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Blackwater, Kea, Cornwall An Archaeological Assessment



Historic Environment Projects

Blackwater, Kea, Cornwall: An Archaeological Assessment

Blackwater, Kea, Cornwall

An Archaeological Assessment

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Acknowledgements

This study was commissioned by Patrick Colledge for Linden Homes and carried out by Historic Environment Projects, Cornwall Council.

The Project Manager was Dr Andy Jones.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration

Looking north across the project area towards Blackwater School

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Abbreviations

HER Cornwall and the Isles of Scilly Historic Environment Record

HE Historic Environment, Cornwall Council
MCO Monument number in Cornwall HER

OD Ordnance Datum – height above mean sea level

OS Ordnance Survey

RIC Royal Institution of Cornwall

1 Summary

Historic Environment Projects, Cornwall Council, were commissioned by Patrick Colledge on behalf of Linden Homes/Galliford Try Partnerships in April 2014 to undertake an Archaeological Assessment on a proposed development site at Blackwater. The assessment incorporates the results of a rapid desk-based assessment, a walkover survey and the summarised results of an independent geophysical survey.

The proposed development site at Blackwater lies within land characterised through Historic Landscape Characterisation (HLC) as 'Recently Enclosed Land' – typically downland and higher pasture that saw post-medieval or later enclosure. The pattern of historic enclosure in the immediate vicinity of the project area comprises small, irregular fields, the majority having straight boundaries. These appear to be associated with dispersed cottages and farms, some of which may have been the holdings of miners working the post-medieval workings at East Treskerby and North Wheal Busy, to the north and south of the proposed development site, respectively. Nearby monuments recorded in the Cornwall HER include these two post-medieval mines, a post-medieval streamworks and buildings, including The Red Lion Public House and Blackwater School. To the south and southeast of the proposed development site the linear boundaries of two field systems have been identified through the National Mapping Programme (NMP). Although undated, at least one of these appears to predate the overlying post-medieval mine workings, suggesting they may be of medieval date. The desk-based assessment also showed evidence for a small enclosed farmstead or holding within the western extent of the site, probably of post-medieval date. The farmstead appears to have declined by the mid-19th century into use as a garden enclosure, possibly with the old cottage or farmhouse continuing in use as an agricultural building or barn. A lane historically ran along the western edge of the site, accessing a former droveway onto common land at Gooncare to the north. Blackwater Primary School now occupies the southwest corner of this common land, with part of the former droveway still surviving between it and the proposed development site.

The magnetometer survey of the project area was compromised by extensive disturbance by geotechnical excavations, which may have masked the detection of weaker magnetic anomalies. The findings identified a wide linear feature and fill broadly perpendicular to the western hedgeline that may reflect a section of historic field boundary associated with the post-medieval farmstead. A further section of this enclosure may also have been picked up by the magnetometer survey a few metres to the southwest but clear interpretation was complicated by the geotechnical investigation. The magnetometer survey also identified a circular group of small pits within the possible enclosure boundary that may reflect archaeological activity, although the date of this, and its relationship, if any, to the post-medieval farmstead is not currently known. They could potentially be of prehistoric origin but it is more likely they are of post-medieval or later date, possibly associated with mining-related activity, such as prospecting pits, or domestic rubbish pits.

The features identified by the geophysical survey were not considered to be of particular archaeological significance, although the concentration of possible archaeological features in the vicinity of the post-medieval farmstead is of some interest. Given the extent of ground disturbance for the geophysical survey, however, there is some potential for additional archaeological features to have been missed or obscured. It is therefore recommended that following an appropriate planning brief the HEPAO retains the option to request further mitigation, for example a watching brief during groundworks on the site.

