

# LAND at HIGHER TREWHIDDLE FARM ST AUSTELL CORNWALL

Results of a Desk-Based Assessment  
Walkover Survey & Geophysical Survey



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Land at Higher Trehiddle Farm, St Austell, Cornwall

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St Austell  
Cornwall**

**Results of a Desk-Based Assessment  
Walkover Survey & Geophysical Survey**

*For*

John Marshall

*of*

Kingsley Developments Ltd. & Westcountry Land (St Austell) Ltd. (the Clients)

*By*



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**Editing:** Natalie Boyd

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December 2014

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## Summary

*This report presents the results of a desk-based assessment, geophysical survey and walkover survey with an impact assessment for Trewiddle Farmhouse carried out by South West Archaeology Ltd. (SWARCH) on land at Higher Trewiddle Farm, St Austell, Cornwall, in advance of a 21.03ha mixed residential and commercial development on the outskirts of the town.*

*Historically, this land belonged to two tenements – Dr Lambe’s Tenement and Grylls Tenement – and formed parcel of the larger Manor of Trewiddle. This manor, first recorded in 1262, has a complex descent; a substantial portion of this manor was owned in the later 18<sup>th</sup> century by the Rashleigh family, and during tin-streaming ‘at Trewiddle’ in 1774 a hoard of late 9<sup>th</sup> century metalwork was recovered. Most of the manor was sold in the early 19<sup>th</sup> century by Charles Rashleigh to the locally-notable Coode and Polkinghorne families.*

*The farmhouse at Trewiddle contains a 16<sup>th</sup> century core, which is probably the detached kitchen block for a larger and now-vanished house. The farmhouse is a significant building in its own right, and, together with its associated farm buildings but particularly the bank barn, forms a locally-significant group. The impact of the proposed development on the setting of this farmstead and specifically the farmhouse is assessed as negative/moderate.*

*The local area contains a range of archaeological sites, including a number of Bronze Age barrows and late Prehistoric or Romano-British rounds. To the west, a large area around St Mewan Church has been subject to geophysical survey and this has revealed a complex palimpsest of archaeological features, including one round and other probable Prehistoric settlements. The geophysical survey carried out on this site, like that of Coyte Farm, identified a large number of geophysical anomalies of probable archaeological origin. These include two late Prehistoric or Romano-British settlements (including one round), a fieldsystem of probable Prehistoric date, a scatter of pits, a large possible sub-rectangular enclosure, a series of holloways, and a historic trackway. The impact of the proposed development on this buried archaeological landscape would be substantial, permanent and irreversible.*

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## 1.0 Introduction

---

<b>Location:</b>	Higher Trehiddle Farm
<b>Parish:</b>	St Austell
<b>County:</b>	Cornwall
<b>Centroid NGR:</b>	21.03ha Centred on SX 00600 51700
<b>Planning Ref:</b>	Pre-Planning
<b>SWARCH Ref:</b>	SHT14
<b>OASIS Ref:</b>	southwes1-506875

### 1.1 Project Background

This report presents the results of a desk-based assessment, walkover survey and geophysical survey carried out by South West Archaeology Ltd. (SWARCH) at Higher Trehiddle Farm, St Austell, Cornwall (Figure 1). The work was commissioned by John Marshall of Kingsley Developments Ltd. and Westcountry Land (St Austell) Ltd. (the Client) in order to identify any buried archaeological or other heritage assets that might be affected by a mixed commercial and residential development covering 21.03ha.

### 1.2 Topographical and Geological Background

The proposed site lies on the south-western edge of St Austell approximately 800m from the town centre. The site covers an area of 21.03ha, a slightly-irregular sub-rectangular area of agricultural land within a shallow valley that stretches up from the base of the St Austell River valley up to the top of the hill to the west, from c.30m AOD to c.90m AOD.

The soils of this area are well-drained fine and loamy soils of the Denbigh 2 association (SSEW 1983); these primarily overlie the slates, siltstones and sandstones of the Meadfoot Group although there are areas of microgabbro to the north-west and flanking the southern boundary of the site (BGS 2014).

### 1.3 Historical Background

The place name Trehiddle contains the element *Tre* (estate, farmstead) and an unknown suffix; the *\*Tre* element is indicative of an early medieval origin (Padel 1985). The Manor of Trehiddle is first recorded in 1262, and by 1840 had been split into at least six different tenements. The proposed development falls within what was known as Dr Lambé's Tenement (Trehiddle Estate) and Grylls Tenement. The farmstead at Higher Trehiddle Farm was created between c.1880 and 1906, although the adjacent Trehiddle Farm (formerly Middle Trehiddle) contains a number of historic farm buildings and an unlisted farmhouse with a 16<sup>th</sup> century core. The proposed development is located in an area characterised on the Cornwall and Scilly Historic Landscape Characterisation as medieval farmland which falls into the category of *Anciently Enclosed Land* (AEL).

## 1.4 Archaeological Background

Surprisingly little archaeological investigation has taken place in the immediate vicinity of the site, with the exception of an extensive geophysical survey and subsequent evaluation that has taken place at the neighbouring Coyte Farm (OA 2012). This revealed a relict fieldscape with at least one clear settlement (a round). Cropmarks or historical sources have identified a series of probable barrows in the area (e.g. on the hilltop between Trewoon and St Mewan). The archaeological record is, however, dominated by post-medieval features and buildings associated with tin mining and subsequently china clay extraction and processing. The most notable find from the area is the Trewiddle Hoard, a collection of late 9<sup>th</sup> century coins and other metalwork found during tin streaming in the late 18<sup>th</sup> century.

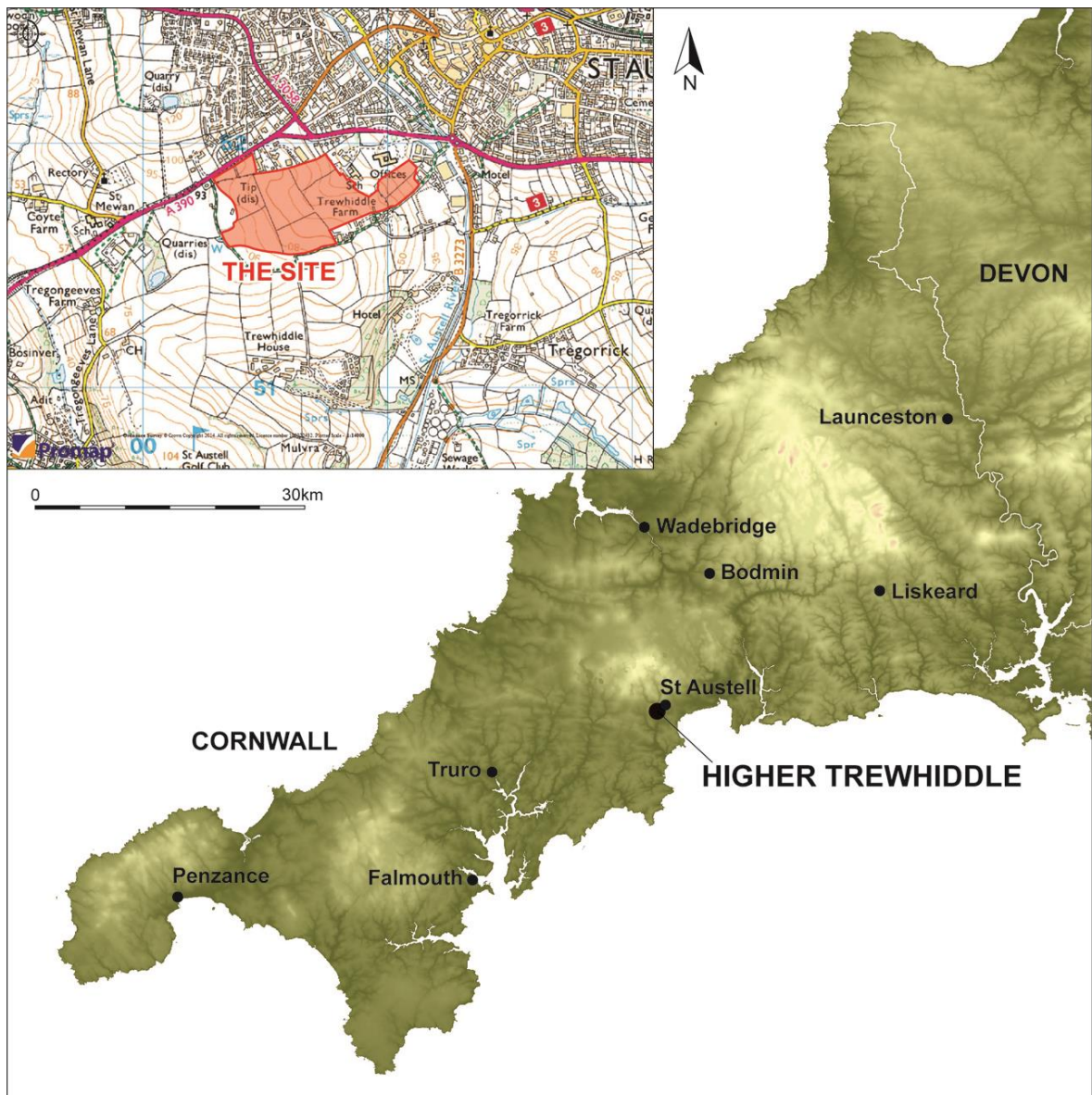


Figure 1: Site location (the site is indicated).

## 1.5 Methodology

The desk-based assessment was undertaken by B. Morris. The work was undertaken with reference to IfA guidelines (IfA 1994, revised 2012) on the preparation of archaeological desk-based assessments. The work involved a review of cartographic and written sources available at the Cornwall Record Office. Internet resources were also consulted as part of this assessment. A detailed magnetic (gradiometer) survey was carried out by J. Bampton and P. Webb and the results were processed in house in accordance with both the English Heritage (2008) and IfA (2011) guidelines. The impact assessment undertaken for Trehiddle Farm follows the guidance as outlined in *The Setting of Heritage Assets* (English Heritage 2011a), *Seeing History in the View* (English Heritage 2011b).



## 2.0 Desk-Based Assessment and Cartographic Analysis

### 2.1 Historical Background

Higher Trehiddle Farm, as it is currently known, is the latest in a succession of tenements forming one part of the ‘manor’ of Trehiddle. The place-name first appears in the documentary record in 1262 as *Trewdel* (Gover 1948), this being derived from the Cornish *tre* meaning estate or farm, and an unknown second element. However, the use of the element *tre* implies the settlement is early medieval in origin.

The name *Trehiddle* is immediately associated with the find of a hoard of late 9<sup>th</sup> century coins and gold and silver artefacts in 1774, and as a result lends its name to a particular style of Late Saxon artwork. The hoard was discovered during tin streaming on a tenement ‘parcel of the manor of Trehiddle’ and was reported on in *Archaeologia* IX by Phillip Rashleigh (of Menabilly). Rashleigh reported the finds were made approximately 17 feet below the original ground surface, within what he interpreted as old tin workings. The character of the artefacts within the hoard has been taken to suggest they were from an as yet unidentified religious community in the local area, and perhaps hidden due to the threat of Viking raids (also see Rogers 1867, Wilson & Blunt 1961). Most of this material is now in the British Museum. The precise location of the findspot is as yet unknown, for reasons that will become clear.

Documentary references to Trehiddle are fairly scarce before the 18<sup>th</sup> century, and while it is fairly consistently referred to as a manor, its precise status is unclear. The tithe map and apportionment (see below) provide the most useful information: in 1842 there are five settlements bearing the name Trehiddle: Great Trehiddle, Middle Trehiddle, Higher Trehiddle, Lower Trehiddle, and Moor Cottage in Trehiddle. These farms define a fairly large block of land, but given the eccentric location of Middle Trehiddle in relation to its farmland, there is reason to believe the three tenements adjacent to the north also formed part of the manor: Dr Lambe’s Tenement, Ponds Tenement and Grylls Tenement. Some of these units were further subdivided and sublet to tenants. The complexity of this arrangement is immediately obvious, and that complexity would appear to have arisen during the 18<sup>th</sup> and early 19<sup>th</sup> century.

For the purposes of this desk-based study, the tithe apportionment names have been retained throughout. However, in the interests of clarity the following table has been prepared:

1842 name	1888 name	1907 name	1930 name	Modern name
Great Trehiddle	Trehiddle	Trehiddle	Trehiddle House	Trehiddle House
Middle Trehiddle	Higher Trehiddle Farm	Trehiddle Farm	Trehiddle Farm	Trehiddle Farm
Higher Trehiddle	Higher Trehiddle	Higher Trehiddle	Higher Trehiddle	Grosvenor House
Lower Trehiddle	Not named	Not named	Not named	Not named
Moor Cottage	Moor Cottage	Moor Cottage	Moor Cottage	The White House
<b>Trehiddle Estate: Dr Lambe’s Tenement</b>	<b>Not named</b>	<b>Not named</b>	<b>Higher Trehiddle Farm</b>	<b>Higher Trehiddle Farm</b>
Grylls Tenement	Not named	Not named	Not named	Not named
Pond Tenement	Not named	Not named	Not named	Not named

Table 1: Table of Trehiddle place-names, based on the historical mapping.

The Rashleighs appear to have owned the manor in the later 18<sup>th</sup> century, but by the 1840s the greater part was owned by the Coode family of Moor Cottage and Ann Polkinghorne. Prior to this, Trewiddle belonged to John Clobery, for whom a survey was undertaken in 1747 (CRO: CN/2955). In a will dated 1710 the executors of (presumably a different) John Clobery dealt with the transfer of a field, old orchard and pond meadow forming 'part of Trewiddle Barton' (CRO: CD/1/761a). The executors happened to be Sir William Courtney of Powderham and Hugh Fortescue of Filleigh, and this would imply William Clobery was of the Cloberys of Bradstone, Devon. William and Christopher Clobery appear to have been clients of the Fortescues, and appear in a number of documents held in the Devon Record Office that relate to Fortescue land (e.g. DRO: 1262M/0/FS/12).

