



Newquay Cycle Hub, Colan, Cornwall Archaeological Evaluation



Newquay Cycle Hub, Colan, Cornwall

Archaeological Evaluation

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Cornwall Archaeological Unit

Cornwall Council

Circuit House, St Clement Street, Truro, Cornwall, TR1 1DT

Tel: (01872) 323603

Email: enquiries@cau.org.uk Web: www.cau.org.uk

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The Project Manager was Dr Fiona Fleming. The fieldwork team comprised Project Officers Dr Fiona Fleming and Jo Sturgess and Site Assistants Antony Angove, Connor Motley, Jay Gossip and Chelsea Fullman.

Carl Thorpe completed the finds report, Connor Motley digitised the site drawings.

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

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Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
HIA	Historic Impact Assessment
HER	Cornwall and the Isles of Scilly Historic Environment Record
LPA	Local Planning Authority
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OS	Ordnance Survey
SDOHE	Senior Development Officer (Historic Environment)
WSI	Written Scheme of Investigation

1 Summary

Cornwall Archaeological Unit (CAU) undertook a programme of archaeological evaluation on land proposed as the site of the Newquay Cycle Hub, within the parish of Colan, Cornwall as part of the requirements for the associated planning application reference: PA21/02617. The evaluation trenching followed a Historic Impact Assessment (HIA) of the site (Johns 2021), which took into consideration the results of a geophysical survey of the site carried out in 2012 (Stratascan 2012)

A total of 8 evaluation trenches were excavated. A total of 32 features were identified, the majority of which were undated, but which included ditches, pits, postholes, stakeholes and possible ring gullies of probable prehistoric date, as well as additional field boundary ditches of possible medieval and/or post-medieval date.

Significant features identified include an area of prehistoric activity indicating possible settlement and including at least two possible roundhouse structures (from Trench 2), along with potentially associated field systems and enclosures. Very little dating evidence was found to securely date features, although one posthole [2018] within one of the roundhouse structures in Trench 2 contained a small slate spindle whorl and sherds of Iron Age Plain South Western Decorated Ware.

Recommendations for mitigation comprise identifying areas for targeted open area excavation or strip map and sample prior to any groundworks, the extent of these to be reviewed against the impact of the proposed development as well as the archaeological potential of the area. Alternatively, archaeological monitoring during groundworks in areas of potential sensitivity may be considered.



Figure 1 Location map.

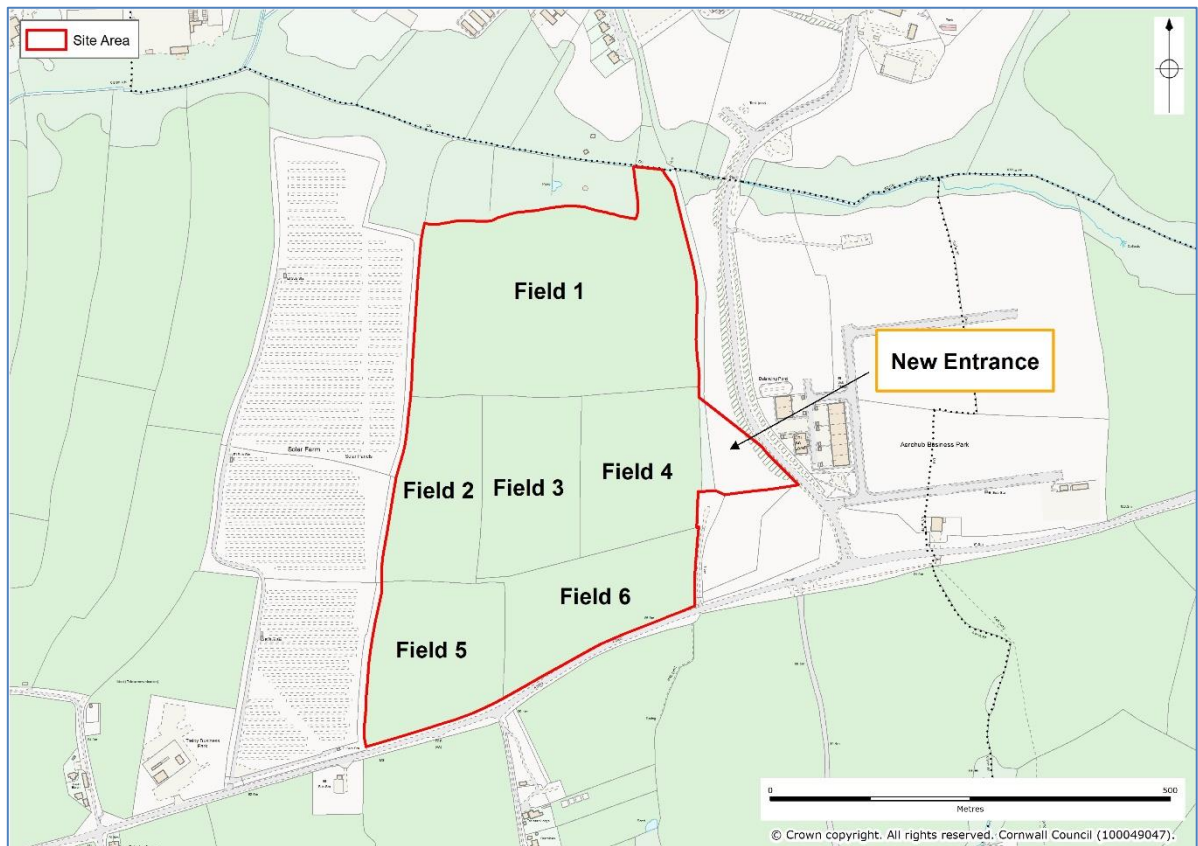


Figure 2 Site extent.

2 Introduction

2.1 Project background

Cornwall Archaeological Unit (CAU) was commissioned by Cornwall Council to undertake a programme of archaeological evaluation at land adjacent to Newquay Aerohub, Colan, Cornwall, associated with a planning application (PA21/02617) submitted to Cornwall Council, consisting of a proposal for a cycling-based activity hub and associated access and parking provision, to include a closed road circuit of approximately 1.83km; MTB and Cyclocross Tracks; BMX racing track; Pump track; Fitness trail; Grass track cycling area; Learn to ride area and Covered bike training area with pavilion building (cafe, changing facilities, fitness suite, multi-use rooms, bike hire and workshop area) on land adjacent to Newquay Hub Business Park, Newquay, Cornwall (centred at NGR SW 86928 63365) (Fig 1).

Prior to the evaluation trenching, a geophysical survey was undertaken in 2012 for the Aerohub Business Park Environmental Impact Assessment, which included the site now proposed for the cycle hub (Stratascan 2012), and an HIA was produced by Cornwall Archaeological Unit in 2021 (Johns 2021). A Written Scheme of Investigation (WSI) for the evaluation trenching was produced by Cornwall Archaeological Unit (Fleming 2021) to provide the methodologies for the evaluation (see Appendix 3).

2.2 Location and setting

* Taken from Johns 2021

The site proposed for the Newquay Cycle Hub is located approximately 6km to the north east of Newquay and 4km to the west of St Columb Major (Fig 1). It comprises six arable fields (Fields 1–6) and a farm lane north of Treisaac Farm, with a total area of 20.5ha (Fig 2). Situated on an east to west running ridge of ground between two stream valleys, the highest point of ground is at 90m OD. There is a gentle upward slope towards the north of the site, with a more pronounced downward slope (in Field 1) to the wooded valley below. The south side of the site is more generally level, sloping away slightly towards the east. The area of the new entrance is to the east of the site (Fig 2). Once a pasture field, this formed part of the Newquay Cornwall Airport Southern Access Route. This area is now an area of poor semi-improved grassland.

The site lies in the parish of Colan (but formerly in St Columb Minor), the stream to the north is the parish boundary between Colan and Mawgan-in-Pydar.

The geology underlying the assessment area consists of the slate, sandstone and siltstone of the Dartmouth group, apart from its far southern margin, where the bedrock is formed by interbedded slates and sandstone of the Meadfoot group (British Geological Survey 1981).

The dominant soil group is Denbigh 2 with 'well drained fine loamy soils over slate or slate rubble' with associated 'fine loamy soils seasonably affected by groundwater' (Avery *et al* 1974).

The site is characterised as 'Post-medieval Enclosed Land' that is to say, land enclosed in the 17th, 18th and 19th centuries, usually from land that was previously Upland Rough Ground and often medieval commons. Generally, in relatively high, exposed or poorly-drained parts of the county (Cornwall County Council 1996).

2.3 Site History

* Taken from Johns 2021. Monument numbers from the Cornwall and Scilly Historic Environment Record (HER), accessed via the Heritage Gateway, are given, prefix MCO, in brackets.

Few traces of Mesolithic (c8000BC to c4000BC) or Neolithic (c4000BC to c2500BC) activity have been identified in the immediate area. However, a stone axe-head found during the construction of the airfield could be Neolithic in date (MCO1439).

In the Early Bronze Age (c2500BC to c1500BC) place-name evidence and archaeological survey show that a number of barrows (earthen mounds) were built near to Tregurrian, Tolcarne, Merock and at Carloggas (see MCO2337, MCO2867, MCOI3661 and MCO3580). Barrows were often located in prominent locations on ridge lines and 'false crests' (on the edge of summits and spurs of land). Two sky-lining Bronze Age barrows (DCO402) can be seen on the coast to the west from the site. Locally, further Bronze Age activity is suggested by a well-preserved hoard of bronze weapons and implements found in a field below Lanherne House, near St Mawgan church town (MCO25950).

There is a concentration of Late Iron Age/Romano-British rounds (MCO3325, MCO3326, MCO7749, MCO8514, MCO8731) within close proximity of the site, along with potential later prehistoric settlement sites (MCO33284, MCO33257 and MCO33301 as examples). Excavation and field survey have demonstrated that rounds were often surrounded by extensive field systems (see Dudley 2011 for discussion).

Traces of later prehistoric or Romano-British activity on the site have been identified from aerial photographs and by geophysical survey (MCO63059). In particular, the concentration of geophysical anomalies 1–48 in Field 5 (extending into Fields 2, 3 and 6) seem to indicate a possible later prehistoric multi-phase settlement. Features are present as roundhouses, a possible stock enclosure and remnant associated field boundaries. A possibly related scatter of isolated pits is visible to the north (Stratascan 2012 and see Fig 3).

A high concentration of early medieval settlements with place-names formed of the Cornish *tre-* prefix are to be found in close proximity of the site. The use of **tre-** 'farmstead, estate' (but sometimes interpreted by archaeologists as 'farming settlement'), dates to the sixth to the tenth centuries AD (Padel 1985). These settlements are often found in close proximity to the location of Iron Age and Romano-British rounds and archaeological excavation in Cornwall has confirmed that the extent of medieval enclosed land generally corresponds with the area of later prehistoric farming activity.

The Domesday Book of 1086 definitely recorded three of the many medieval settlements in the area; Lanherne, Tolcarne and Treloy (Thorn and Thorn 1979). Through the 12th to 14th centuries other settlements in the area were recorded in documentary sources for the first time, however, it is likely that some, in particular Trevithick, predate their first reference in documentary sources.

During the medieval period, most of the small settlements within the vicinity of the site settlements were probably farming hamlets of several tenants farming blocks of open strip fields. These would have been cultivated by each tenant within open groups or 'cropping units', which would collectively have formed areas of medieval 'open' field surrounding each settlement. Some of these former strip fields have influenced the pattern of 19th century fields and field boundaries, which reuse the earlier boundary lines.

It is likely that large parts of the ridge and sections of the valley bottoms were areas of rough ground, most likely used for stock grazing during the summer and autumn months. Despite widespread enclosure and improvement, evidence for the former existence of these large areas of rough ground was preserved in field-names on the c1840 Tithe Survey, several of which included the English 'downs' and 'moor' or the Cornish element, **hal** 'moor' in their name.

A process of map regression helps to understand the recent landscape history of the site. Martyn's map of 1748 (Fig 8) is not greatly detailed but shows the general area of the site and with 'Trebarva' and 'Treizack' shown to the south of a road (now the A3059). The map also shows a settlement called 'Hard to come by' in a bend of the stream. It is unclear if this settlement was located within the site itself – if so, it would probably have been in Field 1. The c1810 OS surveyors' drawing (Fig 9) shows that at this date the settlement of 'Hard to come by' no longer existed, the fields were enclosed, and the surrounding road patterns were as they are today.

The c1840 Tithe Map and Apportionment for the parish of St Columb Minor (Fig 10) record that the fields were part of the tenement of Treisaac and were owned by John, William

and Thomas Trebilcock and occupied by John Williams. The map shows the field boundaries as they are today except that the Field 1 was divided into three fields; 'Lower Meadow' (TA1022), 'Plantation Meadow' (TA1023) and 'Higher Rockey Close' (TA1024). Field 2 was called 'Beef Close' (TA1025), Field 3 was 'Lower Close' (TA1026), Field 4 was 'Well Park' (TA1027), Field 5 was 'Orchard', Field 6 was 'Lower Rockey Close' (TA 1029). The land use of all the fields was described as arable, except for Field 5 which was orchard.

The First Edition OS 25" to the mile map of c1880 (Fig 11) and the Second Edition OS map in c1907 (Fig 12) show that no changes had occurred to the field pattern. The modern OS map indicates that at some point during the 20th century the boundaries dividing Field 1 had been removed. Until very recently the fields were deep-ploughed (DB3 Architecture & Design 2021, 16).

3 Methodology

3.1 Aims and objectives

The principal aim of the evaluation was to gain a better understanding of the archaeology of the development area in order to assess the potential location and nature of archaeological remains within the site.

Key objectives were:

- To identify the nature, character, extent and possible date of any archaeological sites and/or features within the site;
- To assess the survival, quality, condition and significance of any archaeological remains;
- To ensure the preservation by record of all archaeological remains revealed during the course of the archaeological evaluation; and
- To prepare an appropriate archaeological archive including the treatment and preservation of any artefacts.

The WSI for the project identifies the following research aims, in accordance with the current South West Archaeological Research Framework (Grove and Croft 2012):

21 – Improve our understanding of the environmental aspects of farming.

29 – Improve understanding on non-villa Roman rural settlement.

40 – Improve our understanding of agricultural intensification and diversification in later prehistory.

Additional research aims might include:

- Late prehistoric to early medieval landscape and settlement transition.

3.2 Working methods

The evaluation was undertaken according to the Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2020a; 2020b) and following the CIfA *Code of Conduct* (2019). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

A total of 8 trenches, 2 measuring 50m by 2m, six measuring 25m by 2m, were laid out to British National Grid coordinates within five of the six fields, using a Leica GPS device. Trenches were numbered 1-8 in a continuous sequence (see Fig 3). Prior to excavation trenches were scanned using a CAT scanner to identify buried services.

The trenches were opened up using a mechanical excavator using a toothless grading bucket to remove all disturbed soil and ploughsoil horizons down to the level of any archaeological horizons or the natural geological surface, whichever was encountered first. The cleaning and recording of any identified archaeological features then proceeded by hand and was undertaken as outlined in the WSI (Fleming 2021).

Once the trenches had been excavated and recorded, they were backfilled using the mechanical excavator.

4 Archaeological results

The results from the evaluation are presented here by trench.

A total of 103 contexts were recorded of which 31 were cut features and one was a possible built structure.

Context numbers were issued from a continuous sequence for each trench. Cuts are given in square brackets, for instance [1], deposits in round brackets, (2), and structures without brackets, 3. Full dimensions of features are given in the Contexts table in Appendix 1.

Full context descriptions are given in Appendix 1 and finds are described in Appendix 2.

The majority of the trenches were positioned to investigate geophysical anomalies identified by the geophysical survey (Stratascan 2012). The geophysical survey results suggested that the predominant archaeology was located in the south westernmost of the five fields (Field 5), with several additional linear and rectilinear anomalies extending across the remaining five fields. Four of the trenches (T1-T4) were assigned to evaluate the concentration of archaeology in Field 5, with a further four trenches (T5-T8) assigned to evaluate a selection of the remaining linear anomalies, as well as one trench (T7) positioned to test out a 'blank' area of the site (see Fig 3).