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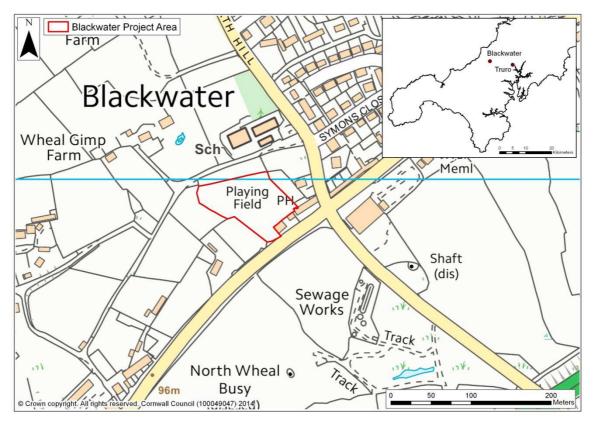


Fig 1 Location map

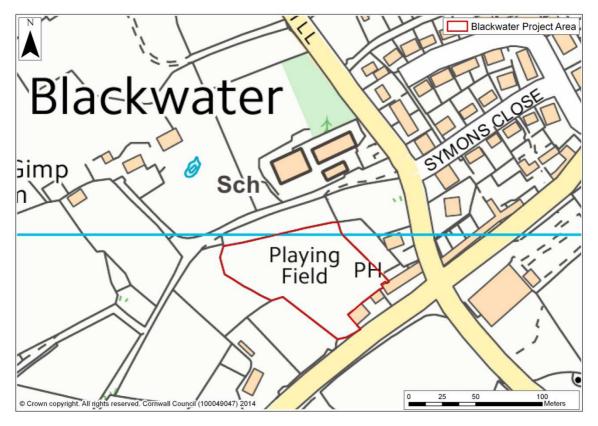


Fig 2 Site extent

2 Introduction

2.1 Project background

Historic Environment Projects, Cornwall Council, were commissioned by Patrick Colledge on behalf of Linden Homes/Galliford Try Partnerships in April 2014 to undertake an Archaeological Assessment on a proposed development site at Blackwater (Figs 1 and 2). The assessment was requested by the client ahead of a planning application and incorporates the results of a rapid desk-based assessment and walkover survey with the results of a magnetometer survey commissioned by the client and carried out by Archaeophysica Ltd (Fry 2014).

2.2 Aims

The principal aim of the study is to gain a better understanding of the impacts which would result from the construction of housing on land at Blackwater in the Parish of Kea.

The overall project aims are to:

- Collect and report on archaeological information about the development site in order to determine the potential direct impacts on the archaeology of the site which would result from the current proposal.
- To recommend any mitigation measures which might be required by the HEPAO to offset or mitigate any determinable impacts on the site.

The site specific project aims are to:

- Carry out a rapid desk-based assessment to collate information from historic maps and data sources such as historic landscape characterisation, remote survey and the Cornwall and Scilly Historic Environment Record (HER).
- Summarise the geophysical survey in interpreted form.
- Produce a report in respect of these.
- Inform whether further archaeological recording or other mitigation is recommended in advance of, or during the construction of housing.

The objective of the project is to produce a report setting out the likely range of impacts of the development on heritage assets within the site and to make recommendations to the Historic Environment Planning Advice Officer relating to the development proposed for this site.

2.3 Methods

2.3.1 Desk-based assessment

During the desk-based assessment historical databases and archives were consulted in order to obtain information about the history of the site and the structures and features that were likely to survive. The main sources consulted were as follows:

- Cornwall HER
- Early maps and photographs

2.3.2 Fieldwork

A walkover survey of the project area was carried out on the 15th April and a series of digital photographs were taken. The day was fair and sunny and there were no obstacles with access, except that a mound in the northeast corner of the field was not closely examined. The mound was very overgrown with scrub and bramble and safety was a consideration as it may be a mining-related feature.

2.3.3 Post-fieldwork

On completion of the project and following review with the HE Project Manager the results of the study were collated as an archive in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006*. The site archive will initially be stored at ReStore, with the eventual aim of deposition at Cornwall Record Office.

An archive report (this report) has been produced and supplied to the Client. This report will be lodged in digital form with the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation once a planning application for the site has been made. A copy of the report will be supplied to the National Monuments Record (NMR) in Swindon, to the Courtney Library of the Royal Cornwall Museum and to the Cornish Studies Library. All digital records will be filed on the Cornwall Council network.

