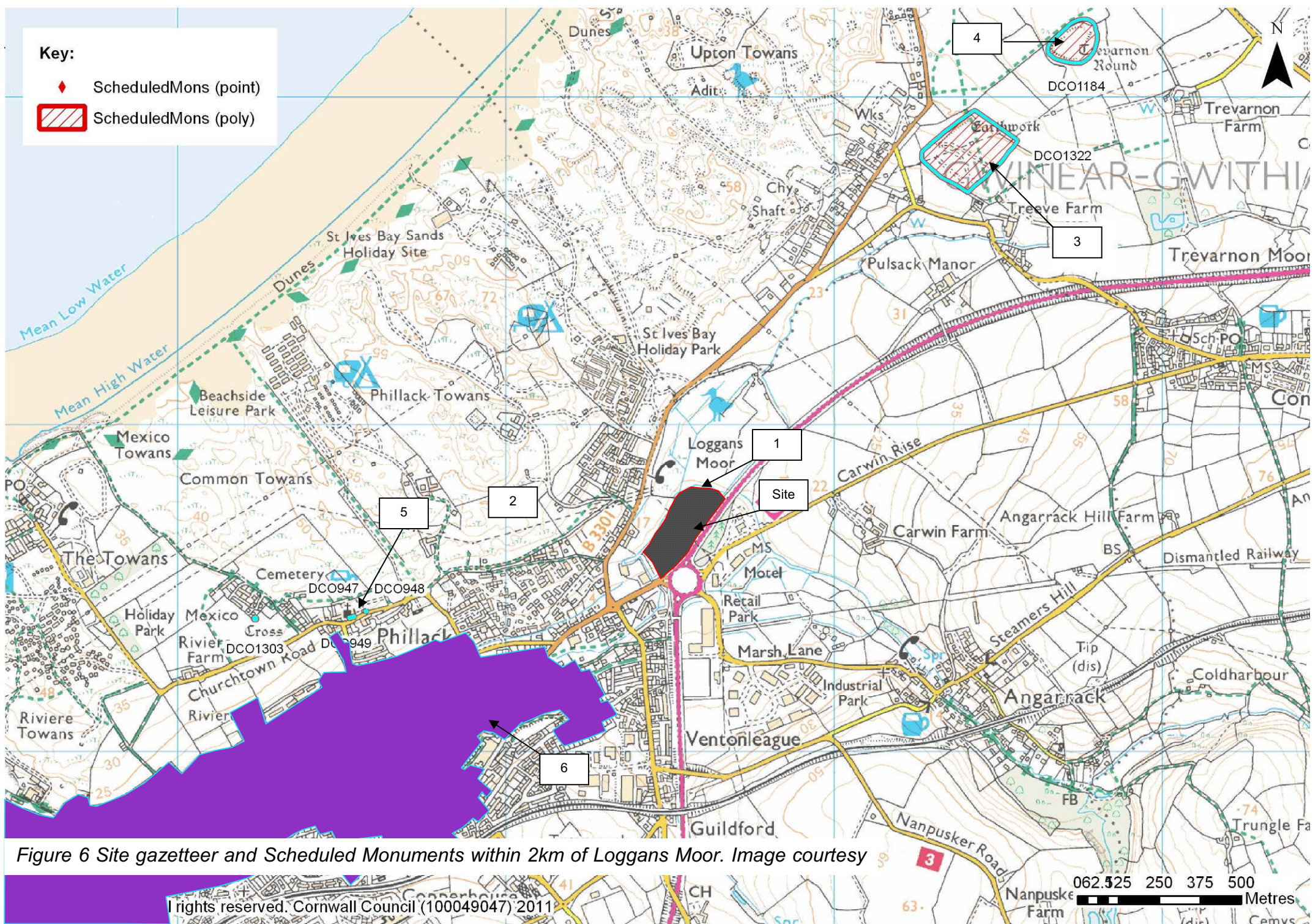


Figure 6 Site gazetteer and Scheduled Monuments within 2km of Loggans Moor. Image courtesy