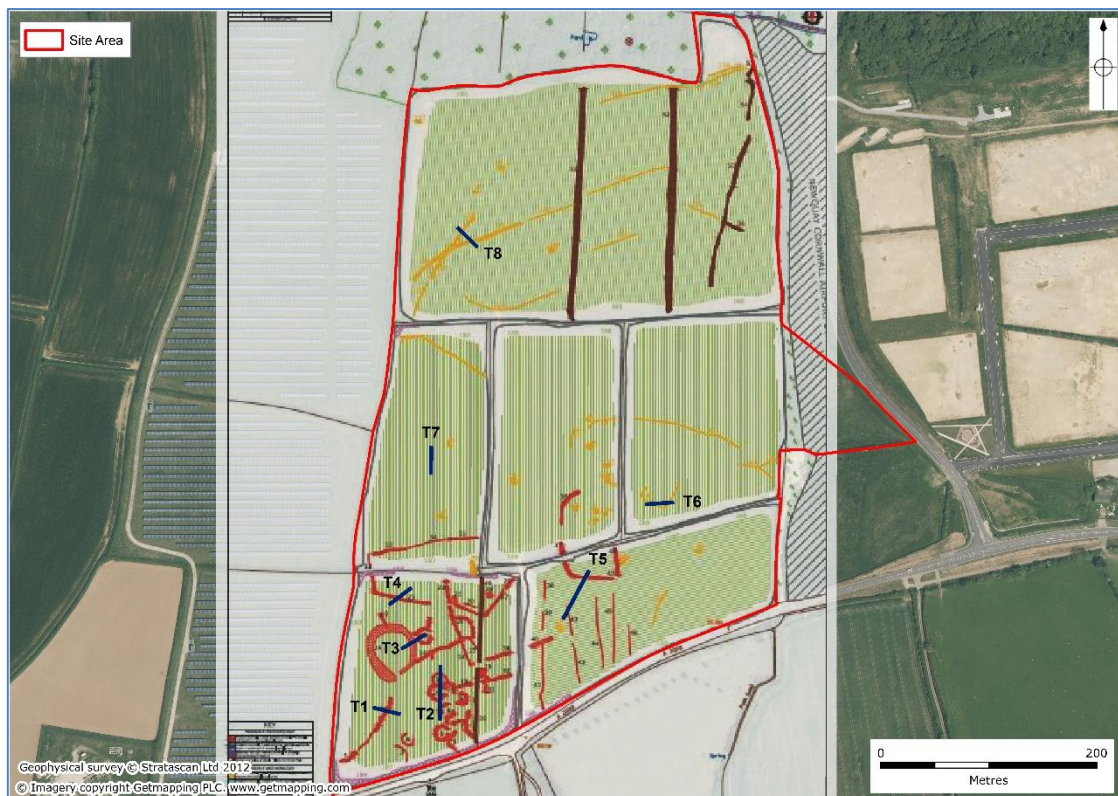


Figure 3 Location of evaluation trenches superimposed on results from geophysical survey (Stratascan 2012; *Abstraction and Interpretation of Anomalies - West*).

4.1 Trench 1

This trench was 25m in length and positioned across the northern end of a SW-NE aligned, slightly curvilinear anomaly (2) in the southwest corner of Field 5. The trench was excavated down to a natural horizon (1003) of light yellowish grey stony silty clay at a depth of 0.5m and overlaid by subsoil (1002) and topsoil (1001). One linear, or possibly curvilinear, feature [1006] was identified cutting the natural horizon.

[1006]

Plan drawing Figure 13; section drawing Figure 14; section photograph Figure 23.

An E-W aligned linear, or possibly curvilinear V-shaped ditch, measuring 1.4m wide and 0.5m deep, with concave/straight sides and a flat base was identified towards the central area of the trench. It contained an upper fill of dark greenish brown compact and very stony silty clay (1004) above a basal fill of yellowish brown friable and very stony silty clay (1005) containing large fragments of quartz. Ditch [1006] had a possible recut. No dating evidence was recovered from this feature.

Interpretation

The linear feature remains undated but can be broadly associated with adjacent linear and curvilinear features which potentially form part of a prehistoric field system. Nearby features to the east in Trench 2 indicate a probable Iron Age date, but the juxtaposition of features in this southwestern corner of Field 5 suggest multiple-phased activity so the date of this feature must remain uncertain.

4.2 Trench 2

** For features present in Trench 2 superimposed on results from geophysical survey (Stratascan 2012), see Figure 4; plan drawing Figure 16, section drawings Figure 15.*

This trench was 50m in length and was positioned on a N-S axis across a cluster of sub-circular anomalies in the south of Field 5 that suggested a possible roundhouse settlement and associated features (see Figs 3 and 4). The trench was excavated down to a natural horizon (2002) of light mottled greyish yellow compact and very stony silty clay at a depth of 0.55m overlaid by topsoil (2001) and a shallow (0.15m deep) subsoil (2002). Several linear or curvilinear features were identified cutting the natural horizon, alongside several possible pits and postholes.

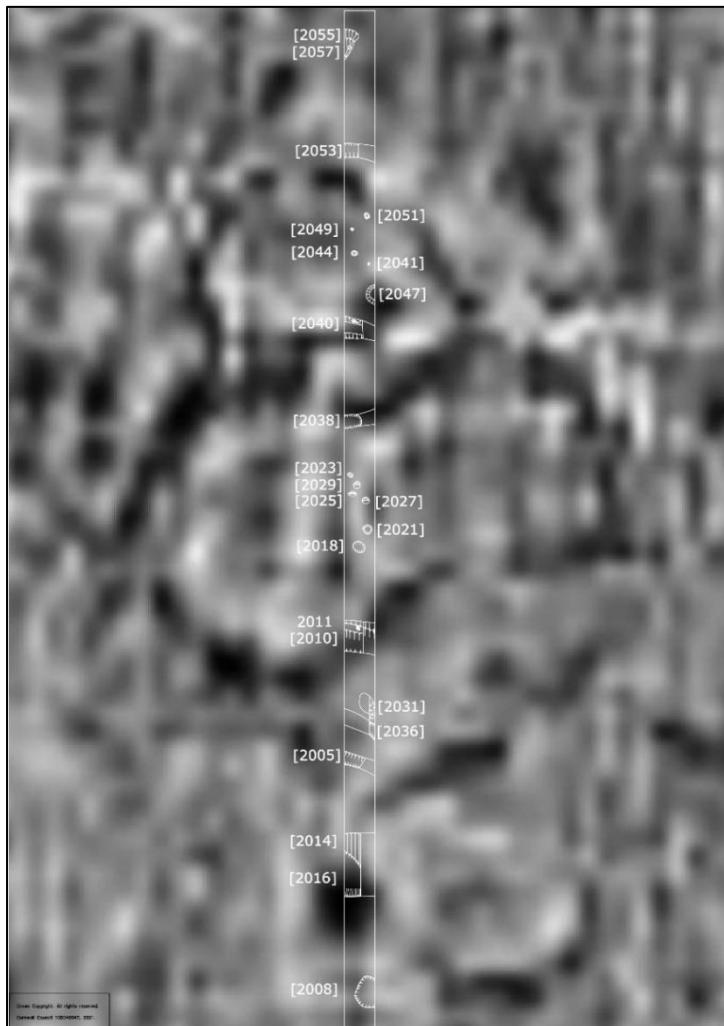


Figure 4 Features present in Trench 2, superimposed on results from geophysical survey (Stratascan 2012).

[2005]

An E-W aligned linear U-shaped ditch, measuring 0.7m wide and 0.36m deep, with steep straight sides and a flat base was identified towards the S end of the trench. It contained an upper fill of mid yellowish brown friable and very stony silty clay (2004) above a basal fill of mid yellowish reddish brown friable and quite stony silty clay (2006) containing occasional charcoal. No dating evidence was recovered from the feature.

Interpretation

Ditch [2005] broadly corresponds with a sub-linear anomaly identified by the 2012 geophysical survey on the northern side of a curvilinear anomaly (8), possibly a roundhouse structure or enclosure (see Fig 4). It may be part of a prehistoric enclosure ditch associated with the roundhouse settlement.

[2008]

A very shallow sub-circular/linear feature, measuring 1.35m wide and 0.05m deep, with concave sides and a flat base and containing a single mid reddish brown very stony silty clay fill (2007), with frequent quartz stones and charcoal fragments was identified towards the southern end of the trench. No dating evidence was recovered from the feature.

Interpretation

Feature [2008] corresponds with two faint parallel linear anomalies visible on the 2012 geophysical survey but not positively identified as having archaeological potential. It may be the end of a severely truncated prehistoric ditch terminal or pit. It is positioned close to the southwest side of a possible prehistoric roundhouse structure (8) (see Fig 4).

[2010]

Section photograph Figure 18.

An E-W aligned U-shaped linear/curvilinear ditch, approximately 0.8m wide and 0.2m deep, with straight sides and a flat base was identified just south of centre within Trench 2. It contained an upper fill of yellowish brown friable very stony silty clay (2009) with occasional charcoal flecks and a quantity of large angular slate and killas stone that had presumably tumbled into the fill from the top of an earth and stone bank 2011 adjacent to the north side of the ditch. At the base of this fill was a very large (0.4-0.5m) flat slate stone, that may have been used as a post pad (see finds report, Appendix 2). A basal fill of ditch [2010] consisted of a light mottled yellowish reddish grey compact, quite stony, clay (2019), possibly redeposited natural from the slump of bank 2011. No dating evidence was recovered from the feature.

2011

Section photograph Figure 18.

A 0.5m wide and approximately 0.2m high linear bank was identified on the north side of ditch [2010]. The bank material consisted of a light mottled yellowish reddish grey compact, quite stony, clay, possibly redeposited natural, topped with medium to large (0.2-0.3m) angular slate and killas stones. Some of the stone and part of the earthen matrix had slumped into ditch [2010].

Interpretation

Ditch [2010] and bank 2011 correspond with part of the south side of a sub-circular anomaly (10) identified on the 2012 geophysical survey, possibly a prehistoric roundhouse structure (see Fig 4). Bank 2011, with evidence of stone facing, may be part of an outer wall.

[2014] and [2016]

Section photograph Figure 17.

A substantial E-W aligned linear ditch [2016] was identified towards the southern end of Trench 2. The ditch was excavated to 1.2m depth but was not bottomed due to safety considerations but was approximately 2m wide with steep straight sides. A shallower sloping cut [2014] on its north side may represent a later recut, taking the overall width to 3m. The upper fill of ditches [2014] and [2016] was a shallow, 0.1m band of yellowish

grey friable slightly stony silty clay, possibly the same as (2002), representing a shallow subsoil. Below (2012) was a mid-reddish brown friable slightly stony silty clay, 0.15-0.3m deep, which filled ditch [2014] and partially filled the north side of ditch [2016], the southern edge possibly marking the edge of the later recut. Below (2013) was a shallow 0.05m deep yellowish grey very stony loose silty clay (2058), which may have formed the basal fill of ditch [2014].

Below fills (2015) and (2058) was a mid-yellowish red slightly stony friable silty clay fill, 0.2-0.4m deep, which extended the width of ditch [2016] and may have formed part of its upper fill. Below fill (2015) was a dark greyish red very stony compact silty clay at least 0.5m deep but not fully excavated. This would have formed a middle or basal fill of ditch [2016]. No dating evidence was recovered from the feature.

Interpretation

Features [2014] and [2016] correspond with a large dark sub-circular anomaly on the west side of a sub-circular feature (8) identified on the geophysical survey and possibly a prehistoric roundhouse structure or enclosure (see Fig 4). The position and form of ditch [2016] suggests this may be a separate feature – and if earlier than anomaly (8), may explain the possible recut [2014], which may correspond with the construction of the roundhouse at a later point. The scale of ditch [2016] suggests a large enclosure ditch, although this is not clearly indicated by the geophysical survey. It is possible that the nature of the very stony fills of ditch [2016] have obscured the survey results but this is a feature that would benefit further investigation to be certain of its morphology, extent and potential date and relationships.

[2018], [2021], [2023], [2025], [2027] and [2029]

Section photograph [2018] Figure 20.

A grouping of six circular/sub-circular postholes/possible postholes were recorded within a sub-circular anomaly (10) identified on the geophysical survey, possibly a prehistoric roundhouse structure. The postholes ranged between 0.24 and 0.59m in diameter and were generally U-shaped with straight or concave sides and containing single fills of reddish brown or reddish grey compact quite stony silty clay. Features [2025], [2027] and [2029] were severely truncated at between 0.03m and 0.05m deep. A small slate spindle whorl of probable prehistoric date was recovered from the surface of fill (2017) on the southwest edge of posthole [2018] (Fig 30). Fill (2017) was also found to contain several medium sized slate stones and multiple abraded pottery sherds of Iron Age Plain South Western Decorated Ware (Figs 28 and 29).

Interpretation

A group of postholes within an Iron Age roundhouse. The features, particularly [2018], broadly correspond with a cluster of small dark sub-circular anomalies visible within curvilinear anomaly (10) on the 2012 geophysical survey (see Fig 4).

[2031]

Section photograph Figure 19.

An irregular E-W aligned linear gully or hollow, measuring 0.7m wide and 0.15m deep, with a series of irregular pockets in its base, was identified towards the southern end of Trench 2, and adjacent to a further linear ditched feature [2036]. Gully [2031] contained a single fill of mid reddish brown very stony compact silty clay. A greywacke cobble whetstone with several wear facets and polished surfaces (Fig 31) was recovered from the baulk just above the north side of [2031], within the subsoil layer (2002).

Interpretation

Feature [2031] may be a prehistoric pit or gully, or possibly a naturally formed feature, perhaps a tree bowl.

[2036]

Section photograph Figure 19.

An E-W aligned U-shaped linear ditch, measuring 1.05m wide and 0.6m deep, with concave sides and a flat base, was identified towards the southern end of Trench 2,

adjacent to the south side, and possibly slightly cutting, pit/gully [2031]. The ditch had four fills. The basal fill (2035) was a dark reddish-brown compact very stony silty clay containing much charcoal. A small sherd of prehistoric gabbroic pot and a notched slate were recovered from the base of this deposit. Above (2035) was a light brownish grey very stony silty clay (2034) containing several large angular slate stones. Above (2034) was a mid-brownish silty clay (2033) containing occasional shillet and much charcoal. A residual Mesolithic flint microburin or waste flake was recovered from this deposit (Fig 32). Overlying fill (2034) was a greyish brown very stony silty clay, which topped ditch [2036] and spread over into a small depression on the north side of the ditch, possibly the result of root action. A narrow band of silty clay subsoil (2003) was visible overlying ditch [2036] and the adjacent pit/gully [2031].

Interpretation

Ditch [2036] corresponds with an area of magnetic noise on the 2012 geophysical survey, not identified as positively having archaeological potential but within the cluster of roundhouses and enclosures in this part of the site. Ditch [2036] may be a small prehistoric enclosure ditch associated with the roundhouse settlement, or possibly part of an earlier feature within the settlement area, indicating a phasing of use and activity.

[2040]

Section photograph Figure 22.

An E-W aligned linear, or slightly curvilinear, V-shaped linear ditch, measuring 1m wide and 0.5m deep, with concave sides and a flat base, was identified towards the northern half of Trench 2. It contained a single fill of mid reddish brown compact silty clay (2039) with frequent quartz stones. No dating evidence was recovered from the feature.

Interpretation

Ditch [2040] corresponds with a linear ditched anomaly visible on the 2012 geophysical survey, within a larger sub-circular anomaly (12), possibly a prehistoric roundhouse (see Figs 3 and 4). Ditch [2040] may be an annexe to this feature or have formed part of an internal division of this space, perhaps separating domestic areas from stock or storage areas. Alternatively, it may represent part of a phasing of construction and use.

[2047]

A semi-circular pit, measuring 0.8m wide and 0.35m deep, with irregular concave sides and an irregular base, was identified against the baulk on the east side of Trench 2, to the north of ditch [2040]. The feature potentially contained two fills, the lower of which was a yellowish red silty clay (2046) containing quartz fragments and occasional charcoal. The upper fill was a greyish yellowish red silty clay (2045), also containing quartz fragments and charcoal. Possible animal burrowing on the south side of the feature obscured the definition and relationship between the two possible fills, which may alternatively have been part of a single disturbed fill. No dating evidence was recovered from the feature.

Interpretation

Pit [2047] continues beyond the eastern edge of Trench 2 and was situated within the area of a possible prehistoric roundhouse, feature (12) identified by the 2012 geophysical survey, and close to the point where three sub-circular anomalies, (10), (11) and (12) intersect (see Figs 3 and 4). Its entire form and morphology remain unknown, but it appears to correspond with a large dark sub-circular/sub-linear anomaly within anomaly (12), possibly indicating a larger pit or perhaps a ditch terminal.

[2041], [2044], [2049] and [2051]

A group of four postholes [2041], [2044], [2049] and [2051] were identified to the north of pit [2047]. The postholes are between 0.2-0.3m in diameter with straight or concave sides and flat or sloping bases. Their depth was not recorded. The four postholes form a semi-circular grouping that appears deliberate and may form part of a complete ring that continues beyond the trench to the east. No dating evidence was recovered from these features.

Interpretation

The postholes are situated almost centrally within the sub-circular anomaly (12) identified by the 2012 geophysical survey, possibly a prehistoric roundhouse (see Figs 3 and 4). Their position and arrangement within the possible roundhouse suggest they may have been part of a ring of postholes, designed to hold timber supports for the roof structure.

[2053]

Section photograph Figure 21.

An E-W aligned linear or curvilinear V-shaped ditch, measuring 0.75m wide and 0.28m deep, with straight/convex sides and a concave base was identified towards the northern end of Trench 2. It contained a single fill of reddish-brown compact very stony silty clay (2052). No dating evidence was recovered from the feature.

Interpretation

Ditch [2053] corresponds with a curvilinear ditch defining the north side of a possible prehistoric roundhouse, anomaly (12) identified by the 2012 geophysical survey (see Figs 3 and 4).

[2055] and [2057]

An irregular sub-oval, or possibly linear, depression, measuring 1.25m wide and 0.25m deep, with concave sides and a sloping base, was identified at the north end of Trench 2. It contained a single fill of reddish brown, quite stony, silty clay (2054). A circular 0.17m in diameter pit, possibly a posthole [2057], with straight sides and a flat base, was cut into the base of [2055] towards its southern end. The fill of posthole [2057] consisted of a yellowish-brown silty clay with occasional shillet stones (2056). No dating evidence was recovered from these features.

Interpretation

Feature [2055] corresponds with a dark sub-oval, possibly sub-linear, anomaly visible on the 2012 geophysical survey to the north of anomaly (12) (see Fig 4). Although not identified as a clear feature, it is within an area of concentrated archaeology and may be associated with the prehistoric roundhouse settlement, or part its phased use. It has been tentatively identified as a possible pit or ditch terminal. The possible posthole cut into the base of [2055] may be associated with some form of internal or external structure at this location, although any phasing or relationship to the roundhouse settlement remains uncertain.