An English Heritage/ADS online access to the index of archaeological investigations (OASIS) record has been made covering this project.

2.3.4 Geophysical survey

A suitably qualified sub-contractor (Archaeophysica Ltd.) was engaged by Patrick Colledge of Linden Homes/Galliford Try Partnerships to carry out a geophysical survey of the land proposed for the housing development at Blackwater.

On visiting the survey site, the geophysical team found that the ground surface had been substantially disturbed by geotechnical excavation trenches. These had been backfilled and levelled but presented a strong magnetic contrast to their background surroundings. This could potentially mask any weaker magnetic returns from archaeological features, thereby compromising their possible interpretation (Fry 2014).

Geometrics MagMapper G858 caesium magnetometers were used to carry out the magnetometry survey, utilising a multisensor acquisition system. Line separation was 1m to achieve a compromise between speed of coverage and lateral resolution. The along-line interval was 0.3m in line with English Heritage guidance.

The data from the survey was presented as a series of greyscale images overlaid onto map data geo-referenced to the OS grid, and these were reproduced in a technical report along with a text and an interpretative figure (Fry 2014). Significant aspects of the results are discussed within the specialist's report.

3 Location and setting

The proposed development site at Blackwater is located in mid-Cornwall, around 5km inland from the north coast at Porthtowan. The site is centred at SW 73399 45972 and covers an area of 0.598 Ha (Figs 1 and 2). The field containing the proposed development land is located at around 95 to 100m OD and occupies a gentle southeast facing slope on the lower edges of the higher downland of Princes Common, to the northeast. The underlying geology comprises Middle Devonian mudstones and sandstones of the Porthtowan Formation, part of the wider Gramscatho Basin deposits (Bristow 1996).

The Red Lion Public House and neighbouring housing stands adjacent to the proposed development site to the southeast, whilst to the north it is bordered by an area of waste ground adjacent to the playground of Blackwater School. The site lies within land characterised through Historic Landscape Characterisation (HLC) as 'Recently Enclosed Land' – typically downland edges and higher pasture that saw post-medieval (eighteenth to nineteenth centuries) or later enclosure (Fig 9). These areas of upland ground or poorer soils may have seen little, if any, formal enclosure prior to this period except where there was periodic expansion during times of increased pressure for arable land. Nonetheless, there is some potential for archaeological evidence deriving from prehistoric activity in these areas. To the east at Blackwater, which is closer to the

margins of Anciently Enclosed Land' (AEL), there may also be evidence of historic relict field boundaries and enclosures, typically Romano-British or medieval in origin, that reflect the expansion and contraction of farmed land over periods of time. The pattern of historic enclosure in the immediate vicinity of the project area suggests small, irregular fields, the majority having straight boundaries. These are associated with dispersed cottages and farms, some of which may have been the holdings of miners working the post-medieval East Treskerby and North Wheal Busy mines, to the north and south of the site, respectively.

The road running to the south of the proposed development site is an historic routeway running southwest to northeast from Scorrier and Redruth; the routeway is shown on late $17^{\rm th}$ century maps by Norden and Gascoyne, although Blackwater itself is not named. There has been some historic ribbon development along this road at Blackwater, although the core settlement of Blackwater is situated around 100m to the northeast of the proposed development site, which is situated just southwest of the crossroads with North Hill. The main road is now bypassed by the A30 dual carriageway, although the route is still a relatively busy cut through for traffic heading to and from the St Agnes area.

4 Designations

4.1 National

None apply within the site. The northwest boundary of the Gwennap Mining District World Heritage Site is situated on the far side of the A30, around 100m to the southeast.

4.2 Regional/county

None apply within the site.

4.3 Local

No local designations apply to the site proposed for the development.

4.4 Rights of Way

No rights of way traverse the proposed development site. This area is not registered as open access land under the CROW Act 2005.

