

Archaeological evaluation and excavation of land at Temple Laugherne, Phase 1 West of Worcester, Worcestershire

Worcestershire Archaeology
for Orion Heritage

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LAND AT TEMPLE LAUGHERNE PHASE 1, WEST OF WORCESTER

Archaeological evaluation and excavation report



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SITE INFORMATION

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Planning reference: 16/01168/OUT
Central NGR: SO 382607 255974
Commissioning client: Orion Heritage
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EXCAVATION WSM77682)**

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Archaeological evaluation and excavation of land at Temple Laugherne, Phase 1 West of Worcester, Worcestershire

By Tim Cornah

With contributions by Alison Foster, Laura Griffin, Rob Hedge and Elizabeth Pearson

Illustrations by Tim Cornah and Shona Robson-Glyde

Summary

An archaeological evaluation followed by excavation was undertaken at Temple Laugherne, Worcestershire (NGR SO 382607 255974). It was commissioned by Orion Heritage on behalf of their client, in advance of a proposed residential development (West of Worcester Urban Extension). Planning permission has been granted subject to a programme of archaeological works.

The evaluation was largely on a grid array, though with two areas within the southern half of the field having a higher concentration of trenching, where trenches were aligned to target geophysical anomalies. Within one of these areas, a number of medieval features were proven, which correlated broadly with the geophysical results.

Subsequent excavation was targeted at this area of medieval activity, and has revealed a medieval hamlet with at least four earth-fast built structures in the form of posthole alignments and beam slots. These sat within plots, and one was associated with two pits filled a large amount of charred grain. The ephemeral nature of the buildings suggested that the settlement had been short-lived, and this was supported by the pottery evidence which also suggested a 13th to 14th century date.

A more notable feature was a more substantial building, aligned east to west and just beyond the other buildings, which was interpreted as a chapel, as corroborated by later field-name evidence. Such a simple medieval chapel, otherwise undocumented, is a rare discovery. A medieval key was also found in the same vicinity. This building came to be set within its own enclosure, and this long influenced the laying out of later field boundaries and a trackway, remnants of which remained into the 19th century.

Report

1 Introduction

1.1 Background to the project

An archaeological evaluation and excavation was undertaken by Worcestershire Archaeology (WA) between September and December 2020 on land at Temple Laugherne, Worcestershire (NGR SO 382607 255974). This comprised 57 evaluation trenches, as well as a further excavation area within a single field. The evaluation was Phase 1 of a wider project, with Phase 2 already reported on and three further phases forthcoming. The project was commissioned by Orion Heritage on behalf of their client, in advance of a proposed residential development (West of Worcester Urban Extension). Planning permission has been granted by Malvern Hills District subject to a programme of archaeological works (planning reference 16/01168/OUT).

The archaeological advisor to the local planning authority considered that the proposed development had the potential to impact upon possible heritage assets. Previous geophysical survey (Stratascan 2015) on the site identified features of agricultural origin, as well as a number of linear features, largely interpreted as former field boundaries. Some features of likely archaeological origin were identified in the south-eastern end of the site. Subsequent evaluation confirmed these features to be of likely medieval origin, along with post-medieval field boundary ditches. An excavation area was subsequently opened targeting these medieval features, after agreement between Orion Heritage and the archaeological advisor to Malvern Hills District Council.

A WSI was prepared by Orion Heritage (2020) and approved by the archaeological advisor to Malvern Hills District Council. The project also conforms to the industry guidelines and standards set out by the Chartered Institute for Archaeologists in *Standard and guidance: for archaeological field evaluation* (ClfA 2014a), *Standard and guidance: for archaeological excavation* (ClfA 2014b) and the *Standards and guidelines for archaeological projects in Worcestershire* (WCC 2019).

1.2 Site location, topography and geology

The 17.75 hectare site is located 2.4km north-west of the centre of the City of Worcester, above the western bank of the River Severn. The immediate eastern boundary of the site is the Laughern Brook, with a further watercourse on its southern boundary which drains into the same brook. The site is largely used for arable agriculture, though with some rough ground and woods along the watercourse and around former farm buildings within the south-eastern side of the site.

The eastern side of the site is on a slight north-south aligned ridge which slopes down to the watercourses to south and east, as well as towards an area in the southern part of the site now filled by ponds. The western side of the site is bounded by a track.

The recorded bedrock geology is Sidmouth Mudstone Formation overlain by Holt Heath Sand and Gravel Member (BGS 2021)

2 Archaeological and historical background

2.1 Introduction

An archaeological desk-based assessment (DBA) of the site was undertaken by CgMS Consulting (2008). The findings presented in the DBA are summarised below along with further sources individually referenced.

A number of flint artefacts, all recovered as surface finds, have been identified in the immediate area, the nearest of which was recovered 100m north of Earls Court. A number of cropmarks (WSM06073, WSM15258) have been recorded within the site as being of broadly prehistoric date. During the Roman period a significant settlement developed within the City of Worcester on the eastern bank of

the River Severn (SAM WT343A-E), and Roman camp (SAM WT242) is located 3km to the north of the site, however there is no evidence to suggest that any contemporary occupation extended into the site. Evidence for this period is limited to a small quantity of abraded Roman pottery sherds (WSM29659, WSM31973) recovered from fieldwalking during the construction of the bypass to the south of the site and during archaeological assessment at Earl's Court. Any activity that has been recorded is concentrated, therefore, to the east and north of the site.

There is no direct evidence relating to the Saxon or early medieval periods on this site or in its immediate environs, though Temple Laugherne has two entries in *Domesday Book*: the first Temple Laugherne consisted of 2 small holders, 1 plough team, 6 meadow acres and an annual valuation of 7 shillings in 1066, rising to 13 shillings in 1086; Lower Temple Laugherne consisted of 1 smallholder with 1 plough team, 6 meadow acres and a mill, with an annual valuation of 1 pound in both 1066 and 1086 (Open Domesday 2021). The location of the mill is likely to have been on the Laughern Brook, which runs along the immediate east side of the site. A good candidate for the location of this is the site of Henwick mill to the immediate north-east of the site.

According to British history online (2021):

... the chartulary of Worcester Priory a manor in Laughern was 'returned' to the cathedral monks by Bishop Simon between 1125 and 1151, but, as both the manors mentioned in *Domesday Book* were still held at that date by William de Beauchamp, this was probably a fresh grant from the bishop's demesne. It seems to have been this property which the prior and convent afterwards claimed to have granted to William, the son of Miles de Laughern, before 1236 at a yearly rent of half a mark [6 shillings and 8 pence]. William was succeeded by another Miles, who sold the manor in 1249 to the Master and brethren of the Temple for £100.

The precise location of Temple Laughern manor is unknown, though generally considered to be to the west of the site, and it is likely that the site itself was, therefore, part of this manor during the medieval period. Despite a long period of disputed ownership in the later 13th century, the Templars remained in possession until 1311, when this land was then granted to the Knights Hospitaller, who held it until the Dissolution of the Monasteries in the 16th century, when, in 1544, the Manor of Temple Laughern was sold to Rich Goodyere and Will Gower (*ibid*).

The following account of the medieval operation of this manor has been provided by Helen Nicholson, based on her current research on Templars' estates generally:

Accounts for the Temple Laugherne estate in 1308-13, include profit and loss for the estate, but there is more information in the surviving accounts as well as acreages sown and crops grown. The detailed accounts submitted by the sheriff of Worcestershire to the Exchequer at Westminster in Feb 1309 state that at Laugherne there were 40 acres sown with wheat, 20 acres of rye, 2 acres of white peas, 10 acres of vetch, 28 acres of dredge (barley and oats mixed) and 30 acres of oats: a total of 130 acres. There was a barn (ie grange) at Laugherne, most likely situated in the main enclosure. A bailiff was employed to run the estate. A carpenter was employed as required. The main income was rent from free and customary tenants, and from the mill. The livestock comprised 2 plough horses, 12 oxen, geese and hens. The deadstock was simply a cart, two ploughs, and various pots, trestle tables, and two coffers. There is no indication that any Templars had lived there before the arrests in January 1308.

Within the wider area, further medieval activity was focused around the historic settlements of Little Eastbury, and Earl's Court manor. Earl's Court (now a scheduled monument; SAM31957/WSM00471) is located to the south-west of the site, and consists of a rectangular moat enclosing an area c 45 x 30m. A holloway (WSM31078) extends across the site via Earls Court from east to west, surviving to the west, but only as a depression to the east of Earls Court. Cropmarks to the north of the moat suggest water management activity possibly of medieval date (WSM07297), and a possible earlier

round moat to the north which was partially infilled to create a focus of activity, including fish ponds. A further small settlement spanning the later Saxon to 13th century was also associated with Earls Court, and this was located to its south, alongside the Bromyard Road (Vaughan and Jones 2014). It contained earth-fast built structures of comparable form and date to those discussed below for the Temple Laugherne excavation site.

Evidence for medieval ridge and furrow indicates that the majority of the area had remained farmland since the medieval period (WSM31973, WSM07893, WSM15105), and previous extensive archaeological assessment of Earl's Court and its surrounding area concluded that the landscape here has probably never been intensively used for anything other than agricultural purposes (WCM101041; Vaughan & Jones 2014)).

The conclusions of the DBA were that there was a low potential for prehistoric activity with little more than an undated cropmark to the north of the site and a handful of artefacts to the south. No known settlement activity of the Roman period was recorded within the immediate area, and the same applied for the Saxon period, hence there was a low potential for deposits of this date.

In contrast, a moderate potential for medieval remains was identified, largely focused around surviving settlements and farmsteads and it was suggested likely to be agricultural in character. Since a Temple Laugherne Farm still existed, though the standing farmhouse dated only from c 1680, it was considered that the origins of the manor probably could have lain in its vicinity.

The site is shown on the Worcester St John's tithe map (1840), where the site comprised eight separate enclosures. The tithe apportionment data with readable numbers for the site is given within Table 1 below. Plot 231, 'Chapel Meadow', was particularly noted.

Owner	Tenant	No	Name
Munn, George	Cooper, John	229	White Leasow
Munn, George	Cooper, John	230	The Yeald
Munn, George	Cooper, John	231	Chapel Meadow
Munn, George	Cooper, John	232	Rushy Meadow
Munn, George	Cooper, John	233	Peachy Meadow
Munn, George	Phipps, Joseph	249	Broomy Hill
Munn, George	Phipps, Joseph	250	Barn Close & Broomy Hill
Munn, George	Phipps, Joseph	253	Pool Meadow

Table 1 Tithe apportionment data for the site, to be read in conjunction with the Worcester St Johns In Bedwardine tithe map of 1841 (WRO ref X760-639)

By 1884 the site had been amalgamated into four fields with the track down the western part of the site shown for the first time, as it remained until at least 1905. The field boundaries are known to have been removed within the 1970s, with some small enclosures (since removed) added in the later 20th century at the south-east end of the site.

2.2 Previous archaeological work on the site

A geophysical survey (Stratascan 2015) identified a number of linear anomalies within the southern and western part of the site. These were interpreted as both possible archaeological features and former field boundaries. Evidence of modern ploughing were interpreted as deriving from the site's more recent agricultural use.

3 Project aims

The principal aims of the archaeological investigation were to:

- Determine the presence or absence of archaeological remains;
- Determine the character, extent, date, complexity, integrity, state of preservation and quality of any archaeological remains present, therefore ensuring their preservation by record; and
- To provide robust baseline information to inform the scoping of a mitigation strategy, should this be required.

The general objectives were to ensure:

- The protection and recording of archaeological assets discovered during the archaeological works;
- That any below-ground archaeological deposits exposed are promptly identified;
- The recording of archaeological remains, to place this record in its local context;
- and to make this record available.

Further, more detailed, research aims may be generated from the results of the fieldwork and specifically in reference to the *West Midlands Regional Research Framework* (2011), and as a focus for post-excavation analysis.

4 Project methodology

A Written Scheme of Investigation (WSI) was prepared by Orion Heritage (Orion 2020). Fieldwork was undertaken between September and December 2020.

57 evaluation trenches, amounting to 4000m² in area, were initially excavated over the 14.3ha site, representing an overall sample of 2.7%. The typical percentage was set out as a 2% coverage in a grid array pattern, increased to 4% to locate a number of linear anomalies identified by the geophysical survey. The 4% sampling areas encompassed trenches 21 to 29 and 44 to 49. These were orientated to best interrogate the geophysical anomalies. The location of all the trenches is indicated on Figure 2.

A subsequent excavation area was opened within the area of trenches 44 to 49 and 51 to expose features identified within the evaluation trenches. This area was itself extended southwards during the period of excavation in order to expose features CG20 to 22 (as discussed below). The total excavation area was 7500m², with a further small trench added to the north-east of the excavation area to investigate the continuation of ditches. See Figure 2 for location of all fieldwork.

Deposits considered not to be significant were removed under constant archaeological supervision using a 360° tracked excavator, employing a toothless bucket. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012) and trench and feature locations were surveyed using a GNSS device with an accuracy limit set at <0.04m. Elements of photogrammetric survey and modelling were also undertaken and located using ground control points within the parameters of the GNSS device as above. On completion of excavation, trenches were reinstated by replacing the excavated material.

All fieldwork records were checked and cross-referenced. Analysis was undertaken through a combination of structural, artefactual and environmental evidence, allied to the information derived from other sources. Features revealed in evaluation trenches 45 to 51 will be discussed in relationship to the excavation area, where more context for these features was available.

The project archive is currently held at the offices of Worcestershire Archaeology. Subject to the agreement of the landowner, it is anticipated that it will be deposited at Worcestershire County Museum.

5 Archaeological results

5.1 Introduction

The features recorded in the trenches and in the excavation areas are shown in Figures 2-9, and Plates 3-9. The trench and context inventory is presented in Appendix 1.

5.2 Site phases

See Figures 4-14.

5.2.1 Natural deposits

Natural deposits consisted primarily of sands and gravels within the excavation area, with increased red clay marls on the western side of the site (Plate 1 and Plate 2 of the evaluation trenches; Plate 3 of excavation area).

Very few clear natural features, such as tree-throws (217, 365), were recorded; these were either omitted from field recording, or are included in the undated features (see below).

5.2.2 Phase 1: Pre-medieval

A small, round pit of possible Iron Age date was present (299) that was 1.10m in diameter and 0.43m in depth with a charcoaly fill. Its profile, near-vertical sides and flat base, was noticeably different from the other features of this type. Two other pits (543 and 545) were located on the south-western side of Phase 3 enclosure CG20. These were oval in plan and up to 1.8m in length with a maximum depth of 0.46m, had sandy fills and contained a small amount of Roman period pottery, including samian ware. The pottery comprised small sherds, and so a post-Roman date seemed the most likely.

5.2.3 Phase 2: 12th to 14th century AD

House plots

Two extensive irregular enclosures (though very truncated, especially northwards) were the earliest main features across the site and probably constituted medieval house plots (tofts). These were as follows:

CG1/?CG3 – a north-east to south-west 30m long ditch, 1.6m in width and 0.33m deep, had two terminal ends curved northwards. It is possible that **CG3**, maximum width 1.1m and 0.35 deep, was a continuation of CG1 (or CG2), beyond an entrance into one (or both) of the plots.