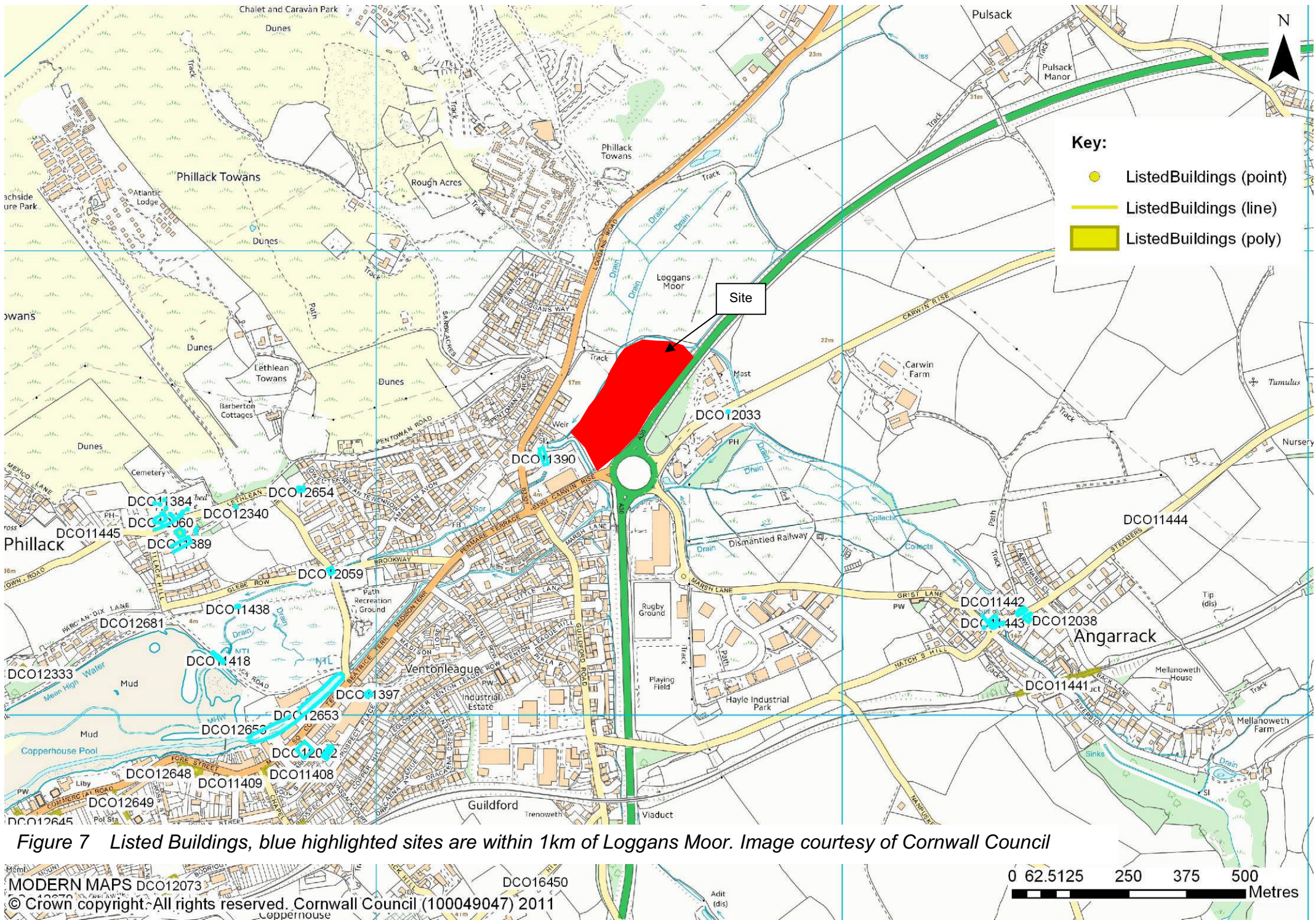




Plate 1 Loggans Moor, with the mill leat, Loggans Mill and modern housing in the background. Looking west.



Plate 2 The mill leat. Looking southwest.



Plate 3 Loggans Mill supported by scaffolding as viewed from the boundary of Loggans Moor. Looking west.

11 Appendices

Appendix 1 Brief

BRIEF FOR ARCHAEOLOGICAL ASSESSMENT

Date: 10th April 2013

Site: Loggans Moor, Loggans Road, Hayle

Application Number: PA12/02851

HBSMR Ref: CCO5046

Applicant: Montgomery Property Group

Agent: Poynton Bradbury Wynter Cole Ltd

Historic Environment Planning Advice Officer: Phil Markham, Cornwall Council, Historic Environment, Council Offices, Dolcoath Avenue, Camborne TR14 8SX

t. 07973 813572 e. pmarkham@cornwall.gov.uk

Planning Case Officer: Peter Bainbridge, Cornwall Council, Planning & Regeneration, Council Offices, Dolcoath Avenue, Camborne TR14 8SX

This brief is only valid for six months. After this period the Historic Environment Planning Advice Officer (HEPAO) should be contacted. The contractor is strongly advised to visit the site as there may be implications for accurately costing the project.