5 Site history

The proposed development site at Blackwater was likely an area of unenclosed marginal downland into the post-medieval period, located just to the south of an area of common land at Gooncare, on the southeast edges of Princes Common.

The National Mapping Programme (NMP), which maps potential archaeological above ground features using aerial photographs, has shown two historic field systems (MCO34778/MCO34783) to the southwest and southeast of the proposed development site (Figs 10 and 11). Although undated, at least one of these appears to predate the overlying post-medieval mine workings at North Wheal Busy, suggesting they may be of medieval date. Shown against the $1^{\rm st}$ Edition c1880 OS mapping (Fig 5), it is clear that the alignment of these field systems continued to influence the pattern of enclosure in these areas well into the $19^{\rm th}$ century and on into the present day. Nearby monuments recorded in the Cornwall HER include the two post-medieval mines of East Treskerby and North Wheal Busy, a post-medieval streamworks and additional post-medieval buildings, including The Red Lion Public House and Blackwater School.

Archaeological evidence for prehistoric activity within the vicinity of the proposed development site is relatively scarce, although a group of Bronze Age barrows (MCO3929) are to be found to the north of Two Burrows on the higher ground of Princes Common, around 800m to the northeast. At around 400m southeast of the proposed development site, the possible medieval field system (MCO34783) suggests a series of curving boundaries that extend eastwards towards a section of historic lane, which curves in turn to the north. To the southeast of this lane is Carnhot, probably an area of post-medieval farming settlement; a post-medieval farmstead (MCO34787) stood immediately west of this lane into the mid 20th century. The place-name element 'carn' may be taken to indicate a naturally occurring rocky hilltop or tor. The historic field and hedge boundaries to the northwest of Carnhot appear to curve round the natural lie of the land to form a large curvilinear landscape feature approximating 500m wide by 850m long. This may simply reflect elements of a medieval or later field pattern that respects a natural hilltop but it may also be evidence of prehistoric enclosure, the function of which remains unknown, to date. The northwest section of this curvilinear feature is less clear and now incorporates the eastern edges of Blackwater village.

The *circa* 1840 Tithe Map and apportionment for Kea (Fig 4) show the proposed development site comprised two plots by the mid to late 19th century. The larger extent of the field is shown as Plot 3319, 'Lower Field'. The landowners are recorded as The Earl of Falmouth, Anna Maria Hill and Jane Hill. The field was leased by William Northey and occupied by John Burrows. A small enclosed plot and a building are shown on the western edge of the field, at a point still marked today by the change in direction of the field boundary. The *c*1807 OS map shows this as a dwelling (Fig 3) but the Tithe Map and apportionment record this as Plot 3319, 'garden'. The landowners are as before, the garden being leased and occupied by Henry Pengelly. No mention of the building is made, suggesting it may have been a post-medieval farmstead that had diminished in use by the mid-19th century, possibly in later use as a field barn. The site walkover revealed a hollow area of land in the vicinity of this former enclosure, to the north of an area of slightly marshy ground. The hollow was picked up by the magnetometer survey, which interpreted the feature as a possible relict field or enclosure boundary.

Both the OS c1807 map and the Kea tithe map show a lane running alongside the western site boundary (Figs 3 and 4), leading from the main road towards the common land at Gooncare to the north. This common land is shown as Plot 5113 on the Kea Tithe Map, which also shows a funnel-shaped lane at each corner of the common, probably historic droveways for taking cattle up to the open pasture (Fig 4). Blackwater School now occupies the southwestern extent of this former common, with the once extensive post-medieval mine workings of Gump Mine, or East Treskerby Mine (MCO12154), located just to the north (Figs 5 and 6). The covered mound in the northeast corner of the field is clearly marked on the c1880 OS map (Fig 5), suggesting this may be a mine shaft associated with the workings at Gump Mine. There is currently a substantial area of undeveloped waste ground in the vicinity of this possible shaft and bordering the proposed development site to the west and north that may further reflect an area of potentially unstable ground associated with the former mining works, although alternatively this may simply reflect an area of relict common. The lane running westwards to the south of the school and to the north of the proposed development site is the only one of the former droveways to survive to any great extent; it appears to have been the historic access between the common and Wheal Gump Farm and at some point may also have served Gump Mine.