Trewiddle was held by the Rashleighs from at least the 1770s (CRO: AD267/2-3); it was transferred from John Colman Rashleigh to Charles Rashleigh of Duporth in the early 19<sup>th</sup> century (CRO: CF/1/178b), and was presumably sold to cover his crippling legal debts over the development of Charlestown, c.1820. Francis Polkinghorne, the father of Ann, was town clerk for Grampond in the 1780s (CRO: CF/1/4685), and Charles Rashleigh was appointed his deputy in 1779 (CRO: CF/1/4686). Edward Coode was a banker and attorney, and went on to become Clerk of the Peace and County Treasurer. Together with Charles Rashleigh he founded Coode & Co. – later known as the St Austell Bank – in c.1793. Charlestown was transferred to the Crowder family in lieu of payment of debt; it is therefore plausible that the impoverished estate of Charles Rashleigh transferred Trewiddle to friends/creditors in St Austell. Edward Coode bought Moor Cottage in c.1819 and built a large Victorian villa set within a landscaped park, now rehabilitated as The Cornwall Hotel Spa and Estate. Francis Polkinghorne went on to live at Great Trewiddle (latterly Trewiddle House), a large, complex and unlisted building that has been demolished, seemingly without record, in the last 5 years. Middle Trewiddle was tenanted to one James Lynn in 1842, and Francis must have invested in the property as the bank barn there bears an initialled datestone "F P 1825". A subsequent Francis Polkinghorne Pascoe lived at Trewiddle and was a noted entomologist and botanist, though he moved to London following the death of his wife in 1851.

Higher Trewiddle was owned by Thomas Grose, listed in Pigot's 1837 Directory as a linen and woollen draper, and occupied by three separate tenants. Dr Lambe's Tenement was owned by Thomas Graham White and leased to Nicholas May. This block of land was run from a small central farmstead that lacked a house; this farmstead was decayed by the 1880s and replaced by 'Higher Trewiddle Farm' before 1906 (see below). A William Lambe, surgeon, appears in records mid 18<sup>th</sup> century records (CRO: CB/B24/14) but is otherwise unknown. Lower Trewiddle was owned by the Coodes and leased to John Kelly. Grylls Tenement was co-owned by Martha Rashleigh, John Hearle Tremayne (of Heligan) and Edward Rodd (the Rodd family of Trebartha) and leased to John Stephens and William Paul. The estates of the Grylls family descended to the Rodds of Trebartha; the Rev. Edward Rodd married Harriet Rashleigh in 1805, their son Francis married Mary Rashleigh, and their son Francis Rashleigh Rodd married Julia Graves Sawle in 1882.

Subsequent owners 'at Trewiddle' include the attorney Daniel Henry Shilson, who joined Coode & Co. in 1840 at which point it was renamed Coode, Sons & Shilson (CRO: AD2043/1/10). Also William Graves Sawle, presumably of the Sawle family of Penrice (CRO: CF/2/224). Daniel Shilson was present at Trewiddle House (i.e. Great Trewiddle) for the 1871 Census, but Polsue (1867, 53) records that the former seat of Francis Polkinghorne had been acquired by Thomas Graves Sawle and was now unoccupied.

In general, the layout of the property would suggest the original early medieval estate was subdivided at an early stage into two properties: Great and Middle (probably known as Little) Trewiddle, and that the property was further subdivided into smaller units over the course of the 17<sup>th</sup> and 18<sup>th</sup> century. The eccentric positioning of Middle Trewiddle in relation to its farmland,

and the fact that a 16<sup>th</sup> century structure survives at the property, would imply it originally encompassed parts of all the adjoining tenements. The proposed development would encompass most of Grylls Tenement and Dr Lambe's Tenement, and part of Higher Trehiddle, Great Trehiddle and the neighbouring Chipponds Tenement.

## 2.2 1842 St Austell Tithe Map

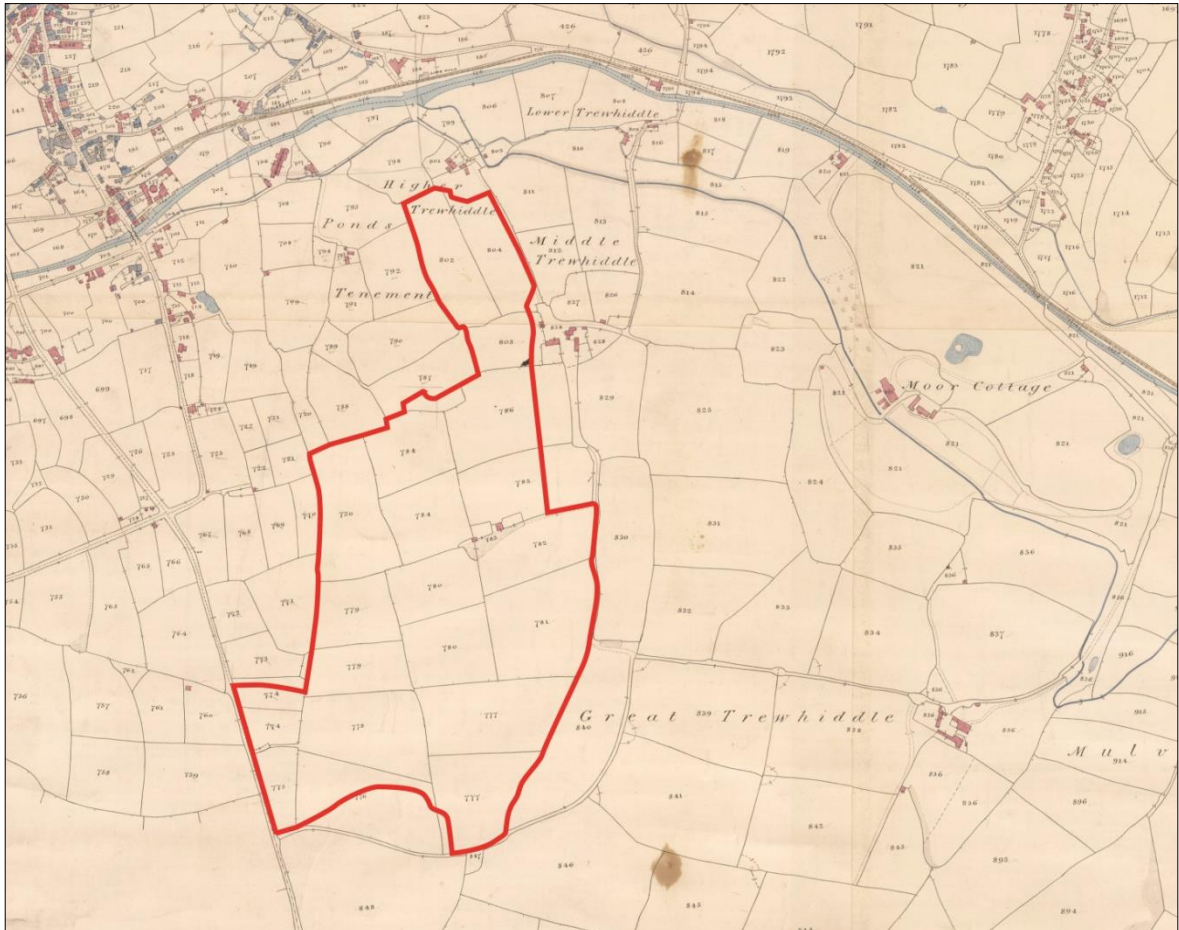


Figure 2: Extract from the 1842 St Austell tithe map (north is to the left) (the area of the development is indicated).

The earliest detailed map available to this study is the 1842 tithe map for St Austell (also see Appendix 2). This depicts a landscape of enclosed fields and scattered farms, with some larger settlements. Broadly speaking, the fields are fairly large and regular in shape; to the north and north-east the size of individual fields decreases markedly, reflecting late subdivision and a proliferation of tenements due to an increasing population. Just visible to the north are a series of curving field boundaries indicative of medieval strip fields, otherwise the morphology of the fieldscape is suggestive of 'Barton fields', i.e. fields laid out and enclosed c.1500-1800. In a number of instances there are repetitious field-names that indicate some of these field boundaries were laid out very recently. It is also of note how the main roads to the north (the modern A390 and A3058) cut across and through fields, indicating these routes post-date the fieldscape. The A390 was one of the roads within the St Austell Turnpike.

In terms of the structure of landholding and tenancy, the pattern is relatively complex (as discussed above). It is clear that the estate or manor known as Trehiddle had been subject to fairly comprehensive subdivision and reorganisation. The pattern of tenancy, particularly for Great Trehiddle, would indicate an earlier farm(s) had been broken up and leased to individual

smallholders. The polite landscape created by Edward Coode at Moor Cottage is immediately obvious. Almost all of the recorded field-names are straightforward and prosaic; there are a small number of more interesting examples, but these all fall outside the area of the proposed development. A field in Ponds Tenement is called *Round Field* and this can indicate the presence of an Iron Age/Romano-British settlement. Between Middle Trehiddle and Moor Cottage lie *Magdalenes Meadow*, *Iveys Field* and *Old Walls*, along with *Higher* and *Lower Stone Park* which, taken together, are suggestive of an earlier medieval settlement. The element *Magdalenes* can be associated medieval religious houses or hospitals, although such a link could be related simply to tithes or rentals.

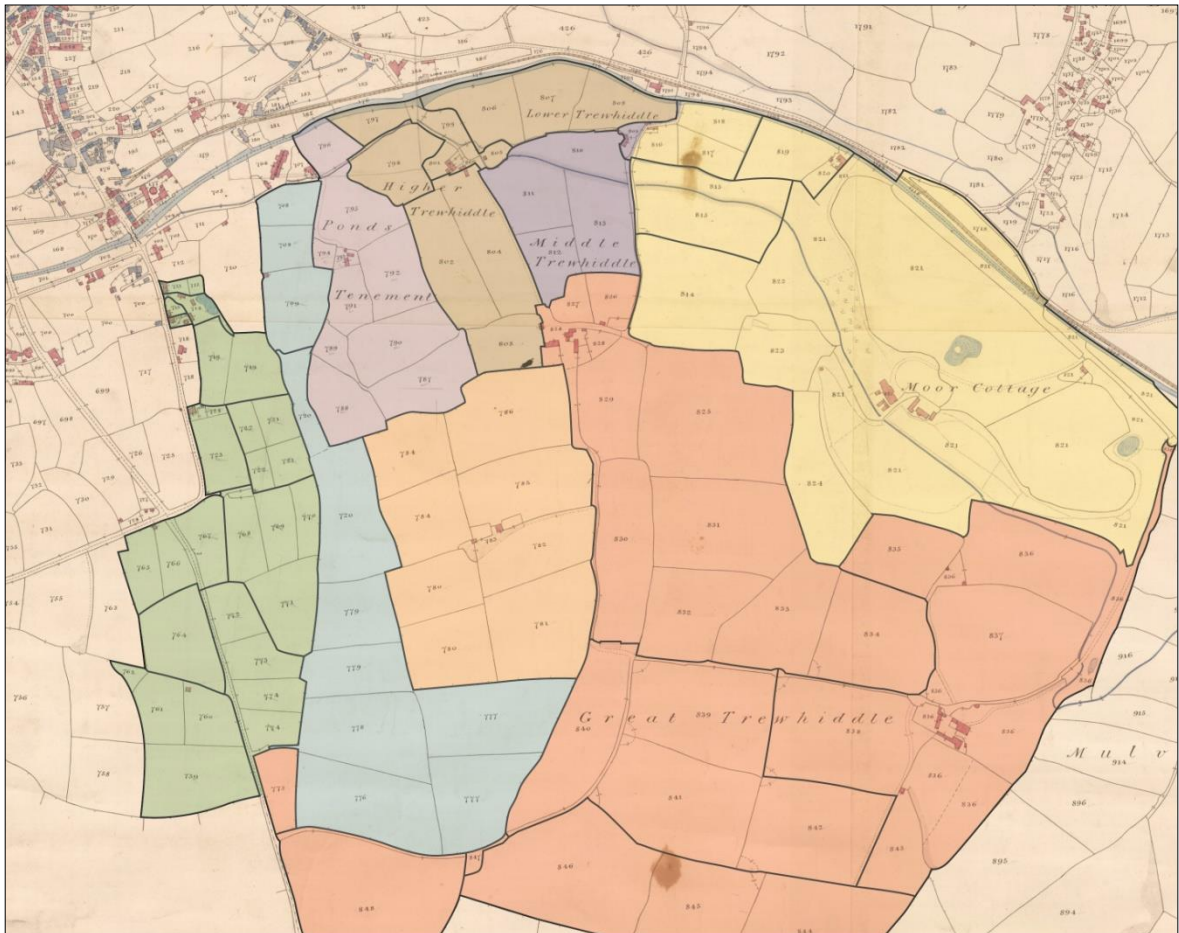


Figure 3: Tithe map showing landownership (colours) and tenancy (black lines). Landowners: **RED** Ann Polkinghorne; **YELLOW** Edward Coode Jun; **PURPLE** Edward Coode; **BROWN** Thomas Grose; **LILAC** Thomas Coode; **ORANGE** Thomas Graham White; **BLUE** Martha Rashleigh/John Hearle Tremayne/Edward Rodd; **GREEN** Lord Edgecumbe.