4.3 Trench 3

** For features present in Trench 2 superimposed on results from geophysical survey (Stratascan 2012), see Figure 5; plan drawing Figure 13, section drawings Figure 14.*

This trench was 25m in length and positioned on a SW-NE axis across the east side of a large horseshoe-shaped anomaly (24) identified by the 2012 geophysical survey on the west side of Field 5. The trench was positioned to also take in a smaller sub-circular anomaly (17) on the east side of anomaly (24) (see Figs 3 and 4).

The trench was excavated down to a natural horizon (3003) of mottled reddish greyish yellow silty clay at a depth of 0.5m and overlaid by a 0.15m deep subsoil/ploughsoil (3002) of yellowish grey quite stony silty clay and a 0.3-0.5m deep silty clay topsoil (3001).

[3005]

Section photograph Figure 24.

A SE-NW aligned sub-oval pit, 0.77m wide and 0.62m deep, with straight sides and a concave base, was identified just east of centre of Trench 3, alongside, and continuing under, its northern edge. The feature contained a single fill of reddish brown quite stony silty clay (3004), with large fragments of shillet and some slate fragments, and a moderate quantity of charcoal. A flint thumbnail scraper of probable Late Neolithic or more probably Bronze Age date (Fig 33) was recovered from the feature, potentially residual.

[3010]

Section photograph Figure 25.

A linear, or possibly curvilinear, U-shaped ditch, measuring 0.9m wide and 0.7m deep, with straight sides and a concave base, was identified towards the eastern end of Trench 3, to the east of pit [3005]. The ditch contained four fills, the basal fill (3009) being a dark brownish orange stony clay silt with large shillet stones, quartz and slate fragments and the occasional possible burnt stone fragment. Above fill (3009) was a yellowish grey stony clay silt (3008) below a brownish orange stony clay silt (3007). The upper fill of ditch [3010] consisted of a greyish brown, moderately stony, clay silt with occasional charcoal and slate fragments (3006). An irregular notched slate was recovered from the upper fill (3006). A broken elongated flattened greywacke pebble that had been utilised as a whetstone was recovered from the basal fill (3009).

Interpretation

Features [3005] and [3010] correspond with sub-oval/sub-linear ditched anomalies visible on the 2012 geophysical survey associated with sub-circular anomaly (17) (see Fig 5). Feature [3005] appears to correspond to part of the outer ditch of anomaly (17) and may be a ditch terminal. Feature [3010] may also be part of a ditch or a ditch terminal, possibly associated with internal divisions of anomaly (17). The date of anomaly (17) remains unknown, but its form may suggest a prehistoric roundhouse or enclosure associated with the concentration of roundhouses to the southeast. Any phasing or chronological depth within the wider roundhouse settlement currently remains uncertain.

There was no evidence within Trench 3 for any features likely to represent the large horseshoe-shaped anomaly (24) identified by the 2012 geophysical survey (see Fig 3). This was slightly surprising and unexpected, but it may be that the feature has been significantly truncated by plough action and does not survive consistently below ground, or that the very stony nature of the natural geology in this area has created spurious readings in some areas and obscured archaeological detail in others. This particular feature may merit further investigation and evaluation to verify its interpretation.



Figure 5 Features present in Trench 3, superimposed on results from geophysical survey (Stratascan 2012).

4.4 Trench 4

This trench was 25m long and positioned across a linear ditched anomaly (23) identified by the geophysical survey, possibly part of a prehistoric rectilinear enclosure (see Fig 3). The trench was excavated down to a natural horizon (4003) of light yellowish yellow stony silty clay at a depth of 0.4m, overlaid by a 0.4m deep, dark reddish brown silty clay topsoil (4001), with traces of a possible reddish brown silty clay subsoil/ploughsoil (4002) below this in places, up to 0.2m deep.

[4005]

Plan drawing Figure 13; section drawing Figure 14.

A linear E-W aligned ditch, measuring 0.7m wide by 0.56m deep, with concave base and sides, was recorded towards the centre of Trench 4. The ditch contained a shallow basal fill (4006) of mid reddish brown compact silty clay below a 0.56m deep upper fill (4004) of dark reddish brown quite stony silty clay. No finds were recovered from this feature.

Interpretation

Feature [4005] corresponds with the E-W linear anomaly (23) identified on the 2012 geophysical survey, which potentially forms the south side of a sub-rectilinear enclosure (see Fig 3). The enclosure appears to form part of a wider rectilinear field system that may be associated with the roundhouse settlement, although precise relationships and dating of any associated features remains uncertain.

4.5 Trench 5

This trench was 50m long and positioned NE-SW across an E-W aligned ditched anomaly (47) central towards the north side of Field 6. This feature appears to form part of a sub-rectilinear enclosure that predates the historic field pattern, suggesting a possible prehistoric date (see Fig 3). The southwestern end of Trench 5 was positioned across one of a series of parallel linear features in Field 6, anomaly (43), which may be agricultural boundaries of unknown date, or possibly plough marks.

The trench was excavated down to a natural horizon (5003) of light mottled reddish greyish yellow silty clay and shillet at a depth of 0.4m and overlaid by a 0.15m deep subsoil/ploughsoil (5002) of mid reddish grey silty clay containing frequent shillet and quartz fragments and a 0.3-0.4m deep silty clay topsoil (5001).

[5006]

Plan drawing Figure 13; section drawing Figure 14.

An irregular sub-oval pit, measuring 0.7m wide and 0.16m deep, was recorded against the east side of Trench 5, towards its southern end. The pit contained a single shallow mid brownish red quite stone silty clay fill (5005). Overlying (5005) was a 0.2m deep layer of mid reddish brown silty clay containing frequent quartz fragments (5004), possibly a slightly deeper area of subsoil (5002).

Interpretation

The nature of pit [5006] is uncertain, although it may just correspond with the top northwest corner of the linear anomaly (43) identified on the 2012 geophysical survey (see Fig 6). It may be a pit or part of a ditch, but could alternatively be of natural origin, perhaps a tree bowl.

[5009]

Plan drawing Figure 13; section drawing Figure 14; section photograph Figure 26.

An irregular, possibly E-W aligned linear feature, up to 2.5m wide and 0.58m deep, with a very irregular and pocketed base, was recorded against the east side of Trench 5, towards its northern end. The linear feature had a basal primary fill of mid reddish brown stony compact silty clay (5008), which was concentrated against the north and south sides of the feature, with a secondary fill of dark greyish brown silty clay and shillet (507), which infilled the central part of feature [5009] and overlay (5008). Edge definition of feature [5009] was very poor, and overall, there had been significant truncation, presumed to be the result of post-medieval deep plough action.

Interpretation

Feature [5009] corresponds with the linear ditched anomaly (47) identified by the 2012 geophysical survey (see Fig 6), which would appear to be part of a sub-rectilinear enclosure predating the historic enclosure of this area, and potentially early medieval or prehistoric in date. The enclosure may be associated with the wider prehistoric field system surrounding the Iron Age roundhouse settlement, although its slightly more curvilinear form and marginally different alignment, being perhaps more north-south than northwest-southeast, may indicate an earlier or later phase of enclosure.



Figure 6 Features present in Trench 5, superimposed on results from geophysical survey (Stratascan 2012).

4.6 Trench 6

This trench was 25m long and positioned to investigate a faint, possibly sub-rectilinear anomaly (98) in the southwest corner of Field 4. The trench was laid out to potentially cross the south eastern corner of the anomaly, with the aim of identifying its southwest and southeast sides.

The trench was excavated down to a natural horizon (6003) of light yellowish brown compact silty clay and shillet, overlaid by a dark brown stony topsoil (6001). No subsoil was visible in the area of Trench 6.

[6005]

Plan drawing Figure 13; section drawing Figure 14.

A shallow E-W aligned U-shaped linear ditch, 0.87m wide and 0.18m deep, with concave sides and a sloping base, was identified towards the western end of the trench. The ditch was substantially truncated and petered out to form a rounded terminal at its northern end, broadly central within the trench. Ditch [6005] contained a single fill of mid reddish brown compact silty clay (6004) containing much shillet stone and quartz fragments. No dating evidence was recovered from this feature.

Interpretation

Ditch [6005] does appear to correspond with a section of the southwest side of the sub-rectilinear anomaly (98) as identified on the 2012 geophysical survey. The rounded end of ditch [6005] may indicate a ditch terminal, although the feature was substantially truncated and shallow. The geophysical results suggest a faint and intermittent anomaly, potentially due to this truncation, which is probably the result of post-medieval deep

plough action. The eastern side of the possible sub-rectilinear anomaly (98) was not visible in the trench.

4.7 Trench 7

This trench was positioned in Field 2 to test out a blank area in the 2012 geophysical survey (Fig 3). The trench was excavated down to a natural horizon (7003) of mid reddish greyish yellow compact and stony silty clay containing frequent quartz fragments. This was overlaid by a shallow and intermittent subsoil/ploughsoil (7002) below a 0.3-0.5m deep topsoil (7001). No features were visible in this trench.

4.8 Trench 8

This trench was positioned to investigate two diagonally crossing or intersecting linear anomalies (106) and (107) in the southwest corner of Field 1 (see Figs 1 and 3).

The trench was excavated down to a natural horizon (8003) of light greyish reddish yellow stony silty clay containing frequent quartz fragments, at a depth of 0.3-0.5m. Overlying the natural was a yellowish grey friable silty topsoil (8001). No subsoil was visible.

[8005]

Plan drawing Figure 13; section drawing Figure 14; section photograph Figure 27.

A NE-SW aligned V-shaped linear ditch, measuring 1.1m wide and 0.37m deep, with straight sides and a pointed base, was identified just SE of centre of the trench. Ditch [8005] contained a single fill of mid greyish brown compact silty clay (8004) containing occasional shillet and quartz fragments. No dating evidence was recovered from this feature.

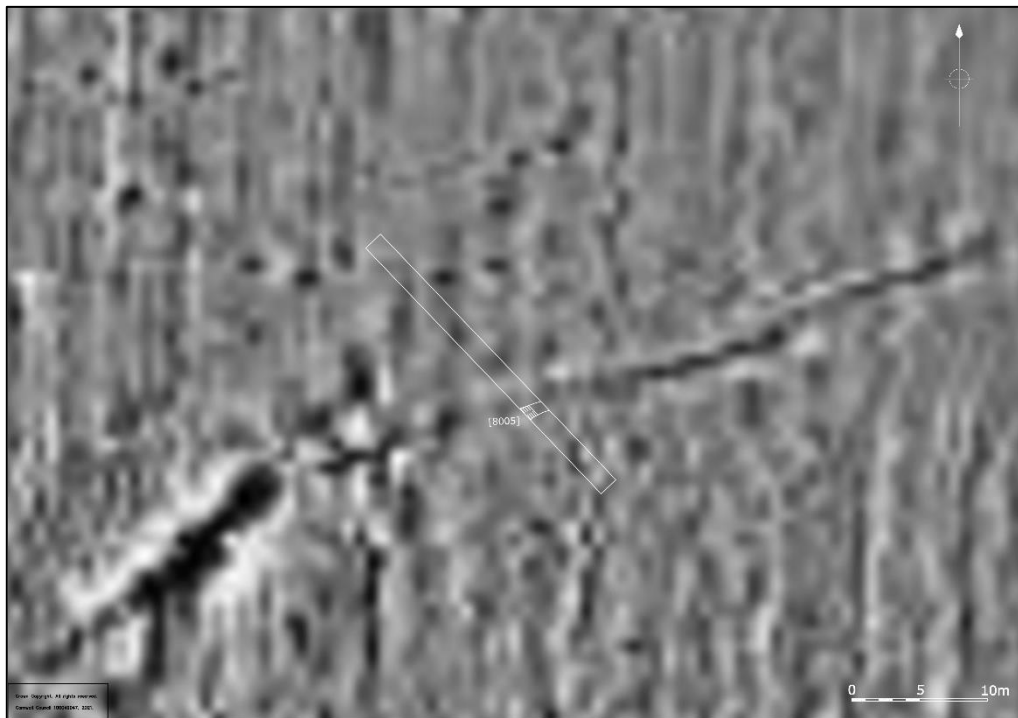


Figure 7 Features present in Trench 8, superimposed on results from geophysical survey (Stratascan 2012).

Interpretation

Ditch [8005] broadly corresponds with the southernmost of the two crossed linear anomalies identified at this location on the 2012 geophysical survey: anomaly (107) – see Figure 7. Anomaly (107) is aligned SW-NE and is one of several faint and intermittent linear anomalies identified in Field 1, all running parallel to each other on a SW-NE axis, counter to the historic field pattern (see Fig 1). The linear ditches may be earlier field or enclosure boundaries, although their precise date remains uncertain. The northernmost of the two linear anomalies, (106), was not visible in the trench.

5 Discussion

The site of the proposed Cornwall Cycle Hub site comprises of six arable fields adjacent to the west of Newquay Hub Business Park, Newquay, Cornwall. Archaeological evaluation of the site was undertaken in the form of six 25m and two 50m trenches, positioned within five of the six arable fields, with the aim of testing the results of the geophysical survey undertaken in 2012 (Stratascan 2012), assessing the extent, character and significance of any archaeology identified, as well as its condition and likely survival.

The results of the 2012 geophysical survey suggested the predominant archaeology was located in the south westernmost of the five fields, with several additional linear and rectilinear anomalies extending across the remaining five fields. Four of the trenches (T1-T4) were assigned to evaluate the concentration of archaeology in the southwest corner of the site, with a further four trenches (T5-T8) assigned to evaluate a selection of the remaining linear anomalies, as well as one trench positioned to test out a 'blank' area of the site (see Fig 1).

The underlying geology of the site is predominantly slate, sand and siltstones. The 'natural' geology was encountered across the site at an average depth of 0.4m-0.5m deep, below a silty loamy clay topsoil that in many cases lay directly above the natural. A shallow subsoil or interface was identified in some of the trenches, which in most cases comprised of a very stony and quartz rich silty clay. The upper fills of most of the features identified during the evaluation were also very stony in character, with frequent quartz.

The results of the evaluation of the eight trenches excavated demonstrated relatively close correlation with the results of the 2012 geophysical survey. Generally, all features excavated were substantially truncated due to post-medieval deep ploughing and most were very shallow in nature. With only traces of a shallow subsoil evident, and with the suggestion of plough strikes in some trenches, it is supposed that the site has been under many years of deep ploughing and crop and this has likely resulted in truncation and some loss of survival and condition of any buried archaeology present within the site. Given this, it would be assumed that where removal of the topsoil is planned during redevelopment of the site, there is a significant risk of further direct impact on any underlying archaeology.

Only one feature, ditch [2016] in Trench 2, remained of substantial depth but was not fully excavated. Ditch [2016] appeared as an indeterminate dark sub-circular anomaly on the geophysical survey, the very stony compact fill of this ditch possibly having obscured its true nature. One large feature identified by the geophysical survey, anomaly (24), was not identified in Trench 3, possibly due to substantial truncation or alternatively to spurious geological returns. The very stony compact nature of the local geology may therefore have impacted on the accuracy of identifying all archaeological features present within the site and there is a strong possibility for further buried archaeology being present that was not picked up by the survey.

Few finds were recovered during the evaluation to allow secure dating of most of the features excavated. Two residual flint artefacts were recovered from contexts (2003) and (3004). These consisted of a Mesolithic microburin/waste flake and a thumbnail scraper of Late Neolithic or Early Bronze Age date (see Appendix 2). Together these finds hint at a trace background of human activity in the area during the Mesolithic to Bronze Age periods.

The bulk of the remaining finds were all recovered from the features excavated within Trench 2. Pottery sherds recovered from contexts (2017) and (2035) were identified as Middle Iron Age South Western Decorated Ware, of Iron Age date (c 350–100 BC). Alongside the pottery sherds, a few items of stonework, including a slate spindle whorl and two whetstones, were also recovered from or adjacent to features in Trench 2 (see Appendix 2).

Subsequent to further analysis and consideration, the predominant findings of the evaluation were that a small prehistoric settlement of probable Iron Age/Roman date was

located on the small rise of ground in the southwest corner of the site, comprising several closely positioned small roundhouses and an associated rectilinear field system. There is the suggestion of phases of settlement throughout its occupation, based on the potential overlaying of some of the possible roundhouse structures and the general juxtaposition of these within the rectilinear field system (see Fig 1).

The presence of a section of the large enclosure ditch [2016] and its recut [2014], in Trench 2 also suggests a potential phasing of settlement activity within the site. The extent of ditch [2016] remains unknown, but the excavated section appears to run broadly east to west and potentially counter to the rectilinear field system in that area of the field. The relationship and chronology of the enclosure ditch relative to the roundhouses or the rectilinear field system could not be tested during the evaluation so much remains unknown. The morphology of the enclosure ditch could be postulated as being Iron Age in form, but it is potentially cut by a small roundhouse, anomaly (8) on the 2012 geophysical survey, suggesting it could be an earlier feature of the site (see Section 4.2 and Fig 4).

Some of the peripheral linear ditches and enclosures within the adjacent fields, 1, 3, 4 and 6, may be outliers of the rectilinear field system associated with the roundhouse settlement and of broadly contemporary date. Although they could be later in origin, all the ditches excavated appear to predate the pattern of historic enclosure, suggesting a medieval or earlier date. As the agricultural history of the site suggests it was downland pasture prior to enclosure by the late 18th/early 19th centuries, the broader indication is for a late prehistoric origin, although firm dating is still needed to be certain.