The late 19^{th} to early 20^{th} century brought some dispersed ribbon settlement along the main road at Blackwater but the main core of settlement lies to the north of the main road and to the northeast of the proposed development site and is largely late 20^{th} century in date.

6 Summary results of geophysical survey

Note, figures in square brackets relate to features shown on the interpreted geophysics survey map (Fig 21).

The geophysical survey was undertaken by Archaeophysica Ltd and the report containing the processed results were received by HE Projects on 13th May 2014.

The report concluded that the magnetometer survey results were compromised by extensive disturbance from geotechnical excavations (feature [1]), which may have masked the detection of weaker magnetic archaeological features. The findings identified a wide linear feature and fill broadly perpendicular to the western hedgeline [3]. This was interpreted as the remains of a possible field boundary and is probably associated with the boundaries of the garden enclosure shown on the c1840's Tithe Map, which may once have been part of a larger post-medieval farmstead; a similarly substantial magnetic anomaly to the east of feature [3] has not been interpreted by Archaeophysica but may be a continuation of the post-medieval enclosure boundary (Figs 19 and 20). The historic enclosure boundary shows up as a cropmark on vertical aerial photographs taken in 2000 and 2005 (Figs 7 and 8).

The magnetometer survey also identified a discrete circular group of eight small pits [2] around 1m each in diameter. These were located to the south of feature [3] and within the extent of the possible post-medieval enclosure. These may be archaeological features although their date and any potential relationship with the post-medieval enclosure is not currently known. Their morphology could indicate a prehistoric origin but it seems more probable that these are features associated with mining prospecting or settlement activity associated with the post-medieval farmstead, perhaps domestic rubbish pits.

Although also not interpreted by Archaeophysica (2014), a curving linear feature (part of [1]) in the northeast corner of the field may relate to the large mound in this area, which may also be a mining-related feature (Figs 19 and 20). The disturbance made by the geotechnical trenching was heaviest in this area, however, and the curvilinear feature may rather be associated with this disturbance.

7 Significance

The desk-based assessment has shown that the proposed development site contained a small, probably post-medieval, farmstead on the edges of common ground that had probably declined in use by the mid-19th century. In addition, the site stands within an area of concentrated mining activity that may have extended across its area, possibly in the form of prospecting pits or trenches; the mound in the northeast corner of the field may also be a mining-related feature. Any survival of below-ground archaeology on this site would therefore be expected to be largely post-medieval or later in origin. The post-medieval farmstead potentially illustrates the gradual encroachment of settlement onto the margins of upper rough ground as pressure for land during this period increased. The opportunity to learn more about marginal post-medieval farming settlement and its subsequent abandonment would be of some value to understanding wider historic patterns of settlement continuity and abandonment and is therefore of some interest.

Any mining-related activity would be part of a much wider mining landscape and its contribution to the current understanding of this may be relatively minor in extent.

The features identified by the geophysical survey are not considered to be of particular archaeological significance, although the concentration of possible archaeological features in the vicinity of the post-medieval garden enclosure or farmstead is of some interest, as mentioned above. Given the extent of ground disturbance for the geophysical survey, however, there is some potential for additional archaeological features to have been missed or obscured. There may be some preservation of below-

ground archaeology relating to the farmstead and its domestic and agricultural functions that might inform the manner of post-medieval occupation in this area. There is also the potential to inform a time-depth of activity on this site, be it domestic, agricultural or industrial in nature. The extent of ground disturbance across the proposed development site at Blackwater, however, may have significantly compromised any archaeological potential it contains.

8 Recommendations

As this assessment informs a pre-planning stage of the proposed development at Blackwater it is recommended that the relevant Historic Environment Planning Advice Officer (HEPAO) be contacted for further guidance further guidance ahead of a formal planning brief The HEPAO retains the option to request further archaeological recording, for example a watching brief during groundworks on the site.