CG2/CG14/CG8/CG9/CG19 – ditch **CG2**, with a maximum width 2m and 0.32m depth, also has a similar curved end towards the north, before being truncated by CG14. **CG14** continued CG2 in a south-eastern direction, potentially recutting the earlier feature. This contained material of 13th to 15th century date, and was 1.28m wide by 0.30m deep. This alignment headed towards a dip in the landscape where the escarpment down to the Laughern brook is less steep, possibly for drainage, though also possibly as a routeway to the brook. **CG8** was seemed parallel to the eastern end of CG2, and ditch **CG9**, 1.08m wide and 0.40m deep, truncated CG8, but also continued it. Ditch **CG19**, 2.94m wide and 0.60m deep, truncated CG18 at its western end, and ran on a parallel alignment with CG14. At the western end, its fills contained a particularly large amount of pottery, dating to the 12th to 13th century.

Truncation by later ploughing has totally removed parts of these ditches. It is likely that CG1/2/3 taken together formed two plots divided centrally by CG3.

Features internal to plot CG1

Within the bounds of CG1 there were elements of structures no more than 0.35m in depth: **CG4** (Figures 5 to 7) consisted mainly of thirteen postholes (0.35 to 0.70m in diameter). They most likely represent a building aligned north to south, with an addition to the north-west, its dimensions would have been approximately 6m in length and 4m. Its broadly medieval date was confirmed by pottery of

11th to 14th date from posthole (467), but sparsity of finds precluded a clear picture of the purpose of this structure, that is whether domestic.

Possibly associated with CG4 were two shallow pits (437 and 433; Plate 5 and Figures 5 to 7), up to 1.40 m in diameter and up to 0.21m in depth, both (438 and 434) containing a large amount of burnt grain and pieces of oak charcoal. These are interpreted as waste pits after processing had gone badly wrong (but for an alternative explanation see Environmental report below). A shallow ditch (435), 0.84m wide and 0.32m deep, truncating pit (433), again contained cooking pottery of broadly 11th to 14th century date. The plan of this feature suggested it was also enclosing the CG4 structure to some degree.

Four further pits were located to the south-west of CG4, (427, 429, 431, 367), with (429), and also contained pottery of 11th to 14th century date. All except (367; Plate 6) were fairly small with no clear function. Pit (367), oval in plan, 3.3m long, over 1.50m wide and 0.40m deep, contained (368-70) 12th to 14th century pottery with burnt deposits and a central deposit of clay, potentially indicative of having held liquid on an otherwise free-draining site.

To the south-west of CG4 were another three small features, **CG5**, up to 2.6m long, 0.34m wide and 0.27m deep with slightly concave bases, which were interpreted as beam slots set together on the edge of CG1, though without clear relationship. One of these slots was parallel to CG1, with the other two set at right angles, suggesting CG1 and CG5 were broadly contemporary. The overall length of the structure could not have been more than 3.2m given that it did not extend south of GC1. It is likely that this was a small square or slightly rectangular structure but its function was unclear. Pottery of 11th to 14th century date was again recovered from one of its fills.

Features internal to plot CG2

Enclosed within the south-west corner of CG2 were two parallel beam slots **CG7** (Figure 8 and 9, Plate 7), up to 0.56m wide and 0.15m deep, aligned east to west, and 5.1m long and separated by a distance of 3m, but without associated dating. To its north-east there was a cluster of features made up of pits and postholes. Working out clear associations amongst these features was again problematic, though a tentative suggestion of a pairing could be made: two postholes, c 1m in diameter with steep sides and flat bases (377 and 386) and up to 0.42m deep, where 377 contained a clear postpipe. An intermittent and extremely ephemeral feature of little more than a surface stain with irregular base, **CG6**, was cut by CG7, and in line with one side of the latter, and so related in some way.

On the northern edge of shallow pit 381 was a small depression which could have held upright timbers such as staves, though this interpretation is again problematic without further such clearly associated features. There were six further small postholes (372, 374, 379, 410, 414 and 416) up to 0.18m in depth and 0.38m in length, along with five pits (401, 403, 405, 407 and 422). The latter were fairly shallow with low sloping sides, and even some degree of irregularity, most notably in feature 401, and their fills were relatively sterile.

While quite busy in terms of features this enclosure was notably accompanied by little in the way of finds.

Chapel

Adjacent, but beyond the other two (?domestic) plots, there was an earth-fast constructed building, **GC22** (Figures 10 to 12), standing on its own. This consisted of twenty postholes, some of which were recuts, but the structure was made up primarily of eight posts forming four cross frames and three bays. Assuming a central point of each posthole for its post and, therefore, wall and sill beam positions, this would give building dimensions of 10.5 by 3m (34 by 10 feet). The three bays were of unequal length measuring respectively 3.8m, 4.05m and 2.4m from east to west (see Figure 13 for an outline reconstruction of its possible appearance). Three-dimensional models of the features as

discussed below half sectioned can be seen here <https://skfb.ly/6XrKx> and fully excavated here <https://skfb.ly/6XzQz>.

The postholes varied in size and shape, one being ovoid and 2m in length and those at the east end being around 1.1m in diameter, depths varying to a lesser degree (ie 0.44m to 0.66m deep). Some of these had reasonably clear post-pipes within the fills.

Dating evidence was sparse with just a small amount of 11th to 14th century pottery within the fills of these features, both relating to the original build and the rebuilding (repair). With the function of this structure fairly assured the explanation for the small amount of material culture here may, in turn, reflect this function (see Discussion below).

Other features

Gullies **CG15**, **CG16** and **CG17**, 0.70-1.3m in width and up to 0.34m deep, contained material of the 12th to 14th century, and are likely to be remnants of intermittent recutting of other boundary or drainage features. How these features interacted with **CG18** (two sections of shallow ditch with eight postholes running parallel on their northern side, along with two small sections of gully) was not clear, as no relationships were seen. The postholes varied substantially in size, from one of two ovoid postholes at the western end being up to 2.6m long and 0.40m deep with the smallest being 0.60m in radius and 0.36m deep. The smallest of these features were most clearly postholes with steep sides and broadly flat bases, while the larger features were wider and shallower. It was speculated that these features together formed a ditch with a fence alongside.

Parallel ditches **CG10/11/12**, 0.08 to 0.22m deep, overlay earlier ditches, but also respected at least part of the earlier alignment. These may be new subdivisions marking a final stage of the hamlet.

There were a further sixteen features considered likely to be of this phase spread across the site, though mostly on its eastern side. These typically consisted of small pits or possible postholes without any clear association, grouping or function, and many of these were not excavated.

5.2.4 Phase 3: Later medieval

During this stage the site was reorganised, though the chapel remained intact and was set apart now within its own enclosure. The latter was broadly square, measuring 34m across, and truncated the earlier features, though relationships were not always clear. It was formed of double ditches **CG20** and **CG21** (Figure 14), with the inner ditch, CG21, 1.5 and 0.30m wide and up to 0.60m in depth, defining an area 24m across. The outer ditch, CG20, was between 2.10 and 1m wide and up to 0.56m in depth with a fairly shallow profile (it was truncated by Phase 4 ditches along its northern side). On its north side, the outer ditch CG20 (ie ditch 229; Figure 14), had largely been truncated away by the Phase 4 trackway and contained material of no later than 12th century. Otherwise the fills of both of these ditches were almost sterile, and the sparse finds recovered dated to between the 1st and 14th centuries AD, strongly suggesting that they were residual, the small sherd size also supporting this interpretation.

Chapel extension/repair

Further features were excavated next to the chapel building **CG22** itself. Two posts were added at the western end, which were smaller and much shallower, suggesting that they were not part of the original construction. They did not quite match the full width of the original building either, again suggesting later addition. The remaining new postholes, mostly at the west end of the building, were variable with no clear sense of pairing and groupings. An interpretation for these may be occasional repair of the main structure with the posthole positions being for temporary wall props. Such an interpretation may also be possible for feature (528) which slightly undercut a main bay frame post as represented by posthole (526), though here it may have been for underpinning and rebuilding, rather than propping. It is noticeable that these features are predominantly at the western end of the building, which would have taken the brunt of the prevailing weather. As illustrated (Figure 10) it is possible

that these features related to repairs at broadly the same time as the enclosure ditches were excavated, by which time the Phase 2 settlement had fallen out of use.

Field boundaries

Ditch **CG23**, 1.90m wide and 0.47m deep, cut through CG1 and CG2, probably also through CG4 and CG7, though without a direct stratigraphic relationship. Its fills contained pottery of 11th to 14th century date, though its relationship to the other features and its alignment with the square enclosure suggested a slightly later date than that of the main settlement (Phase 2); in which case the pottery was probably all residual.

Broadly the same alignment was followed by another ditch (ungrouped), 0.46m deep, on the southern limit of the site. It also contained pottery of 11th to 14th century date. This was probably another new field boundary, as in the case of CG23.

5.2.5 Phase 4: Post-medieval

Two large, parallel ditches **CG24** and **CG25** were cut through numerous existing site features, including the Phase 3 square enclosure, though in the latter case they also respected the chapel enclosure. These ditches contained material spanning the 11th to 19th century, but with the majority being post-medieval. The field trackway/boundaries which these ditches represented persisted into the 20th century, as shown by cartographic evidence. The same feature was encountered in evaluation trench 54 where was an east to west aligned 1.7m wide feature which closely matched a field boundary present on the tithe map of 1841. This feature contained modern material, and so was not excavated.

5.2.6 Phase 5: Modern

Most of the evaluation trenches had subsoils which consisted of a mid orangey brown sandy silt, though with increasing clay content towards the west and south-west of the site. Its maximum depth was 0.20m but it was occasionally truncated entirely, including within the excavation area where topsoils and the medieval features were in direct relationship. This indicates the severity of truncation in this area in particular. Topsoils consisted of mid grey brown sandy silt, again with increasing clay content to the west and south-west of the site. This deposit was relatively deep at around 0.35m, probably due to cultivation of potatoes on the site in recent years.

Modern features were infrequent. Outside the excavation area there were two modern features (not excavated) running between trenches 23, 25 and 28 as well between trenches in 42 and 43. Neither of these were present on the historic mapping and contained modern material so are likely to be of 20th century date. A possible Geotech trial pit was present within the excavation area as well as a number of ceramic field drains, which were also occasionally present in the evaluation trenches.

5.2.7 Undated

There were 47 undated features which included seven small sections of gullies, the remainder being small pits and possible postholes. A majority of these features were not excavated, as they largely consisted of features with fills of similar composition to natural and subsoil deposits, and so probably to be accounted for as natural features. Within the evaluation trenches, a single small possible pit without dating evidence was present in trench 9 (Plate 9).

6 Artefactual evidence

By Laura Griffin

With contributions by Rob Hedge

6.1 Introduction

The artefact report conforms to standards and guidance issued by the Chartered Institute for Archaeologists (CIfA 2014c; 2014d), as well as further guidance on pottery analysis, archive creation and museum deposition created by various pottery study groups (PCRG/SGRP/MPRG 2016), the Archaeological Archives Forum (AAF 2011), and the Society of Museum Archaeologists (SMA 1993).

6.2 Aims

This analysis aimed to identify, sort, spot date, and quantify all artefacts and describe the range of artefacts present. The information has been used to provide a full analysis of the significance of the artefacts.

6.3 Methodology

6.3.1 Recovery policy

Artefacts were recovered according to standard Worcestershire Archaeology practice (WA 2012). The majority of artefacts collected in the field were recovered by hand, but a small quantity of further material was retrieved from environmental samples (see below).

6.3.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. This date was used for determining the broad date of phases defined for the site. All information was recorded on a Microsoft Access 2007 database, with tables generated using Microsoft Excel.

The pottery was examined under x20 magnification and referenced as appropriate by fabric type and form according to the fabric reference series maintained by Worcestershire Archaeology (Hurst and Rees 1992; WAAS 2017). Where possible, forms were categorised and dated using the appropriate published typology for the specific fabric type and referenced appropriately below.

Artefacts from environmental samples were examined but none were worthy of comment and so are not included below. Iron and copper alloy objects were radiographed by Pieta Greaves of Drakon Heritage, in order to aid identification where possible.

6.3.3 Discard policy

Artefacts from topsoil and subsoil and unstratified contexts will normally be noted but not retained, unless they are of intrinsic interest (eg worked flint or flint debitage, featured pottery sherds, and other potential 'registered artefacts'). Large assemblages of post-medieval or modern material, unless there is some special reason to retain (such as local production), may be noted and not retained, or, if appropriate, a representative sample will be retained. Discard of finds from post-medieval and earlier deposits will only be instituted with reference to museum collection policy and/or with agreement of the local museum.

6.4 Results

The results below provide a summary of the finds and of their associated location or contexts by site phase. Where possible, dates have been allocated, and the importance of individual finds commented upon as necessary.

The assemblage recovered from the site totalled 579 finds weighing 90.12kg (see Tables 2 and 4). The majority of the assemblage was of medieval and early post-medieval date. Sherd size showed

that the pre-medieval pottery (eg Roman average sherd weight 6g) was far more residual (ie degraded due to redeposition) than medieval pottery (9.6g), as might be expected on an essentially medieval site – but it also demonstrates that the medieval finds were also generally well fragmented before deposition in mainly ditches, in keeping with this being regular detritus littering the site. The only variation was for the fabric (average sherd weight 21g) as used for the 'knight' jug, suggesting more primary deposition, especially where this particular vessel was concerned, as its sherds were notably large in comparison with the rest of the medieval pottery.

period	material class	material subtype	object specific type	count	weight (g)
M-LBA	ceramic		pot	5	5
?Iron Age	ceramic		?briquetage	7	39
Roman	ceramic		pot	20	118
Roman	slag	slag(Fe)		2	337
Roman	slag	slag(Fe)	smelting slag	2	258
Roman	slag	slag(Fe)	smelting slag(tap)	1	13
?Roman	ceramic		pot	1	9
medieval	ceramic		?cbm	5	13
medieval	ceramic		cbm	11	59
medieval	ceramic		pot	461	4537
medieval	metal	copper alloy	strip	1	2
medieval	metal	iron	hook	1	25
medieval	metal	iron	nail	10	64
medieval	metal	iron	padlock key	1	18
medieval	stone		quern	2	730
?medieval	ceramic		cbm	1	30
late med/early post-med	ceramic		roof tile(flat)	6	553
late med/early post-med	metal	copper alloy	spherical bell	1	3
late med/early post-med	metal	iron	horseshoe	1	71
post-medieval	ceramic		brick	2	1165
post-medieval	ceramic		pipe	2	9
post-medieval	ceramic		pot	5	190
post-medieval	glass		vessel	15	324
modern	ceramic		pot	7	21
modern	glass		vessel	4	51
undated	ceramic	fired clay		1	7
undated	stone	sandstone		3	10
undated	stone	sandstone	tile	1	351
Totals				579	9012

Table 2: Quantification of site assemblage

6.4.1 Summary of artefacts by period

Prehistoric

All pottery dating to this period was residual. It included five small fragments from a single vessel were identified as being of a quartz and limestone tempered fabric (fabric 5.12; context 310; CG14) and of middle-late Bronze Age date. In addition, there were highly abraded fragments of ceramic which were tentatively identified as sandy briquetage (fabric 1; context 452; CG23) and datable to the later Iron Age.

fabric code	fabric name	count	weight (g)
5.12	Quartz and limestone	5	5
1	Sandy briquetage	7	39

Table 3: Quantification of the prehistoric pottery by fabric type

Roman

Pottery

A small assemblage of twenty sherds of Roman date was retrieved. All were abraded and the majority small, as reflected in a low average sherd weight of just 5.9g and suggesting that even those from contexts with a Roman *tpq*, are likely redeposited, possibly incorporated into features via manuring.