### 2.3 Later Ordnance Survey Maps

The later Ordnance Survey maps depict a landscape similar in outline, but different in detail. By the 1880s, Ponds Tenement has been largely subsumed with Pond Ddu House and gardens. In addition, a number of field boundaries within and between Lambe's Tenement and Grylls Tenement had been lost, indicating the two tenements had been amalgamated. A new farmhouse and buildings (labelled *Higher Trehiddle Farm*) was built between 1888-1907 west of what was formerly Middle Trehiddle, with that farm now labelled *Trehiddle Farm*. By 1938 the suburbs of St Austell were reaching this area, and a new road (*Penwinnick Road*) had been constructed. Later developments in the area include the development of a retail park at the base of the valley,



Land at Higher Trehiddle Farm, St Austell, Cornwall

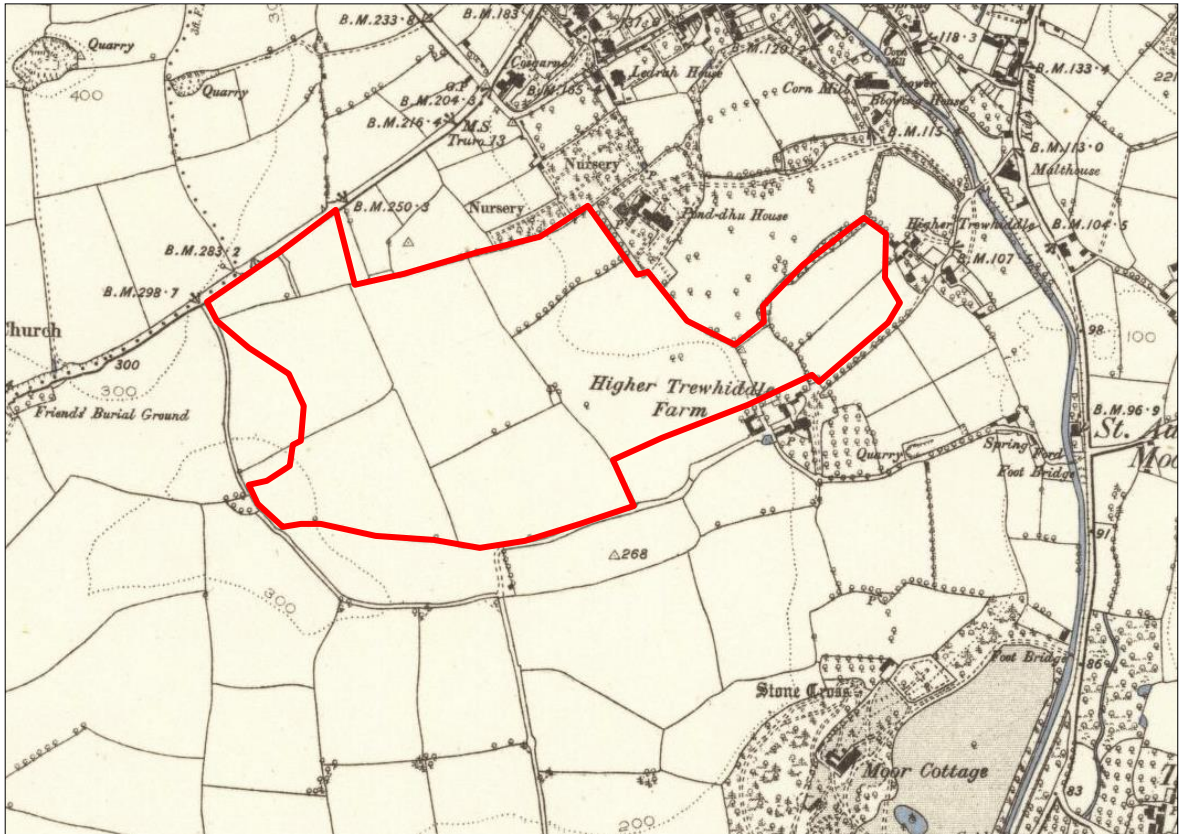


Figure 5: Extract from the 1<sup>st</sup> edition OS Map, published 1888.



Figure 6: Extract from the 2<sup>nd</sup> Edition OS map, published 1907.



### 3.0 Site Inspection, Archaeological Background and Geophysical Survey

#### 3.1 Site Inspection

The site was visited on 9<sup>th</sup> of October 2014 by J. Bampton. The weather was overcast and intermittently sunny with fair-to-good visibility. A photographic survey was undertaken (see Appendix 3). The walkover survey covered 11 fields, labelled A-K in Figure 8. In general, the site was divided up by relatively-well maintained Cornish hedgebanks and occasional modern stone-faced Cornish hedgebanks and fenced boundaries, most of which contained mixed deciduous trees and thick brambles. The site topography consisted of various gentle-to-steep slopes dominated by a wide dry valley, the base of which ran along the north end of Field D. From ridges and faint linear striations in the fields currently under meadow/pasture (Fields A-I) it is evident that ploughing has occurred across most of the site at some time in recent history. Trackways between gateways were also evident on the surface. However, no earthworks of archaeological significance were observed.

In general, the hedgebanks were c.2m wide and 1-1.5m tall, usually with faced with stone and often well-maintained. In a number of places the hedgebank was not visible due to dense hedge shrubs and brambles. Most of the fields were under pasture, although Field J and K had contained a spring barley crop. The north-western boundary of Field D was particularly sturdy (1-2m high) though a significant amount of hedging stone has become dislodged and lines the base of this boundary. Field D contained patches of long grass or thistles that appeared to indicate where cattle feeders had been located. In Field E there is a band of lush growth running along the length of the field from south-west to north-east, perhaps indicating the presence of a relict field ditch. In Field K, close to the gate in its north boundary, a bifacially-flaked possible early Neolithic leaf-shaped arrowhead was found on the surface. At the north corner of Field K, the hedgebank is, in fact, the mortared stone back wall of a demolished structure (as shown on the 1938 map). There is a probable pile of rubble on the Field K side of this wall. In the north corner of Field J, an original narrow gateway with granite gateposts survives; these posts do not appear to have feather-and-tare marks, and may therefore be of some antiquity. There are single granite gatepost with feather-and-tare marks in the gateway between Fields J and G, and between Fields K and F.

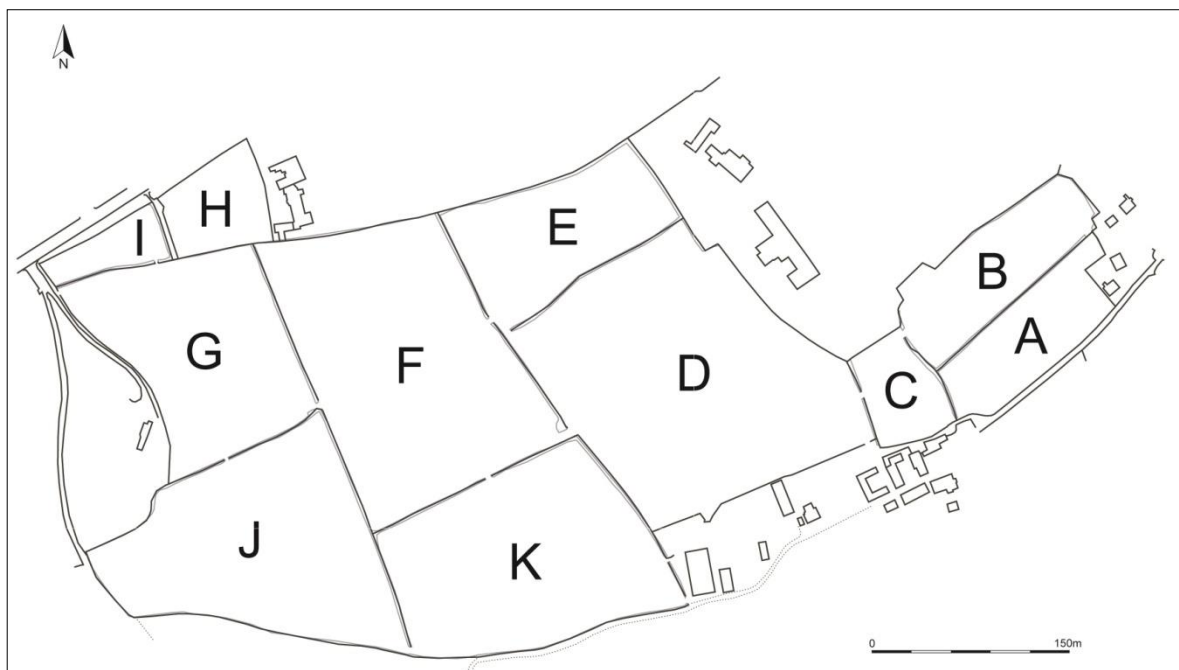


Figure 8: The fields at Trehiddle.



Just outside the site, at the entrance to the quarry, there are a pair of grand tall squared granite gateposts. All other gateways are either forced through or widened for modern machinery.



Figure 9: Field A: view from the north corner, looking south-west.



Figure 10: Field D: view from the western corner of the field; the round identified in the geophysical survey would be left of Higher Trehiddle Farm (building on the skyline). Viewed from the north, looking south (scale 2m).



Figure 11: Field E: view down the field from the south-west; viewed from the south-west, looking north-east.



Figure 12: Field F: view across the field from the north-west corner; viewed from the north-west, looking south-east.



Figure 13: Field J: view across the field; viewed from the south-west corner, looking north-east.

### 3.2 Archaeological Background

The area around Higher Trehiddle Farm is notable for two things: the expansion of St Austell and its history of tin and then china clay extraction. Both elements have left an indelible mark on the landscape. The discovery of a hoard of Late Saxon metalwork 'at Trehiddle' (discussed above) is also notable, as is the find of an ingot of Tungsten, possibly produced in the late 18<sup>th</sup> century (Rehren 2005).

A small number of interventions have taken place in the immediate area, the value of which is offset by the scale of one of these interventions: Coyte Farm. This is a very extensive proposed mixed retail and residential development located immediately to the west of the Higher Trehiddle development, covering an area in excess of 40ha. A substantial part of this area was subject to geophysical survey (see Figure 15), and the results revealed a network of relict field boundaries of (presumed) Prehistoric date, as well as at least one Iron Age or Romano-British round. A subsequent evaluation demonstrated most of the identified anomalies were archaeological; although dating evidence was limited, it confirmed the round was late Prehistoric or Romano-British in date (OA 2012). There are a number of known or suspected barrows on high ground in the local area, as well as a number of additional known or suspected rounds. This, taken together with the fact the area of the proposed development is recorded on the Cornwall and Scilly HLC as *Anciently Enclosed Land*, means the likelihood of encountering Prehistoric and Romano-British remains is *high*.

## Land at Higher Trewiddle Farm, St Austell, Cornwall

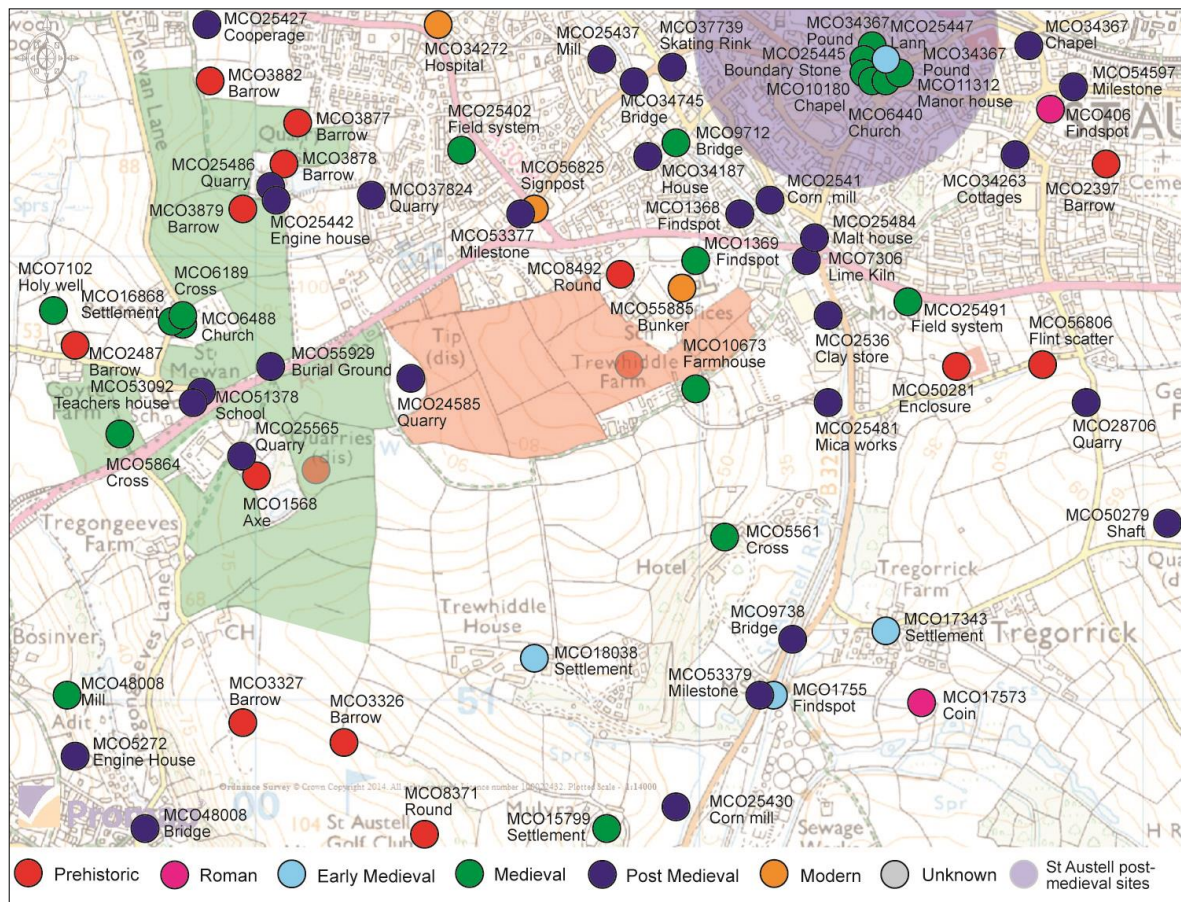


Figure 14: Nearby HER entries (source CHES). The development area is shown in red; the area of the proposed Coyte Farm development is shown in green