The geophysical survey did not reveal any archaeological features of such significance that would require site re-design to mitigate potential impacts on them.

9 References

9.1 Primary sources

Ordnance Survey, c1807. 1 Inch Map First Edition (licensed digital copy at HE)

Ordnance Survey, c1880. 25 Inch Map First Edition (licensed digital copy at HE)

Ordnance Survey, c1907. 25 Inch Map Second Edition (licensed digital copy at HE)

Ordnance Survey, 2007. Mastermap Digital Mapping

Tithe Map and Apportionment, c1840. Parish of Kea (microfiche copy at HE)

9.2 Publications

Fry, R., 2014. Land off North Hill, Blackwater, Cornwall. Geophysical Survey Report Produced for Cornwall Council HES. Project Code BWC141. Archaeophysica Ltd

9.3 Websites

http://www.heritagegateway.org.uk/gateway/ English Heritage's online database of Sites and Monuments Records, and Listed Buildings

10 Project archive

The HE project number is 146368

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

- 1. A project file containing site records and notes, project correspondence and administration.
- 2. Digital photographs stored in the directory: R:\Historic Environment (Images)\SITES.A-D\Sites B\Blackwater Impact Assessment Digital Images
- 3. GIS projects and maps stored in the directory: L:\Historic Environment (Data)\HE Projects\Sites B\Blackwater Impact Assessment
- 4. English Heritage/ADS OASIS online reference: cornwall2-179122

This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites B\Blackwater Assessment\Report\146368 Blackwater Rapid Impact Assessment Report.docx