6 Conclusions

The results from the evaluation at the proposed Newquay Cycle Hub site have demonstrated a trace background of human activity in the area during the Mesolithic to Late Neolithic/Bronze Age periods, with a more concentrated area of potential settlement-related activity of potentially Iron Age date in Field 5. This includes probable roundhouse structures, working areas and agricultural field/enclosure boundaries.

The features identified during the evaluation bore close correlation with the results from the 2012 geophysical survey, although the very compact stony nature of the local geology, and of the fills found within individual features, may have impacted on the accuracy of identifying all archaeological features present within the site. There is therefore a strong possibility for further buried archaeology being present that was not picked up by the survey.

The general summation of the findings would be of a small Iron Age/Roman period settlement located in the southwest corner of the site, at one time partly or wholly enclosed, possibly continuing into the later Iron Age or even the Romano-British period and, possibly during the latter phases of use, associated with a rectilinear field system. This would not be out of character with the general evidence for Iron Age/Romano-British settlement in the vicinity (see Section 2.3).

The significance of the archaeology of the site is in its time depth and phasing, which further investigation and analysis would refine and characterise. Understanding the development of open and enclosed settlement and agricultural practices during the Iron Age and into the Romano-British period remains one of the research topics of the South West Archaeological Research Framework (Grove and Croft 2012). Further archaeological recording as part of a programme of mitigation of the site, if required by the LPA, would therefore continue to build on the current evidence and help shed further light on this subject.

The results of the fieldwork and the assessment of significance allow for some proposals to be made for further work. These are based on the current proposals for the cycle hub, which in some areas will be constructed using a low impact, no-dig, policy. If developments were to change, the potential for increased impact might require further assessment and possible mitigation. The following proposals are for guidance only and

the Local Planning Authority (LPA) will guide the required work. All stages of proposed further work will need to be supported by WSIs approved by the LPA.

6.1 Mitigation in advance of groundworks

6.1.1 Strip map and sample

The concentration of archaeology within the site is within Field 5, where an Iron Age roundhouse settlement and associated field system have been identified (in the region of Trenches 1-4). Features associated with this site may extend into the adjacent fields, particularly Fields 2, 4 and 6. The local SDOHE may request a programme of strip map sample, which would help to identify the scale of this activity and better characterise and potentially date it. This would involve the stripping of targeted open areas under archaeological supervision, the mapping of the features revealed, and the excavation of a sample of identified features. The extent of any area subject to this type of mitigation would need to be reviewed against the impact of the proposed development as well as the archaeological potential of the area.

6.1.1 Archaeological watching brief

The local SDOHE may request an appropriate programme of archaeological monitoring and recording during any groundworks stages or topsoil stripping. This would need to be agreed as part of the proposed development in order to identify and properly record any buried archaeology impacted on by associated ground disturbing works. This mitigation option might be considered a viable alternative to strip map and sample in Field 5, dependent on the scale and nature of construction works being carried out in this area.

6.2 Analysis and publication

Should the results merit it a programme of post-excavation analysis and publication may be required by the Local Planning Authority.

6.3 Outreach

Given that the area for proposed development will be aimed at enhancing visitor enjoyment from within Cornwall and beyond, there is an opportunity to promote awareness of the historic and archaeological significance of the site. This could be achieved locally through display and exhibition space in the Cycle Hub main buildings. Consideration could be given to other forms of outreach through publication, social media channels or local television.

7 References

7.1 Primary sources (in chronological order)

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7.3 Websites

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Figure 8 Detail from Thomas Martyn's map, 1748 (Electronic reproduction. Cambridge, Mass.: Harvard Geospatial Library, 2014).

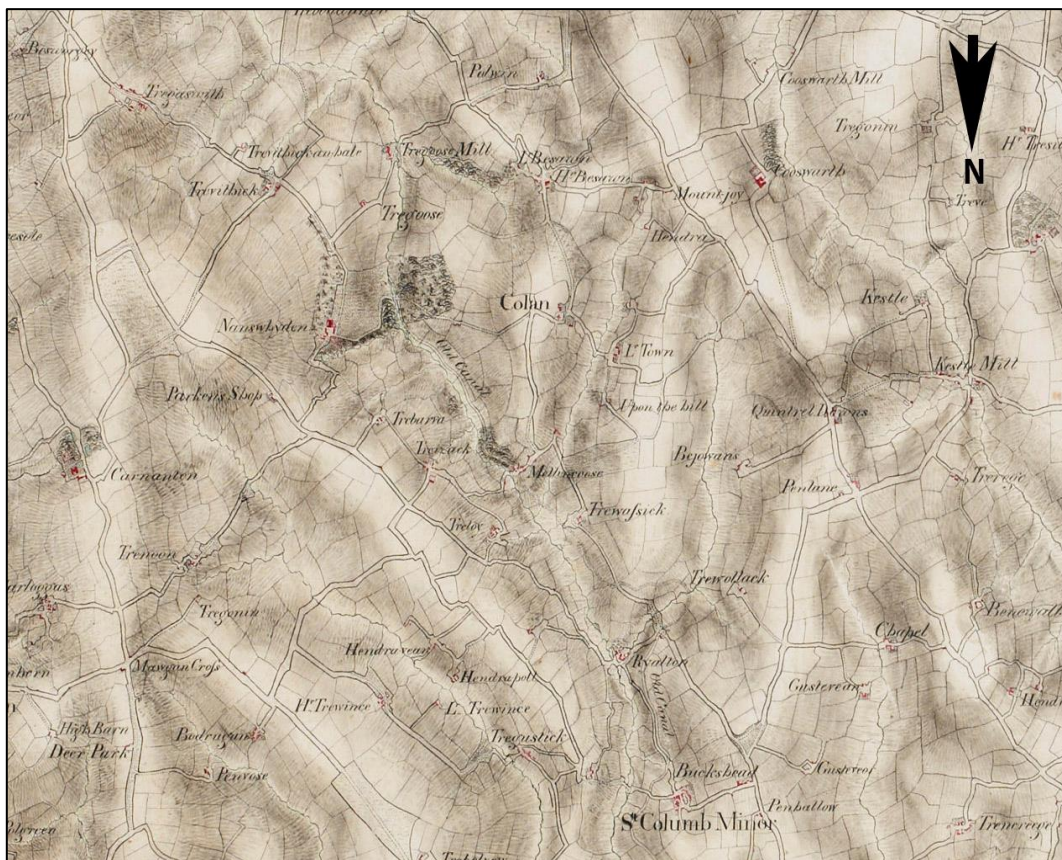


Figure 9 The c1810 OS Surveyors' drawing (Copyright: British Library, OGL v1.0).

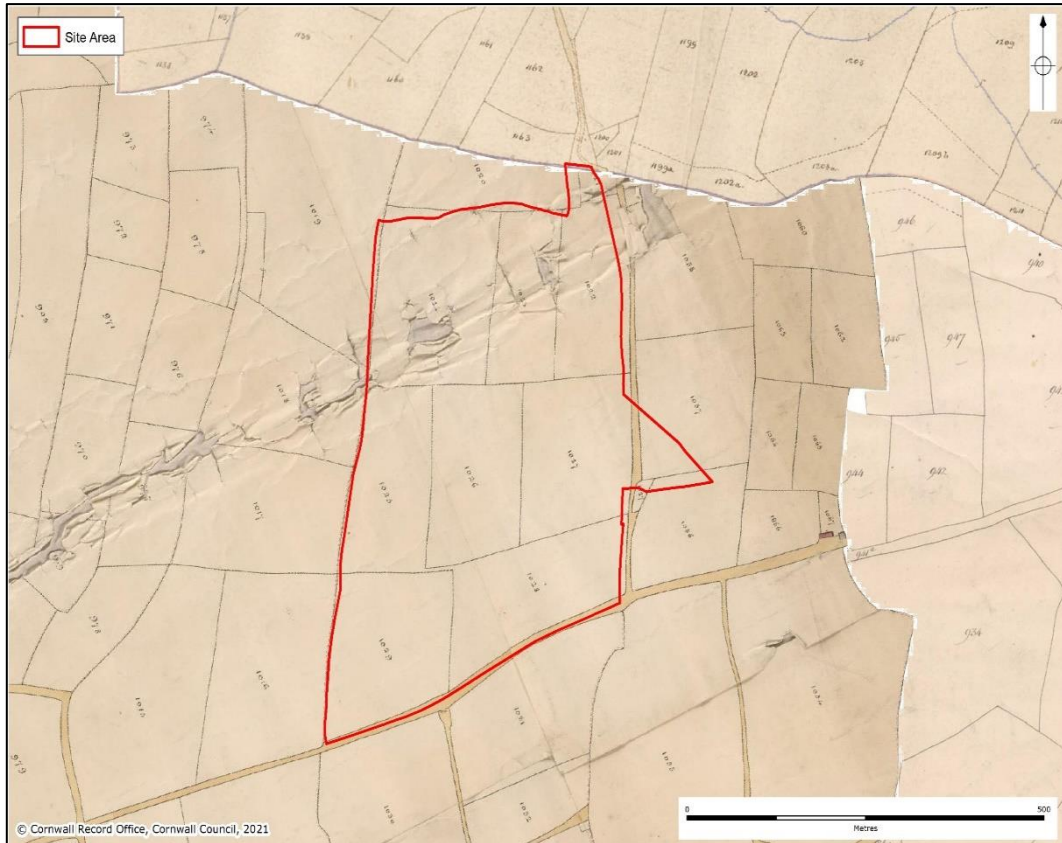


Figure 10 The 1839 Tithe Award map for the parish of St Columb Minor.

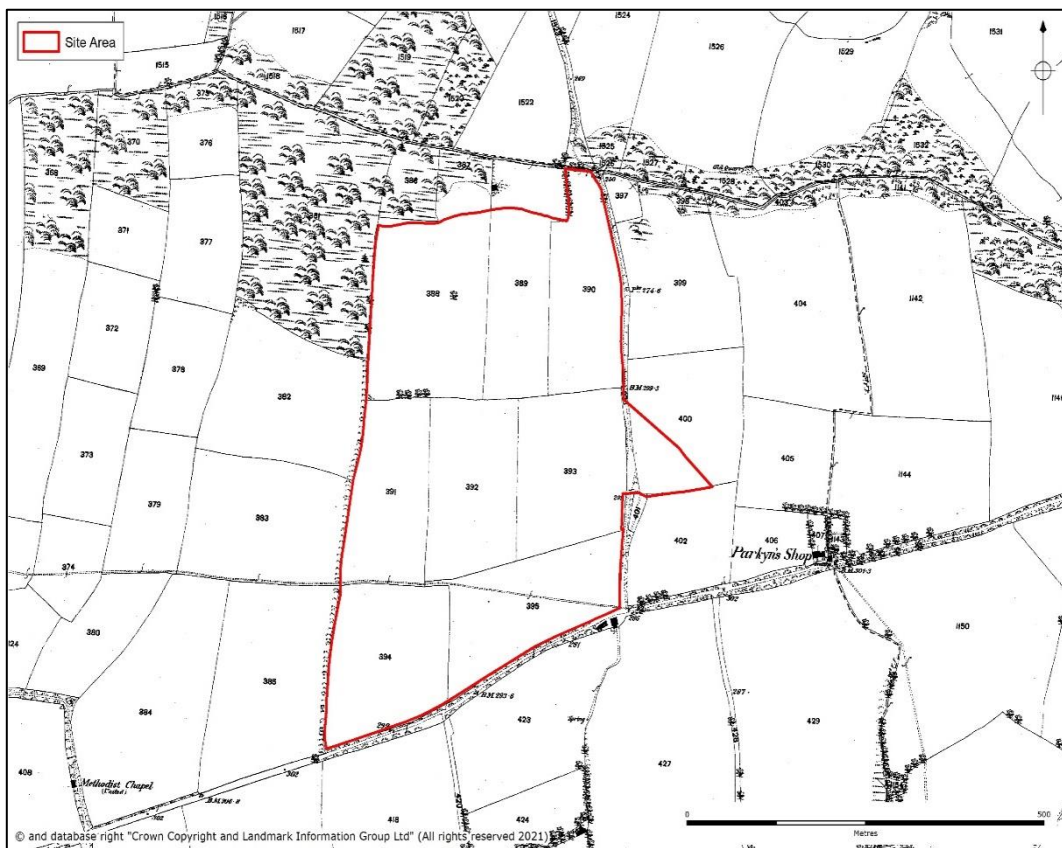


Figure 11 First Edition of the Ordnance Survey 25 Inch Map, c1880.

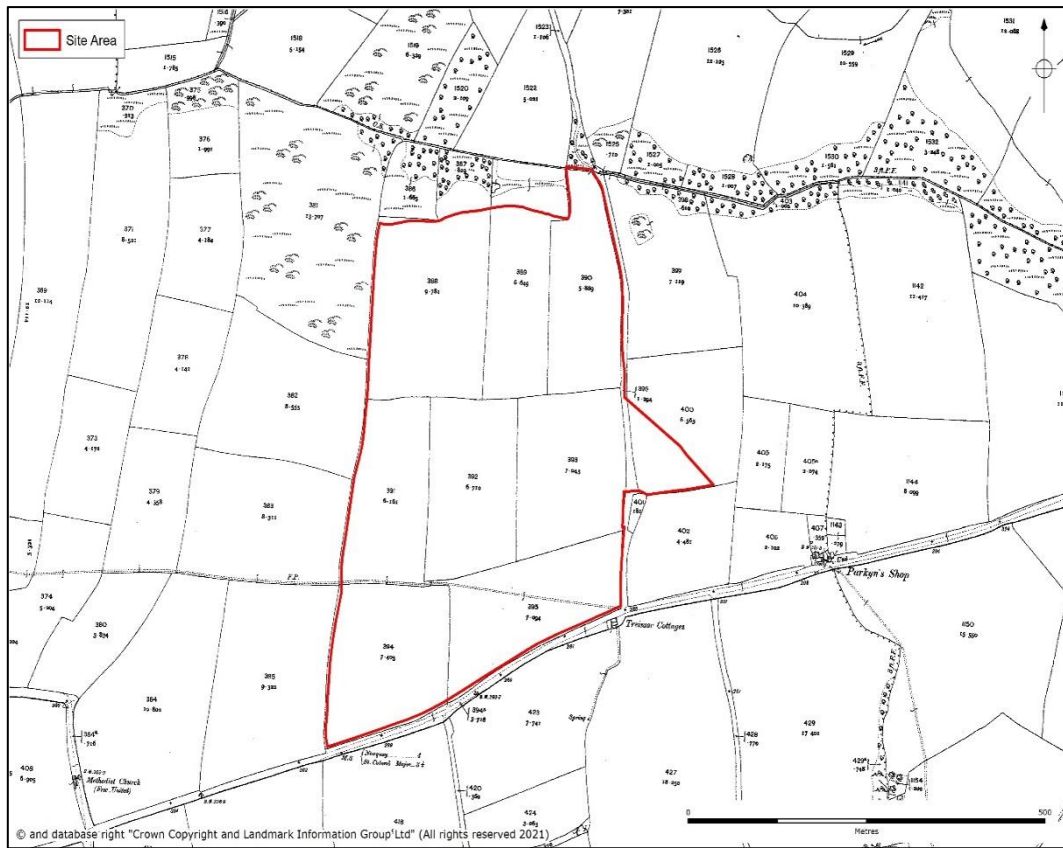


Figure 12 Second Edition of the Ordnance Survey 25 Inch Map, c1907.

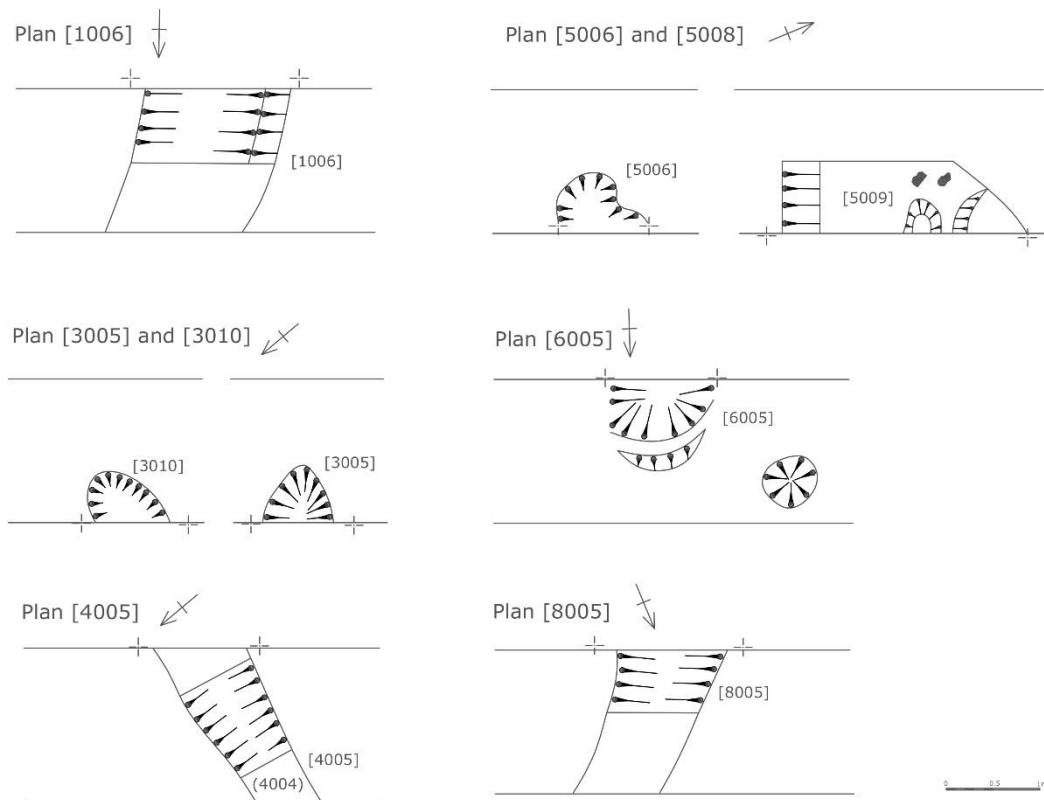


Figure 13 Plan drawings of features identified in Trench 1, Trenches 3-6, and Trench 8.