The range of fabrics was narrow (see Table 4), with the majority of sherds being of local production (fabrics 12, 12.2 and 3). Diagnostic sherds included a Malvernian ware lid (fabric 3; context 238) and wide-mouthed jar in oxidised Severn Valley ware (fabric 12; context 511) which could be dated mid-2nd–late 3rd century. The only non-local sherds consisted of two fragments of Central Gaulish samian ware (fabric 43.2), one from a Dragendorff 37 bowl with moulded decoration (context 541).

fabric code	fabric name	count	weight (g)
3	Malvernian ware	1	25
12	Severn Valley ware	15	56
12.2	Oxidised organically tempered Severn Valley ware	2	17
43.2	Central Gaulish samian ware	2	20
98	Miscellaneous Roman wares	1	9

Table 4: Quantification of the Roman pottery by fabric type

Iron slag

The only other material likely to be of Roman date consisted of three pieces of iron smelting slag, two of which could be identified as tap slag (contexts 196 and 258).

Medieval

Material of medieval date totalled 467 finds weighing 4472g and could be dated between the late 11th and early 15th centuries. All came from stratified contexts, and all came from contexts securely dated to the medieval period (see Table 2). The group was dominated by pottery, which formed 99% of the medieval assemblage.

Pottery

A total of 462 sherds weighing 4460g were identified as being of medieval date, accounting for 92% of the pottery assemblage (Table 5). Although at 9.6g, the average sherd weight was not as low as observed in the Roman assemblage, the level of preservation was variable across the assemblage, with some sherds showing higher levels of fragmentation and abrasion than others. It is possible that this variability is the result of post-depositional disturbance. However, with very little evidence of residuality amongst the medieval assemblage, it is more likely that the ground conditions have affected preservation, causing softening of sherds and surface degradation.

The range of fabrics and forms identified are typical of a rural assemblage of this period from Worcestershire, with locally produced fabrics dominating and only a narrow range of forms, consisting primarily of cooking pots and jugs. However, there was one jug which was highly unusual, due to

being decorated with a knight on horseback (see below). This vessel stood out in what was, otherwise, a very basic, low status assemblage.

Locally produced wares

Pottery of this period was dominated by local wares, primarily of Worcester (fabrics 55 and 64.1) and Malvernian (fabrics 53, 56 and 69) production. In total, 98% of the medieval assemblage comprised these five local fabric types, all of which have been described, dated and discussed at length by Hurst and Rees (Upwich, Droitwich; 1992), and by Bryant (Deansway, Worcester; 2004). The range of forms identified was narrow, with cooking pots dominating the group.

Worcester-type sandy unglazed ware (fabric 55)

Sherds of Worcester-type sandy unglazed ware (fabric 55) formed the largest proportion of these sherds at 48% of the medieval pottery analysed. Diagnostic sherds included one with a simple everted rim (Deansway form 55/2), which could be dated late 11th-mid 12th century. All remaining diagnostic sherds were from thickened, everted rim cooking pot forms (Deansway form 55/3). Typologically, this is the latest cooking pot form of Worcester production, with examples from Deansway indicating production from the start of the 12th century until the mid-14th century, and a definite peak in supply during the 13th century. The marked decrease in the number of these vessels identified with deposits of the mid and late 14th centuries in both Worcester and Droitwich is thought to result from the increase in availability and popularity of metal cooking pots at all levels of society (Le Patourel 1968; Bryant 2004, 290). There is generally a degree of variation noted in the specific rim form of these 55/3 type vessels, and this assemblage was no exception with the group including a flat, almost flared lid seat (context 313), and two examples with a distinctive squared off rim (contexts 105 and 313). There were also two vessels an incised groove running around the top of the rim (context 163). Interestingly, a further cooking pot with a grooved rim was retrieved from this latter context, but this example was in the Malvernian fabric (fabric 56; see below). A large number of these sherds displayed blackening and soot deposits characteristic of this type of vessel, and in confirmation of their use for cooking.

Glazed Worcester-type sandy wares (fabric 64.1)

Sherds of this fabric formed 8% of the medieval pottery assemblage, with the majority of sherds being in poor condition with decayed glaze and/or abraded surfaces. However, despite this, a good proportion of the group was diagnostic, and decoration was noted on a number of sherds. This fabric group also included a number of adjoining sherds from an extremely rare vessel with decoration representing a knight on horseback (see more below).

Where surviving, glaze was dark green as characteristic of vessels this fabric, and three sherds also displayed roller-stamping. Although small, a number of sherds were diagnostic, the majority coming from jug forms, including an example with a thumbled base (context 353) and the unusual 'horse and knight' vessel (see below). In addition, there was a small pipkin rim (Deansway form 64.1/6; context 313) and a large strap handle with stabbed decoration, thought to come from either a large jug or pitcher (context 4502). Remaining sherds were undiagnostic but included body sherds thought to come from jug, jar and pitcher forms. Sherds from five vessels had soot deposits on the external surface, as expected, in the case of the pipkin, from its use for cooking. In the case of the remaining sherds, it is not clear if this sooting represents use or had happened following discard, as these were jugs or pitchers (contexts 207, 322, 4502 and 4604), not traditionally associated with use over an open fire.

Horse and knight jug

A total of 23 sherds, many adjoining, were identified as coming from a 'horse and knight' jug (context 103, see Figure 15). All came from the upper and middle sections of the vessel; no base sherds were retrieved. It was made in a glazed Worcester sandy ware fabric and decorated with a thin and patchy green glaze (now largely decayed) over a white slip. This slip could be seen to extend over the rim and down as far as the shoulder on the interior surface. The jug had a complex collared rim, and although no spout survived, the use of a white slip on Worcester products is commonly associated with bridge-spouted forms of 13th-14th century date (Deansway form 64.1/4.2). The handle was

attached at the rim and decorated with a series of vertical slashes running its length. These slashes were carelessly executed running diagonally rather than centrally from top to bottom of the handle, and being irregularly spaced and of differing length. Further decoration around the neck of the vessel consisted of an applied strip with diagonal slashing, running vertically from just below the rim. Although the vessel has broken at this point, the position of this strip is approximately where the spout would have been attached to the body of the jug, and so it is possible that this was used to mask any join with another on the other side of the spout.

The horse and knight were crudely modelled and applied to the widest part of the body. The knight is mounted on the horse, which has its front legs extended, as if in the attitude of galloping. Although surface abrasion has resulted in the loss of some detail, the faint outline of what appears to be a conical nasal helmet can be seen on the knight. There also appears to be some modelling in the cheek area, which may represent cheek guards or chainmail. The only facial feature present is the eye which looks to have been formed by stabbing with a small, circular point. There is the outline of a shield tucked in behind the trunk of the figure, as if being carried on the back. Like those seen on other examples of knight jugs (Dunning 1973, 195; McCarthy and Brooks 1988, 228 and 247) the shield is roughly triangular in shape. The hands are modelled without any detail but appear to be holding the horse's reins as well as another object, thought to be a weapon, which is straight and pointing upwards. Due to the sherd having broken at this point, it is only possible to speculate as to what this weapon was, but, on balance, it seems most likely a sword. The horse is even more basic in appearance, having a snout, two ears and a single, slightly bigger eye formed in the same manner as that of the knight. The two front legs appear to have been formed from a slightly curved piece of clay, with an incised line along its length.

This is the first vessel of its kind identified in Worcestershire. Traditionally 'knight' jugs appear to be the product of a limited number of industries largely confined to the North and East Midlands, and Yorkshire (McCarthy and Brooks 1988, 228, 247, 266 and 277). However, the Worcester potters are known to have produced zoomorphic/anthropomorphic vessels and roof finials during the 13th-14th century, with examples identified at Worcester and, also, nearby Droitwich (Jones 1999; https://www.britishmuseum.org/collection/object/H_1974-1001-1_1). These include a horse and rider finial from Droitwich, thought to represent the ruling king of the time it was made (Jones 1999, 154). It is interesting to note that such vessels and finials do not appear to have been produced in Malvernian fabrics, the other main producer of pottery in Worcestershire. In fact, where still *in situ*, it has been noted that modelled Worcester-made roof finials were sometimes mounted on ridge tiles of Malvernian production (D Hurst, pers comm). Therefore, it would seem that the production of zoomorphic/anthropomorphic objects was a particular specialism developed by the Worcester potters during the 13th-14th centuries.

Knight jugs from elsewhere are generally more elaborate and highly decorated than the example from Temple Laugherne, and those produced in Scarborough and Nottingham are generally of tubular spouted form. However, although not as highly decorated or complex, the suspected use of a bridge-spouted form, one of the more unusual and ornamental forms produced by Worcester industry, would seem to be a deliberate choice. It is also notable that other examples of knight jugs are almost exclusively associated with urban sites, making the occurrence of this vessel on a small, lower order settlement in rural Worcestershire even more curious. They can be well imagined to have been intended as centre pieces for more formal eating occasions and, especially, feasting.

Early Malvernian glazed ware (fabric 53)

A single small foot with a circular section (context 505) was typical of this fabric type used exclusively for the production of tubular-spouted tripod pitchers (Bryant 2004, 297) in the mid-12th to mid-13th century.

Unglazed Malvernian ware (fabric 56)

A total of 135 sherds (29%) of this fabric were from cooking pot forms and, as in the case of the Worcester-type cooking pots, the majority displayed external sooting and blackening. Two forms

could be identified; the first being handmade with an everted, upright rim (Deansway type 56/1) which could be dated to the late 12th century and was represented by one vessel (context 163). Remaining identifiable vessels had the more common short everted folded rim type (as seen on Deansway types 56/2-4) and could be dated mid-13th to 14th century (contexts 103, 131, 518, 586 and 4911). Two vessels were notable, the first for having faint incised scrolling around the shoulder (context 313), and the second (mentioned alongside the Worcester-type cooking pots above) for having a groove running around the top of the rim.

Oxidised glazed Malvernian ware (fabric 69)

Just four sherds (18.6%) of this fabric were retrieved, and all could be dated to the medieval period. The absence of late medieval/early post-medieval sherds in this fabric is relatively unusual and would appear to confirm that the main period of occupation on this site had ceased by the 15th century.

Just one diagnostic sherd was present, coming from the base of a shallow bowl dated late 13th-14th century (Deansway form 69.1; context 4502). As seen on many sherds of this form type, the base was sooted on the exterior, indicating use for cooking (Bryant 2004, 301). All sherds were decorated with the characteristic speckled glaze of this ware, although, in the case of the bowl sherd, this was decayed.

Non-local wares

Only five non-local sherds were identified within the assemblage, and all were of fabric types previously identified within medieval assemblages from Worcestershire. Three were from jug forms of 13th-14th century date: one sherd of glazed sandy white ware (fabric 64.2; context 204), and two of Ham Green B (fabric 143.2; context 103). The remaining two sherds were undiagnostic fragments of Newbury A ware.

Miscellaneous medieval wares (fabric 99)

Three sherds could not be confidently identified: a single sandy oxidised sherd with rounded quartz and ?grog (context 426), and two reduced sherds with large, mixed inclusions, similar in appearance to Newbury B ware but not close enough to be confidently identified as such (context 103).

fabric code	Fabric name	count	weight(g)
53	Early Malvernian glazed ware	1	22
55	Worcester-type sandy unglazed ware	276	2088
56	Malvernian unglazed ware	135	1496
64.1	Worcester-type sandy glazed ware	39	821
64.2	Glazed sandy white ware	1	1
69	Oxidized glazed Malvernian ware	4	77
99	Miscellaneous medieval wares	1	1
143.2	Ham Green type B	2	15
157.1	Newbury A ware	2	16

Table 5: Quantification of the medieval pottery by fabric type

Ceramic building material

A total of 23 pieces of ceramic building material could be dated to the medieval period. The majority were small, undiagnostic fragments, but there were seven pieces which could be identified as coming from three flat roof tiles (contexts 233, 236 and 315). All three were of Worcester production with two fabric types identified. The earliest example was of common sandy type (fabric 2a; context 315) and could be dated 13th-15th century. The remaining fragments were of Worcester grog/pellet type fabric (fabric 2c), a distinctive fabric known to have been produced in Worcester from the later 15th century and into the earlier post-medieval period (Miller *et al* 2004).

Stone

Two stone objects were dated to this period, both from a ditch fill (context 518). The first a piece of red sandstone tile. The other was an abraded fragment of an Old Red Sandstone millstone dressed with faint channels in the surface and likely to originate from the mill which once stood on nearby the Laugherne Brook (D Hurst, pers comm).

Metalwork (by Rob Hedge)

A small number of medieval iron and copper alloy objects were recovered and radiograph to aid identification (Plate 10). Condition was poor, due to deleterious soil conditions. The majority of the metal artefacts were handmade iron nails and fragments thereof, ranging in length from 20mm to 70mm.

Phase 2

Of particular note was an iron padlock key within fill 522 of ditch 531 (CG22): a long, tapering stem broadened to a wide, flattened head, which ended in a thicker tip that appears to have been a suspension loop. The bit comprised a perforated loop protruding at right angles to the stem. Overall, the key was approximately 110mm long. It was classified as a Goodall (2011) Type 5 padlock key, similar to several described from periods 8 and (11th to 15th century) at Deansway (Crummy 2004, figs 235-6), and a larger sample from York (Rogers and Ottoway 2002, fig 1453-4). Such keys fitted iron barrel padlocks which spanned the medieval period, but the majority of the York examples of this type with an angled bit appear to be 12th–14th century in date. Given its findspot, the Temple Laugherne find may well have been a key relating to the chapel. The majority of the nails were also recovered from ditch and posthole fills in CG20 and CG22, that is, also, in the vicinity of the timber-built chapel. An undiagnostic bent fragment of iron – possibly a hook – was also recovered from CG20.

Other metalwork included one iron nail within ditch 162 (CG19), and small undiagnostic copper alloy strip was present within ditch 425 (CG1).

Phases 3 to 4

A small fragment from a horseshoe (236) was present within CG24, a post-medieval field boundary. It is not closely diagnostic, but is consistent with a later medieval or early post-medieval date. Another field boundary ditch fill (196) within ditch CG25 yielded a small copper alloy crotal bell, a long-lived artefact type manufactured from the 13th to at least the 17th century. It was associated with residual medieval pottery in a post-medieval context, and was from a part of CG25 effectively, at least in part, recutting chapel enclosure ditch CG20.