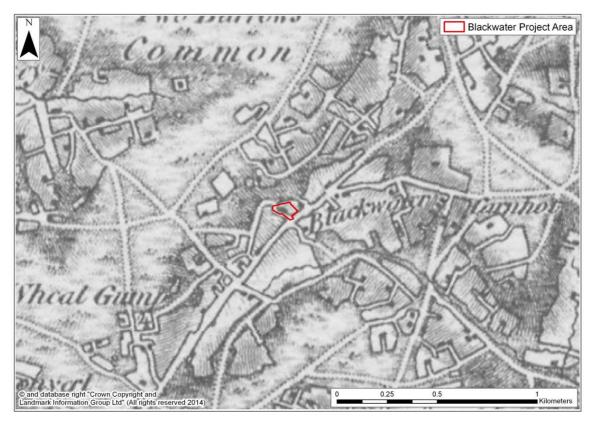


Fig 3 Extract from the OS First Edition One Inch Map c1809

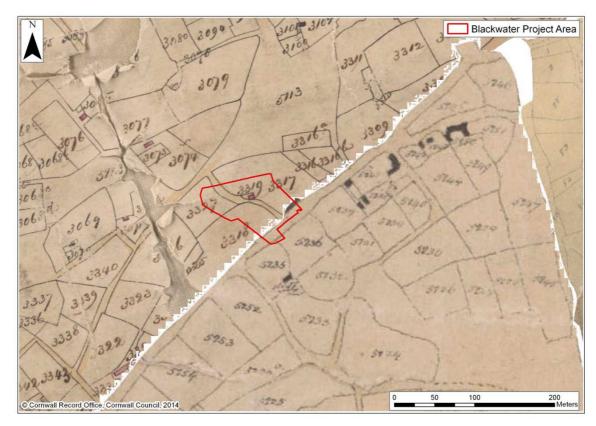


Fig 4 Extract from the Kea Parish Tithe Map, c1840

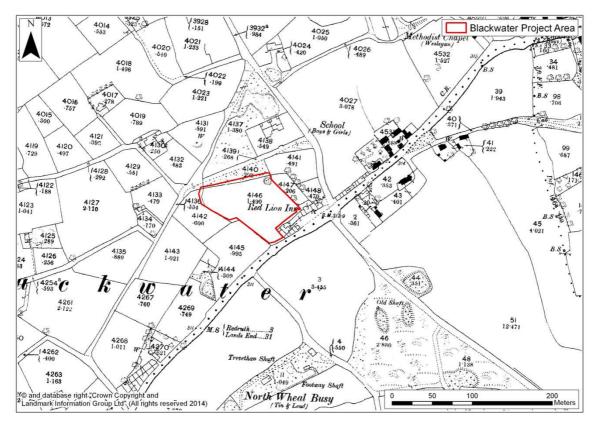


Fig 5 First Edition of the Ordnance Survey 25 Inch Map, c1880

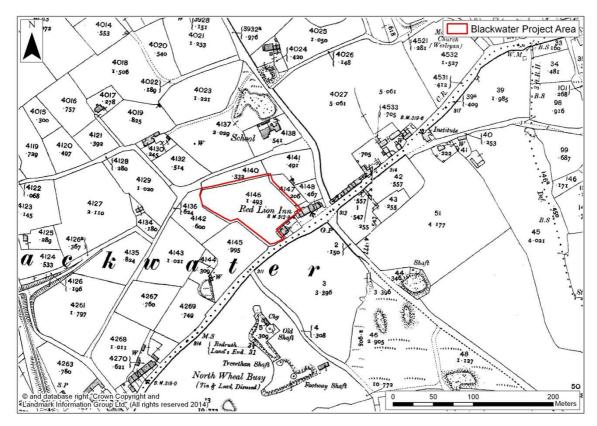


Fig 6 Second Edition of the Ordnance Survey 25 Inch Map, c1907



Fig 7 Vertical aerial photograph (2000) showing the project area and environs

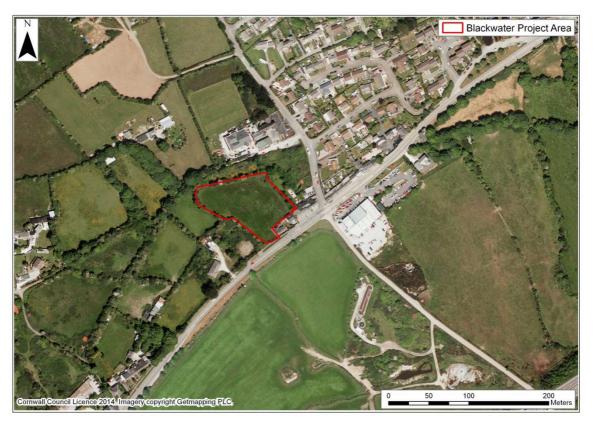


Fig 8 Vertical aerial photograph (2005) showing the project area and environs

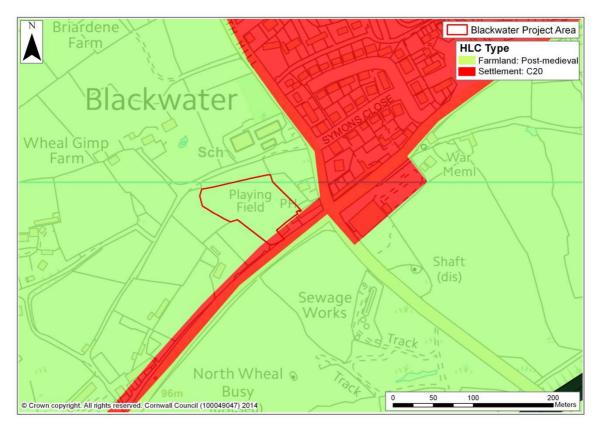


Fig 9 Historic Landscape Characterisation (HLC) types associated with the project area