Selected sections Scale 1:10

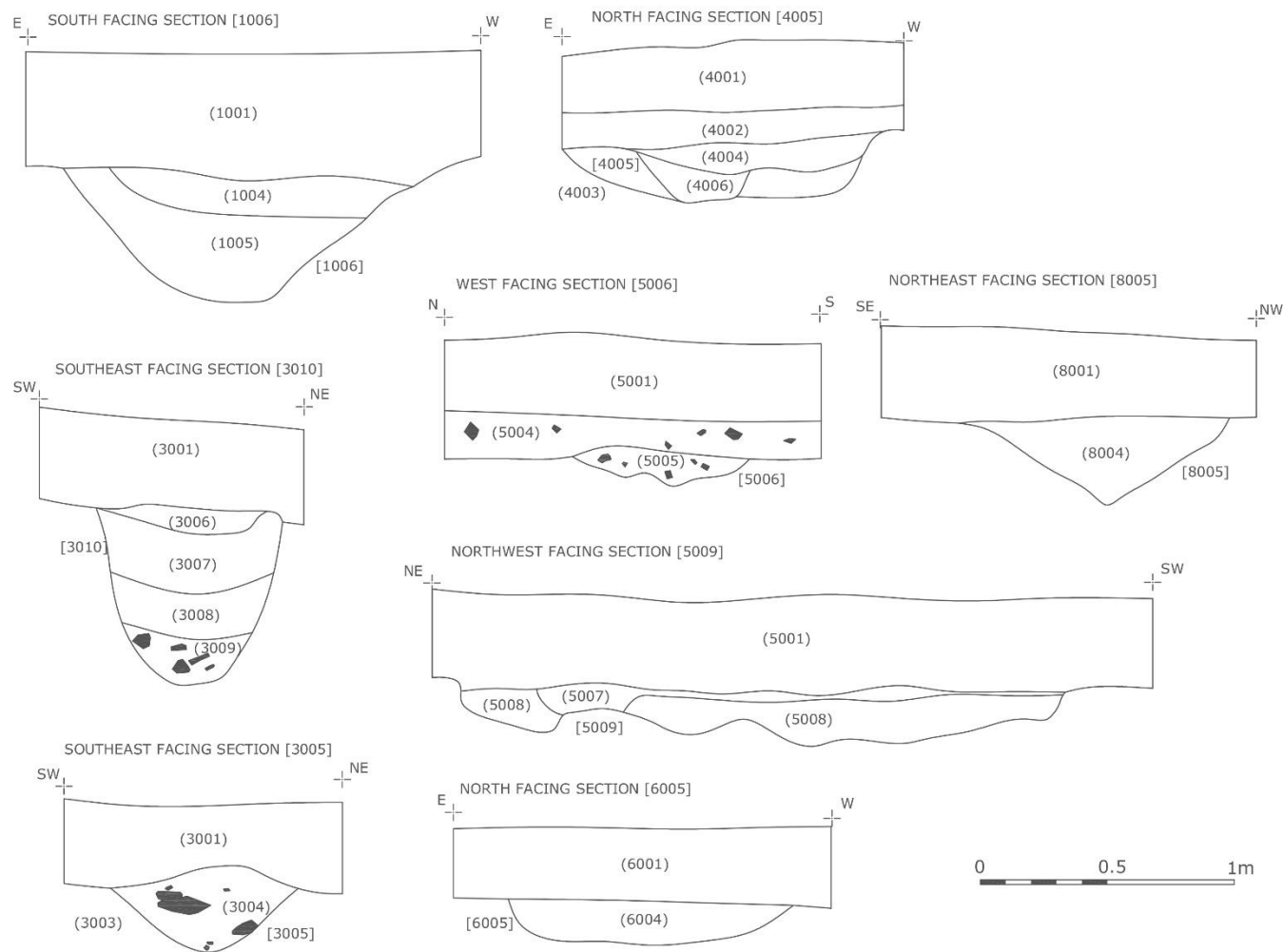


Figure 14 Section drawings of features identified in Trench 1, Trenches 3-6, and Trench 8.

Selected sections Trench 2 Scale
1:10

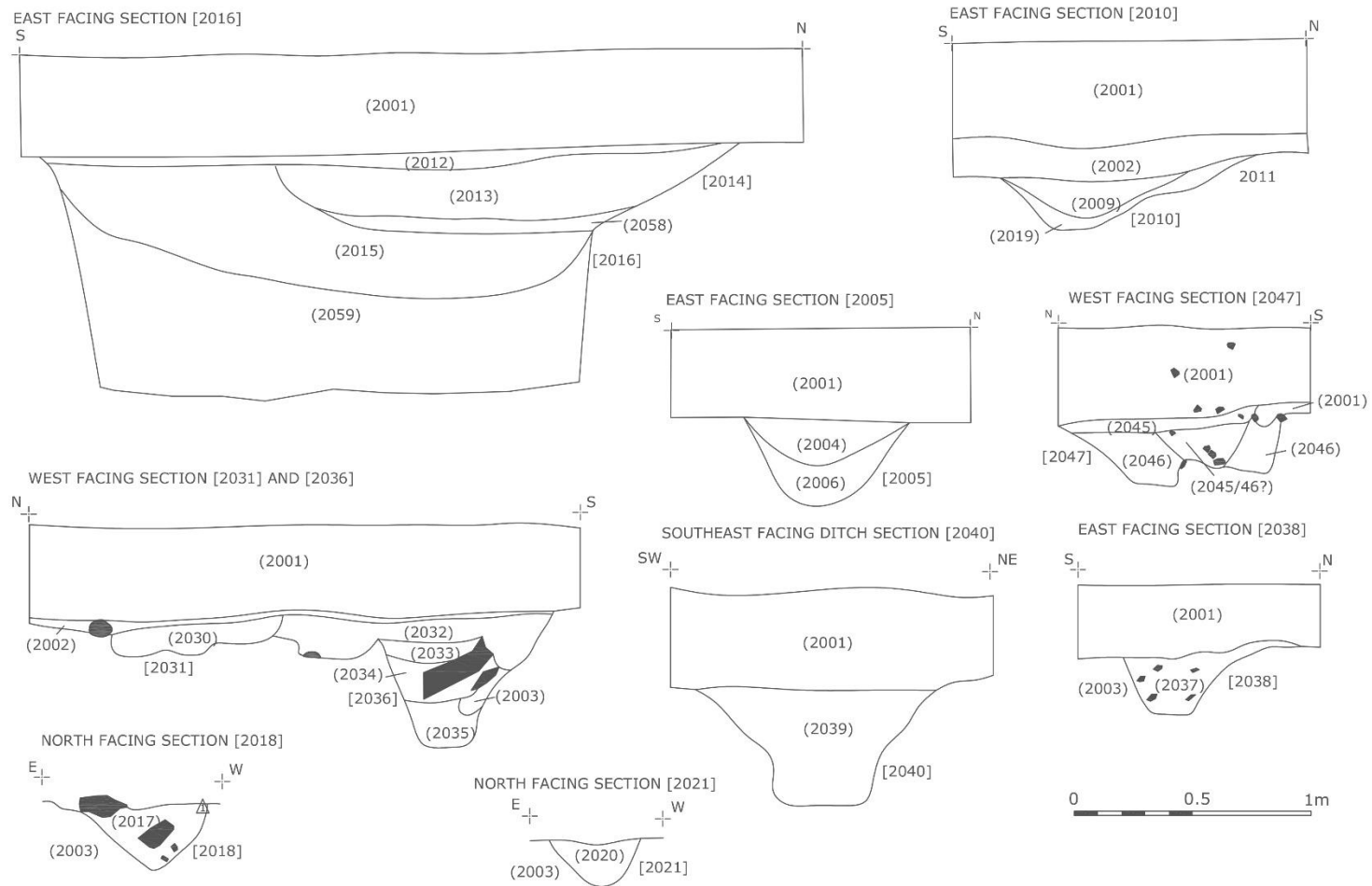


Figure 15 Section drawings of features identified in Trench 2.

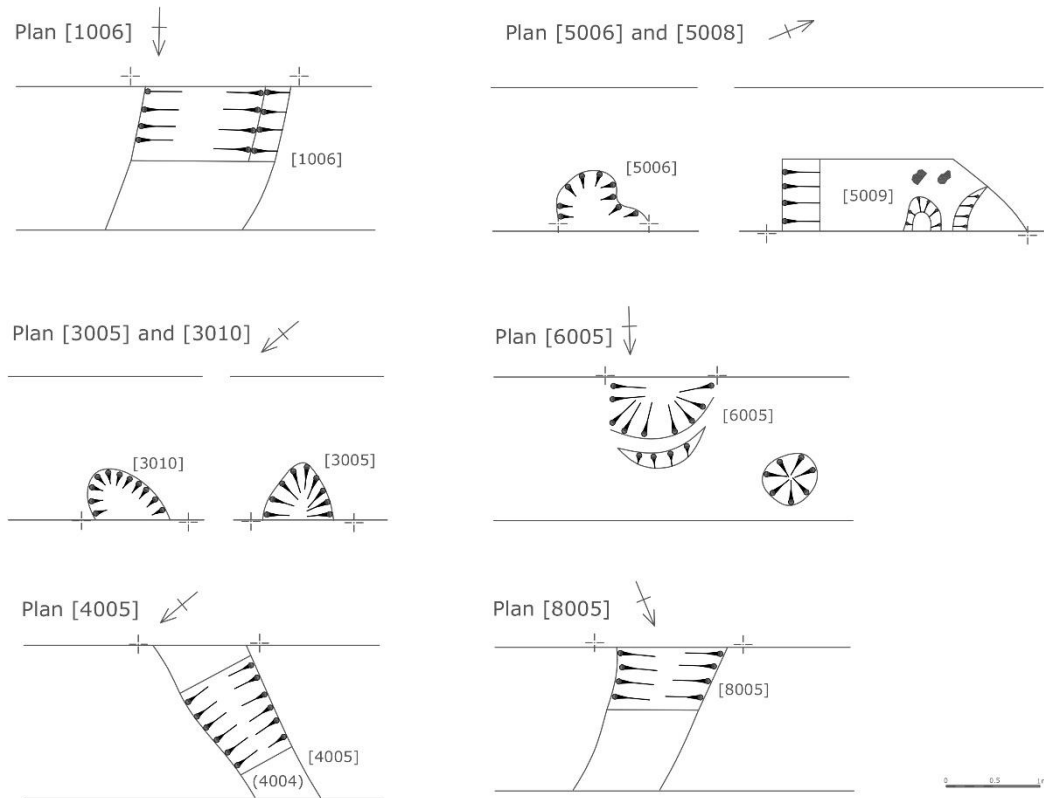


Figure 16 Plan drawings of features identified in Trench 2.



Figure 17 East facing section of ditch [2016], with recut [2014].



Figure 18 East facing section of ditch [2010] and bank 2011.



Figure 19 West facing section of ditch [2031] and pit? [2036].



Figure 20 North facing section of posthole [2018].



Figure 21 East facing section of ditch [2053].



Figure 22 East facing section of ditch [2040].



Figure 23 North facing section of ditch [1006].



Figure 24 Southeast facing section of ditch/ditch terminal [3005].



Figure 25 Southeast facing section of ditch terminal [3010].



Figure 26 West facing section of ditch [5009].



Figure 27 Northeast facing section of ditch [8005].



Figure 28 IA pottery rim from (2017).



Figure 29 IA pottery rim from (2017).



Figure 30 Slate spindle whorl from (2017).



Figure 31 Whetstone from (2002) on north side of [2031] showing pecked finger grip.



Figure 32 Flint microburin or waste flake from (2033).



Figure 33 Flint thumbnail scraper from (3004).

Appendix 1: Table of contexts

* Cut and build features are in bold

Context Number	Site sub-division	Cut/Deposit/Build	Which cut is it in	Description	Finds	Interpretation
1001	T1	D		Dark greyish brown friable silty clay containing occasional shillet. Up to 0.5m deep.		Topsoil.
1002	T1	D		Light to mid greyish brown friable silty clay containing moderate small angular stones. 0.15-0.2m deep.		Subsoil.
1003	T1	D		Light yellowish grey compact silty clay containing frequent shillet.		Natural.
1004	T1	D		Dark greenish brown compact silty clay containing frequent shillet. 0.16m deep. Cuts (1005).		Upper fill of ditch [1006]. Possible recut, cuts lower fill (1005).
1005	T1	D	1006	Mid yellowish brown friable silty clay containing frequent shillet and large (0.1-0.4m) fragments quartz. 0.34m deep.		Basal fill of ditch [1006].
1006	T1	C		Cut of E-W aligned flat bottomed 1.37m wide and 0.5m deep V-shaped ditch with concave/straight sides and a flat base. Possibly linear or curvilinear.		Possible enclosure ditch of potentially prehistoric date. Possibly with a secondary recut.
2001	T2	D		Dark yellowish grey friable silty clay containing occasional to moderate shillet. Up to 0.35m deep.		Topsoil.
2002	T2	D		Mid yellowish brownish red friable silty clay containing moderate shillet. Up to 0.15m deep.	Greywacke cobble whetstone	Subsoil.
2003	T2	D		Light mottled greyish reddish yellow friable/compact silty clay containing frequent shillet.		Natural.
2004	T2	D	2005	Mid yellowish brown friable silty clay containing (0.05-0.1m) shillet. Up to 0.2m deep.		Upper fill of ditch [2005].
2005	T2	C		Cut of E-W aligned U-shaped linear, or possibly curvilinear, ditch with steep straight sloping sides and a flat base. 0.7m wide and 0.36m deep.		Late Prehistoric enclosure ditch associated with the roundhouse settlement.
2006	T2	D	2005	Mid yellowish reddish brown friable silty clay containing frequent medium shillet. Occasional charcoal flecks.		Basal fill of ditch [2005].

2007	T2	D	2008	Mid reddish brown compact silty clay containing frequent shillet and quartz. Frequent charcoal. Some suggestion of heating/burning of clay surface. 0.05m deep.		Fill of [2008].
2008	T2	C		Cut of very shallow E-W aligned 1.35m wide and 0.05m deep sub-circular/linear feature with rounded west end.		Possibly a severely truncated ditch terminal or sub-linear pit/depression.
2009	T2	D	2010	Light to mid yellowish brown friable silty clay containing frequent medium shillet and occasional charcoal. Large (0.4-0.5m) flat slate stone at base, overlying shallow depression. Also contained tumbled large angular stones from surface of build 2011.	Sub-rectangular slate slab with trimmed edges	Upper fill of ditch [2010].
2010	T2	C		Cut of E-W aligned U-shaped linear ditch with straight sloping sides and a flat base. 0.8m wide (approx. – against bank 2011) and 0.2m deep.		Outer ditch of an Iron Age roundhouse.
2011	T2	B		Linear bank of redeposited natural, stone faced on S side and top. Situated adjacent to N side of ditch [2010]. Some tumble of stone into fill (2009).		Possibly a bank around the inner side of an Iron Age roundhouse.
2012	T2	D	2014 and 2016	Mid yellowish grey friable silty clay containing moderate shillet. Up to 0.1m deep.		Shallow upper fill of ditches [2014] and [2016]. May be the same as (2002), a shallow interface of subsoil overlying the ditches.
2013	T2	D	2014	Mid reddish brown friable silty clay containing occasional shillet. 0.15-0.3m deep.		Fill of ditch [2014] and partially fills ditch [2016]. Possibly redeposited natural.
2014	T2	C		Shallow E-W aligned sloping straight sided cut, 0.65m wide, on the N side of ditch [2016].		Possible recut of ditch [2016]. May be part of a later roundhouse or enclosure ditch cutting the earlier ditch.
2015	T2	D	2016	Light to mid yellowish red friable silty clay containing occasional shillet. Overlying (2059) possibly cut by (2013) and (2058)] to form ditch [2014]. 0.2-0.4m deep.		Upper/top fill of ditch [2016].
2016	T2	C		Cut of E-W aligned steep-sided linear ditch, base unseen but over 1.2m in depth. Approximately 2m wide with a possible recut [2014] on its N side taking it to 3m wide.		Late prehistoric, probably Iron Age, enclosure ditch. Possibly with a secondary recut [2014].