Mon. ID	Site Name	Record	Notes
MCO18038	Trewiddle – early medieval settlement	Documentary evidence	Settlement first recorded 1262 when it is spelt 'Trewdel'
MCO5561	Moor Cottage – medieval cross	Extant structure	Fine Latin cross stands in a landscaped garden at Moor Cottage
MCO1568	Tregonjeves Quarry – Bronze Age Findspot	Findspot	Early Bronze Age flat axe found near Tregonjeves Quarry, now in Truro Museum
MCO25565	Tregonjeves – post-medieval quarry	Extant structure	Quarry at Tregonjeves is recorded on the 2 <sup>nd</sup> edition OS map
MCO25485	Trewiddle – post-medieval quarry	Extant structure	Quarry at Trewiddle is recorded on the 2 <sup>nd</sup> edition OS map
MCO5929	Tregonjeves – C17 burial ground	Demolished structure	The site of a Friends Burial ground containing burials from the C17
MCO53092	St. Mewan – post-medieval teachers house	Extant structure	Schoolmasters House adjacent to St. Mawan School
MCO51378	St. Mewan – post-medieval school	Extant structure	Board School built in 1874, recorded on 1 <sup>st</sup> and 2 <sup>nd</sup> edition OS maps
MCO5864	St. Mewan – medieval cross	Documentary evidence	Field-name <i>Cross Park</i> suggests the site of a cross but there are no remains
MCO2487	Coyte – Bronze Age Barrow	Documentary evidence	The possible site of a barrow suggested by the name <i>Coyte</i>
MCO7102	St. Mewan – medieval holy well, post-medieval holy well	Extant structure	The holy well of St. Mewan is sited in a field west of St. Mewan Church
MCO6488	St. Mewan – medieval church	Extant structure	The parish Church of St Mewan
MCO6189	St. Mewan – medieval cross	Extant structure	A weathered medieval cross base stands at an angle outside the church of St. Mewan
MCO16868	St Mewan – medieval settlement	Documentary evidence	St Mewan is first recorded as <i>Sancti Maweni</i>
MCO3879	Trewoon – Bronze Age Barrow	Documentary evidence	Possible site of a barrow
MCO25486	Calartha – post medieval quarry	Extant structure	Hills quarry shown on the 2nd edition OS map NW Calartha; a chimney stack standing at the site in 1958
MCO25442	St. Austell – post-medieval engine house	Extant structure	The remains of an engine house survive at Hill west of St Austell
MCO3878	Trewoon – Bronze Age barrow	Documentary evidence	A feature recorded on the 1 <sup>st</sup> edition OS map suggests the site of a barrow
MCO37824	St Austell – post-medieval quarry	Demolished structure	Site of a disused quarry
MCO25402	Trewoon – medieval field system	Documentary evidence	Field boundaries to the east of St. Austell indicate an extensive medieval fieldsystem
MCO53377	Post-medieval milestone	Extant structure	C18 Stone milestone survives on the south side of the A390
MCO56825	St Austell – modern signpost	Extant structure	A cast iron finger post stands on the northern side of the Truro Road

Land at Higher Trewiddle Farm, St Austell, Cornwall

MCO8492	St Austell – Iron Age round, Romano-British round	Documentary evidence	Field-name <i>Round Field</i> suggests the presence of a round but there are no remains
MCO55885	St. Austell – modern civil defence bunker	Extant structure	The Restormel Borough Emergency Centre, a Cold War civil defence bunker, is located in the basement of the Restormel Borough Council Offices
MCO1369	St. Austell – early medieval findspot	Findspot	Findspot, nine Saxon pennies
MCO25484	Higher Trewiddle – post-medieval malt house	Documentary	Malthouse at St. Austell recorded 1842 but no longer survives
MCO7306	St. Austell – post-medieval lime kiln	Demolished structure	Site of two lime kilns opened in 1831 and disused by 1906
MCO25436	St. Austell – post-medieval clay store	Extant structure	Clay store in St. Austell, unknown construction date, has been used as a coal yard and later as a saw mill
MCO25481	Trewiddle – post-medieval mica lagoon	Demolished structure	Trewiddle mica works, built over or much expanded by 1971
MCO2541	St. Austell – post-medieval corn mill	Extant structure	Pedlars Mill is recorded on the 1842 tithe map
MCO1368	St. Austell – post-medieval findspot	Findspot	Three ingot moulds discovered on the site of Lower Blowing House
MCO25491	St. Austell – medieval field system	Documentary	Probable medieval field system to the west of St. Austell
MCO50281	St. Austell – Prehistoric enclosure	Cropmark	Faint traces of a bivallate enclosure on APs
MCO17343	Tregorrick – early medieval settlement	Documentary	Settlement first recorded 1258 as <i>Tregorrec</i>
MCO1573	Tregorrick – Romano British findspot	Findspot	Coin of Trajan found 'deep beneath the surface'
MCO9738	Tregorrick – post-medieval bridge	Extant structure	Iron bridge at Tregorrick shown on 1 <sup>st</sup> edition OS maps
MCO1755	Trewiddle – early medieval findspot	Findspot	C9 hoard found 'at Trewiddle' in 1774 in old tin works
MCO53379	Trewiddle – post-medieval milestone	Extant structure	Early C19 milestone on the west side of the B3273
MCO10673	Trewiddle – medieval farmhouse	Extant structure	Farmhouse at Trewiddle described as Late Tudor
MCO56806	St. Austell – Prehistoric flint scatter	Artefact scatter	Mesolithic, Early Neolithic and Bronze Age finds
MCO50279	Tregorrick – post-medieval shaft	Extant structure	Post-medieval shaft visible APs
MCO28706	Tregorrick – post-medieval quarry	Extant structure	Quarry SE of St Austell is 1963 and partly filled by 1974
MCO34263	St. Austell – post-medieval cottage pair	Extant structure	A pair of early C18 cottages
MCO2397	Carveth – Bronze Age barrow	Documentary	Field-name <i>Burrow Close</i> suggests a barrow
MCO406	Carveth – Romano-British findspot	Findspot	Coin of Trajan found at Carveth
MCO54597	St. Austell – post-medieval milestone	Extant structure	Milestone, set into a granite hedge on the north side of Alexandra Road
MCO34367	St. Austell – post-medieval Nonconformist chapel	Extant structure	Plymouth Brethren Chapel
MCO34224	St. Austell – medieval pound	Demolished structure	The parish pound was situated in the centre of St Austell; it no longer survives
MCO11312	St. Austell – medieval manor house	Extant structure	Manor house in St Austell, probably medieval origin
MCO6440	St. Austell – medieval church	Extant structure	The parish church of St. Austell
MCO10180	St. Austell – medieval chapel	Demolished structure	The Chapel of St Michael dates from 1291 and was built into the 15 <sup>th</sup> century Holy Trinity Church
MCO25447	St. Austell – early medieval Lann	Extant structure	St. Austell churchyard may be a medieval <i>lann</i>
MCO25445	St Austell – medieval boundary stone	Extant structure	The Mengu Stone was formally situated opposite the Queens Head Hotel on North Street and marked the point where the three manors met; it now stands in the churchyard
MCO5794	St Austell – medieval cross	Extant structure	A Latin cross on a C19 base in the churchyard of Holy Trinity church
MCO37739	St. Austell – post-medieval skating rink	Demolished structure	Site of a skating rink built between 1840 and 1877
MCO34745	St. Austell – post-medieval bridge	Extant structure	New bridge, early C19, constructed as part of a road development scheme for the town
MCO25437	Trevarrick Mill – post-medieval corn mill	Extant structure	Corn mill known as Trevarrack Mill shown on 1 <sup>st</sup> edition OS map
MCO34272	St. Austell – modern hospital	Extant structure	Cottage Hospital opened in 1919
MCO25427	Trewoon – post-medieval cooperage	Extant structure	A cooperage to the SE of Trewoon mentioned by Kelly in 1883 and possibly still survives although its use as possibly changed now for agricultural use
MCO3882	Trewoon – Bronze Age barrow	Documentary	Field name <i>Hilly Meadows</i> suggests the site of a barrow but there are no remains
MCO3877	Trewoon – Bronze Age Barrow	Documentary	Mapping and APs suggest the site of a possible barrow
MCO9712	St. Austell – medieval bridge	Extant structure	'Old bridge'
MCO34187	St. Austell – post-medieval house	Extant structure	4-5 River Walk, late C18 houses
MCO25533	Bosinver – medieval stamping mill, post medieval stamping mill	Demolished structure	Stamps were recorded at this NGR in 1570, and in a later document three stamps were mentioned stamps were marked on the 1813 OS map; there are no remains
MCO52727	Polgooth – post-medieval engine house	Extant structure	Dressing floor engine house situated on the site of Polgooth, which had a stamps engine
MCO48008	Polgooth – post-medieval bridge	Extant structure	Road bridge is recorded on the 1 <sup>st</sup> edition OS map
MCO3327	Polgooth – Bronze Age Barrow	Cropmark	Circular cropmark c.0.4m diameter
MCO3326	Polgooth – bronze age barrow	Documentary	Field-name <i>barrow park</i> suggest the site of a barrow but there are no remains on the ground
MCO8371	Polgooth – Iron Age round, Romano-British round	Documentary	A small circle and the inscription <i>round</i> on a map annotated by Hamilton Jenkin suggests the possible remains of a round
MCO15779	Mulvra – medieval settlement	Documentary	Mulvra is first recorded as <i>Milvre</i>
MCO25430	Mulvra – post-medieval corn mill	Documentary	Mmill marked on the 1842 tithe map as <i>Old Mill</i>

Table 2: Local HER records (source: CCHES).

Land at Higher Trehiddle Farm, St Austell, Cornwall

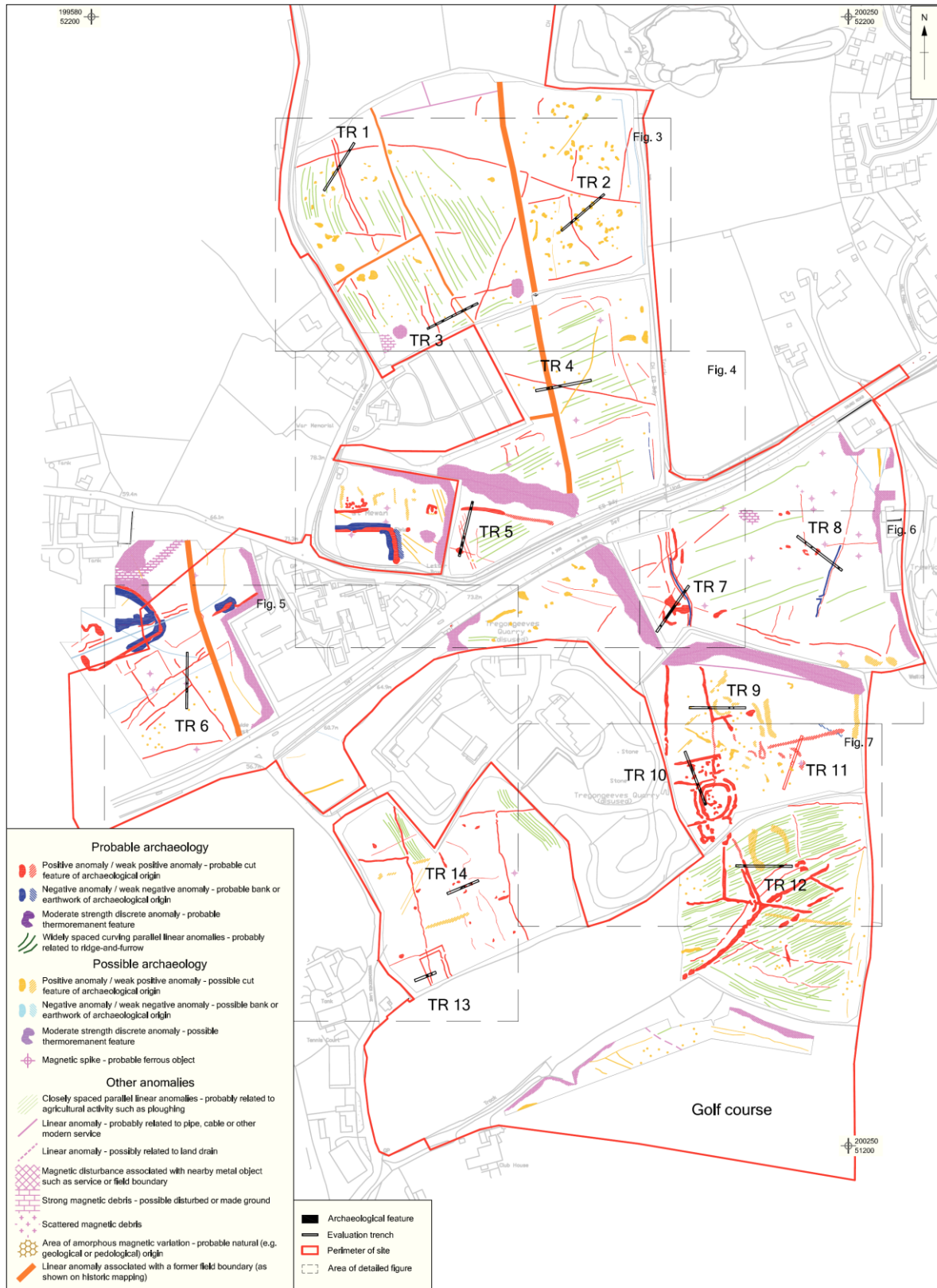


Figure 15: The geophysical survey results with trench plan for the Coyte Farm development; Higher Trehiddle Farm is located immediately to the east (figure from OA report 2012, fig.2).

### 3.3 Trehiddle Farm (formerly Middle Trehiddle) Setting Impact

To determine the likely impact of the proposed development on the setting of the unListed farmhouse at Trehiddle Farm, one must first establish the baseline data: the date, character and South West Archaeology Ltd.

importance of the building, its current setting, and the contribution setting makes to the significance of that building.

Trehiddle Farm (known as Middle Trehiddle in 1842) is currently comprised of a range of relatively modern and historic farm buildings strung out along the line of a historic trackway and footpath; the modern footpath has now been redirected around the farmyard to the north. Given that the A390 would appear to be a late 18<sup>th</sup> century turnpike, there is good reason to suppose this trackway was the original route up and across the valley and is thus of some antiquity.