Post-medieval

Pottery

The post-medieval pottery assemblage consisted of five sherds dating later 17th-18th century. Four were of dark brown glazed post-medieval red sandy ware (fabric 78; contexts 100 and 316) and the other was of tin-glazed ware (fabric 82; context 316). A single sherd was diagnostic coming from a large baking dish with yellow and brown slip decoration (context 316).

fabric code	fabric name	count	weight (g)
78	Post-medieval red ware	4	177
82	Tin-glazed ware	1	13

Table 6: Quantification of the post-medieval pottery by fabric type

Ceramic building material

Two pieces of brick (contexts 236, CG24; and 320, CG9) were dated to this period. The most complete example appeared mould-made, unfrosted and was relatively thin, with measurable dimensions of 4.5 x 2 inches.

Clay pipe

A bowl and stem from two different pipes were retrieved from a ditch fill (context 233; CG25). The bowl form is comparable to Broseley form 2b dated to the later 17th century (Oswald 1975, fig 7).

Glass

Nineteen shards of dark green glass from three individual vessels were retrieved (contexts 233, 315 and 316; CG25). The two most complete were identified as onion bottles of later 18th century date (contexts 315 and 316; CG25).

Modern

Pottery

Seven sherds of modern pottery were identified. They included two sherds of late 18th century creamware (fabric 84; contexts 315 and 316; CG25), one of banded yellow ware dating mid-19th–early 20th century (fabric 101.2; context 316), and three fragments of pearlware, one with a feathered rim and another with transfer decoration, dated late 18th–early 19th century (fabric 85.11; context 315).

fabric code	fabric name	count	weight (g)
84	Creamware	3	5
85.11	Pearlware	3	9
101.2	Yellow ware	1	7

Table 7: Quantification of the modern pottery by fabric type

6.4.2 Discussion of the artefactual assemblage by phase

Phase 1 Pre medieval

Pre-medieval finds were few and, generally, residual (see above).

Phase 2 12th-14th century AD

This was the main period of domestic activity on the site, which is clearly reflected in the artefactual assemblage (402 finds, including 382 sherds of pottery). As noted above, fabrics and forms within this pottery assemblage largely indicated a low-order rural settlement, with a peak in activity between the 13th and 14th centuries. However, there were two notable items: the 'knight' jug, and the presence of Newbury A ware.

The knight jug is curious, with all other known examples coming from either urban or kiln contexts (see above). It is tempting to connect this vessel with the Knights Templar who owned the manor and estate between 1249 and 1311. However, this still wouldn't explain how such a vessel would have come to end up in the vicinity of a related hamlet. Whatever the reason for the presence of this

vessel, it would clearly have been a prized possession, likely to have been kept for much longer than the cooking pots and more common jug forms which make up the rest of the assemblage. Maybe it was damaged and found its way into peasant hands, before broken beyond use and finally discarded.

The presence of Newbury ware is also of note due to its relative rarity in assemblages from Worcestershire, with only a handful of sherds previously identified. Furthermore, a pattern is emerging that indicates supply of this ware was primarily connected with ecclesiastical manors, with sherds coming from the moated manorial site at Earl's Court Farm, west of Worcester (Newbury Ware A and B; Griffin 2016, 68), an ecclesiastical manor at Kempsey to the south of Worcester (Newbury Ware A; Griffin and Hedge 2015, 10–11), and a further site at Taylor's Lane, Powick, related to the moated complex at Upper Broomhill Farm, which was under the ownership of Tewkesbury Abbey (Newbury Ware B; Bradley 2019, 17). Therefore, from the evidence gathered so far, it is possible that there was a different mechanism for the supply of pottery to ecclesiastical manor sites in comparison to other urban and rural settlements in Worcestershire. However, it is also possible that Newbury wares are yet to be identified in assemblages from Worcester or Droitwich, because vessels of this fabric appear to have been so rare in Worcestershire. Therefore, another possible explanation for these wares coming into the county is via the saltways connected to the supply of Droitwich salt (D Hurst, pers comm). There are three such routes known which crossed Gloucestershire and continued southwards into Wiltshire and the Kennet Valley, where Newbury wares were produced (D Hooke 1985, 125, fig 31). Therefore, it would seem feasible that these vessels were part of a reverse trade, whether as vessels in their own right, or as containers for another sought-after product from that area. It is hoped that the recording of future find spots will add to this data and aid our understanding of this supply network, and the industries involved.

Phase 3 Later medieval

Structurally, this phase is mainly concerned with the later chapel use, though the remains of this actually contained very little in the way of artefacts (72 finds, weighing 1542g). A concentration of iron nails in associated features – though not closely dateable – probably originated with the structure. Almost all of the datable pottery retrieved from this phase was residual. However, the lack of anything notably later than 14th century might well suggest there was little use of the chapel beyond the end of that century, even though its place in the landscape had been firmly established so that later boundaries respected it.

Phase 4 Post-medieval

All material of post-medieval date was retrieved from the upper fill of the driveway (CG 24 and 25) and indicated rubbish discard between the mid-17th and 18th centuries.

Phase 5 Modern

A single sherd of post-medieval blackware was identified in the topsoil.

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
100	ceramic		pot	78	1	20	L17C	18C	18C
103	ceramic		cbm	0	1	8	0		medieval
103	ceramic		pot	56	1	11	L12C	14C	13-14C
103	ceramic		pot	56	1	91	L12C	14C	13-14C
103	ceramic		pot	56	2	77	L12C	14C	13-14C
103	ceramic		pot	56	5	51	13C	14C	13-14C
103	ceramic		pot	56	10	111	13C	14C	13-14C
103	ceramic		pot	56	41	344	12C	14C	13-14C

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
103	ceramic		pot	64.1	1	2	12C	14C	13-14C
103	ceramic		pot	64.1	23	413	13C	14C	13-14C
103	ceramic		pot	143.2	2	15	L12C	13C	13-14C
103	ceramic		pot	157.1	2	16			13-14C
103	ceramic	fired clay		0	1	7	0		
105	ceramic		pot	55	4	25	12C	M14C	12-M14C
108	ceramic		pot	55	1	9	L11C	M14C	M14C
113	ceramic		pot	55	1	10	L11C	M14C	M14C
114	metal	iron	hook	0	1	25	L11C	15C	medieval
163	ceramic		pot	12	1	3	M1C	4C	?E13C
163	ceramic		pot	55	1	14	L12C	M14C	?E13C
163	ceramic		pot	55	2	20	12C	M14C	?E13C
163	ceramic		pot	55	2	39	L12C	M14C	?E13C
163	ceramic		pot	55	8	135	L12C	M14C	?E13C
163	ceramic		pot	55	9	33	12C	M14C	?E13C
163	ceramic		pot	55	129	894	L12C	M14C	?E13C
163	ceramic		pot	56	4	28	12C	14C	?E13C
163	ceramic		pot	56	26	341	L12C	E13C	?E13C
163	metal	iron	nail	0	1	5	L11C	15C	medieval
165	ceramic		pot	43.2	1	1	AD100	AD200	Roman
173	ceramic		pot	69	1	2	13C	16C	13-16C
174	ceramic		cbm	0	3	1	13C	15C	medieval
178	ceramic		pot	12.2	1	6	M1C	4C	Roman
196	ceramic		pot	55	3	1	L11C	M14C	12-14C
196	ceramic		pot	56	1	4	12C	14C	12-14C
196	metal	copper alloy	spherical bell	0	1	3	13C	17C	late med/early post-med
196	slag	slag(Fe)	smelting slag(tap)	0	1	13	0		Roman
199	ceramic		pot	55	2	31	12C	M14C	12-M14C
204	ceramic		pot	12	1	4	M1C	4C	13-14C
204	ceramic		pot	64.2	1	1	13C	14C	13-14C
205	ceramic		pot	55	1	7	L11C	M14C	12-M14C
205	ceramic		pot	64.1	1	9	12C	14C	12-M14C
207	ceramic		pot	55	5	42	12C	M14C	13-14C
207	ceramic		pot	64.1	1	216	13C	14C	13-14C
209	ceramic		pot	56	2	12	12C	14C	13-14C
231	ceramic		pot	55	1	8	11C	M12C	M12C
233	ceramic		pipe	0	2	9	1660	1680	post-medieval

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
233	ceramic		roof tile(flat)	0	3	48	0	L15C+	late med/early post-med
233	glass		vessel	0	1	4	0		post-medieval
236	ceramic		brick	0	1	1148	0		post-medieval
236	ceramic		roof tile(flat)	0	3	505	L15C	M17C	late med/early post-med
236	metal	iron	horseshoe	0	1	71	15C	17C	late med/early post-med
238	ceramic		pot	3	1	25	1C	3C	Roman
258	slag	slag(Fe)	smelting slag	0	2	258	0		?Roman
271	ceramic		pot	12	4	6	M1C	4C	Roman
293	ceramic		pot	55	1	26	L11C	M14C	L11-M14C
301	ceramic		pot	5.12	5	5			prehistoric
313	ceramic		pot	55	1	16	12C	M14C	13-14C
313	ceramic		pot	55	1	23	12C	M14C	13-14C
313	ceramic		pot	55	1	35	12C	M14C	13-14C
313	ceramic		pot	55	5	59	L11C	M14C	13-14C
313	ceramic		pot	56	6	59	13C	14C	13-14C
313	ceramic		pot	56	17	86	13C	14C	13-14C
313	ceramic		pot	64.1	1	5	E13C	L14C	13-14C
315	ceramic		cbm	0	3	44	0		med/post-med
315	ceramic		pot	84	2	2		L18C	L18-E19C
315	ceramic		pot	85.11	3	9	L18C	E19C	L18-E19C
315	glass		vessel	0	4	51	0		post-medieval
315	stone	sandstone		0	2	9	0		
316	ceramic		pot	78	1	75	M17C	18C	L18-E19C
316	ceramic		pot	78	2	82	L17C	18C	L18-E19C
316	ceramic		pot	82	1	13	L17C	18C	L18-E19C
316	ceramic		pot	84	1	3		L18C	L18-E19C
316	ceramic		pot	101.2	1	7	M19C	E20C	L18-E19C
316	glass		vessel	0	14	320	0	L18C	post-medieval
320	ceramic		brick	0	1	17	0		post-medieval

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
322	ceramic		pot	64.1	2	23	13C	15C	13-15C
322	ceramic		pot	69	2	8	13C	15C	13-15C
340	ceramic		pot	55	1	8	L11C	M14C	L11C-M14C
344	ceramic		pot	56	1	4	12C	14C	13-14C
344	ceramic		pot	64.1	5	29	13C	15C	13-14C
353	ceramic		pot	64.1	1	32	13C	14C	13-14C
370	ceramic		cbm	0	2	4	0		medieval
370	ceramic		pot	55	1	14	12C	M14C	12-M14C
371	ceramic		pot	55	1	5	L11C	M14C	L11-M14C
384	ceramic		pot	55	7	31	12C	M14C	12-M14C
394	ceramic		pot	55	8	31	L11C	M14C	L11-M14C
426	ceramic		?cbm	0	5	13	0		medieval
426	ceramic		pot	55	6	69	12C	M14C	L11-M14C
426	ceramic		pot	99	1	1			L11-M14C
426	metal	copper alloy	strip	0	1	2	L11C	15C	medieval
426	metal	iron	nail	0	1	3	L11C	15C	medieval
428	ceramic		pot	55	5	22	L11C	M14C	L11-M14C
430	slag	slag(Fe)		0	2	337	0		
436	ceramic		pot	55	3	32	L11C	M14C	L11-M14C
446	ceramic		pot	55	3	1	L11C	M14C	L11-M14C
446	stone	sandstone		0	1	1	0		
448	ceramic		pot	55	2	14	L11C	M14C	L11-M14C
452	ceramic		?briquetage	1	7	39	MIA	LIA	L11-M14C
452	ceramic		pot	55	26	161	L11C	M14C	L11-M14C
468	ceramic		pot	55	1	1	L11C	M14C	L11-M14C
500	metal	iron	nail	0	2	8	L11C	15C	medieval
505	ceramic		pot	53	1	22	L12C	M13C	M12-M13C
511	ceramic		pot	12	1	23	M2C	L3C	3C
511	ceramic		pot	12.2	1	11	M1C	2C	3C
518	ceramic		pot	55	2	13	L11C	M14C	13-14C

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
518	ceramic		pot	56	4	58	13C	14C	13-14C
518	stone		quern	0	2	730	0		medieval
518	stone	sandstone	tile	0	1	351	0		
519	ceramic		cbm	0	1	30	0		?medieval
525	ceramic		pot	55	3	3	L11C	M14C	L11-M14C
533	ceramic		cbm	0	2	2	0		medieval
533	ceramic		pot	55	7	36	L11C	M14C	L11-M14C
533	metal	iron	padlock key	0	1	18	12C	15C	medieval
535	ceramic		pot	55	6	64	12C	M14C	L11-M14C
541	ceramic		pot	43.2	1	19	AD100	AD200	2C
553	metal	iron	nail	0	1	10	L11C	15C	medieval
575	ceramic		pot	12	3	1	M1C	4C	Roman
579	ceramic		pot	12	1	1	M1C	4C	L11-M14C
579	ceramic		pot	55	1	6	L11C	M14C	L11-M14C
579	metal	iron	nail	0	1	4	L11C	15C	medieval
582	metal	iron	nail	0	1	9	L11C	15C	medieval
584	ceramic		pot	55	3	15	L11C	M14C	L11-M14C
586	ceramic		pot	55	4	33	12C	M14C	13-14C
586	ceramic		pot	56	1	13	13C	14C	13-14C
587	ceramic		pot	55	1	1	L11C	M14C	L11-M14C
592	metal	iron	nail	0	1	10	L11C	15C	medieval
592	metal	iron	nail	0	1	12	L11C	15C	medieval
594	ceramic		pot	12	3	15	M1C	4C	L11-M14C
594	ceramic		pot	55	1	2	L11C	M14C	L11-M14C
602	ceramic		pot	12	1	3	M1C	4C	Roman
602	metal	iron	nail	0	1	3	L11C	15C	medieval
615	ceramic		pot	55	1	6	L11C	M14C	L11-M14C
4502	ceramic		pot	55	1	12		13C	L13-14C
4502	ceramic		pot	55	1	56	L12C	M14C	L13-14C
4502	ceramic		pot	56	9	182	12C	14C	L13-14C
4502	ceramic		pot	64.1	1	4	12C	14C	L13-14C
4502	ceramic		pot	64.1	1	76	12C	14C	L13-14C

context	material class	material subtype	object specific type	fabric code	count	weight(g)	start date	end date	finds TPQ
4502	ceramic		pot	69	1	67	L13C	14C	L13-14C
4602	ceramic		pot	56	2	13	12C	14C	12-14C
4604	ceramic		pot	56	1	2	12C	14C	13-14C
4604	ceramic		pot	64.1	2	12	13C	15C	13-14C
4702	ceramic		pot	55	3	25	L11C	M14C	L11-M14C
4904	ceramic		pot	98	1	9			?Roman
4911	ceramic		pot	56	1	9	13C	14C	13-14C

Table 8: Summary of context dating based on artefacts

6.4.3 Discard/retention

Aside from the horse and knight jug, this is a very standard assemblage made up primarily of locally produced pottery in small and abraded sherds. All material has been fully analysed and recorded and therefore, it is recommended that only sherds from the aforementioned jug need to be retained for the archive.