2017	T2	D	2018	Mid reddish brown compact silty clay containing frequent large shillet and occasional charcoal. Small circular slate spindle whorl recovered from surface of deposits, multiple abraded pottery sherds throughout fill.	Iron Age pottery sherds, several vessels Slate spindle whorl	Fill of posthole [2018].
2018	T2	C		Cut of sub-oval 0.59 by 0.23m posthole with straight sides and pointed base. 0.28m deep.		Posthole within roundhouse.
2019	T2	D	2010	Light mottled yellowish reddish grey compact plastic silty clay containing moderate shillet. May be redeposited natural.		Basal fill of ditch [2010]. May be or contain slumped material from bank 2011.
2020	T2	D	2021	Light reddish brown compact silty clay containing occasional shillet and infrequent charcoal. Some very degraded red pottery fragments present, not recoverable.		Fill of posthole [2021].
2021	T2	C		Cut of circular 0.42m in diameter U-shaped posthole with concave sides and base. 0.2m deep.		Posthole within Iron Age roundhouse.
2022	T2	D	2023	Mid reddish brown friable stony silty clay.		Fill of posthole [2023].
2023	T2	C		Cut of circular 0.24m in diameter U-shaped posthole with concave sides and base. 0.16m deep.		Posthole within Iron Age roundhouse.
2024	T2	D	2025	Light reddish brown compact silty clay containing moderate charcoal.		Fill of possible posthole [2025].
2025	T2	C		Cut of shallow (0.05m deep) circular 0.36m in diameter pit with concave sides and base. One of a group of three positioned close together.		Possibly a truncated posthole within Iron Age roundhouse.
2026	T2	D	2027	Light reddish brown compact silty clay containing occasional small angular stones and occasional charcoal. One degraded sherd of red pottery recovered.		Fill of possible posthole [2027].
2027	T2	C		Cut of shallow (0.05m deep) circular 0.3m in diameter pit with concave sides and base. One of a group of three positioned close together.		Possibly a truncated posthole within roundhouse.
2028	T2	D	2029	Dark greyish grey compact silty clay containing frequent charcoal.		Fill of possible posthole [2029].

2029	T2	C		Cut of shallow (0.03m deep) circular 0.34m in diameter pit with concave sides and base. One of a group of three positioned close together.		Possibly a truncated posthole within Iron Age roundhouse.
2030	T2	D	2031	Mid reddish brown compact 0.15m deep silty clay containing frequent shillet.		Fill of gully [2031].
2031	T2	C		Cut of irregular E-W aligned 0.7m wide and 0.15m deep linear gully with series of irregular pockets in base, possibly the result of root action. Situated adjacent to N side of ditch [2036].		Possible gully or pit affected by root action at base. Perhaps a natural feature, possibly a tree bowl.
2032	T2	D	2036	Mid greyish brown compact silty clay containing frequent shillet. 0.6m deep.		Upper fill of ditch [2036].
2033	T2	D	2036	Mid brownish red compact silty clay containing occasional shillet and frequent charcoal. Flint scraper recovered from fill. 0.6m deep.		Middle fill of ditch [2036].
2034	T2	D	2036	Light brownish grey compact silty clay containing frequent shillet and large (0.2-0.3m) quartz stones. Also, several large angular slate stones. 0.6m deep.		Middle fill of ditch [2036].
2035	T2	D	2036	Dark reddish brown compact silty clay containing frequent shillet and frequent charcoal. Small pot sherd and notched slate from base of deposit. 0.6m deep.		Basal fill of ditch [2036].
2036	T2	C		Cut of E-W aligned 1.05m wide and 0.6m deep U-shaped linear ditch with concave sides and a flat base.		Possible prehistoric enclosure ditch.
2037	T2	D	2038	Mid reddish brown friable stony silty clay. 0.35m deep.		Fill of ditch [2038].
2038	T2	C		Cut of E-W aligned 0.65m wide and 0.29m deep U-shaped linear, or slightly curvilinear, ditch with concave sides and base.		Possibly the outer ditch of an Iron Age roundhouse or a ditched feature within a larger roundhouse.
2039	T2	D	2040	Mid reddish brown compact silty clay containing frequent quartz stones. 0.52m deep.		Fill of ditch [2040].
2040	T2	C		Cut of E-W aligned 1m wide and 0.52m deep U-shaped linear, or slightly curvilinear, ditch with convex sides and a flat base.		Ditch associated with an Iron Age roundhouse or an annexe within a roundhouse.

2041	T2	C		Cut of circular 0.2m in diameter U-shaped posthole with straight vertical and curved concave sides and a flat sloping base. Forms a close circular grouping with [2044], [2049] and [2051].		Posthole within Iron Age roundhouse. One of a ring of postholes.
2042	T2	D	2041	Mid reddish brown soft friable silty clay containing occasional shillet.		Fill of posthole [2041].
2043	T2	D	2044	Mid reddish brown soft friable silty clay containing occasional shillet.		Fill of posthole [2044].
2044	T2	C		Cut of circular 0.28m in diameter irregular posthole with irregular concave sides and a sloping base. Forms a close circular grouping with [2041], [2049] and [2051].		Posthole within Iron Age roundhouse. One of a ring of postholes.
2045	T2	D	2047	Mid greyish yellowish red friable silty clay containing moderate fragments quartz and occasional charcoal.		Upper fill of pit [2047].
2046	T2	D	2047	Light to mid yellowish red friable silty clay containing frequent fragments quartz and occasional charcoal.		Basal fill of pit [2047]. Possibly the same as (2045), definition not clear.
2047	T2	C		Cut of possibly circular 0.8m wide and 0.35m deep pit with irregular concave sides and an irregular base. Rise of natural on its S side, with possible burrowing, which may obscure a former edge to the feature.		Possible Iron Age pit or ditch terminal. Feature lies within a probable roundhouse or annexe to a roundhouse.
2048	T2	D	2049	Mid greyish brown compact silty clay containing moderate fragments quartz.		Fill of posthole [2049].
2049	T2	C		Cut of circular 0.17m in diameter U-shaped posthole with straight sides and an irregular sloping base. Forms a close circular grouping with [2041], [2044] and [2051].		Posthole within roundhouse. One of a ring of postholes.
2050	T2	D	2051	Dark greyish black friable silty clay containing very occasional burnt stones and frequent charcoal.		Fill of posthole [2051].
2051	T2	C		Cut of circular 0.3m in diameter U-shaped posthole with concave sides and a flat sloping base. Forms a close circular grouping with [2041], [2044] and [2049].		Posthole within Iron Age roundhouse. One of a ring of postholes.
2052	T2	D	2053	Mid reddish brown compact silty clay containing frequent shillet.		Fill of ditch [2053].
2053	T2	C		Cut of E-W aligned 0.75m wide and 0.28m deep linear/curvilinear V-shaped ditch with straight/convex sides and concave base.		Outer ditch of Iron Age roundhouse.

2054	T2	D	2055	Mid reddish brown friable silty clay containing moderate shillet and very occasional charcoal. 0.25m deep.		Fill of [2055].
2055	T2	C		Cut of irregular sub-oval/linear depression, 1.25m wide and 0.25m deep with concave sides and a sloping base. Contains possible posthole [2057].		Uncertain. Possible ditch or ditch terminal.
2056	T2	D	2057	Mid yellowish brown friable silty clay containing very occasional shillet. 0.24m deep.		Fill of possible posthole [2057].
2057	T2	C	2055	Cut of circular 0.17m in diameter U-shaped posthole with straight sides and a flat base.		Possible posthole.
2058	T2	D	2014	Light yellowish grey loose silty clay containing frequent shillet. Found at base of (2013). 0.05m deep approximately. Context added post-ex.		Basal fill of ditch [2014].
2059	T2	D	2016	Mid to dark greyish red compact silty clay containing frequent shillet. Context added post-ex. Excavated to a depth of 1.2m, not bottomed.		Lower, possibly basal, fill of ditch [2016].
3001	T3	D		Mid greyish yellowish brown friable silty clay containing occasional shillet. Up to 0.5m deep.		Topsoil.
3002	T3	D		Light yellowish grey friable silty clay containing moderate shillet. Up to 0.2m deep.		Subsoil.
3003	T3	D		Light mottled reddish greyish yellow friable silty clay containing frequent shillet.		Natural.
3004	T3	D	3005	Mid reddish brown compact silty clay containing moderately large shillet and moderate charcoal. 0.37m deep.	Flint thumbnail scraper	Fill of ditch [3005].
3005	T3	C		Cut of sub-oval SE-NW aligned 0.77m wide concave pit with straight sides and a concave base. 0.62 m deep.		Late Prehistoric ditch terminal or pit.
3006	T3	D	3010	Mid greyish brown friable clay silt containing occasional shillet and occasional charcoal. Slate fragments.	Irregular notched slate slab	Top fill of ditch terminal [3010].
3007	T3	D	3010	Mid brownish orange clay silt containing frequent shillet. 0.35m deep.		Fill of ditch terminal [3010].
3008	T3	D	3010	Mid yellowish grey clayey silt containing frequent shillet.		Fill of ditch terminal [3010].

3009	T3	D	2010	Mid to dark brownish orange clayey silt containing frequent large shillet stones and quartz fragments. Possibly occasional large burnt stone fragments. Rounded slate fragment.	Flattened greywacke pebble utilised as a whetstone	Fill of ditch terminal [3010].
3010	T3	C		Cut of 0.9m wide and 0.7m deep linear/curvilinear U-shaped ditch with straight sides and concave base.		Late Prehistoric ditch terminal.
4001	T4	D		Dark reddish brown friable silty clay containing moderate stone. Up to 0.2m deep.		Topsoil.
4002	T4	D		Dark reddish brown friable silty clay containing moderate stone. Up to 0.2m deep.		Subsoil.
4003	T4	D		Light yellowish yellow compact silty clay containing frequent shillet.		Natural.
4004	T4	D	4005	Dark reddish brown friable silty clay containing moderate shillet. Up to 0.56m deep.		Fill of ditch [4005].
4005	T4	C		Cut of E-W facing 0.7m wide and 0.56m deep concave linear ditch with concave sides and base.		Late prehistoric enclosure ditch.
4006	T4	D	4005	Mid reddish brown compact silty clay. Up to 0.12m deep.		Basal fill of ditch [4005].
5001	T5	D		Mid yellowish grey friable silty clay.		Topsoil.
5002	T5	D		Mid reddish grey friable silty clay containing frequent shillet and quartz fragments. Up to 0.15m deep.		Subsoil.
5003	T5	D		Light mottled greyish reddish yellow friable/compact silty clay containing frequent shillet.		Natural.
5004	T5	D		Mid reddish brown compact silty clay containing frequent quartz fragments. 0.2m deep.		Layer overlying Fill (5005).
5005	T5	D	5006	Mid brownish red compact silty clay containing moderate shillet. 0.16m deep.		Fill of pit [5006].
5006	T5	C		Cut of E-W aligned sub-oval 0.7m wide and 0.16m deep irregular pit with irregular sides and base.		Possible ditch terminal/pit. Perhaps a tree bowl.
5007	T5	D		Dark greyish brown compact silty clay containing very frequent shillet.		Stony layer overlying Fill (5008).
5008	T5	D	5009	Mid reddish brown compact silty clay containing frequent shillet.		Fill of [5009].

5009	T5	C		Cut of NE-SW aligned 2.5m wide and 0.58m deep irregular linear feature with concave/straight sides and flat/irregular base.		Possible enclosure ditch. Perhaps an intersection or corner of a truncated rectilinear ditched enclosure indicated on the geophysical survey. Unknown date, possibly Late Prehistoric/Medieval in origin.
6001	T6	D		Dark brown friable silty clay containing frequent shillet stones. Up to 0.3m deep.		Topsoil.
6002	T6	D		Not seen		
6003	T6	D		Light yellowish brown compact silty clay containing moderate shillet.		Natural.
6004	T6	D	6005	Mid reddish brown compact silty clay containing frequent shillet and quartz fragments. 0.18m deep.		Fill of [6005].
6005	T6	C		Cut of E-W aligned 0.87m wide and 0.18m deep U-shaped linear ditch with concave sides and sloping base.		Possible ditch terminal, perhaps associated with small rectilinear enclosure identified on geophysical survey.
7001	T7	D		Light greyish red friable silty clay containing occasional shillet stones. Up to 0.5m deep.		Topsoil.
7002	T7	D		Light to mid greyish red friable silty clay containing frequent shillet and moderate quartz fragments. Up to 0.2m deep.		Subsoil.
7003	T7	D		Mid reddish greyish yellow compact silty clay containing frequent shillet and occasional quartz fragments.		Natural.
8001	T8	D		Light yellowish grey friable silty clay containing occasional shillet stone. Up to 0.5m deep.		Topsoil.
8002	T8	D		Not seen		
8003	T8	D		Light greyish reddish yellow friable/compact silty clay containing occasional frequent shillet and occasional quartz fragments.		Natural.
8004	T8	D	8005	Mid greyish brown compact silty clay containing occasional shillet and quartz fragments. 0.37m deep.		Fill of ditch [8005].
8005	T8	C		Cut of NE-SW aligned 1.1m wide and 0.37m deep V-shaped linear ditch with straight sides and a pointed base.		Field or enclosure ditch, possibly late prehistoric in date.

Appendix 2: Report and Table of Finds

C M Thorpe

A total of 40 items were recovered during this project. Pottery comprises the largest number of finds (31 sherds or 77.5% of the collection). Stone forms the next largest category (5 pieces or 12.5%) with clay, and flint represented within the assemblage. Currently all the artefacts are being temporarily stored in the CAU finds store, Circuit House, Truro, Cornwall.

Some of the artefacts came from the topsoil and are best considered unstratified, being collected during the stripping of the field or the cleaning of the archaeological features. Other artefacts were recovered as bulk finds from features. The total number of finds from each context are summarised in the table below.

The earliest identifiable artefacts are flints. Two were recovered during the course of the work coming from contexts (2033) and (3004). The flint from (2033) is a microburin/waste flake of Mesolithic date (8000-4000 BC), while the thumbnail scraper from (3004) is of Late Neolithic (4000-2500 BC) or Bronze Age date.

The earliest identifiable pottery recovered during this project is Middle Iron Age (*circa* 350 – 100 BC) in date comprising 31 sherds from contexts (2017) and (2035). These are all in a fine well-made gabbroic fabric with burnished surfaces. Diagnostic rimsherds were recovered from (2017). These were upright slightly everted beaded rims representing at least three different vessels. At least one of these vessels had a cordon running horizontally around the neck. All of these vessels appear to be plain South Western Decorated ware jars.

It is possible that all the stonework collected is also of this date. This includes the slate spindle whorl from (2017) and the two whetstones from contexts (2002) and (3009).

No other material of more recent date was collected. This may be a reflection of the collection policy adopted in the project, or more likely that the site has remained as pasture subsequent to the Iron Age/Roman period with little or no improvement to the land by the spreading of midden material to improve the fertility of the soil.

Trench	Context Number	Small Find	Feature	Material	Number of items	Weight (G)	Dimensions (MM)	Description	Period	Broad Period	Further work: analysis / drawing etc?
T2	2002		North side of [2031]	Stone	1	1178	160 x 84.7 x 57.2	Elongated greywacke cobble whetstone with several wear facets and polished surfaces. There is also a pecked finger grip on one of the larger flat surfaces.	Prehistoric-early medieval	Prehistoric-early medieval	
T2	2009		Within ditch [2010]	Stone	1	6000	400 x 350 x 55	Sub-rectangular slate slab. Edges appear to be deliberately trimmed and shaped. Post pad?	17th to 18th centuries AD	Post-medieval	
T2	2017		On top SW edge of posthole [2018]	Pottery	1	26	71.4 x 32.8 x 6.	Rimsherd of prehistoric pottery in a gabbroic fabric. Slightly everted beaded rim. Well-made fabric with burnished surfaces. Plain South Western Decorated ware jar.	Neolithic?	Prehistoric	
T2	2017		Within posthole [2018]	Pottery	6	10	25.2 x 23.3 x 5.7 largest 10.3 x 9.9 x 5.8 smallest	3 rimsherds (2 co-joining) and 3 bodysherds of prehistoric pottery in a gabbroic fabric. Slightly everted beaded rim. Well-made fabric with burnished surfaces. Plain South Western Decorated ware jar (2 vessels?).	Mesolithic / Neolithic?	Prehistoric	
T2	2017		Within posthole [2018]	Pottery	16	20	24 x 20 x 4.4 largest 8.8 x 8.7 x 4.5 smallest	5 neck sherds decorated with a cordon, and 11 bodysherds of prehistoric pottery in a gabbroic fabric. Well-made fabric with burnished surfaces. Plain South Western Decorated ware jar (2 vessels?).	Prehistoric	Prehistoric	Draw

T2	2017		Within posthole [2018]	Pottery	7	14	32.2 x 27.7 x 7.5 largest 6.9 x 6.6 x 6.2 smallest	Bodysherds of prehistoric pottery in a gabbroic fabric. Well-made fabric with burnished surfaces. Plain South Western Decorated ware (2 vessels).	Iron Age	Prehistoric	
T2	2017		Within posthole [2018]	Clay	2	3	18.4 x 15.1 x 11.1 largest 15.7 x 14.2 x 7.8 smallest	Burnt clay or daub fragments.	Iron Age	Prehistoric	Draw
T2	2017		Within posthole [2018]	Stone	1	13	44 x 42.6 x 5.3	Slate spindle whorl. Hourglass shaped perforation located at centre of 6.4mm diameter.	Iron Age	Prehistoric	Draw?
T2	2033			Flint	1	1	17 x 12.4 x 1.9	Microburin. Waste from blade manufacture.	Mesolithic	Prehistoric	
T2	2035			Pottery	1	2	23 x 17.7 x 6.5	Neck sherd of prehistoric pottery in a gabbroic fabric. Standard finish. Diagonal incised line on exterior.	Iron Age	Prehistoric	
T3	3004		[1314]	Flint	1	7	26.4 x 24.8 x 14.5	Flint thumbnail scraper.	Late Neolithic-Bronze Age	Prehistoric	
T3	3006			Stone	1	13	52.6 x 43.4 x 3.8	Irregular shaped notched slate slab with a U-shaped notch on one end 24.9mm wide and 9.6mm deep.	Prehistoric	Prehistoric	Draw
T3	3009			Stone	1	58	101.4 x 47.6 x 8.4	Broken elongated flattened greywacke pebble utilised as a whetstone. Distinctive polished surfaces, striated and with peck marks on one of the larger flat faces.	Prehistoric-early medieval	Prehistoric-early medieval	

Appendix 3: Written Scheme of Investigation

Newquay Cycle Hub, Cornwall

Archaeological Evaluation WSI

Client: Cornwall Council

Client contact: Sarah Roberts

Planning ref: PA21/02617

Project background



Figure 1: site location map

This document sets out a Written Scheme of Investigation (WSI) by Cornwall Archaeological Unit (CAU) for a programme of archaeological evaluation on land proposed for the Cornwall Cycle Hub. The site is adjacent to the Newquay Hub Business Park (NGR SW 86928 63365).