The farmhouse is a complex multi-period building. The core structure is an L-shaped stone-built 16<sup>th</sup> century building, with a rendered pre-1842 extension to the north (now with a mono-pitch roof but presumably formerly a pitched roof), a stone rubble lean-to cartshed to the west with blocked windows (presumably originally a ?dairy or something similar), and a rendered later 19<sup>th</sup> century extension to the east. The 16<sup>th</sup> century building is described in Chesher (1968, 48-9):

*Among the houses of the period with a simple plan of two ground floor rooms, the old farmhouse at Trehiddle, near St. Austell is particularly interesting because it shows a break away from the rectangular shape. Its kitchen and hall are in the two arms of an L-shaped building with a cross-passage between, where the arms meet. In spite of the modest size of this house, its builders put considerable emphasis, in the traditional way, on the hall, which takes up the whole length and breadth of the longer arm of the L. It was given a fireplace of high quality, constructed of large pieces of stone cut to form a shallow arch and finished with roll moulding. The kitchen and the chamber above it also have original fireplaces, but these are plainer, with flat heads, and in the kitchen fireplace is a brick oven similar to the more common cloam ovens. The date of Trehiddle seems to be late Tudor, judging from the style of the fireplace and the principal doorway, which has well-finished, deeply moulded arch and jambs, with a simple geometrical design in the spandrils. Although the house was modest in size, and built with an eye to quality, both in its design and its individual features, and it is a good example of what was being achieved at this level of local building.*

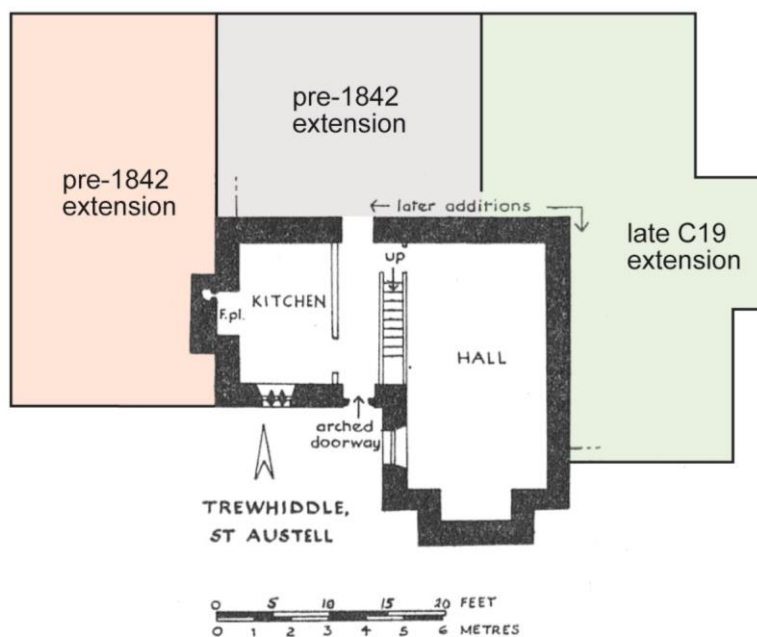


Figure 16: The farmhouse at Trehiddle; after Chesher (1968, 33), showing the later additions.

However, and *contra* Chesher, it seems more likely that this building was a detached (kitchen) block that belonged to a larger house altogether. On the tithe and 1<sup>st</sup> Edition OS map (see Figure

18) there is quite a complex of buildings to the west of the current farmhouse, which do not precisely correspond to the extant building (B2, see below) near this location. Therefore it is possible that this early building was, or incorporated elements of, that larger house. In the context of St Austell, the survival of such a structure is relatively rare, as many farmsteads underwent a process of rebuilding in the first half of the 19<sup>th</sup> century. The architectural elements present in the building point to an elevated status for the structure, and imply it once formed part of an important group. In terms of the broader context, it is a significant building, which Chesher gives parity with more famous structures like the Old Post Office at Tintagel.

Wrapping around the farmhouse on the north and west side is a series of farm buildings. To the east and south lies a garden/orchard, within sub-rectangular enclosure, with agricultural fields beyond. The garden is bounded by mature deciduous trees, particularly between the entrance to the farm – which is marked by granite gateposts – and the front (east) elevation of the house. These trees provide good-to-comprehensive screening for the house to the north and north-east. The garden is fairly large and appears to contain orchard and/or specimen trees, although it was not possible to undertake more than a cursory analysis from the public footpath. The trees in the garden lend an enclosed, introverted feel to the house and conceal it from view; however, without the trees the house would enjoy good, clear views across the valley to the east, and would feature fairly prominently in views to this location from across the valley. The 19<sup>th</sup> century element of the building was clearly constructed with views to and from the east-north-east in mind. Daniel Shilson lived at Trehiddle House in 1871, and if he also owned this property he was probably responsible for this build. The views across the valley to St Austell, with the tower of the parish church prominently in view, may have been clear considerations.

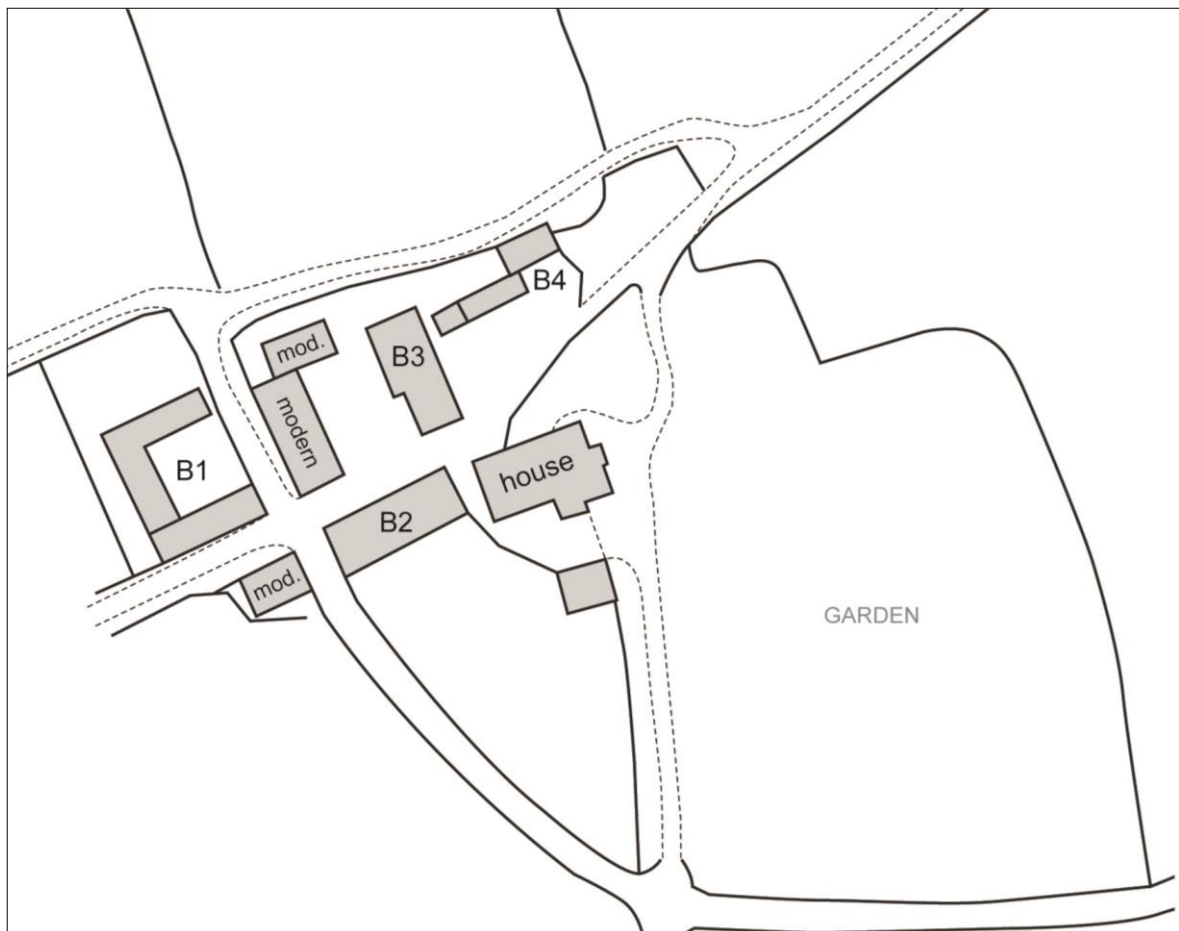


Figure 17: Layout of the modern farmstead at Trehiddle Farm.



The farmstead contains four historic farm buildings. Building 1, to the west, was constructed after 1842 and consists of a range of three buildings of stone rubble build with slate roofs over, set around a courtyard that was open to the east. These appear to have been pigsties, but have now been comprehensively remodelled, raised to two storeys and turned into a residential property, making interpretation more difficult. Building 2, west of the farmhouse, is a long rectangular building of stone rubble with a modern pitched roof. The interior has now been fitted out with horse boxes. The original function is now difficult to determine as it appears to have been renovated. This building not shown on the 1842 tithe map, but there is a building of a similar size shown immediately to the south (though see above). Building 3, north of the farmhouse, is a long rectangular double chall or bank barn, of roughly-coursed, roughly-dressed stonework that is an attractive mix of pink and yellow sandstone, granite and shillet. The original openings have brick segmental arches. The roof is hipped, with an original slate roof laid in diminishing courses, held up by simple 19<sup>th</sup> century half-lapped bolted roof trusses. There is an initialled datestone in the eastern elevation "F P 1825", presumably Francis Polkinghorne. Building 4 is a small cartshed with thin granite pillars, with a pitched slate roof over; the cart entrances are now mostly infilled with stone rubble. Adjacent and abutting this building is a second small building of stone rubble with pitched modern slate roof.



Figure 18: Layout of the modern farmstead in 1842 (left) and 1888 (right).

In terms of the extant structure, the fact that the original house may have been a detached block belonging to a grand house, and that the later 19<sup>th</sup> century extension was clearly built with views in mind, indicate setting was a material consideration. The subsequent development of the property, as a working farmstead, also suggests display was a factor, in particular the attractive east elevation of the bank barn (B3), which faces the approach to the property. More pertinent to the current discussion, however, is its current situation. This farmstead is approached from both the east and the west via a historic trackway/footpath, and lies within a band of agricultural fields that separate it from the urban fringe of St Austell. Notwithstanding the conversion of B1 into residential accommodation, the farmstead retains the sense of a working farm, and thus the development of all the land to the north of the farm will have a pronounced impact on its setting within a working agricultural landscape. This consideration is particularly relevant to the house, but the principal value of the building is not as a farmhouse, but as an example of relatively high status vernacular architecture within the context of a later farmstead. Given that principal views across the valley from the farmhouse would not be affected, and that the experience of the house on the ground takes place within a largely enclosed and introverted perceptual environment, the

overall impact of the proposed development is diminished. Taking these factors into account and on a scale of neutral-negligible-minor-moderate-substantial, the impact on the setting of the farmhouse is likely to be **negative/moderate**.



Figure 19: Trehiddle Farmhouse viewed from the west; the 16<sup>th</sup> element is indicated.



Figure 20: The north-eastern elevation of the farmhouse, viewed through the trees of the garden from near the entrance.

### 3.4 LiDAR

The LiDAR data (data from the TELLUS project) is rather inconclusive; the main topographical feature – the dry valley that runs through the centre of the site – is very obvious, but no relict earthwork features are apparent within the area of the development. This is undoubtedly due to arable cultivation in the post-medieval and later periods (note the fields under arable cultivation to the south-west).



Figure 21: QGIS image (terrain analysis>slope) of LiDAR survey data [contains freely available LiDAR data supplied by Natural Environment Research Council (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey); ©NERC (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey)].

### 3.5 Geophysical Survey

A detailed gradiometry survey was conducted by SWARCH personnel in October 2014 over approximately 20 ha of pasture and wheat stubble. The survey was carried out using two twin-sensor fluxgate gradiometers (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The

gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor Version 3.0.25.0* by J. Bampton. A synopsis of these data processes for each field can be seen in Appendix 4 and a sample of images of the data to highlight the relative polarities of anomalies and the interpretation process can be seen in Appendix 5. The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage, 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (Institute for Archaeologists, 2011, updated 2013).

The purpose of this survey was to identify and record magnetic anomalies. While the anomalies may relate to archaeological deposits and structures, the dimensions of recorded anomalies may not directly correspond with any associated archaeological features. The following discussion attempts to clarify and characterise any identified anomalies. Eleven fields were surveyed (Figure 8) in October 2014 by SWARCH personnel in overcast or poor weather conditions. Fields A-G were under short pasture; Fields J and K were wheat stubble. Field C contained stacks of round bales and some farm machinery.

As such a large area of *Anciently Enclosed Land* was surveyed, and given results of the survey undertaken at Coyte Farm (OA 2012), it was almost inevitable a large number of archaeological features would be identified (see Figure 22 and Figure 23). In this synopsis of the results (see SWARCH *forthcoming*), the main geophysical anomalies or groups of anomalies are discussed below:

1. Oval feature c.40m across with traces of internal and external ditch, and partial internal bank, an entrance to the east and with possible internal features. This anomaly is a late Prehistoric and/or Romano-British round, a settlement type very commonly encountered in Cornwall but rarely fully-excavated.
2. A possible sub-rectangular enclosure c.150×60m across. This feature has a well-defined boundary on its south-west side, seemingly comprised of a bank and a series of possible pits; the other elements are more tentative, and as this 'enclosure' runs up the side of the dry valley here, it does appear rather dubious. It is possible the south-west boundary relates to a slight trackway or even mineral exploration.
3. A group of probable and possible linear anomalies that suggest the presence of a settlement, perhaps also of Romano-British date, but no clear structural evidence can be observed.
4. A bundle of roughly-parallel possible linear anomalies that appear to lead to the round (1). These may represent slight holloways but this seems unlikely as they do not lead to the entrance of the round.
5. Elements of a relict fieldsystem. A series of long parallel field boundaries orientated east-to-west. In some instances these anomalies appear to respect extant field boundaries, so it is unclear whether they represent a Prehistoric (even co-axial) fieldsystem, or an earlier medieval system that was later heavily-modified. On balance, the fact that the probable trackway (6) runs across these boundaries implies they are early. There is a possible livestock funnel to the south of the round (1).
6. A probable metalled trackway with flanking ditches. Given the obvious relationship with the lane/footpath immediately to the south and east, this is likely to have been a historic routeway across, the importance of which may have declined before, but certainly after, the 1761 Turnpike Trust was established. This anomaly is a rather wide weak anomaly with a strong bipolar linear anomaly adjacent to its south representing a modern service, and parallel positive linear anomalies with adjacent negative readings on its north side. This and its proximity to the existing trackway have probably obscured the results. Although it is unclear, the width and strength of the negative aspect of this anomaly may be indicative of a relatively deep feature.