7 Environmental evidence

By Elizabeth Pearson

With a contribution by Alison Foster

7.1 Introduction

The environmental project conforms to guidance by ClfA on archaeological evaluation and excavation (2014a; 2014b), further guidance by English Heritage (2011) and the Association for Environmental Archaeology (1995).

The underlying soils consist of Freely draining slightly acid loamy soils of low fertility (Cranfield and Agrifood Institute 2021; Soilscape 6). The geology comprises bedrock of Triassic rocks (undifferentiated – mudstone, siltstone and sandstone; (BGS 2021).

7.2 Methodology

7.2.1 Sampling policy

Samples were taken according to standard Worcestershire Archaeology practice (2012). A total of 14 bulk samples were taken from the evaluation and excavation (each of up to 160 litres) were taken from the site (Table 9).

7.2.2 Processing and analysis

The samples were processed by flotation using a Siraf tank. The flots were collected on a 300µm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds. The residues were scanned by eye and the abundance of each category of environmental remains estimated. A magnet was also used to test for the presence of hammer scale. The flots were scanned using a low power MEIJI stereo light microscope and plant remains identified using modern reference collections maintained by Worcestershire Archaeology, and a seed identification manual (Cappers *et al* 2012). Nomenclature for the plant remains follows Stace (2010).

An initial assessment of all fourteen samples was made, following which, two samples from grain/charcoal-rich pits were selected for further analysis, that is Phase 2 (12th to 14th century) fills 434 and 438 of pits 433 and 437 respectively. These were adjacent and possibly associated with an elongated posthole structure (?building; CG4).

As the assemblage from fill 434 totalled 160 litres, this was split into a smaller fraction (1/128) to reduce sorting and quantification time. Results are presented for the 1/128 fraction, and also multiplied to present results consistent with the entire assemblage. The entire assemblage from fill 438 was fully sorted and quantified.

Quantifications for charred grass and cereal grains include estimates of whole grains from fragments. Straight and twisted grains of barley (*Hordeum vulgare*) are differentiated for fill 434 only.

Charcoal was examined under a low-power MEIJI stereo light microscope, in order to determine the presence of oak and non-oak charcoal, but as only oak was recorded, no further analysis was undertaken.

Context	Sample	Feature type	Description	Period	Phase	Group number	Sample volume (L)	Volume processed (L)
103	4	Gully	Upper fill of gully [202]. Contained Small Find 1	12th to 14th Century	2	15	20	10
118	1	Ditch	Fill of ditch [117]	Later medieval	3		10	10
143	2	Ditch	Fill of ditch [142]	Later medieval	3		10	10
231	3	Ditch	Fill of ditch [229]	Post medieval	4	25	40	10
300	5	Pit	Fill of pit [299]	Pre-medieval	1		10	10
344	6	Posthole	Fill of posthole [345]	12th to 14th Century	2		20	10
360	9	Pit	Fill of pit 358	12th to 14th Century	2		10	10
369	7	Pit	Fill of pit [367]	12th to 14th Century	2		20	10
370	8	Pit	Fill of pit [367]	12th to 14th Century	2		20	10
434	10	Pit	Fill of pit [433]	12th to 14th Century	2		160	90
438	11	Pit	Fill of pit [437]	12th to 14th Century	2		50	10
454	12	Pit	Fill of pit [453]	Later medieval	3		30	10
500	14	Posthole	Fill of posthole [501]	12th to 14th Century	2	22	10	10
509	13	Pit	Fill of pit [508]	undated			20	10

Table 9: List of bulk samples

7.2.3 Discard policy

Remaining soil sample and residues (post scanning) will be discarded after a period of three months following submission of this report, unless there is a specific request to retain them.

7.3 Results

7.3.1 Charred plant macrofossils and charcoal

Results

The results are summarised in Tables 10 and 11.

Phase 2 (12th to 14th century) fills 434 and 438, of pits 433 and 437 respectively, from the vicinity of possible building (CG4) produced charred plant remains made up of almost entirely cereal grain, with small quantities of weed seeds, presumably crop contaminants burnt with the crop. Occasional fragments of charred hazelnut shell occurred in both samples, but more so in fill 434.

Cereal grains were predominantly free-threshing wheat in both samples, with a small to moderate quantity of hulled barley (*Hordeum vulgare*), rye (*Secale cereale*) or wheat/rye (*Triticum/Secale* sp). Oat may have been intentionally grown with the wheat as a cultivar, but as diagnostic chaff (florets) had not survived, it was not possible to determine whether these were cultivated or wild oats. Brome and smaller grass grains are also presumed to have been crop contaminants.

Weed seeds, present in small quantities included corncockle (*Agrostemma githago*), goosefoot/cleavers (*Galium aparine*) and stinking mayweed (*Anthemis cotula*). The latter were probably reaped with the corn as seeds in seed heads. Many would not have been screened out during the sieving stage of processing, as they are of similar size to the cereal grain, hence, they are most likely to have been hand-sorted from the processed grain for their removal. Other weed seeds, commonly found in assemblages of this date, included vetch (*Vicia sativa*), vetch/pea (*Vicia/Lathyrus*) and nipplewort (*Lapsana communis*), alongside water mint (*Mentha aquatica*), common sorrel (*Rumex acetosa*) and small scabious (*Scabiosa columbaria*).

Uncharred remains, consisting of mainly root fragments and occasional weeds seeds are assumed to be modern and intrusive, as they are unlikely to have survived in the soils on site for long without charring or waterlogging.

Context	Sample	Charcoal	Charred plant	Unch*	Artefacts
434	10	abt	abt**	occ	occ clay pipe, fired clay, burnt stones
438	11	mod	mod**	occ	occ fired clay

Table 10: Summary of environmental remains; occ = occasional, mod = moderate, abt = abundant, * = probably modern and intrusive, ** = quantification includes estimate of whole grains from fragments

Latin name	Family	Common name	Habitat	434* 1/128 fraction	434 – whole assemblage	438
Charred plant remains						
<i>Triticum aestivo-compactum</i> grain	Poaceae	club wheat	F	8	1,024	
<i>Triticum aestivo-compactum</i> type grain	Poaceae	club wheat	F			65
<i>Triticum</i> sp (free-threshing) grain	Poaceae	free-threshing wheat	F	665	85,120	1018
<i>Triticum</i> sp grain	Poaceae	wheat	F	17	2,176	3
<i>Triticum/Secale</i> sp grain	Poaceae	wheat/rye	F			47
<i>Hordeum vulgare</i> grain (hulled, straight)	Poaceae	barley	F	23	2,994	
<i>Hordeum vulgare</i> grain (hulled, twisted)	Poaceae	barley	F	13	1,664	
<i>Hordeum vulgare</i> grain (hulled)	Poaceae	barley	F	11	1,408	321
<i>Secale cereale</i> grain	Poaceae	rye	F	6	768	
cf <i>Secale cereale</i> grain	Poaceae	rye	F			35
Cereal sp indet grain	Poaceae	cereal	F	106	13,568	17
Total cereal grain					108,722	1,506
<i>Avena</i> sp grain	Poaceae	oat	AF	25	3,200	289
cf <i>Ranunculus</i> sbsgen <i>Batrachium</i>	Ranunculaceae	crowfoot	E			1
<i>Vicia sativa</i>	Fabaceae	common vetch	AB	12	1,536	
<i>Vicia/Lathyrus</i> sp	Fabaceae	vetch/pea	ABCD	6	768	31
<i>Corylus avellana</i> shell fragment	Betulaceae	hazelnut	C	14	252	1
<i>Rumex acetosa</i>	Polygonaceae	common sorrel	ABD			4
<i>Agrostemma githago</i>	Caryophyllaceae	corn cockle	AB	10	1,280	8
cf <i>Agrostemma githago</i>	Caryophyllaceae	corn cockle	AB			14

Latin name	Family	Common name	Habitat	434* 1/128 fraction	434 – whole assemblage	438
<i>Galium aparine</i>	Rubiaceae	cleavers/goosefoot	ABC			5
<i>Mentha aquatica</i>	Lamiaceae	water mint	E			4
<i>Lapsana communis</i>	Asteraceae	nipplewort	BCD			2
<i>Anthemis cotula</i>	Asteraceae	stinking chamomile	AB	11	1,408	5
<i>Scabiosa columbaria</i>	Dipsacaceae	small scabious	BD			1
<i>Bromus</i> sp grain	Poaceae	brome grass	AF	52	6,656	26
Poaceae sp indet grain	Poaceae	grass	AF	273	34,994	
Poaceae sp indet grain (small)	Poaceae	grass	AF	10	1,280	48
unidentified seed	unidentified					+
Grains & grain-sized grass grains					153,572	
Uncharred plant remains*						
<i>Fallopia convolvulus</i>	Polygonaceae	black bindweed	AB	1		
<i>Chenopodium album</i>	Amaranthaceae	fat hen	AB			1
<i>Solanum nigrum</i>	Solanaceae	black nightshade	AB			1
unidentified seed	unidentified					1

Table 11: Plant remains from bulk samples

habitat	quantity
A= cultivated ground	+ = 1 - 10
B= disturbed ground	* = fragments
C= woodlands, hedgerows, scrub etc	
D = grasslands, meadows and heathland	
E = aquatic/wet habitats	
F = cultivar	

Discussion

Composition of the charred assemblages

Both pit assemblages clearly represent processed grain. No chaff remains were recorded, and the occasional weed seeds are mainly those which are of similar size to the grain (such as corncockle), or small seeds which are likely to have remained in seed heads of similar size to the cereal grain. These contaminants are, therefore, most likely intended to have been hand-separated during the final stages of processing.

The two most common weeds, Corncockle (*Agrostemma githago*) and cleavers (*Galium aparine*) are both considered as associated with autumn-sown crops. For instance, Conservation Evidence (2020) states that corncockle has a slight tendency to fruit more in autumn-sown than spring-sown crops. The dominant crop (free-threshing wheat) may have been autumn-sown, but it should be borne in mind that the weed assemblage was probably representative of only a minor component of the crop in the field.

Abundant large fragments of oak charcoal, many of regular size, were also found in association with fill 434.

Origin of the charred remains

It is uncertain what circumstances gave rise to such large assemblages of charred, yet processed cereal grain and charcoal in adjacent pits. There is no evidence to suggest that these are the rakings from a kiln or corn-drier, as no such structures were found nearby. It was common for grain to be stored in granaries or barns during the medieval period, rather than pits, and so that does not account for them. The pits at Temple Laugherne were associated with a structure (CG4), which might have been a granary or barn, but there was no evidence for its destruction by fire, so as produce such an assemblage, and, even then, it might not have been cleared away through burial in pits. In fact the presence of pits on a medieval rural hamlet in the first place is not so easy to explain.

Perhaps the large, consistently sized fragments of oak charcoal also in fill 434 hold the key. They could be the remains of a barrel or wooden box (or tun, see below), and hence, it is suggested that the grain may have been stored in this way. As spontaneous combustion of grain stores is known (Claridge and Langdon 2011), it is possible that the charred grain from fill 434 resulted from spontaneous combustion of grain stored in a wooden barrel or box. Accordingly, Claridge and Langdon (2011) mention the difficulty with long-term storage of grain in wooden tuns:

'Wheaten flour held in wooden tuns was even more sensitive to lengthy storage and was liberally dosed with salt to prevent insect infestation and, above all, kept in cool conditions, pre-eminently in cellars, as the purveyance accounts again abundantly testify.'

No doubt the peasants of Temple Laugherne would have had stocks of grain, especially as they were involved in its production as agricultural labourers.

Valuation of pit 433 in terms of bushels of wheat, loaves of bread and acres of land

Bushels of wheat

The total number of cereal grains from fill 434 (pit 433), for the entire assemblage, is estimated to represent around a 1/3 of a bushel of grain, based on calculations relating to a Winchester bushel and Troy pounds described by R D O'Connor (2012). He states that a bushel of wheat should weigh 64 Troy pounds. When grain-sized grass grains are included, which are difficult to separate from the cereal grain and probably would have been milled with cereal grains into flour, the assemblage would represent around half a bushel. Considering that the pit is thought to have been truncated, this is a significant quantity of grain to lose by its incineration.

Loaves of bread

If the assemblage is considered as a half bushel (see above; includes large grass grains), then it represents around 20 to 25 loaves (either 1½lb or smaller 0.5kg loaves respectively) based on modern measures of U.S. bushels and 1½lb loaf equivalents of commercially made white bread (National Association of Wheat Growers 2021). Scully (1995) found that the amount of bread a single person consumed in a day was remarkably similar across Europe, and amounted to 2lb a day. Based on this estimate, the assemblage from pit 433 would represent between 15 and 19 days' ration of bread for one person.

A person's days' work

In terms of bushels on average produced by a person in a year (viz prepared, harvested and processed), the contents of pit 433 represented only a small percentage of the annual production of between 266 and 296 bushels per person (according to estimates by Karakacili 2004, based on Essex village records).

Farming economy of the site

Documents of the Worcestershire Templar sites show that their Worcestershire manors produced grain. Nicholson (2016) states that:

Accounts for Lawerne [Temple Laugherne] cover only the last eleven weeks of year two, and years three to six. They show similar sources of income and expenses and similar employees [to other Templar sites in western England mentioned in the text], with a woodward employed with two ploughmen and drovers, potage being made for the farm labourers and general maintenance costs. Income included 8s from servile 'works' which had been commuted, the sale of underwood, herbage hay and garden produce, sale of grain from the mill and pleas and perquisites of court.

The site lies on slightly acid loamy soils which would have been easily tilled but are known to be of low fertility (Cranfield and Agrifood Institute 2021; Soilscape 6), so production of grain (as on many farmsteads) would have been limited by the need to rotate leaving fields fallow, and rotate grain production with grazing. The remains reported on here form a tangible link to the account set down in the medieval period for the operation of farming on this manor.

7.3.2 Animal Bone

By Alison Foster

Methods

Hand-collected vertebrate remains

Subjective records were made of the state of preservation, and the bones were examined for evidence of dog gnawing, burning, butchery and fresh breaks which was noted where applicable. Where pieces of the same bone could be refitted the pieces were recorded as a single element.

Where possible, fragments were identified to species or species group using modern comparative reference material and published works (eg Schmid 1972). Remains that could not be identified to species were grouped into categories: large mammal (assumed to be cattle, horse or large deer (cervid), medium-sized mammal 1 (assumed to be sheep/goat (caprine), pig or small deer), medium-sized mammal 2 (from a cat or hare-sized mammal), and completely unidentifiable.

Vertebrate remains from samples

The bone extracted from each sample residue was weighed, the fragment frequency recorded semi-quantitatively and the maximum linear dimension of the largest bone fragment from each sample measured.