Contractors Written Scheme of Investigation (WSI)

No ground works are to be undertaken until the HEPAO and the Local Planning Authority (LPA) have approved the archaeological contractor's WSI.

1 Introduction

- 1.1 This brief has been written by the HEPAO and sets out the minimum requirements for an archaeological assessment of the above site. An archaeological assessment will be required to provide information on the significance and potential of archaeological remains on the site and to identify the likely impact of the proposals on that significance.

2 Site Location and Description

- 2.1 The site is located on the north-eastern edge of Hayle at Ordnance Survey Grid Reference SW5754 3868 and is currently rough grassland.

3 Planning Background

- 3.1 Outline planning application PA12/02851 was submitted on the 23rd March 2012 and was for a proposed business park on Loggans Moor with a new access road off Loggans Road. This application is currently pending consideration.

4 Archaeological Background

- 4.1 The Cornwall and Scilly Historic Environment Record (HER) records that the site contains a mill leat associated with the adjacent listed Loggans Mill and

that the site is within an area classified as Upland Rough Ground and includes: Typical historical and archaeological components: The semi-natural vegetation community is the most immediately visible component of this Type but there is also usually a wealth of archaeological remains, many of which may be fairly ephemeral, not making a significant impact on present landscape form. Others, however, are highly visible and catch the eye; for instance, hill-top Bronze Age barrows, long post-medieval pasture boundaries, and areas of turf-cutting. In Cornwall generally, prehistoric sites and complexes are generally best-preserved in Upland Rough Ground and can comprise complete Bronze Age ritual/ceremonial monuments (long barrows, chambered tombs, round barrows, stone circles, stone rows, standing stones etc) and apparently coherent groups of these. These are sometimes sufficiently well preserved to establish that certain natural features, like tors or streams, were incorporated by prehistoric people into their ritual complexes. Transhumance huts, the shelters used by seasonal pastoralists from the long period of common grazing, survive on Bodmin Moor and there are remains of peat cutting including the little platforms the dried peat was stacked on. More recent components include pasture boundaries, usually laid out as commons were 'privatised' in the post-medieval period. Industrial remains often survive well on Upland Rough Ground and the extensive disturbance of some tracts has inhibited later agricultural improvement. Quarries and mines form important components of certain areas of Upland Rough Ground. There are few medieval or modern settlements and tracks and roads are usually open (not hedged).

5 Requirement for Work

5.1 Ground works may disturb extant and buried archaeological remains. In order to understand the site and its potential for recording archaeological remains an assessment is required. This would involve a desk based assessment including a map regression plus a walk over survey to assess any extant remains of the site. This would provide evidence for any recommendations for archaeological recording.

5.2 The site specific aims are to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Whether historic/architectural features should be retained.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the

'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in the NPPF.

6 General Guidance

- 6.1 The archaeological contractor is expected to follow the code of the Institute for Archaeologists (IfA).
- 6.2 All of the latest Health and Safety guidelines shall be followed on site.
- 6.3 Terminology will be consistent with the English Heritage Thesaurus.

7 Results

- 7.1 The full report including any specialist assessments shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant and the archaeological contractor, Cornwall Council Historic Environment Service and the Cornwall Record Office or Royal Cornwall Museum. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.
- 7.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).
- 7.3 This report will be held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation.
- 7.4 The report must contain:
 - A concise non-technical summary of the project results.
 - The aims and methods adopted in the course of the investigation.
 - A discussion of the archaeological findings in terms of both the site specific aims and the desk based research.
 - A location map, a drawing showing those areas examined as part of the archaeological recording, and copies of historic maps and plans consulted and any archaeological plans and sections. All plans shall be tied to the national grid.
 - All specialist reports and assessments.
 - A summary of the archive contents and date of deposition.
 - A copy of the brief and the approved WSI will be included as an appendix.

8 Archive Deposition

- 8.1 An ordered and integrated site archive will be prepared in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006* upon completion of the project.
- 8.2 Where there is only a documentary archive this will be deposited with the Cornwall Record Office.
- 8.3 A copy of the report will be supplied to the National Monuments Record (NMR) Swindon.
- 8.4 A summary of the contents of the archive shall be supplied to the HEPAO.
- 8.5 Only on completion of 8.1 to 8.5 (inclusive) will there be a recommendation for the discharge of any archaeological recording condition.