7. Three long, curving linear anomalies that fan out from a point in the south-east corner of Field G. These anomalies are most likely to represent holloways crossing formerly-open unenclosed land; however, they clearly do not respect the relict fieldsystem, and thus are probably older.
8. Two faint circular features that may represent Middle Bronze Age sunken-featured roundhouses. This is a well-known regional building type.
9. A series of pit groups scattered across the site. These are essentially undatable, but are often Prehistoric or Romano-British in date.
10. A curvilinear feature roughly contiguous with the base of the slope in Field D is most likely the result of geological variation, perhaps of soil creep. However, as an entirely positive, relatively weak anomaly it may represent a boundary or earthwork.

In general terms, there are a number of clear modern features. These include a series of double-ditched former field boundaries shown on the historic mapping. Ferrous pipes cross the north-eastern end of Fields A and B, and follow the hedgeline along the southern side of Fields J and K. Note that an iron pipe is exposed in the track by B1 at the farmstead. Three (presumably alkathene) pipe trenches appear to radiate from the farmstead. There is a general lack of metallic debris across the site, suggesting the results are relatively reliable.

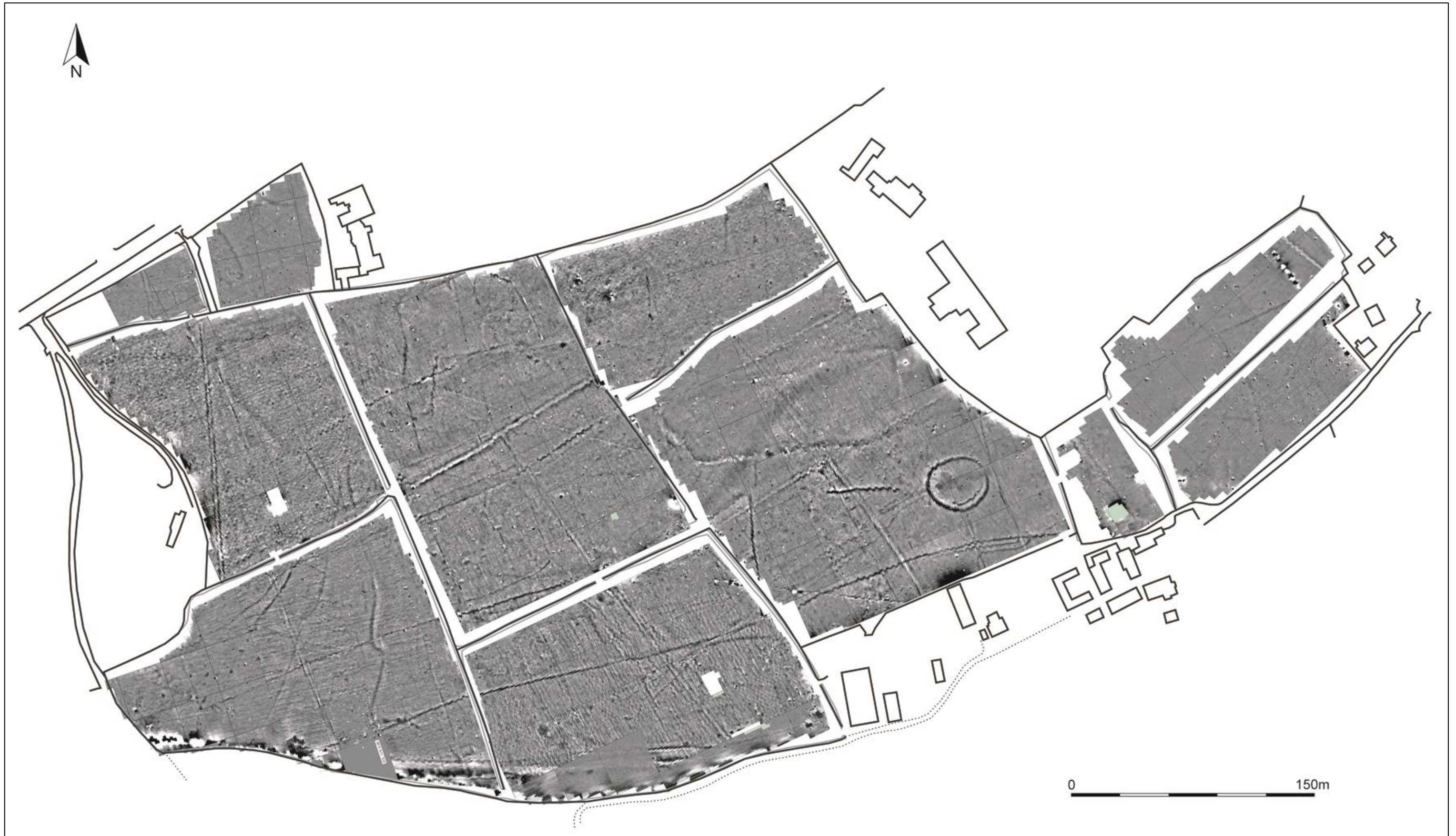


Figure 22: Preliminary shade plot of gradiometer data with minimal processing.



Figure 23: Preliminary interpretation of the geophysical anomalies.

## 4.0 Discussion and Conclusion

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### 4.1 Discussion and Conclusion

The proposed development is located south-west of St Austell, within an area of farmland characterised on the Cornwall and Scilly HLC as *Anciently Enclosed Land*. Historically, this land belonged to two tenements – Dr Lambe’s Tenement and Grylls Tenement – and formed parcel of the larger Manor of Trewiddle. This manor, first recorded in 1262, has a complex descent, with at least five separate settlements bearing the name ‘Trewiddle’ by 1842. A substantial portion of this manor was owned in the later 18<sup>th</sup> century by the Rashleigh family, and during tin-streaming ‘at Trewiddle’ in 1774 a hoard of late 9<sup>th</sup> century metalwork was recovered. Neither the precise location of the findspot nor the location of the tin-streaming responsible is known. Most of the manor was sold in the early 19<sup>th</sup> century by Charles Rashleigh of Duporth, presumably to cover his crippling legal debts, to the locally-notable Coode and Polkinghorne families.

The farmhouse at Trewiddle contains a 16<sup>th</sup> century core, which, *contra* Chesher (1968) is probably the detached kitchen block for a larger and now-vanished house. It may not be coincidental that fields a little distance to the south of the farmhouse were labelled *Magdalenes Meadow* and *Old Walls* in 1842. The farmhouse is a significant building in its own right, and, together with its associated farm buildings but particularly the bank barn, forms a locally-significant group. The impact of the proposed development on the setting of this farmstead and specifically the farmhouse is assessed as negative/moderate.

The local area contains a range of archaeological sites, including a number of Bronze Age barrows and late Prehistoric or Romano-British rounds. Another significant find ‘at Trewiddle’ is an ingot of Tungsten that may pre-date the formal discovery of Tungsten in the later 19<sup>th</sup> century. The fieldscape is comprised of fairly large sub-rectangular fields bounded by stone-faced Cornish hedgebanks, and by analogy probably date to the post-medieval period. To the west, a large area around St Mewan Church has been subject to geophysical survey which has revealed a complex palimpsest of archaeological features, including one round and other probable Prehistoric settlements.

The geophysical survey carried out on the site, like that of Coyte Farm, identified a large number of geophysical anomalies of probable archaeological origin. These include two late Prehistoric or Romano-British settlements (including one round), a fieldsystem of probable Prehistoric date, a scatter of pits, a large possible sub-rectangular enclosure, a series of holloways, and a historic trackway. The impact of the proposed development on this buried archaeological landscape would be substantial, permanent and irreversible.



## 5.0 Bibliography & References

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### Published Sources:

- Beacham, P. & Pevsner, N.** 2014: *The Buildings of England: Cornwall*. London.
- Chesher, V.W. & Chesher, F.J.** 1968: *The Cornishman's House: an introduction to the history of traditional domestic architecture in Cornwall*. Truro.
- English Heritage** 2008. *Geophysical Survey in Archaeological Field Evaluation*.
- English Heritage** 2011a: *The Setting of Heritage Assets*.
- English Heritage** 2011b: *Seeing History in the View*.
- Institute for Archaeologists (IfA)** 2012. *Standard and Guidance for Archaeological Geophysical Survey*.
- Landscape Institute** 2013: *Guidelines for Landscape and Visual Impact Assessment* 3rd edition. London.
- Lysons, D. & Lysons S.** 1814: *Magna Britannia: volume 3: Cornwall*.
- Padel, O.J.** 1985: *Cornish Place-Name Elements*. EPNS.
- Polsue, J.** 1867 (repub. 1975): *Lake's Parochial History of the County of Cornwall*. Truro.
- Rogers, J.** 1867: 'Saxon silver ornaments and coins found at Trewiddle, near St Austell, AD 1774', *JRIC* VIII.
- Rowse, A.L.** 1960: *St Austell Church, Town, Parish*. St Austell.
- Soil Survey of England and Wales** 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.
- Rehren, I.** 2005: *The Trewiddle Tungsten Bloom – an initial report*. Newsletter of the International Tungsten Industry Association.
- Wilson, D.M. & Blunt, C.E.** 1961: *The Trewiddle Hoard*. Offprint from *Archaeologia* 98.

### Websites:

- British Geological Survey** 2014: *Geology of Britain Viewer*.  
[http://maps.bgs.ac.uk/geologyviewer\\_google/googleviewer.html](http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html) [accessed 25.11.2014]

### Unpublished Sources:

- Gover, J.E.B.** 1948: *Place-Names of Cornwall*.
- Oxford Archaeology** 2012: *Coyte Farm, St Austell, Cornwall: archaeological evaluation report*.
- SWARCH** forthcoming: *Land at Higher Trewiddle Farm, St Austell, Cornwall: results of an archaeological gradiometer survey*.

## Appendix 1

# PROJECT DESIGN FOR DESK-BASED ASSESSMENT, SITE WALKOVER, GEOPHYSICAL SURVEY AND VISUAL IMPACT ASSESSMENT ON LAND AT HIGHER TREWHIDDLE FARM, ST AUSTELL, CORNWALL.

<b>Location:</b>	Land at Higher Trewiddle Farm
<b>Parish:</b>	St Austell
<b>County:</b>	Cornwall
<b>NGR:</b>	21.03Ha centred on SX006517
<b>Planning Application ref:</b>	Pre-application
<b>Proposal:</b>	Construction of a mixed residential and commercial development
<b>Date:</b>	26 <sup>th</sup> August 2014

### 1.0 INTRODUCTION

1.1 This document forms a Project Design (PD) which has been produced by South West Archaeology Limited (SWARCH) at the request of John Marshall of Kingsley Developments Ltd. and Westcountry Land (St. Austell) Ltd. (the Client). It sets out the methodology for desk-based assessment, site walkover, geophysical survey and a visual impact assessment on the unlisted farmhouse at Trewiddle Farm; and for related off site analysis and reporting at land at Higher Trewiddle Farm, St Austell, Cornwall. The PD and the schedule of work it proposes have been drawn up in line with guidance issued by Dan Ratcliffe of Cornwall Council Historic Environment Service (CCHES) and English Heritage (EH).

### 2.0 ARCHAEOLOGICAL BACKGROUND

The proposed site lies on the south-western edge of St Austell approximately 800m from the town centre. The proposed site covers an area of 21.03ha, a slightly-irregular sub-rectangular area of agricultural land within a shallow valley that stretches up from the base of the St Austell River valley up to the top of the hill to the west, from c.30m AOD to c.90m AOD. Very little archaeological investigation has taken place in the immediate vicinity of the site, although an extensive area to the west around St Mewan Church has been subject to geophysical survey and trial trenching. This has revealed a relict landscape with at least one settlement or round. In addition, there are a number of features noted on Cornwall County Council's Historic Environment Record, including a spread of Prehistoric funerary activity and a number of findspots on Wisley Down to the north of the site, as well as some possible Prehistoric field boundaries less than one kilometre to the south of the site. Notably, the late 9<sup>th</sup> century Trewiddle Hoard was recovered during tin streaming from somewhere within the manor of Trewiddle in 1774.