Results

Identifications and descriptive details of the hand-collected vertebrate remains, including quantification, fragmentation and preservation, may be found in Table 12. Table 13 records a few additional fragments recovered during the evaluation stage of the works (Project no P5848). Table 14 details the vertebrate remains recovered from the sample residues.

Hand-collected vertebrate remains

A total of 35 fragments (33 after refitting) were recovered from medieval and post-medieval ditches and a pit dated to 12th-14th century (Table 12). Preservation of the material was generally poor to very poor, with no discernible phase or area-related variation. Very few of the bones could be identified to species. The fill of a Phase 2 ditch (CG2) produced a sheep/goat mandibular molar. Cattle remains were limited to an upper molar from a Phase 3 ditch (CG23) and a very eroded third phalanx from the post-medieval boundary ditch (CG25). None of the material was suitable for recording metrics or tooth wear. No butchery marks were apparent, or carnivore tooth marks, although the poor condition of the bones would make identification of these features unlikely.

Vertebrate remains from sample residues

The calcined bone from the environmental sample residues (Table 14) was of little interpretive value except to emphasise the poor preservation on site. Burnt bone is more resilient to acidic soils but more vulnerable to breakage through trampling etc (Estévez 2014; Stiner 1995). These few, tiny fragments probably represent bones incorporated into other material burnt on site and subsequently fragmented and scattered.

Discussion

The small collection of hand-collected vertebrate remains from Temple Laugherne showed very poor preservation with a high incidence of fragmentation. This is corroborated by the negligible amounts of bone present in the environmental sample residues, even from the larger samples (for example, the 40 litres processed from Pit 453 (CG23, P3). The condition of the bone suggests a significant amount of material lost to the adverse burial conditions. The assemblage offers little potential for interpretation beyond informing on taphonomic processes on site.

Phase	Context	Feature	CG	Frag. count	Bone count	Wt (g)	MLD (mm)	Pres.	Comments and identifications
2	204	Gully [202]	15	1	1	<1	20	p	Unidentified: single tiny indeterminate fragment, calcined
	370	Pit [367]	-	13	13	2	24	vp	Unidentified: tiny indeterminate fragments with eroded surfaces
	426	Ditch [425]	1	1	1	6	49	p	Large mammal: scapula blade fragment, eroded, probably cattle
	436	Ditch [435]	-	3	3	1	11	vp	Medium-sized mammal 1: tooth enamel fragments,
	535	Ditch [534]	2	2	2	4	30	p	Sheep/goat: lower 3 rd molar, occlusal surface broken, tooth wear stage not possible Medium-sized mammal 1: tooth enamel fragment
	586	Ditch [585]	-	1	1	3	30	vp	Unidentified: cancellous bone with

Phase	Context	Feature	CG	Frag. count	Bone count	Wt (g)	MLD (mm)	Pres.	Comments and identifications
									eroded cortical surface
3	199	Ditch [198]	23	6	5	41	105	p	Large mammal: long bone fragments, possibly all from the same bone (one refit possible), very soft with abraded surfaces. Probably cattle
	452	Ditch [451]		2	2	17	40	p	Cattle: upper molar, eroded Unidentified: tooth enamel
	579	Ditch [578]	20	1	1	4	24	vp	Unidentified; indeterminate fragment, plus lots of tiny fragments too small to record
	595	Ditch [596]	21	2	1	7	56	p	Large mammal: indeterminate flat fragment, plus crumbs too small to record
4	315	Ditch [314]	25	1	1	7	45	p	Cattle: 3 rd phalanx, worn and abraded, not measurable
	316			2	2	2	29	p	Unidentified: tiny indeterminate fragments
Total				35	33	94			

Table 12: Temple Laugherne, Worcester: Summary of hand-collected vertebrate remains including frequency and preservation from excavation (P5960). Key: 'CG' = context group; 'Wt (g)' = weight of the bone in grams; 'MLD' = maximum linear dimension of largest fragment; 'pres' = preservation; 'g' = good; 'm' = moderate; 'p' = poor; 'vp' = very poor.

Context	Feature	Frag. count	Bone count	Wt (g)	MLD (mm)	Pres.	Comments and identifications
4911	Ditch	5	5	1	20	vp	Unidentified: tiny enamel fragments, probably from sheep/goat cheek teeth
5103	Ditch	3	1	30	140	p	Large mammal: long bone (?tibia) shaft fragment, possibly equid

Table 13: Temple Laugherne, Worcester: Summary of hand-collected vertebrate remains frequency and preservation from evaluation (P5848). Key: as for Table 12

Phase	Context	Feature	CG	Sample no	Sample vol (l)	Weight (g)	Bone fragment abundance (sq)	MLD (mm)	Notes and identifications
1	300	Pit [299]	-	5	10	1	3	8	Tiny indeterminate fragments, calcined
2	103	Gully [202]	15	4	20	1	3	10	
	369	Pit [367]	-	7	20	<1	1	3	
	370		-	8	20	<1	1	13	
3	454	Pit [453]	23	12	40	<1	1	3	

Table 14: Temple Laugherne, Worcester: Vertebrate remains recovered from sample residues. Key: 'Sample vol (l)' = volume of processed sample in litres; 'Weight (g)' = extracted bone weight in grams;

'sq' = semi-quantitative abundance score relating to bone fragments; '1' = 1-5; '2' = 6-15; '3' = 16-50; '4' = 51-200; '5' = 200+; 'MLD (mm)' = maximum linear dimension in mm.

Recommendations, retention and disposal

The assemblage is too small and poorly preserved for meaningful interpretation and does not warrant retention.

8 Discussion

Activity at Temple Laugherne clearly began within the Roman era, as seen predominantly from a background residual assemblage of small pieces of pottery of this period. Such an assemblage is typical of an agricultural hinterland where the practice of manuring was common. What is perhaps most surprising is the virtual absence of later prehistoric activity on a raised and well-drained area of gravel terrace within close access to the Laughern Brook, and more broadly on the western bank of the Severn.

Two settlements were recorded by the time of Domesday. Whilst some of the pottery recovered from the excavated site potentially dated to the late 11th century, these were undiagnostic forms. The diagnostic forms of the same fabric suggested a slightly later date, it is, therefore, unlikely that this settlement was that recorded in the Domesday survey. The precise whereabouts of any late Saxon settlement is, therefore, still uncertain. However, it is likely to not be far away, as springs (see OS 25-inch map revised 1901) lay just to the west of the site draining southwards.

The pottery evidence is certainly strong that the settlement excavated here was present from the 12th century until around the middle of the 14th century, with a peak, according to the pottery evidence, in the 13th to 14th centuries. There is, therefore, a strong possibility that the site at least peaked under the patronage of the Templars after 1249, or, perhaps, was even founded at that time.

Settlement started initially with plots being laid out, which bounded three separate structures/buildings of varying construction. Of the latter, CG4 consisted of a post-built structure of at least thirteen posts though its overall plan form, or even orientation was not clear. It is probable that the structure was built with a post and intermittent sill beam construction, and other such contemporary examples have been seen locally though of a larger scale (Vaughan and Jones 2014). It is worth noting here that the posthole diameters ranged from 0.35 to 0.70m. The post would have been significantly smaller than the posts holes, demonstrating the small section timbers used. As with the wider historic timber building in Britain, it is likely the timber was used fresh cut and of high moisture content which when in contact with the soil would have increased the speed of decay. It is, therefore, likely that this was a short-lived structure, certainly well within a single person's life span – its function remained unclear.

In the case of CG5 there was evidence for construction using sill beams set into the ground. The surviving elements were no more than 2.77m in length, possibly suggesting a small ancillary structure. Timbers would again have been of small section, again suggesting a fairly short-lived structure, though the presence of three slots implies some rebuild. These features were defined by CG1 into a plot area, perhaps also in conjunction with CG3, suggesting some degree of planned site layout, and, therefore, a toft.

There was no way to suggest whether the plots, as defined by CG1/2/3, were contemporary, though given the relatively tight range of ceramic dating of the site as a whole, this seemed likely. The ends of CG1 and CG2 butting each other certainly suggests their being contemporary, with a gap in between, possibly for a path. CG2 bounded an area of activity focused on structure CG7 which was of the same ground-set sill beam construction, though clearer with definite ends to the sill beam features. This made structure of approximately 4.5 by 3.5m in dimension. It is possible that the 4.5m dimension was that of the cross width of the building and that the sill beam slots were cross frames of a north to south aligned structure which was later truncated by modern ploughing and CG23 to the south. Assigning a function was again problematic.

A cluster of pits and postholes to the north of CG7 also had the potential to represent the location of (truncated) structure and associated domestic activity. Some further ditches and divisions (CG10/11/12) were added subsequently, but their purpose was not readily explicable.

Much more of note was a larger building, CG22, aligned east west and originally constructed of three unequal bays, and possibly extended west later by a further small bay. Its dimensions of 10.5 by 3m made for a long thin building, and it, noticeably, had relatively substantial postholes, suggesting it was sturdy and built to be taller than normal. These unusual proportions, along with its pronounced situation on the very top of the hill slightly set away from the other buildings, and a distinct lack of domestic material, make it unlikely that this was a domestic or agricultural function. In fact long after surviving field-name evidence provides an important clue that this was a chapel. Taking its cue from this identification, a speculative reconstruction of this structure has been attempted based on the pattern of postholes (Figure 13). A small bell tower is added to the reconstruction, based upon the westernmost bay being thin, which would allow the tie beams to be spanned and built upon. This fits well with bell towers typically being at the western end of churches and chapels.

The building was constructed with earth-fast posts, a technique typically considered to have started to come to an end with the onset of construction of a full timber frames with posts jointed into continuous sill beams from the start of the 13th century, though examples of buildings constructed with methods associated with earth-fast construction can persist much later (Grenville 1997). For instance, Cruck Cottage at Upton Magna in Shropshire was built in 1269 with its cruck blades set into the ground, and many other later cruck structures were the same, though the evidence is typically missing (Moran 2003). That the field, it lay in, was named on the 1841 tithe map as 'Chapel Meadow', was taken as an important clue, despite a gap of 500 years.

The Knights Templar are known to have owned the estate from 1249, and it remained in their possession until 1311 when it was granted to the Knights Hospitaller. The chapel could have been constructed to display the patronage of the new owners, or it might have been the onset of the Black Death reaching Britain by the summer of 1348, that spurred on its construction. However, given the construction technique of the building, this later date seems unlikely. Other such small chapels are known, particularly in Warwickshire, where there are hints that the villagers got together and funded them, the chapel, therefore, being funded by the community and, where lasting for a short time span, undocumented, so that archaeology, and field-names then become the best evidence (Chris Dyer, pers comm). At Temple Laugherne these have fortunately coincided together.

Such a chapel would be an offshoot of the main parish church, in this case the church of St John, in the parish of St John in Bedwardine, part of Worcester. In England, around 4000 parochial chapels were built between the 12th and 17th centuries as subsidiary places of worship for the convenience of parishioners who lived at a distance from the main parish church (Historic England 2021). Beyond mere convenience, this would have allowed more time for the parishioners to work the estate fields.

The last major medieval addition was a square double-ditched enclosure around the chapel which may have been constructed in two phases – this and the chapel repairs/extension were associated with ceramics no later than the 14th century. With the chapel placed more or less centrally, this enclosure probably marked the extent of consecrated ground, so preventing stock access around the building, especially after the hamlet was abandoned. The ditches are somewhat problematic in that there was no visible entrance to the enclosure, though simple planked access across the ditches would, of course, have been a possibility. Repairs to the chapel (Figure 10) could also have been undertaken at this time, which were primarily at its western end where facing the prevailing weather. The bell-frame, as reconstructed on Figure 13, would also have created movement and stress in the timber frame, so could also have been another factor leading to the need for repairs.

Field boundaries relating to the chapel location, in addition to the field name, persisted into the 19th century (cf WRO BA5403 20/2835), but by the early 20th century had been removed with the creation of new large fields.

8.1 Research aims

The site has the potential to contribute towards a number regional research framework objectives, as outlined in the source below:

Hunt, J, 2011 *The medieval period*, in S Watt (ed), *The archaeology of the west Midlands: a framework for research*, 173–209. Oxford: Oxbow Books

Rural settlement (page 176)

In general terms, the site could add to a map of settlement density in the medieval period and allow an examination more closely the form that it took. It also informs the types of building types in rural settlements, most notably highlighting the small and relatively temporary nature of buildings within this hamlet. It also highlights the continuation of earth-fast building techniques in a period when the longer lasting method of building using a continuous sill beam was becoming prevalent. The structure of the chapel is most notable in this context, being the largest building of the site, with the largest investment. Is it possible that the continuation of the earth-fast technique reflects the structural knowledge of the inhabitants of the site, perhaps it being more likely that it would have been built with sill beam above ground had it been built under the patronage of the manor?

The origins of this small village or hamlet may well again be linked with the patronage of the manor, given their suggested proximity. It is likely that the manor in general was a grange for the wider Templar order, with this settlement providing part of the agricultural input.

The nature and context of the site can also provide further information on the fluidity of settlement and reviewing settlement 'life cycles'. As previously mentioned, the buildings and settlement were of short-lived character, as further highlighted by the ceramic evidence. It may be that hamlet would have persisted past the middle of the 14th century had it not been for the upheaval of the Black Death, with only the chapel maintained beyond this point. Whilst the dating is certainly suggestive of the settlement ending with the Black Death, this interpretation may be too simplistic and, besides, is one that cannot be easily tested.

The secular church (page 201)

The origins of the parish church remain a key research priority. Where and when did this arise, and in what context? Are we dealing primarily with seigneurial foundations between the 10th and 12th centuries? Whilst this site cannot answer these questions directly, as it was not the site of a parish church, it could be a model for the establishment of a settlement with chapel associated with a manor within the 12th or 13th century. Whilst more documentary research is required on this front, it is possible the settlement together with a chapel was set up by the Templar order within the 13th century.

The site can also illustrate how religious buildings related to their communities in various ways, re-acting to patterns of prosperity and decline. It is considered that the chapel was established within the time-frame of the main settlement within the 12th or 13th century, with the settlement abandoned by the middle of the 14th century. The chapel appears to have persisted to some degree past this, with evidence for alterations at a later date, as well as later being surrounded by an enclosure. The wider parish of St John in Bedwardine is context for further consideration, especially with a further former church within its boundaries, at Lower Wick, where elements of the fabric of this structure remain within later farm buildings. The historical record suggests that this was closed after the black death in 1371 as it was ruinous and poorly attended (St John on Bedwardine 2021).

Work, to date, has had a tendency to overlook wider contexts and focus instead on what is visible in standing structures from this period. The result of this approach is that the standing preserved medieval churches have had the majority of attention and that other forms of building, which have not lasted, are under-represented, and even largely unrecognised. This

is true to the degree that rural chapels are not discussed in the frameworks, though this site shows that they would have had a substantial role in rural life.