9 Monitoring

- 9.1 The HEPAO will monitor the work and should be kept regularly informed of progress.
- 9.2 Notification of the start of work shall be given preferably in writing to the HEPAO at least one week in advance of its commencement.
- 9.3 Any variations to the WSI shall be agreed with the HEPAO, preferably in writing, prior to them being carried out.

Loggans Moor, Hayle, Cornwall.

Archaeological Assessment: Written Scheme of Investigation.

Author: Hayley Goacher BA (Hons) PlfA and
Matt Mossop MA (Hons) MGSDip MIAI MIfA

Report Date: 06.06.2013

Client: Montgomery Property Group

Project No: AC13001E

Planning Reference: PA12/02581

Statutory Protection: Partial Area of Great Scientific Value and
partial Site of Special Scientific Interest

Proposal: Business Park

Civil Parish: Hayle

District: West 1

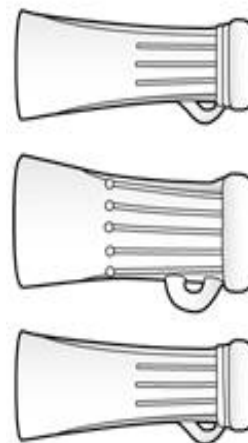
County: Cornwall

Country: England

National Grid Reference: SW 5754 3868

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England and Wales Registered Company No. 5784610

Archaeological
Consultancy Ltd.



1 Summary

Archaeological Consultancy Limited (AC) have been commissioned by Simon Burgess of Poynton Bradbury Wynter Cole Architects Ltd on behalf of Montgomery Property Group, to undertake an archaeological assessment of Loggans Moor (NGR SW 5754 3868), in accordance with a brief provided by Phil Markham, Historic Environment Advisor (Archaeology). This will assess the significance of the site and inform on the likelihood and recording of any remains, to facilitate appropriate planning decisions for the proposed business park.

2 Site location

2.1 Location

Loggans Moor lies within Hayle civil parish, approximately 2 km northeast of Hayle town centre.

2.2 Topography

The site is currently rough grassland on a plateau behind the extensive sand dunes, known as the Towans, which line the coast to the north. It is surrounded by modern developments.

2.3 Geology

The landscape is characterised by the Mylor Slate Formation of sedimentary slate and siltstone bedrock formed approximately 354-370 million years ago in the Devonian Period. These were formed on the ocean floor from fine microscopic pelagic organisms. The superficial deposits over the bedrock are categorised as alluvium of clay, silt, sand and gravel formed 2 million years ago in the Quarternary Period from river terrace deposits, floodplains and bogs. In this area the influence of estuarine and coastal plain deposits is highly relevant. (www.bgs.ac.uk/geologyviewer).

3 Project background

3.1 Development background

Outline planning for the proposed business park was submitted in March 2012 and is pending consideration. An archaeological assessment has been requested by HES Advice to provide information on the significance and potential of archaeological remains on the site and the impact the proposals are likely to have on that significance. AC has been commissioned to undertake an archaeological assessment to provide this information.

A brief for archaeological assessment was provided by Markham (2012).

3.2 Archaeological and Historical background

Although only 17m above Ordnance Datum the site is characterised as Upland Rough Ground. This is generally thought to preserve archaeological sites, particularly Prehistoric monuments, Medieval or earlier agricultural boundaries and industrial remains quite well.

Loggans Mill survives adjacent to the site. It is a Grade II Listed early 19th Century corn mill owned by the locally important Hosken family. The Listing entry states:

Circa early C19, extended in 1852 for Mr W. Hosken and again extended in 1884. Granite rubble with granite dressings to the older parts, rockfaced granite to the later C19 part. Corrugated asbestos roofs with gable ends coped gable end on right. Scantle slate roof over rear wing. Plan: Large rectangular plan plus square tower towards left and single storey wing at right angles to rear right. Waterwheel was originally at rear left. The building was entirely refurbished in 1884 as a very advanced steam-driven roller mill with electric light. All machinery now gone. Exterior: 4-storeys and 5-storeys. At left is taller (on higher ground) late C19 block with large round-arched doorway on the ground floor, otherwise blind. In front of the right hand corner of this block is a 4-storey roofless tower of similar date. Tower has wide segmentally arched doorway on the ground floor and windows to each floor above. Older part, right, is a regular 1:4:3 window range. Large window openings in the left-hand bay, otherwise smaller window openings. 2 openings have been made into loading doorways, many of the openings have been blocked but there are some circa late C19 4-pane sashes and some small-paned casements surviving. Date stone on right-hand gable end. Interior: Not inspected. This mill is part of a large C19 industrial complex much of which has been partly demolished in the 1980's (www.HeritageGateway.org.uk).