The nearby Trewiddle Farm, although unlisted, is a heritage asset of note. V .M. and F. J. Chesher (The Cornishman's House, 1968: 48-49) records that: *Among the houses of the period with a simple plan of two ground floor rooms, the old farmhouse at Trewiddle, near St. Austell is particularly interesting because it shows a break away from the rectangular shape. Its kitchen and hall are in the two arms of an L-shaped building with a cross-passage between, where the arms meet. In spite of the modest size of this house, its builders put considerable emphasis, in the traditional way, on the hall, which takes up the whole length and breadth of the longer arm of the L. It was given a fireplace of high quality, constructed in large pieces of stone to form a shallow arch and finished with roll moulding. The kitchen and the chamber above it also have original fireplaces, but these are plainer, with flat heads, and in the kitchen fireplace is a brick oven similar to the more common cloam ovens. The date of Trewiddle seems to be late Tudor, judging from the style of the fireplace and the principal doorway, which has well-finished, deeply moulded arch and jambs, with a simple geometrical design in the spandrels. Although the house was modest in size, and built with an eye to quality, both in its design and its individual features, and it is a good example of what was being achieved at this level of local building.*

### 3.0 AIMS

3.1 The principal objectives of the work will be to:

- 3.1.1 Undertake a desk-based appraisal of the site;
- 3.1.2 Undertake a walkover survey of the site;
- 3.1.3 To observe and identify archaeological features through geophysical survey.
- 3.1.4 Assess the direct visual effects of the proposed development upon the nearby, unlisted Trewiddle Farm;
- 3.1.7 Produce a report containing the results of the above investigations;
- 3.1.8 Provide a statement of the impact of the proposed development on the potential archaeological resource, with recommendations for those areas where further evaluation and/or mitigation strategies may be required.

### 4.0 METHOD

4.1 Desk-based Appraisal:

The programme of work shall include desk-based research to place the development site into its historic and archaeological context. This will include examination of material currently held in the Cornwall County Council Historic Environment Record and examination of readily available cartographic sources. The desk-based assessment will be carried out in accordance with the *Institute for Archaeologists Standard and Guidance for Historic Environment Desk-Based Assessment 1994 (revised 2001, 2009, 2011 and 2012)*.

4.2 Walkover survey:

The area of the development will be subject to a walkover survey and its terrain and boundaries noted. Exposed soil will be checked for artefacts. The walkover survey will be carried out in accordance with the *Institute for Archaeologists Standard and Guidance for Archaeological Field Evaluation 1994 (revised 2001 and 2008)*.

4.3 Geophysical Survey:

The programme of work shall include a magnetometer (gradiometer) survey of the site, covering the fields in which the proposed development would be located. The results of this survey will inform whether an archaeological evaluation or further archaeological recording of any potential buried remains or other mitigation is required. The geophysical survey will be carried out in accordance with the *Institute for Archaeologists Standard and Guidance for Archaeological Geophysical Survey 2011*.

4.4 Visual Impact Assessment (VIA):

4.4.1 Trewiddle Farm will be visited to assess the impact on its setting in accordance with the Landscape Institute and Institute of Environmental Assessment "Guidelines for Landscape and Visual Impact Assessment" 3<sup>rd</sup> Edition 2013. This will be used to produce a statement of significance for this heritage asset which will potentially be impacted upon by the development.

## Land at Higher Trehiddle Farm, St Austell, Cornwall

- 4.3.4 The likely impact will be assessed using the methods outlined in the English Heritage 2012 *Guidelines on the Setting of Heritage Assets*.
- 5.0 REPORT**
- 5.1 A report will be produced and will include the following elements:
- 5.1.1 A report number and the OASIS ID number;
- 5.1.2 A location map, copies of the view shed analysis mapping, a map or maps showing assets referred to in the text and copies of historic maps and plans consulted shall be included, with the boundary of the development site clearly marked on each. All plans will be tied to the national grid;
- 5.1.3 A concise non-technical summary of the project results;
- 5.1.4 The aims and methods adopted in the course of the investigation;
- 5.1.5 Illustrations of the site in relation to known archaeological deposits/sites around it, in order to place the site in its archaeological context;
- 5.1.6 A statement of the impact of the proposed development on the potential archaeological resource;
- 5.1.7 A copy of this PD will be included as an appendix.
- 5.2 The full report will be submitted within three months of completion of fieldwork. The report will be supplied to the HES on the understanding that one of these copies will be deposited for public reference in the HER. A copy will be provided to the HES in digital 'Adobe Acrobat' PDF format.
- 5.3 A copy of the report detailing the results of these investigations will be submitted to the OASIS (*Online Access to the Index of archaeological investigations*) database under reference Southwes1-196425.
- 6.0 FURTHER WORK**
- 6.1 Should the results of this Assessment indicate a need for further archaeological works to be undertaken this would need to be completed before validation of the Planning Application in order to enable the Local Planning Authority to make an informed and reasonable decision on the application, in accordance with the guidelines contained within paragraph 141 of paragraph 128 of the *National Planning Policy Framework (2012)*.
- 7.0 PERSONNEL**
- 7.1 The project will be managed by Bryn Morris; the desk-based research, walkover survey, geophysical survey and the visual impact assessment will be carried out by SWARCH personnel with suitable expertise and experience. Relevant staff of (CCHES) will be consulted as appropriate. Where necessary, appropriate specialist advice will be sought (see list of consultant specialists in Appendix 1 below).

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### List of specialists

#### **Building recording**

*Richard Parker*

11 Toronto Road, St James, Exeter. EX4 6LE, Tel: 07763 248241

#### **Conservation**

*Alison Hopper Bishop*

The Royal Albert Memorial Museum Conservation service, [a.hopperbishop@exeter.gov.uk](mailto:a.hopperbishop@exeter.gov.uk)

*Richard and Helena Jaeschke*

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#### **Curatorial**

*Thomas Cadbury*

Curator of Antiquities Royal Albert Memorial Museum, Bradninch Offices, Bradninch Place, Gandy Street, Exeter, EX4 3LS

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*Alison Mills*

The Museum of Barnstaple and North Devon, The Square, Barnstaple, North Devon, EX32 8LN, Tel: 01271 346747

#### **Bone**

Human & Animal *Wendy Howard*, Department of Archaeology, Laver Building, University of Exeter, North Park Road, Exeter EX4 4QE

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#### **Lithics**

*Dr Martin Tingle*

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#### **Palaeoenvironmental/Organic**

Wood identification *Dana Challinor* Tel: 01869 810150 [dana.challinor@tiscali.co.uk](mailto:dana.challinor@tiscali.co.uk)

Plant macro-fossils *Julie Jones* [juliedjones@blueyonder.co.uk](mailto:juliedjones@blueyonder.co.uk)

Pollen analysis *Ralph Fyfe* Room 211, 8 Kirkby Place, Drake Circus, Plymouth, Devon, PL4 8AA

#### **Pottery**

Prehistoric *Henrietta Quinnell*, 39D Polsloe Road, Exeter EX1 2DN, Tel: 01392 433214

Roman

*Alex Croom*, Keeper of Archaeology

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Medieval *John Allen*, Exeter Archaeology, Custom House, The Quay, Exeter, EX2 4AN, Tel: 01392 665918

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Land at Higher Trehiddle Farm, St Austell, Cornwall

Appendix 2  
Tithe Apportionment Data

No	Land owner	Occupier	Field name	Cultivation	
<b>Ponds Tenement</b>					
787	Thomas Coode Esq. and Catherine Jane his lessee	Matthew Roberts	Higher Long Field	Pasture	
788			Round Field	Pasture	
789			Little Meadow	Pasture	
790			First Long Field	Pasture	
791			Barn Meadow, Barn, Mowhay and Waste	-	-
793				-	-
792			Square Meadow	Pasture	
794			Orchard	Orchard	
795			Way Field	Pasture	
796			River Meadow	Arable	
<b>Middle Trehiddle</b>					
809	Edward Coode Esq. and John Kelly his lessee	John Kelly	Dwelling House and Garden	-	
810			Moor	Arable	
811			Lower Field	Arable	
812			Higher field	Arable	
813			Homer field	Arable	
<b>Moor cottage in Trehiddle</b>					
814	Edward Coode Jun Esq.	Himself	Magdalenes Meadow	Arable	
821			Moor Cottage and Grounds	-	
822			Iveys Field	Pasture	
823			Old Walls	Pasture	
824			Cold Wind	Arable	
1718			Plantation	Wood	
815			Joseph Pedlar	Leat Field	Arable and pasture
816		John Kelly	Field	Pasture	
817			Field	Arable	
818			Field	Arable	
819		William Martyn	Field	Arable	
820			Cottage and Garden	-	
1719		John Tiller	Plot and Garden	Arable	
1720				Arable	
<b>Higher Trehiddle</b>					
797		Thomas Grose	William Nettle	Forty Acres	Arable
799				Garden Meadow and Waste	Arable
801	Orchard			Orchard	
800	William nettle and John Gill		Dwelling House and Garden	-	
805			Garden	Garden	
798	Himself		Beef Close	Pasture	
802	Thomas Hitchens		Way Field	Pasture	
803			Higher Field	Pasture	
804			Way Field	Pasture	
806			Higher Moor	Pasture	
807			Middle Field	Pasture	
808			Lower Field	Pasture	
<b>Chipponds Tenement</b>					
713	The Right Honourable Lord Mount Edgcombe and Robert Gould Lake Esq. his lessee	John Stephens and James Coade	Dwelling House, Barn, Mowhay and Gardens	-	
714		John Stephens	Mowhay and Outhouses	-	
715		John Barrows and another	Dwelling House and Garden	-	
719			The Ledrah	Pasture	
721		John Rendle Jr.	Nursery and pasture field	Pasture	
722			Pasture		
764			Nursery	Nursery	
768		John Rendle Sen.	North Field	Pasture	
769			Middle Field	Pasture	
770			South Field	Pasture	
771			West Field	Pasture	
759		William Biddick Kellow	Higher Field	Arable	
760			Lower Field and garden	Arable	
761				Arable	
762				Arable	
723		The right Honourable Lord	John Hodge	Nursery Cottages and Garden	-

Land at Higher Trehiddle Farm, St Austell, Cornwall

724	Mount Edgcombe			-	
<b>Great and Middle Trehiddle</b>					
825	Ann Polkinghorne	James Lynn	Lower Stone Park	Arable	
826			Meadow and Garden	Arable	
827			Orchard	Orchard	
828			Mowhay, Orchard and Buildings	-	
829			Higher Meadow	Arable	
830			Lower Long Close	Arable	
831			Higher Stone Park	Arable	
832			Horney Wink	Arable	
833			Peas Close	Arable	
834			Middle Close	Arable	
835			Herself	Brake Meadow	Arable
836				Great Trehiddle Dwelling House, Woods and Garden	Arable
837				Kitt Hill	Arable
838				Above Town	Arable
843		Three Cornered Meadow		Arable	
847		Pump Place and Part of Lane		-	
839		William Martyn		Square Close	Arable
840			Higher Long Close	Arable	
841			Crooked Park	Arable	
842			Stone Park	Arable	
844		Thomas Olver	Lower Nine Acres	Arable	
845			Higher Nine Acres	Arable	
846			Six Acres	Arable	
848		William Kellow	Rocky Park	Arable	
775		Benjamin Knott	Knotts Meadow	Arable	
849		Frederick Pearce	Quakers Meadow	Arable	
<b>Trehiddle Estate - Doctor Lambe's Tenement</b>					
780	Thomas Graham Esq.	Nicholas May	Four Acres	Arable	
781			Higher Field	Arable	
782			Way Field	Arable	
783			Barn Garden and Waste	-	
784			Under Town	Arable	
785			Garden Meadow	Arable	
786			Long Close	Arable	

Appendix 3  
Supporting Jpegs  
*Walkover Survey*



Field A: view from the north-east corner, looking south-west.



Field A: view from the north-east corner, looking north-west.



Field A: the hedgebank separating Fields A and B; viewed from the south-east, looking north-west (scale 2m).



Field A: the south-western field boundary; viewed from the north, looking south (scale 2m).



Field C: looking through the gateway into Field A; viewed from the south-west, looking north-east.



As above, detail of the granite gatepost (scale 2m).





Field C: the buildings of Trehiddle Farm on the southern boundary of Field C; viewed from the ENE, looking WSW.



Field C: viewed from the south-east corner, looking across the field to the north-west.



Field C: looking along the eastern boundary; viewed from the north, looking south (scale 2m).



Field C: looking through the gateway into Field B; viewed from the south-west, looking north-east.



Field C: view along the northern boundary; viewed from the north-east, looking south-west.



Field D: view along the southern boundary; viewed from the east, looking west (scale 2m).



Field D: view along the eastern boundary; viewed from the south, looking north (scale 2m).



As above, detail of the eastern boundary of Field D (scale 2m).



Field D: view from the north corner of the field, showing the eastern boundary and steep slopes; viewed from the north-west, looking south-east.



Field D: view from the north corner looking across the field, showing the slope; viewed from the east, looking west.



Field D: view from the north corner looking along the northern boundary; viewed from the north-east, looking south-west.



Field D: detail of the hedgebank in the northern corner of the field; viewed from the south, looking north (scale 2m).



Field E: detail of the hedgebank in the west corner; viewed from the south-east, looking north-west (scale 2m).



Field F: view along the northern boundary; viewed from the south-west, looking north-east.



Field F; view along the western boundary; viewed from the NNW, looking SSE.



Field G: quarry spoil and structure in the western half of the field; viewed from the north-east, looking south-west.





Field G: view across the eastern half of the field; viewed from the north-west, looking south-east.



Field G: the western boundary and quarry structure; viewed from the north, looking south (scale 2m).



Field G: the quarry structure in the adjacent field, viewed from the east, looking west.



Field G: View across the field from the south-west corner; viewed from the south-west, looking north-east.



Field G: view along the south boundary of the field; viewed from the south-west corner, looking north-east (scale 2m).



Field H: the roadside boundary hedge; viewed from the north-east, looking south-west (scale 2m).



Field H: view along the southern boundary to the neighbouring property; viewed from the west, looking east (scale 2m).



Field H/I: view along the overgrown track between the two fields; viewed from the north, looking south (scale 2m).



Field I: view across the field from the middle of the western boundary; view from the west, looking east.



Field J: view along the northern boundary; viewed from the east, looking west.



Field J: view along the western boundary; viewed from the south, looking north.



Field J: view along the southern boundary; viewed from the west, looking east.



Field J/K: cross-section through the hedgebank in the gateway between Fields J and K; viewed from the south, looking north (scale 2m).



As above, looking along the eastern side of the field boundary; viewed from the south, looking north (scale 2m).



Field K: view across the field from the south-west corner of the field; viewed from the south-west, looking north-east.



Field K: view along the southern boundary; viewed from the west, looking east.