The proposed development area comprises six formerly arable fields, sub-divided by Cornish hedges and characterised as 'Post-medieval Farmland', with a new entrance from the east. The site does not include any Scheduled Monuments or Listed Buildings and there are no other designations applied to the land. Although there are no archaeological features visible on the ground surface, buried archaeological remains were identified by a geophysical survey undertaken in 2012 for the Aerohub Business Park Environmental Impact Assessment (Stratascan 2012).

The evaluation of the site has been requested by Cornwall Council's Senior Development Officer Historic Environment (SDHOE) to inform planning application PA21/02617. On the basis of the results of a Historic Impact Assessment of the site (Johns 2021) and on the results of the 2012 geophysical survey, it is now proposed that a programme of archaeological evaluation should be undertaken in order to provide additional information regarding the nature, extent and date of archaeological features or deposits within the development area.

Site setting and history

* Extracted from Johns 2021. Monument numbers from the Cornwall and Scilly Historic Environment Record (HER) are given, prefix MCO, in brackets.

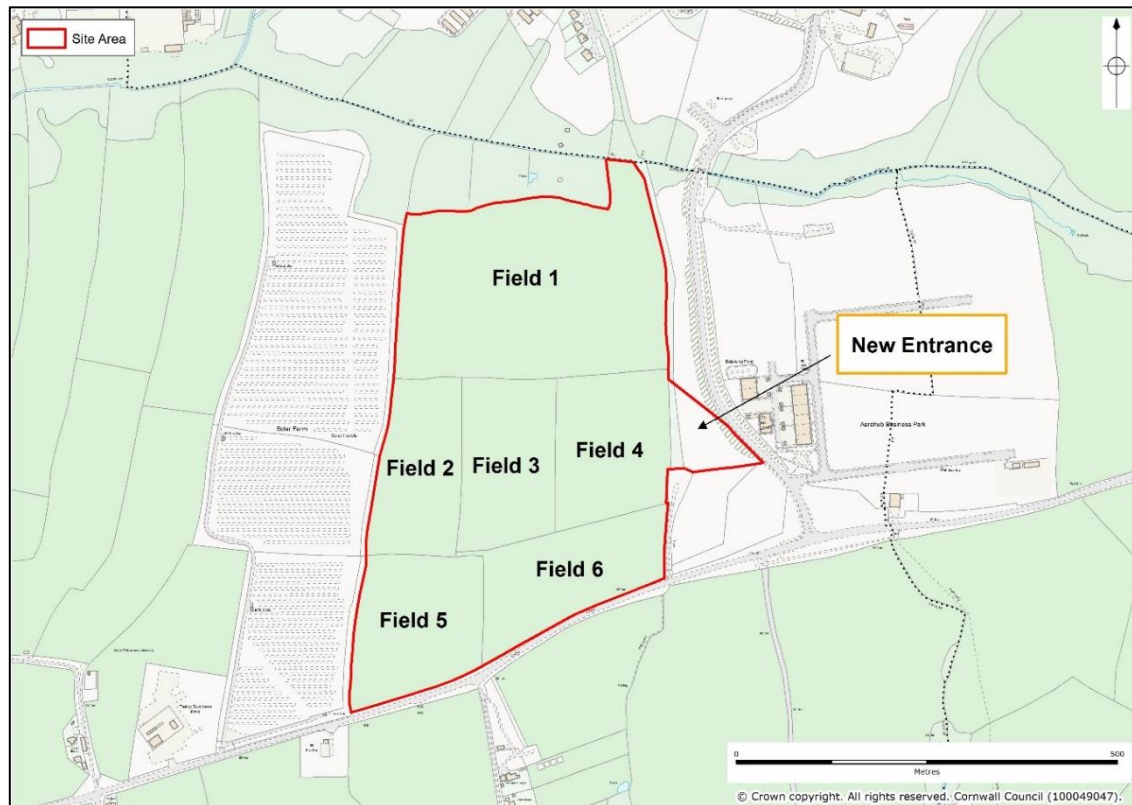


Figure 2 Site extent.

The site is located approximately 6km to the north east of Newquay and 4km to the west of St Columb Major, centred at NGR SW 86928 63365 (Fig 1). It comprises six arable fields (Fields 1–6) and a farm lane north of Treisaac Farm, with a total area of 20.5ha (Fig 2).

The land is 90m OD at its highest point and slopes very gently to the north towards a stream in a small, wooded valley; the slope is more pronounced in the northern part of Field 1. Fields 1, 4 and 6 also slope down towards a small valley on the eastern part of the site.

To the north east of the site is Newquay Cornwall Airport, the main civilian airport in Cornwall. It was formerly part of a Royal Air Force base (RAF St Mawgan) but in 2006 the airfield part of the base was purchased by Cornwall Council from the Ministry of Defence. The remaining area of RAF St Mawgan is located to the north west of the site and is still in active military use. To the east of the site is the Aerohub Business Park, to the west is the Kernow Solar Farm and to the south the site is bounded the A3059.

The site lies in the parish of Colan (but formerly in St Columb Minor), the stream to the north is the parish boundary between Colan and Mawgan-in-Pydar.

The area of the new entrance is to the east of the site (Fig 2). Once a pasture field, this formed part of the Newquay Cornwall Airport Southern Access Route. This area is now an area of poor semi-improved grassland.

The geology underlying the assessment area consists of the slate, sandstone and siltstone of the Dartmouth group, apart from its far southern margin, where the bedrock is formed by interbedded slates and sandstone of the Meadfoot group (British Geological Survey 1981).

The dominant soil group is Denbigh 2 with 'well drained fine loamy soils over slate or slate rubble' with associated 'fine loamy soils seasonably affected by groundwater' (Avery *et al* 1974).

The site is characterised as 'Post-medieval Enclosed Land', i.e., land enclosed in the 17th, 18th and 19th centuries, usually from land that was previously Upland Rough Ground and often medieval commons. Generally, in relatively high, exposed or poorly drained parts of the county (Cornwall County Council 1996).

Prehistoric activity in the vicinity of the site includes several Bronze Age barrows near to Tregurrian, Tolcarne, Merock and at Carloggas (MCO2337, MCO2867, MCOI3661 and MCO3580). Locally, further Bronze Age activity is suggested by a well-preserved hoard of bronze weapons and implements found in a field below Lanherne House, near St Mawgan church town (MCO25950).

There is a concentration of Late Iron Age/ Romano-British rounds (MCO3325, MCO3326, MCO7749, MCO8514, MCO8731) within close proximity of the site, along with potential later prehistoric settlement sites (MCO33284, MCO33257, MCO33301 as examples). Excavation and field survey have demonstrated that rounds were often surrounded by extensive field systems (see Dudley 2011 for discussion).

Traces of later prehistoric or Romano-British activity on the site have been identified from aerial photographs and by geophysical survey (MCO63059). In particular, the concentration of geophysical anomalies 1–48 in Field 5 (extending into Fields 2, 3 and 6) seems to indicate a possible later prehistoric or Romano-British multi-phase settlement. Features are present as roundhouses, a possible stock enclosure and remnant associated field boundaries. A possibly related scatter of isolated pits is visible to the north (Stratascan 2012 and see Fig 4).

A high concentration of early medieval settlements with place-names formed of the Cornish *tre-* prefix are to be found in close proximity of the site. The use of **tre-** 'farmstead, estate' (but sometimes interpreted by archaeologists as 'farming settlement'), dates to the sixth to the tenth centuries AD (Padel 1985). These settlements are often found in close proximity to the location of Iron Age and Romano-British rounds and archaeological excavation in Cornwall has confirmed that the extent of medieval enclosed land generally corresponds with the area of later prehistoric farming activity.

The Domesday Book of 1086 recorded three of the many medieval settlements in the area; Lanherne, Tolcarne and Treloy (Thorn and Thorn 1979). Through the 12th to 14th centuries other settlements in the area were recorded in documentary sources for the first time, however, it is likely that some, in particular Trevithick, pre-date their first reference in documentary sources.

During the medieval period, most of the small settlements within the vicinity of the site settlements were probably farming hamlets of several tenants farming blocks of open strip fields. These would have been cultivated by each tenant within open groups or 'cropping units', which would collectively have formed areas of medieval 'open' field surrounding each settlement. Some of these former strip fields have influenced the pattern of 19th century fields and field boundaries, which re-use the earlier boundary lines.

It is likely that large parts of the ridge and sections of the valley bottoms were areas of rough ground. Despite widespread enclosure and improvement, evidence for the former existence of these large areas of rough ground was preserved in field-names on the c1840 Tithe Survey, several of which included the English 'downs' and 'moor' or the Cornish element, **hal** 'moor' in their name.

Martyn's map of 1748 shows the general area of the site and with 'Trebarva' and 'Treizack' shown to the south of a road (now the A3059). The map also shows a settlement called 'Hard to Come By' in a bend of the stream. It is unclear if this settlement was located within the site itself – if so, it would probably have been in Field 1.

The c1840 Tithe Map and Apportionment for the parish of St Columb Minor record that the fields were part of the tenement of Treisaac and were owned by John, William and Thomas Trebilcock and occupied by John Williams. The map shows the field boundaries

as they are today except that the Field 1 was divided into three fields; 'Lower Meadow' (TA1022), 'Plantation Meadow' (TA1023) and 'Higher Rockey Close' (TA1024). Field 2 was called 'Beef Close' (TA1025), Field 3 was 'Lower Close' (TA1026), Field 4 was 'Well Park' (TA1027), Field 5 was 'Orchard', Field 6 was 'Lower Rockey Close' (TA 1029). The land use of all the fields was described as arable, except for Field 5 which was orchard.

The First Edition OS 25" to the mile map of c1880 (Fig 10) and the Second Edition OS map in c1907 show that no changes had occurred to the field pattern. The modern OS map indicates that at some point during the 20th century the boundaries dividing Field 1 had been removed. The removed boundaries are revealed as linear ditched anomalies on the 2012 geophysical survey (Stratascan 2012) (Fig 4).

Environment Agency LiDAR appears to show a banked linear feature in Field 6 (Fig 3). The feature potentially corresponds with the eastern end of a linear enclosure boundary detected by the 2012 geophysical survey (Stratascan 2012; 28 and 40 – see Fig 4). This may suggest a later prehistoric origin, although a later date is also possible.

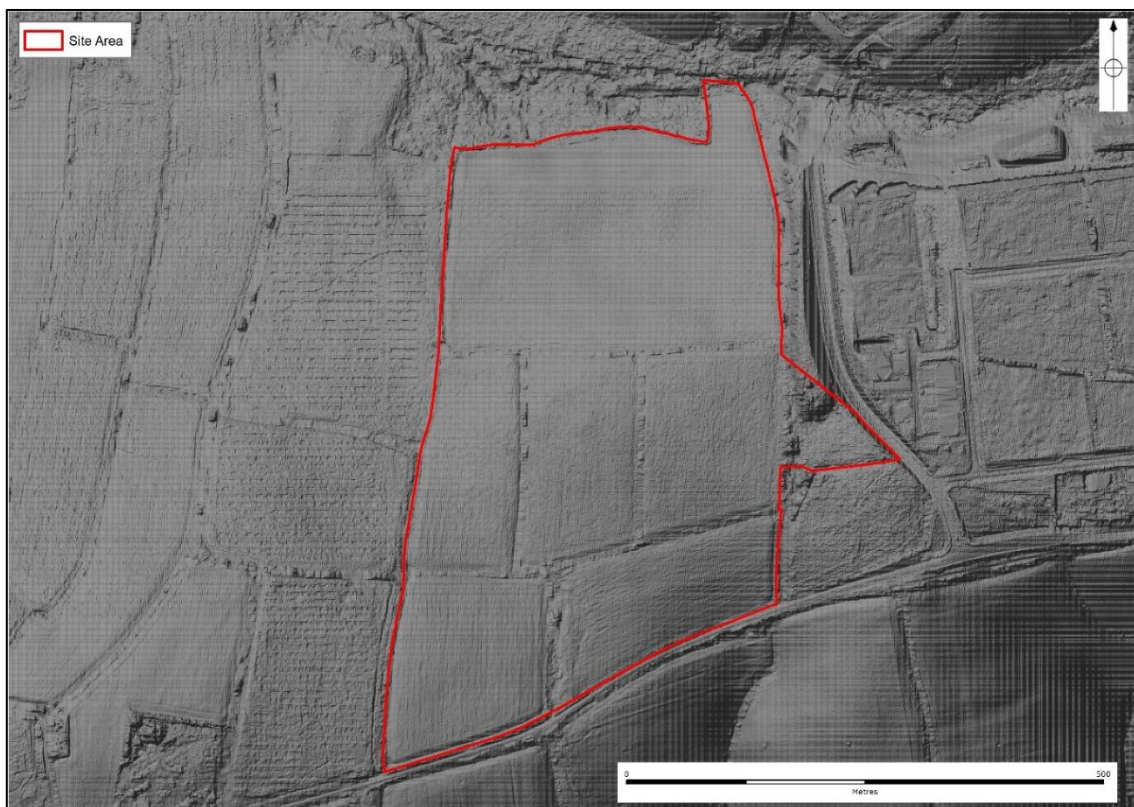


Figure 3 LiDAR imagery of the site appears to show a linear feature in Field 6 (Source: Environment Agency).

Project extent

The evaluation will concentrate on eight trenches; six measuring 25m long by 1.8m wide, and two measuring 50m long by 1.8m wide.

The proposed locations of the trial trenches are indicated on Figure 4. The trenches have been positioned to evaluate the anomalies recorded by the geophysical survey, but also include one 'control' area recorded as 'blank' by that survey.



Figure 4 Results of the geophysical survey (From Stratascan 2012) with proposed trench locations.

Aims and objectives

The principal aim of the evaluation is to gain a better understanding of the archaeology within the development area.

Key objectives are to:

- To identify the nature, character, extent and possible date of any archaeological sites and/or features within the site;
- To assess the survival, quality, condition and significance of any archaeological remains;
- To ensure the preservation by record of all archaeological remains revealed during the course of the archaeological evaluation; and
- To prepare an appropriate archaeological archive including the treatment and preservation of any artefacts.

The WSI for the project identifies the following research aims, in accordance with the current South West Archaeological Research Framework (Gove and Croft 2012):

21 – Improve our understanding of the environmental aspects of farming.

29 – Improve understanding on non-villa Roman rural settlement.

40 – Improve our understanding of agricultural intensification and diversification in later prehistory.

Additional research aims might include:

- Late prehistoric to early medieval landscape and settlement transition

Working methods

All recording work will be undertaken according to the Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2014, 2019, 2020a, 2020b). Staff will follow the CIfA *Code of Conduct* (2019). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

Pre-fieldwork

In advance of the fieldwork CAU, will discuss and agree with the client:

- Working methods and programme.
- Health and Safety issues and requirements, including measures for addressing risk from Covid 19.
- Transfer of Title for artefacts.
- Obtaining an accession number from the appropriate archive repository.

Fieldwork: evaluation trenching

A programme of evaluation trenching will be undertaken comprising 8 trenches (see Figure 3). The work will be guided by CIfA's guidance on undertaking field evaluation (CIfA 2014a).

The client will liaise with their own surveyor to set out the trenches, which will be laid out to British National Grid coordinates using a Leica GPS or similar device. Prior to excavation trenches will be scanned by a suitably trained operative with a CAT scanner to identify buried services. Adjustment of trench locations that may subsequently be necessary will be confirmed with the SDOHE prior to excavation.

All trenching will be undertaken under professional archaeological supervision and the machine in use will be fitted with a 1.8m wide toothless grading bucket. Each trench will be excavated cleanly down to a level at which archaeological features or layers can be expected to be revealed (for instance, the top of the 'natural'). The trench will then be inspected by an archaeologist and any archaeological features or layers exposed within it will be carefully excavated by hand where required and archaeologically recorded by context record, plan, section, and photographic record as appropriate by a CAU archaeologist. Spoil will be visually examined for artefacts.

One long section of each trench will be cleaned by hand and drawn to allow the site stratigraphy to be understood and for the identification of archaeological features. All trenches will be planned at an appropriate scale.

In the case of trenches containing no archaeologically significant features and deposits a *pro-forma* CAU trench record sheet will be filled in, which will include descriptions of soil horizons, measurements, and a sketch section. A record photo of the trench, to include at least one long section, will be taken.