Hayle was a highly important town in the 19th Century with at least two foundries, the port and other industrial works all supporting and facilitating the Cornish mining industry. The Towans to the east contain considerable archaeological remains, including Prehistoric settlements such as at Gwithian, religious monuments like St. Piran's Oratory and World War II installations (www.HeritageGateway.org.uk).

4 Project aims and objectives

The principal aims will be to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Inform whether historic/architectural features should be retained.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.

To achieve these aims the report will:

- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.

- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the 'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in the NPPF.

5 Method statement

5.1 General methodology

AC complies with the guidelines set out in the IfA's Standards and Guidance and follows the IfA code of conduct. Terminology will be consistent with the English Heritage Thesaurus.

5.2 Desk-based assessment (DBA) and walk over survey

An initial DBA will concentrate on Sites and Monuments Records (SMR), records held at the Cornwall Records Office, Cornwall Studies Library as appropriate, and a map regression exercise. Further research may be undertaken as necessitated by the findings.

A walk over survey will record any extant visible remains on the site. The site is currently open with quite dense rough grassland. Any buildings and sites identified by the desk-based assessment will be targeted by the walk-over assessment. Identified sites and features will be located using GPS or measured survey as appropriate.

Existing plans will be annotated with archaeological detail typically at 1:1000 with additional details as required. Scaled digital photographic survey will document identified sites as appropriate. A photographic register detailing as a minimum, site number, location and direction of shot will be included in the archive. Where appropriate the shots will be located on existing base maps.

5.3 Report

A single archive report will be prepared to describe the results of the archaeological work. A digital version will also be supplied on CD-ROM. The final report will contain: summary, aims and methods, discussion, conclusion and recommendations, location and other relevant plans tied in to the OS grid and an archive index including intended date of deposition. The brief and WSI will be included as appendices.

Copies of the archive report will be submitted to: the client; the County Historic Environment Record (HER); Cornwall Record Office; National Monuments Record (NMR) in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation.

5.4 Archive

The site archive will be prepared in line with the brief.

The archive is likely to be of a documentary nature and will be deposited in a suitable form with the Cornwall Record Office, within six months of the completion of the final report and confirmed in writing with the HEAA.

5.5 Web-based publications

The online OASIS record will be completed when the report is submitted.

6 Project management and structure

6.1 Staff

The project will be managed by Matt Mossop (AC). The desk-based assessment, walk-over survey and compilation of the report will be undertaken by Hayley Goacher and Matt Mossop.

Matt Mossop MA (Hons) MGSDip MIAI MIfA Project Manager

Matt has extensive archaeological experience in England, France and Ireland from 1992 onwards, becoming a licensed director in Ireland (2001). He has directed numerous excavations and presented papers for the World Archaeological Congress, Royal Society of Antiquaries of Ireland, universities and local groups in Ireland and the UK.

Hayley Goacher BA (Hons) PlfA Project Officer

Hayley completed her BA in archaeology at The University of Durham in 2009 and has archaeological experience, from 2004 onwards, of both excavation and post-excavation, principally with contractual archaeological firms. She joined AC in July 2010 and has since undertaken a number of assessments, walkover, photographic and historic building surveys, watching briefs, evaluations and excavations, most recently including Trewarthenick and Gwel An Mor.

Whilst we endeavour to avoid changes to senior project staff, AC reserve the right to change the nominated personnel if necessary.

6.2 Project facilities and infrastructure

The project will be based at the AC office in Halvasso, Penryn. AC has a computer network running Windows XP Professional, Vista and Windows 8. Report texts are generated in Word 2007.

6.3 Timetable

The work is anticipated to commence as soon as we have written approval from the Historic Environment Planning Advice Officer. The fieldwork stage of the project is expected to take one day.

An archive report will be completed within 6 months of the end of the fieldwork. If the site proves complex or specialist reports are required, an interim statement will be produced in the same time-frame. The deposition of the archive following completion of the report will be within a timescale agreed with the relevant repository. AC has appropriate interim storage.

6.4 Health and safety

AC complies with all relevant health and safety guidelines and legislation. A risk assessment will be prepared for the site work and all staff will be briefed on the contents of the final version. PPE will be issued and used as required.

6.5 Insurance

AC has adequate insurance for employer's liability, public liability and professional indemnity. Further details are available on request.