9 Conclusions

During the evaluation, two areas, within the southern half of the development area, were more intently trenched, in order to target geophysical anomalies. Within one of these areas, a number of medieval features were proven which correlated broadly with the geophysical results, while any other features elsewhere were considered to be of low significance.

Subsequent excavation was focussed on this area of medieval activity, which then revealed a hamlet with at least four earth-fast built structures in the form of posthole alignments and beam slots. These sat within plots. Related to one of these, two pits were filled a large amount of charred grain. The ephemeral nature of the buildings suggested that the settlement was relatively short-lived, and had belonged to the 13th and/or 14th century.

One notable feature of the site was a more substantial building aligned east to west which was interpreted as a chapel. This building came to have its own enclosure, though seemingly only after the main settlement had gone out of use. This enclosure then influenced the laying out of field boundaries, which remained into the 20th century.

The methods adopted have allowed a high degree of confidence that the aims of the project have been achieved. Conditions were suitable in all of the trenches to identify the presence or absence of archaeological features, though some weathering out of features did occur within the excavation area, thereby suggesting some potential for features to have been missed, especially within the evaluation trenches. Further to this, 20th-century ploughing have severely truncated many of the features making much of the structural information difficult to interpret. On balance, it is considered that the nature, density and distribution of archaeological features provides an accurate characterisation of the historical development site as a whole.

10 Project personnel

The fieldwork was led by Tim Cornah ACIfA, assisted by Roland Tilyer, Hazel Whitefoot, Martina Loccatelli, Yago Terrabuto, Chris Crump, Beth Williams, Jamie Wilkins, Elspeth Iliff and Nina O'Hare.

The project was managed by Tom Rogers, MCIfA (fieldwork) and Derek Hurst MCIfA (post-excavation). The report was produced and collated by Tim Cornah. Specialist contributions and individual sections of the report are attributed to the relevant authors throughout the text. Thanks are owed to Helen Nicholson (Cardiff University) for kindly supplying some detailed results from her recent research on the Templars and their estates.

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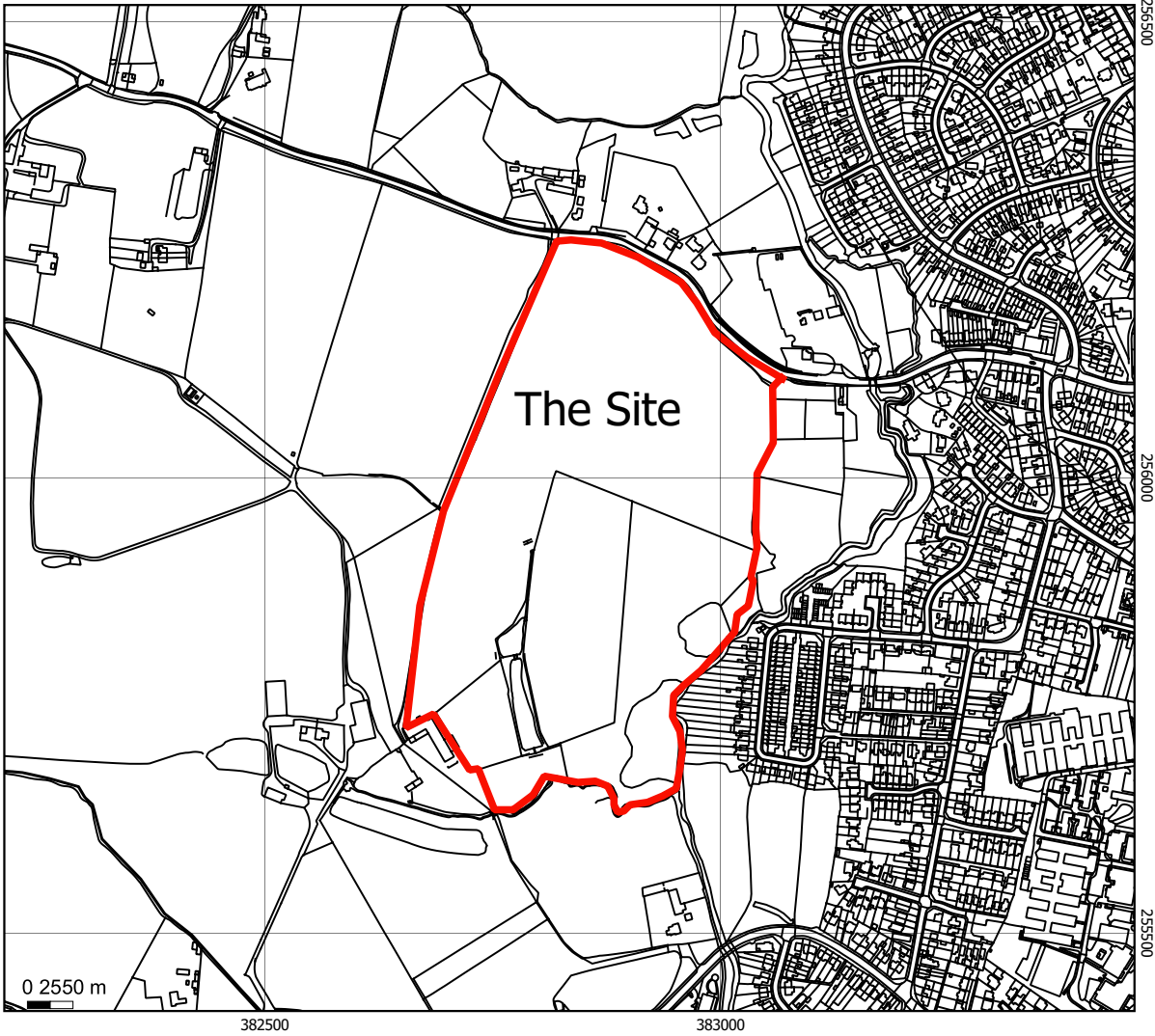
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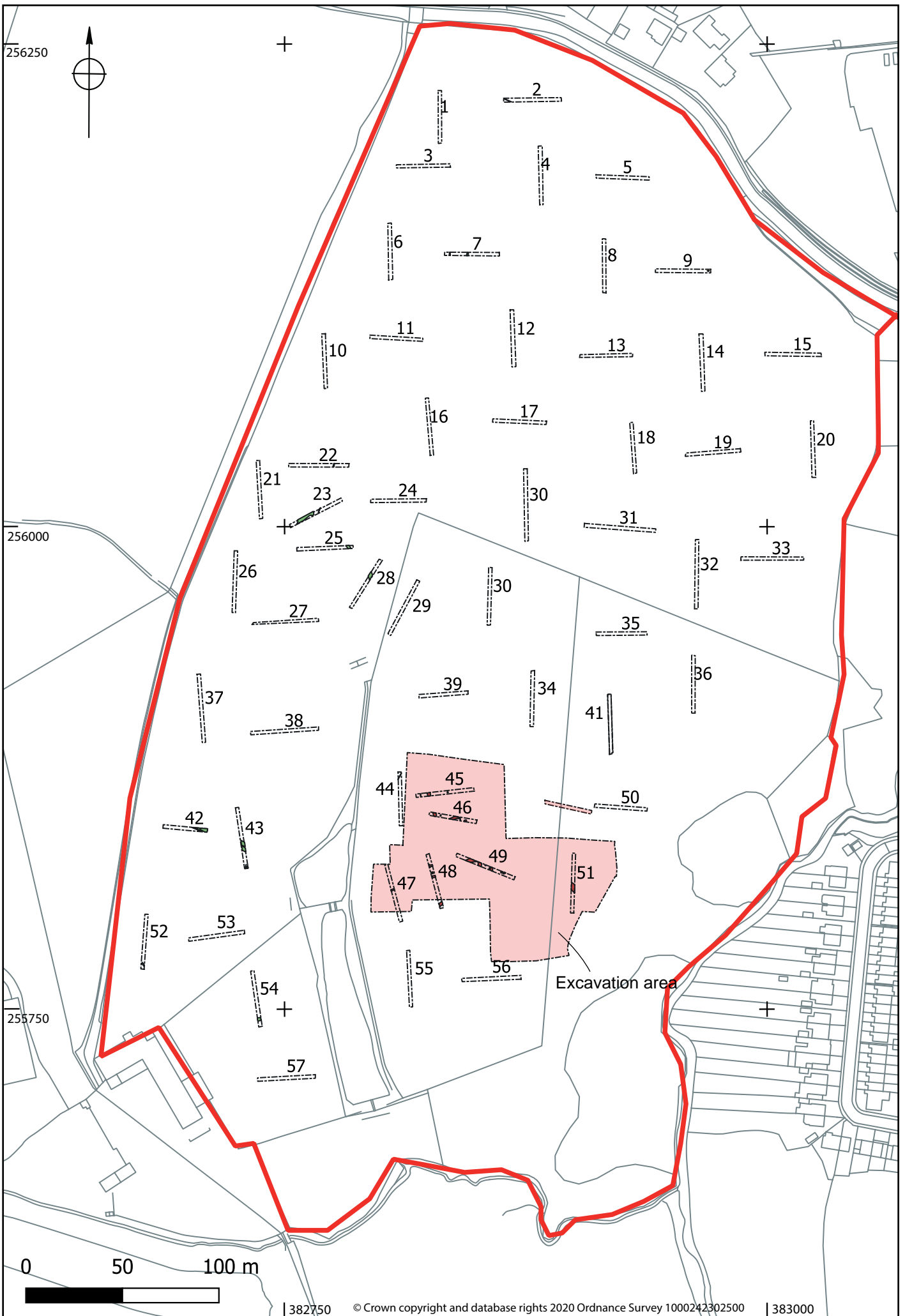
Figures



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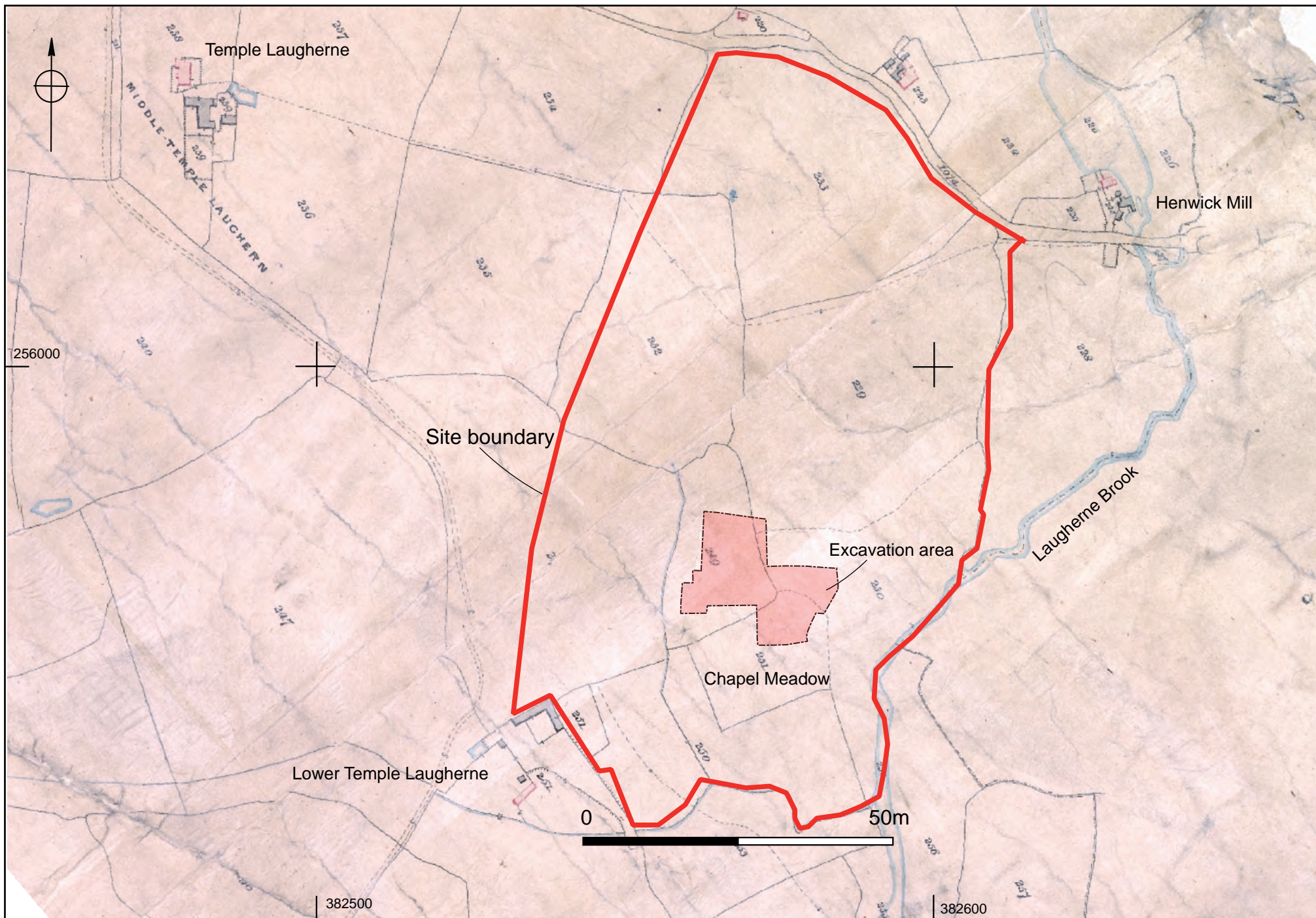
Location of the site