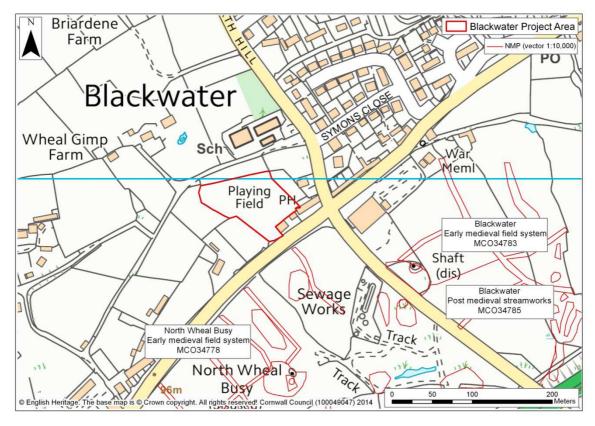


Fig 10 National Mapping Programme (NMP) vectors in the vicinity of the project area

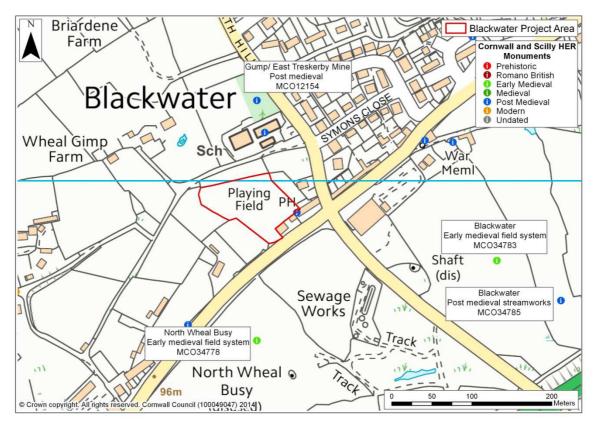


Fig 11 Cornwall and Scilly HER Monuments in the vicinity of the project area



Fig 12 Looking northwest across the project area from the field gate beside the Red Lion Public House



Fig 13 looking northwest across the project area



Fig 14 looking west across the project area towards the site of the probable post-medieval farmstead from the field gate beside the Red Lion Public House



Fig 15 looking northeast towards the mound in the northeast corner of the field, with the schoolhouse in the background



Fig 16 Closer detail of the mound in the northeast corner of the field, largely obscured by bramble and scrub



Fig 17 looking northeast across the project area towards the mound in the northeast corner of the field, with the schoolhouse centre left of shot



Fig 18 Looking northeast along the southeastern boundary of the project area



Fig 19 The magnetometry survey data for the project area.

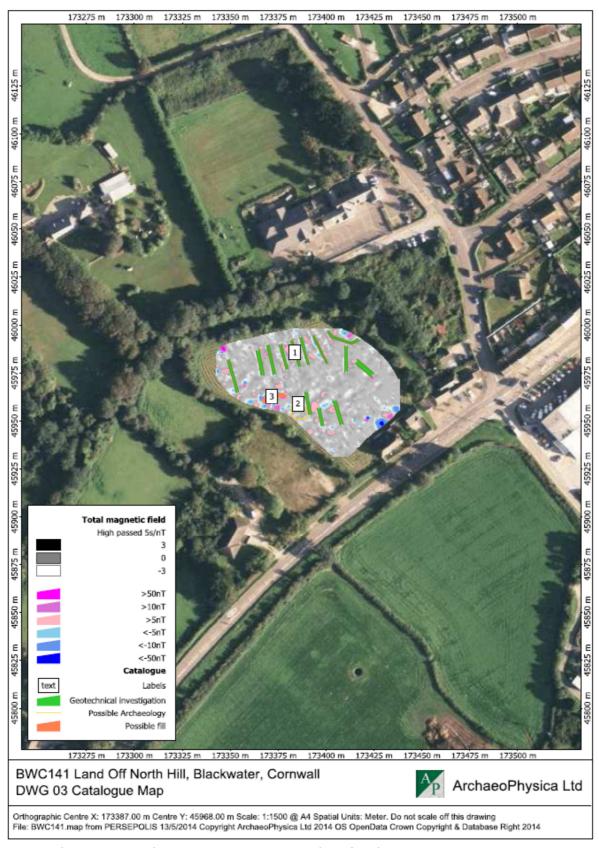


Fig 20 The interpreted magnetometry survey data for the project area.