In the case of trenches containing archaeologically significant features and deposits a record will be made as for negative trenches plus further excavation and recording as follows:

- Features will be excavated only as much as is necessary to evaluate their significance and phasing. In the case of small discrete features (postholes, pits, etc <1m in diameter) as many of these as is necessary to evaluate them will be fully excavated (excepting large numbers of very small features such as stakeholes which will be subject to a lower sampling frequency).
- Larger discrete features (pits >1m) will be half-sectioned.
- Linear/curvilinear features will have 1m wide sections excavated, where practical, in sufficient quantity to evaluate the feature.
- Human remains will not be excavated.

Recording

During the archaeological recording the archaeologist will:

- Identify and record any archaeological features that are revealed; the level of recording will be appropriate to the character/importance of the archaeological remains.
- Site drawings (plans and sections) will be made by pencil (4H) on drafting film; all drawings will include standard information: site details, personnel, date, scale,

north-point. Drawings will also show absolute heights derived from Ordnance Datum (Newlyn).

- All features and finds will be accurately located at an appropriate scale.
- All archaeological contexts will be described to a standard format linked to a continuous numbering sequence.
- Photographic recording will comprise colour photography using a digital SLR camera (with a resolution of 10 million pixels or higher; CAU will follow Historic England (2015) guidance on digital image capture and storage) / black and white negative photography using an SLR camera. 35mm format colour transparencies and monochrome images may also be created. In this case, the monochrome negatives and contact prints will be filed in appropriate media, and the transparencies will be mounted in appropriate hard cases. Photographs will include a record of significant features and general working shots. A metric scale, site, trench number and context identifier, and a north arrow where appropriate, will be included in all record shots.

Treatment of human remains

It is considered very unlikely that human remains will be encountered. Should any be found, the presumption is that they will be excavated, removed and treated in accordance with current guidance from Historic England and the Advisory Panel on the Archaeology of Burials in England (APABE) (APABE 2015; APABE 2017; Historic England 2018).

- If human remains are discovered within an archaeological context on the site the client, the SDOHE, and Public Health, Cornwall Council will be informed.
- Any human remains should only be excavated and removed if it is considered that they will contribute towards further scientific understanding.
- A coroner's license must be obtained from the Ministry of Justice before any remains are disturbed.
- Any consents or licenses required will be obtained on behalf of the client by CAU
- If human remains are uncovered, which require excavation, they will be excavated with due reverence. The site will be adequately screened from public view. Once excavated, human remains must not be exposed to public view. If human remains are not to be removed their physical security will be ensured, by backfilling as soon as possible after recording.

Treatment of finds

The fieldwork is likely to produce artefactual material. The following recording and retention policies will be followed:

- In the event that objects containing precious metal(s) are encountered, the coroner will be informed as per the provisions of the Treasure Act 1996.
- Significant finds in stratified contexts will be plotted on a scaled base plan or with a Leica GPS unit and recorded as small finds.
- All finds will be collected in sealable plastic bags which will be labelled immediately with the site code, the context number or other identifier, the type of material, and the finder's initials. The only exception to this policy will be that large assemblages of modern (post-1800) material may be representatively sampled.
- Modern (post-1800) finds may be disposed of at the cataloguing stage. This process will be reviewed ahead of its implementation.

Treatment of samples

The fieldwork may produce environmental samples. The following collection, recording and processing policies will be followed:

- Sealed/undisturbed archaeological contexts in the form of buried soils, layers or deposits within significant archaeological features that have the potential to

contain palaeoenvironmental evidence and/or material suitable for scientific dating will be sampled.

- Where bulk samples are taken a minimum of 40 litres will be sampled from these deposits where feasible.
- In the event that significant organic remains are encountered, advice may be sought from the Historic England Regional Advisor for Archaeological Science.
- All samples will be described to a standard format linked to a continuous numbering sequence.
- Bulk samples will be processed using flotation with appropriate mesh sizes.

Reporting

The results from the project will be drawn together and presented in a concise report. The scope of the report will be dependent on the scale and significance of the results from the project.

An evaluation report will be produced. This will include a summary of the site archive and work carried out, a discussion of the potential of the data.

The report will include the following elements:

- A non-technical summary of the work including the results;
- A general introduction to the project including site description;
- Aims and objectives;
- Methodology;
- Archaeological results;
- Chronology/dating evidence;
- Interpretation and discussion of the results;
- Conclusions
- References
- Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

Creation of the physical and digital archive

Following review with the CAU Project Manager the results from the fieldwork will be collated as an archive.

This will involve the following.

- All finds, etc., will be washed, catalogued, and stored in a proper manner (being clearly labelled and marked and stored according to CAU guidelines).
- All records (drawings, context sheets, photographs, etc.) will be ordered, catalogued and stored in an appropriate manner (according to CAU guidelines).
- Colour digital images taken as part of the site archive will be deposited with the Archaeology Data Service (ADS).
- Completion of the Historic England/ADS OASIS online archive index.
- All correspondence relating to the project, the WSI, and a single paper copy of the report, stored in an archive standard (acid-free) documentation box.
- Drawn archive storage (plastic wallets for the annotated record drawings).
- Additional digital data (survey, external reports etc)

Archive deposition

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with CAU standards.

- The physical archive will go to an accredited archive repository, when a dedicated space becomes available. Until that time material will be stored at CAU offices.
- Digital data will be stored on the Cornwall Council network which is regularly and frequently backed up.

- Digital data (CAU reports, external reports, survey data, geophysics data, digital photographs etc) forming part of the site archive will be deposited with the ADS.
- The documentary archive will be retained by CAU until an accredited archive repository is available.

CAU uses the following file formats for stored digital data:

DOCX	Word processed documents
XLSX	Spreadsheets
PDF	Exports of completed documents/reports/graphics
JPG	Site graphics and scanned information
DNG or TIF	Digital photographs
DWG	AutoCAD drawings, measured surveys
MXD	ArcView GIS (electronic mapping) data
AI	Adobe Illustrator graphics

Timetable

The study is anticipated to commence during August 2021. CAU ideally require at least 2 weeks' notice before commencement of work, in order to allocate field staff and arrange other logistics, however a shorter timetable has been agreed with the client on this occasion.

The archive report will be completed within 3 months of the end of the fieldwork. Following agreement of the draft report with the nominated RPS Archaeological Project Manager and the client, a digital copy (either in pdf or .doc format) will be supplied to the Senior Development Officer (Historic Environmental Planning – Archaeology) at Cornwall Council for verification and assessment.

The deposition of the archive will be completed within 3 months of the completion of the archive report.

Monitoring and Signing Off Condition

Monitoring of the project will be carried out by the SDOHE (Archaeology). Where the SDOHE (Archaeology) is satisfied with the archive report and the deposition of the archive, written discharge of the planning condition will be expected.

- The SDOHE (Archaeology) will monitor the work and should be kept regularly informed of progress.
- Notification of the start of work shall be given preferably in writing to the SDOHE (Archaeology) at least one week in advance of its commencement.
- Any variations to the project design will be agreed with the SDOHE (Archaeology), in writing, prior to them being carried out.
- If significant detail is discovered, all works must cease and a meeting convened with the client and the SDOHE (Archaeology) to discuss the most appropriate way forward.

Monitoring points during the study will include:

- Approval of the project design
- Completion of fieldwork
- Completion of archive report
- Deposition of the archive

References

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Cornwall Archaeological Unit

Cornwall Archaeological Unit is part of Cornwall Council. CAU employs 14 project staff with a broad range of expertise, undertaking around 120 projects each year.

CAU is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

- Conservation works to sites and monuments
- Conservation surveys and management plans
- Historic landscape characterisation
- Town surveys for conservation and regeneration
- Historic building surveys and analysis
- Maritime and coastal zone assessments
- Air photo mapping
- Excavations and watching briefs
- Assessments and evaluations
- Post-excavation analysis and publication
- Outreach: exhibitions, publication, presentations

Standards



CAU is a Registered Organisation with the Chartered Institute for Archaeologists and follows their Standards and Code of Conduct.

<http://www.archaeologists.net/codes/ifa>

Terms and conditions

Contract

CAU is part of Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of CAU and will be presented in good faith on the basis of professional judgement and on information currently available.

Project staff

The project will be supervised and managed by Dr Fiona Fleming who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client and the field officers, including arrangements for health and safety.
- Monitor progress and results for each stage.
- Edit the project report.
- Liaise with the client regarding the budget and related issues.

Work will be carried out by CAU field staff, with assistance from qualified specialists and sub-contractors where appropriate. All staff will follow CAU's Health and Safety Policy and work in accordance with a site-specific risk assessment.

The project team is expected to include*:

Project Manager:

Dr Fiona Fleming, Senior Archaeologist

Educational and Professional qualifications

BSc (Hons) Archaeology (1st Class), 2008, University of Plymouth; MA Landscape Archaeology, 2009, University of Exeter; PhD Archaeology, 2013, University of Exeter. Member of the Chartered Institute for Archaeologists (MCIfA) since 2008.

Employment history

I have been a professional archaeologist for 12 years, combining self-employed and voluntary work with my full-time studies. Following successful completion of my PhD with the University of Exeter, I joined Cornwall Archaeological Unit in July 2013. I am currently a Senior Archaeologist, managing and undertaking a wide range of projects.

Key experience

I have extensive experience in designing, delivering and managing a wide range of archaeological projects, particularly specialising in historic landscape assessment, historic characterisation, historic building recording and producing conservation management plans for clients and partners in heritage and other sectors, such as Natural England, English Heritage and the Tate Gallery. Since 2015 I have worked as part of CAU's Aerial Investigation and Mapping (AIM) team.

Recent major projects include: Dorset Upper Frome and Sydling Valleys AIM; Camel Creek Resort evaluations and SMS excavations (project manager); Inner Humber Estuary RCZAS; Saints Trail Cycle Routes Scheme (Heritage Assessment); Palais de Danse CMP; Inner Humber AIM; Dorset Stour AIM; Marshwood Vale AIM; Cornwall South Coast RCZAS; Cornish Ports and Harbours; Chysauster Ancient Village CMP; Dodman Point CMP and Stage Two works; Redruth Brewery excavation, watching briefs and historic building recording; Redruth Brewery archaeological assessment; Devon Extensive Urban Survey; Totnes and Tiverton.

Key skills and knowledge:

I am a skilled Landscape Archaeologist and researcher, with a particular interest in Late Roman and Early Medieval landscape and settlement transition. I have extensive experience of complex projects for clients such as Historic England, English Heritage, the National Trust and Natural England, incorporating heritage assessment and survey and conservation management planning. I am an experienced user of AutoCAD and ArcGIS and am skilled in aerial investigation and lidar analysis. I am an accomplished report writer, having brought large complex projects into publication. My PhD thesis was published as a BAR report in 2016. I hold a First Aid at Work certificate and current CSCS card (Management and Professional Health Safety and Environment).

Selected Bibliography

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Project Assistant/Officer:

Jo Sturgess, Senior Archaeologist

Educational and Professional qualifications

BA (Hons) 1991, Archaeology Nottingham University

Elected as a full Member of the Chartered Institute for Archaeologists (MCIfA) in 2018

Employment history

I have been a professional archaeologist for 28 years. Having worked for a variety of Archaeological companies across the country for many years I joined Cornwall Archaeological Unit in October 1999 where I continue to work as an archaeologist and historic building specialist.

Key experience

I have extensive experience in managing and undertaking a wide range of projects taking them from inception through to completion. These include historic building surveys and heritage assessments in particular but also include characterisation projects and development-related watching briefs, evaluations and excavations.

Recent major projects include:

Arlington Court, Devon – Historic building record

Bradley Manor, Devon – Historic building record and landscape assessment

Buckland Abbey, Devon – Historic Building Recording and Rapid Archaeological Assessment

The Quadrangle and Link Building, St Clare, Cornwall – Historic Building Record

Molenick Farmhouse, Tideford - Historic Building Record and watching brief

Key skills and knowledge

My specialism is in the recording and interpretation of historic buildings and, as such, I take the lead with historic building projects for CAU. Although the majority of my work is with historic buildings, having trained and worked as an archaeologist for many years I have considerable knowledge and understanding of a wide variety of other projects associated with the historic environment.

I am trained and proficient in the use of a variety of software including AutoCAD and GIS and am skilled in undertaking measured surveys using a total station. I am also a qualified First Aider and holder of a CSUS card.

Project Assistant:

Antony Angove, Assistant Archaeologist

Educational and Professional qualifications

BSc (Hons) Archaeology (2018), University of Plymouth

MA Archaeology and Heritage (2021), University of Leicester (pending)

Elected as an Associate of the Chartered Institute for Archaeologists (ACIfA) in 2021

Key Experience

I joined Cornwall Archaeological Unit in February 2019 after completing my degree. I am currently an Assistant Archaeologist, undertaking heritage impact assessments, surveys, watching briefs, evaluations and excavations, as a sole worker or member of team. I also work a project supervisor on larger field work projects.

Key skills and knowledge

Proficient archaeological excavation skills, site supervisory experience, driver of 4x4 vehicles, GIS, Leica GPS /GNSS, Total Station, EDM and CAT Scan user.

Recent projects include:

Sithney Church, Excavation - February 2019

St Michaels Mount, Marazion, Evaluation – June 2019

Hall for Cornwall, Truro, Evaluation – January 2020

Carland Cross Solar Farm, St Newlyn East, Evaluation – February 2020

Trebarveth/Lowland Point, Survey – March 2020

Tintagel Castle, Watching Brief – March 2020

Dingerin Castle, Field Survey – June 2020

Pydar Street Car Park, Evaluation – June 2020
Nansledan Phase 6, Evaluation – July 2020
Helston HX2 Development - September 2020
Stowes Hill – Condition Survey October 2020
St Levan’s Chapel – Excavation November 2020
Pendennis Headland, Watching Brief - December 2020
Monumental Improvement project, Site Surveys – 2020/2021
Zennor cable undergrounding – March 2021
St Levan’s Chapel – Excavation September 2021

Project Assistant:

Connor Motley, Assistant Archaeologist

Educational and Professional qualifications

BA (Hons) 2018, Archaeology, University of York

Elected as a Practitioner of the Chartered Institute for Archaeologists in 2019

Employment history

I joined Cornwall Archaeological Unit in 2019 with previous experience of voluntary archaeology work in Cornwall, Wales and England. Prior to this I was employed in the antiquarian book trade.

Key experience

My current role is to assist with and undertake projects primarily relating to historic buildings. These have included a number of Heritage Impact Assessments and Historic Building Recordings. At university I undertook training in field walking, geophysics, GIS, total station and measured survey. I have extensive experience of archival research and work in archives, having undertaken conservation work at York Minster Library, and archival research and management for a major London bookselling firm. I helped set up the Brecon Beacons Young Archaeologists Club and I have good experience of excavation, having volunteered at a number of sites across the UK including Cornwall.

Key skills and knowledge

I have a strong knowledge of AutoCAD, used in creating floorplans of buildings and drawing archaeological features in detail. I also have a good working knowledge of photogrammetry software (Autodesk Recap and Agisoft Metashape), and of photo editing software (Adobe Photoshop). I also have a good working knowledge of GIS.

Recent projects include:

Godrevy Farm, Historic Building Recording
Greeb Cottage, Land’s End, Heritage Impact Assessment
Hall for Cornwall, Evaluation
Heskyn Mill, Tideford, Heritage Impact Assessment
Kirk House, Polperro, Heritage Impact Assessment
Lanhydrock House, Historic Building Recording
Maker Heights, Conservation Management Plan
Palais de Danse, St Ives, Historic Building Recording
Port Eliot, Historic Building Recording & Watching Brief
Salt Cellar, Porthleven, Historic Building Recording
Arundell House, Flushing, Heritage Impact Assessment

Project consultants and specialists

(additional specialists will be appointed if necessary)

- **Hayley McParland** – Regional Science Advisor, Historic England

- **Henrietta Quinnell**, freelance artefact specialist - prehistoric pottery and stonework
- **Carl Thorpe**, finds specialist, CAU: Roman, medieval and post-medieval pottery and worked stone
- **Laura Ratcliffe** – freelance conservator (artefacts)
- **Wendy Carruthers** – palaeobotanist (macrofossils)
- **Dana Challinor** – palaeobotanist (charcoal)
- **Tim Young** – archaeometallurgist
- **Richard Mikulski** – osteoarchaeologist

Report distribution

Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

A digital copy of the report, illustrations and any other files will be held in the Cornwall HER and also supplied to the client on CD or other suitable media.

Copyright

Copyright of this Written Scheme of Investigation will be reserved to Cornwall Archaeological Unit, Cornwall Council. It may only be used/reproduced with permission from Cornwall Archaeological Unit.

Existing copyrights of external sources will be acknowledged where required.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

CAU will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received CAU may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

CAU follows Cornwall Council's *Statement of Safety Policy*.

Prior to carrying out on-site work CAU will carry out a site-specific Risk Assessment.

Insurance

CAU is covered by Cornwall Council's Public and Employers Liability Insurance, with a policy value of £50m. The Council also has Professional Negligence insurance with a policy value of £10m.

Dr Fiona Fleming

Senior Archaeologist

11/08/2021

Cornwall Archaeological Unit

Cornwall Council

Circuit House

St Clement Street

Truro, Cornwall. TR1 1DT

07843 357270

Email: fiona.fleming@cau.org.uk

Cornwall Archaeological Unit

Fal Building, County Hall, Treyew Road, Truro,
Cornwall
TR1 3AY



(01872) 323603
enquiries@cau.org.uk
www.cau.org.uk