As above, detail of the southern hedgebank (scale 2m).

Land at Higher Trehiddle Farm, St Austell, Cornwall



1950/60s farm buildings west of Higher Trehiddle Farm; viewed from the south-west, looking north-east.



Higher Trehiddle Farmhouse; viewed from the west, looking east.

Land at Higher Trehiddle Farm, St Austell, Cornwall



The south elevation of Higher Trehiddle Farmhouse (built 1880×1906); viewed from the south-west, looking north-east.



The converted pigsties west of Trehiddle Farm; viewed from the south.

Land at Higher Trehiddle Farm, St Austell, Cornwall



As above.



As above, viewed from the south-east, looking north-west. The iron waterpipe – probably the one identified in the geophysical survey – is indicated.



Trehiddle Farm: north elevation of the cartshed(?), viewed from the north-east, looking south-west.



Trehiddle Farm: west elevation of the bank barn; viewed from the south-west.



Trehiddle Farm: east elevation of the bank barn; viewed from the east.



Trehiddle Farm: detail of the datestone in the eastern elevation.

Land at Higher Trehiddle Farm, St Austell, Cornwall



Trehiddle Farm: sheds north of the farm, including a former open-fronted shed; viewed from the south, looking north.



View through the entrance gates to Trehiddle Farmhouse; viewed from the south-west, looking north-east.

## Appendix 4 Gradiometer data processing and details

Data composites of all fields underwent processes; Clip +/-3SD; DeStripe all traverses, median; Interpolate X and Y, double resolution.

Field A; all grids: Additional Processes: None.

Details: 0.66ha surveyed; Max. 100.00nT, Min. -100.00nT; Standard Deviation -10.06nT, mean -1.80nT, median -1.52nT.

Field B; all grids: Additional Processes: DeStagger offset outbound by +2 intervals.

Details: 0.72ha surveyed; Max. 100.00nT, Min. -100.00nT; Standard Deviation 10.35nT, mean -2.68nT, median -2.60nT.

Field C; all grids: Additional Processes: DeStagger offset outbound by -1 interval.

Details: 0.26ha surveyed; Max. 103.42nT, Min. -112.54nT; Standard Deviation 15nT, mean 0.62nT, median 0.00nT.

Field D: Additional Processes: Grids I15-I21 DeStagger offset outbound by -4 intervals; Grids L1-L17 DeStagger offset outbound by -6 intervals; grids M1-M16 DeStagger offset outbound by -2 intervals.

Details: 3.73ha surveyed; Max. 96.85 to 121.62nT, Min. -97.98 to -107.06; Standard Deviation 5.55 to 10.83nT, mean -0.56 to 7.40nT, median -0.02 to 0.00nT.

Field E; all grids: Additional Processes: DeStagger offset outbound by -2 intervals.

Details: 1.18ha surveyed; Max. 103.11nT, Min. -131.42nT; Standard Deviation 5.78nT, mean 0.09nT, median 0.00nT.

Field F: Additional Processes: Grids C8-C25 DeStagger offset outbound by -7 intervals; Grids D1-D20 DeStagger offset outbound by -3 intervals.

Details: 3.19ha surveyed; Max. 103.96 to 183.13nT, Min. -93.70 to -108.43nT; Standard Deviation 6.20 to 11.60nT, mean -1.89 to 0.23nT, median -0.09 to 0.00nT.

Field G; all grids: Additional Processes: None

Details: 1.92ha surveyed; Max. 108.57nT, Min. -97.35nT; Standard Deviation 6.75nT, mean 0.16nT, median 0.00nT.

Field H; all grids: Additional Processes: DeStagger offset out and inbound by -2 interval.

Details: 0.36ha surveyed; Max. 103.34nT, Min. -115.31nT; Standard Deviation 14.30nT, mean 0.61nT, median 0.01nT.

Field I; all grids: Additional Processes: DeStagger offset out- and inbound by -2 interval.

Details: 0.22ha surveyed; Max. 108.47nT, Min. -97.53nT; Standard Deviation 4.13nT, mean 1.42nT, median 1.55nT.

Field J: Additional Processes: Grids I1-I14 DeStagger offset outbound by -3 intervals.

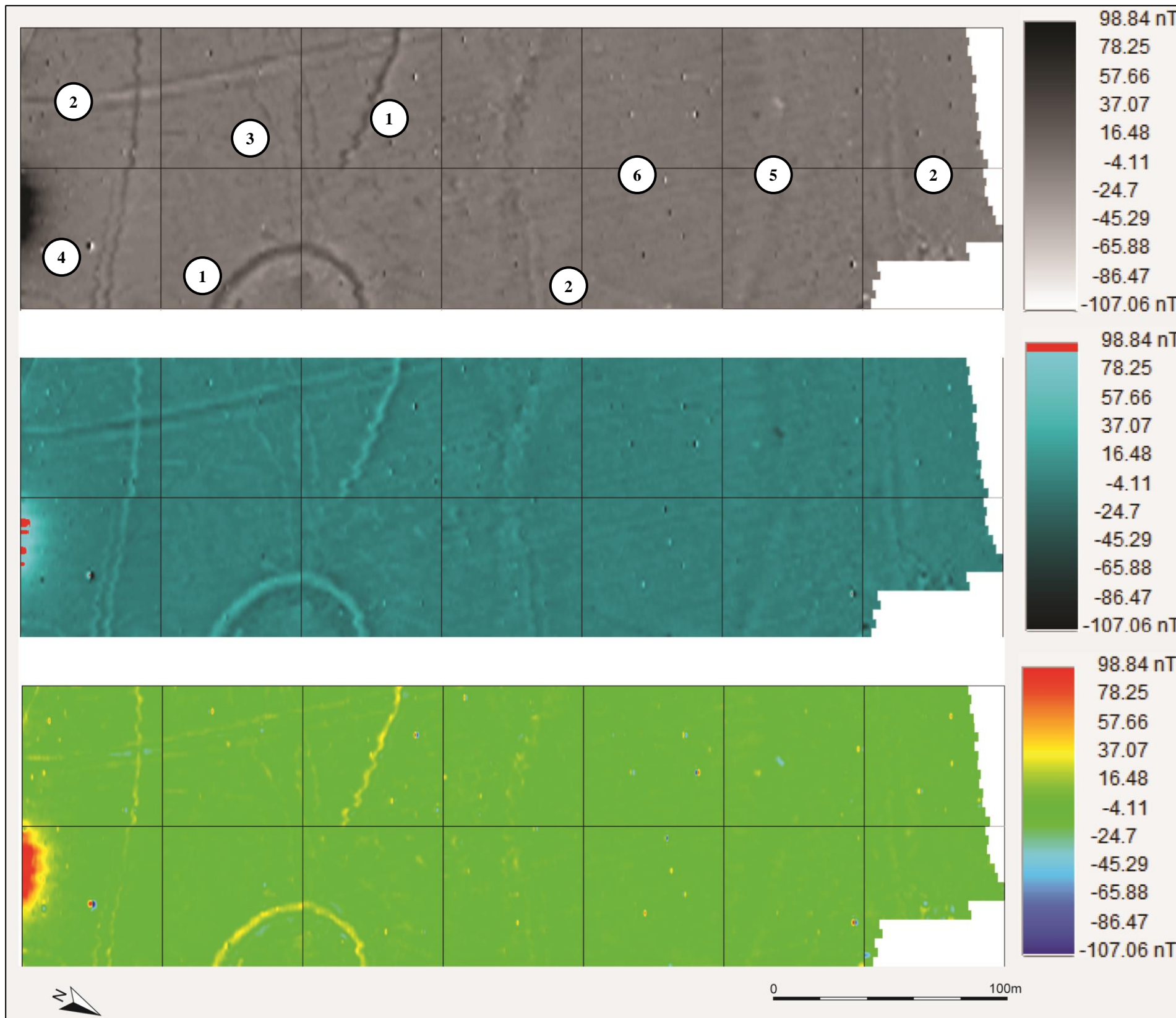
Details: 2.45ha surveyed; Max. 114.39nT, Min. -147.04nT; Standard Deviation 16.26nT, mean -0.16nT, median -0.01nT.

Field K: Additional Processes: Grids C26-C32, none; Grids D21-26, none; Grids E1-E9 DeStagger offset in- and outbound by +5 intervals; Grids F1-F10, none

Details: 2.43ha surveyed; Max. 92.01 to 151.06nT, Min. -93.04 to -182.83nT; Standard Deviation 7.93 to 43.97nT, mean 0.60 to -1.58nT, median -1.55 to 0.00nT.



Appendix 5  
Gradiometer data processing images



The accompanying images are a sample of the above geophysical survey. In this case, two transects from Field D aligned north-west by south-east including the western half of a probable 'round'.

All these images have been clipped to +/- 3SD; and DeStriped, all traverses, median. The kinks in linear anomalies, such as those running east-west in these images have been left in to highlight the purpose of the DeStagger process in correcting pacing margins of error.

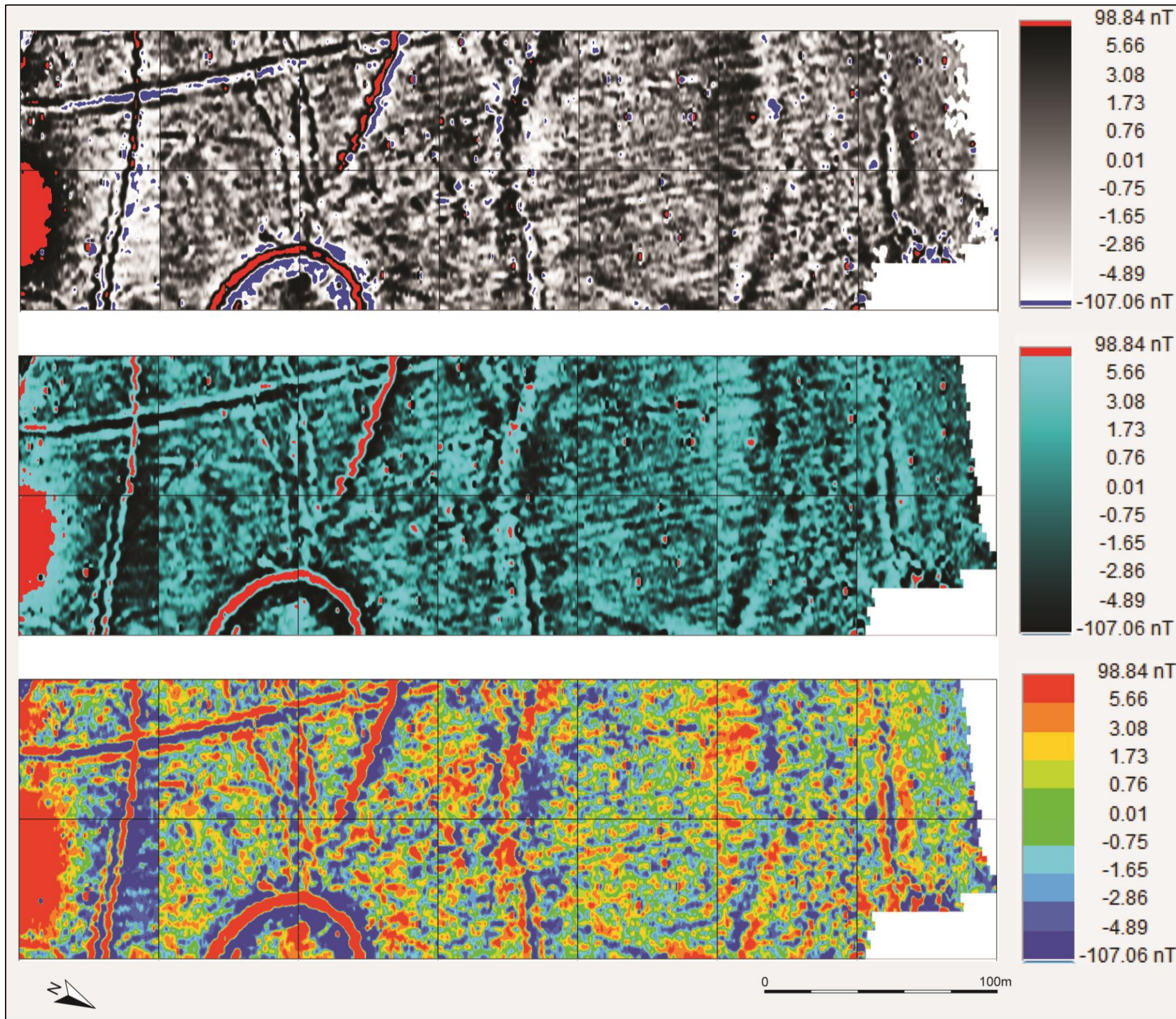
The initial greyscale image includes anomalies of various polarities including;

1. Positive with associated negative, probable features, likely boundaries and ditches
2. Negative with associated positive, probable features, likely banks with associated ditches
3. Negative, probable ditches
4. Dipolar, ferrous material
5. Weak background variation, possible geology or archaeology
6. Very weak positive and negative striations indicative of ploughing

The strengths of these anomalies further allude to the likelihood of them being modern, geological or archaeological features.

The following images more clearly differentiate between anomalies and their relative polarities.

The images directly to the left indicate that Group 1 on the list above are probably substantial archaeological features and that the discrete dipolar anomalies (Group 4) are instances of ferrous objects in the topsoil. Group 3 are still probable archaeological ditches.



Groups 2, 3 and 5 on the list above all become clearer in the images to the left.

Historic maps account for some of the Group 2 anomalies as historic field boundaries and given the strength of the readings it is possible that these are comprised of stone lined banks.

Group 5 becomes much clearer as a definitive anomaly with an in-filled depression on its south side and possible bank or built up material on its north side. It's location along the break of slope at the trough of the valley in Field D may be suggestive of it being a geological anomaly, however this may be coincidental as the relative high readings compared to the surrounding geology may be indicative of an archaeological feature.

Internal features to the 'round' also become much more intelligible in the images to the left.



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