Figure 1



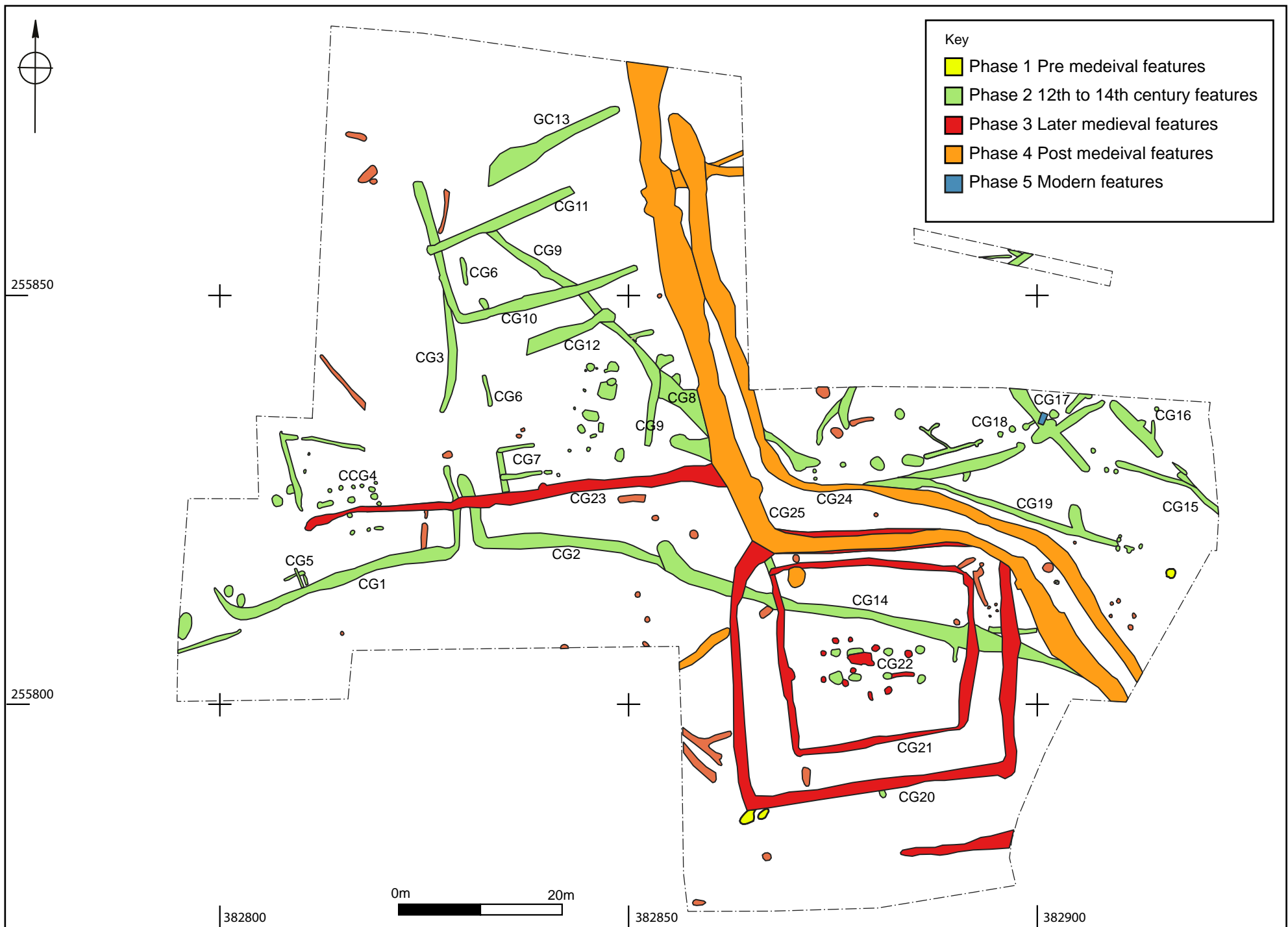
Location of evaluation trenches and excavation area

Figure 2



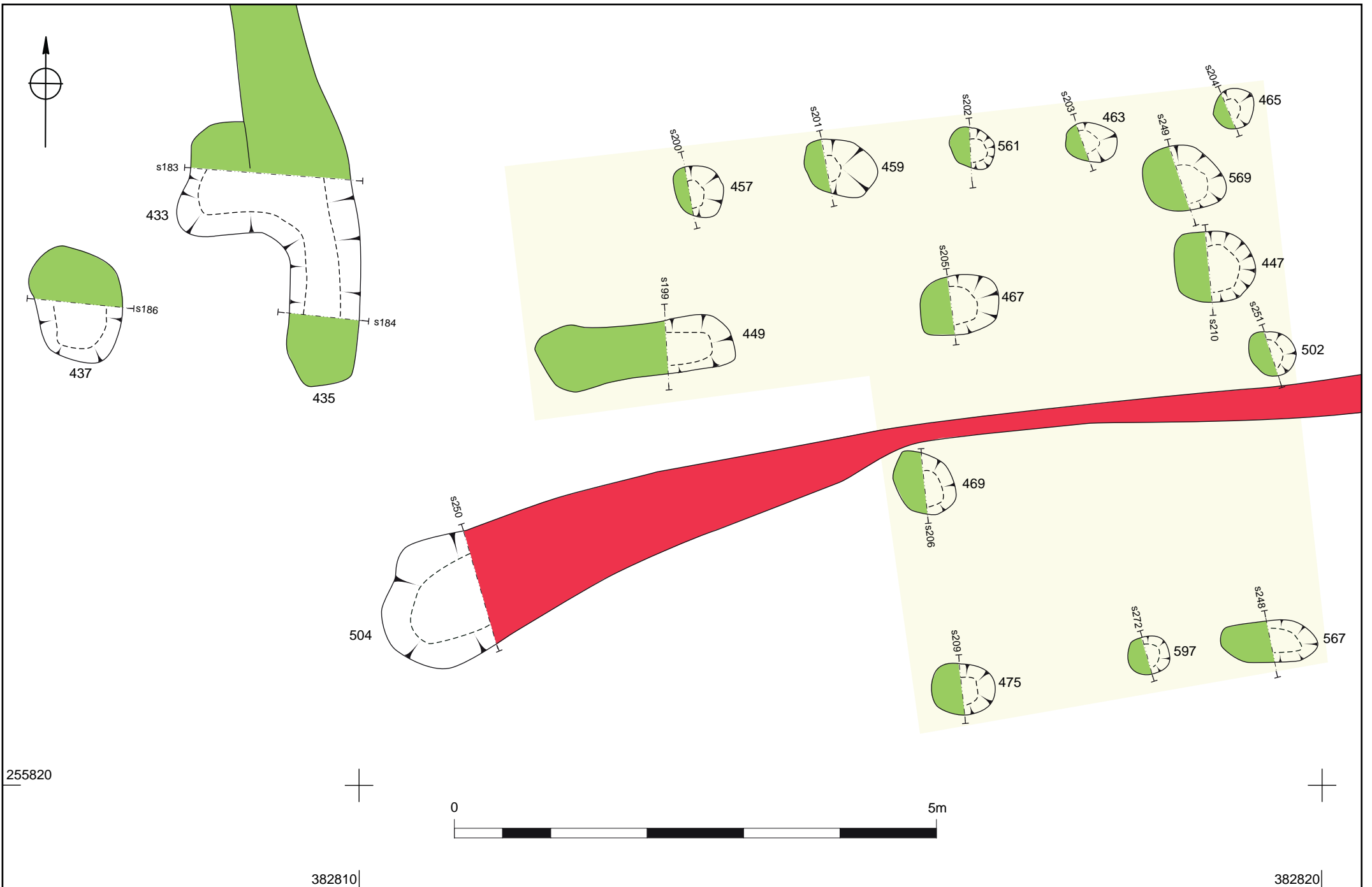
The excavation area and site boundary overlaid onto the 1841 tithe map of Worcestor St. John in Bedwardine (WRO X760-639)

Figure 3



Excavation area phase plan with context group (CG) numbers

Figure 4



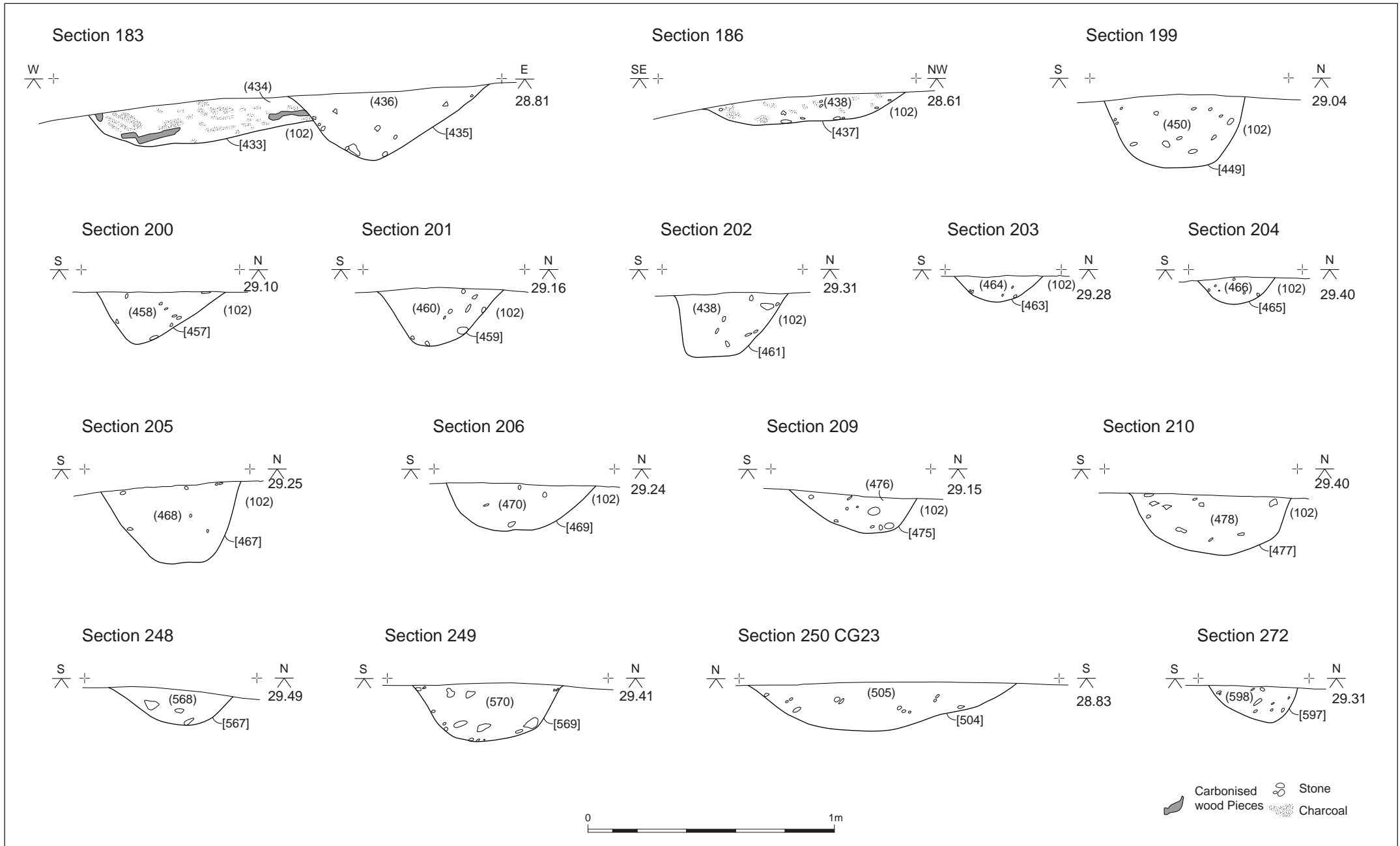
Plan of structure CG4 with pits 433 and 437 and later ditch 504

Figure 5



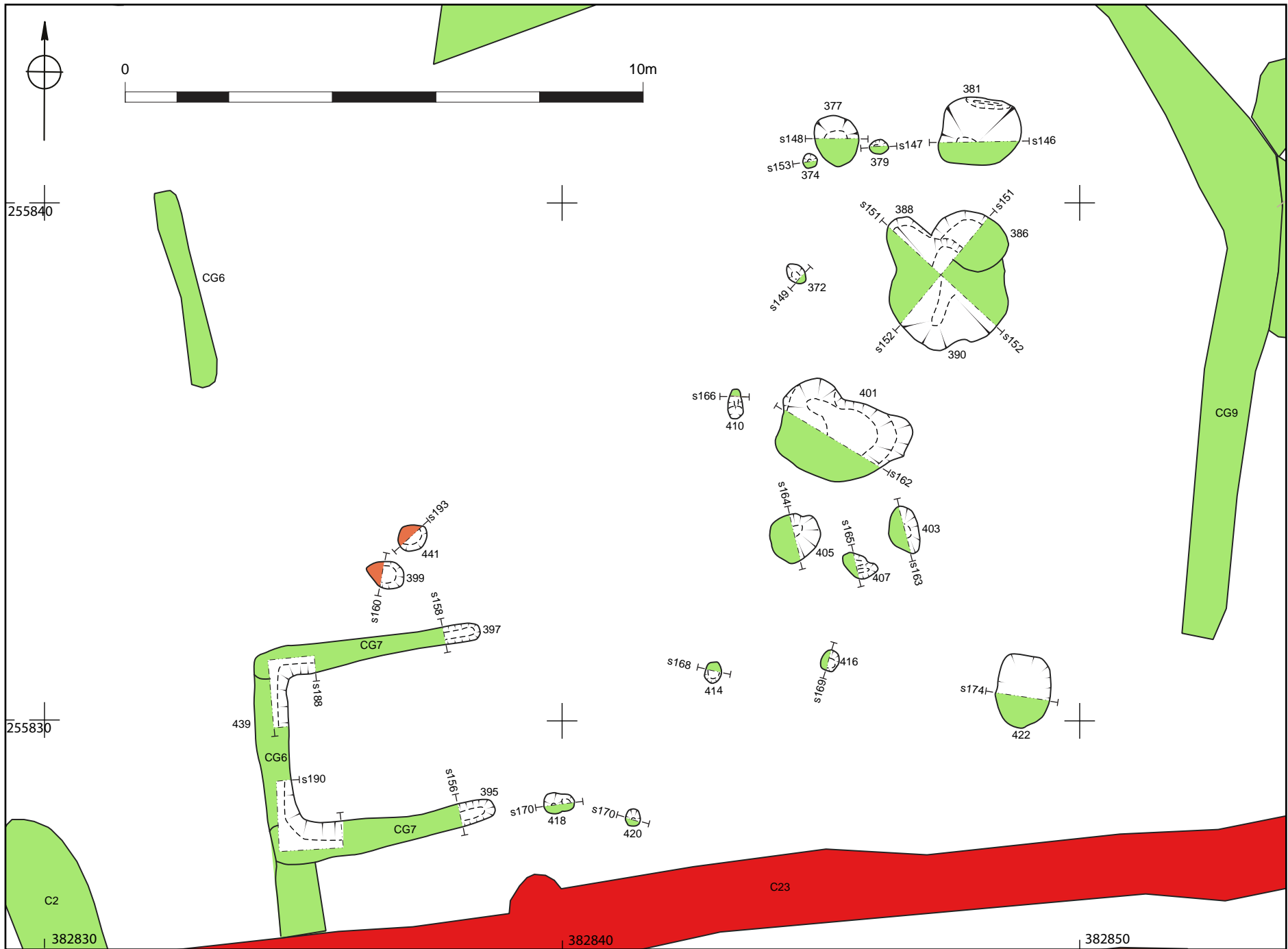
Plan of structure CG4 with pits 433 and 437 and later ditch 504 with photogrammetric plan

Figure 6



Sections of Context Groups 4 and 5 and pits [433] and [437]

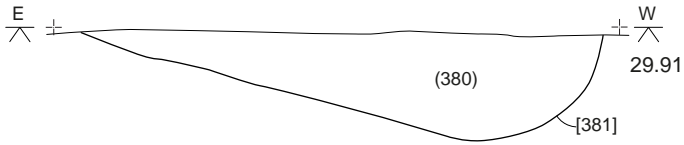
Figure 7



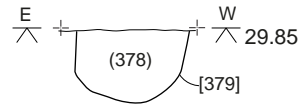
Plan of CG7 and pits and post holes cluster

Figure 8

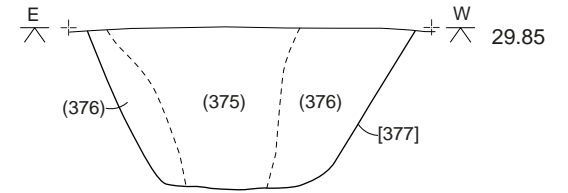
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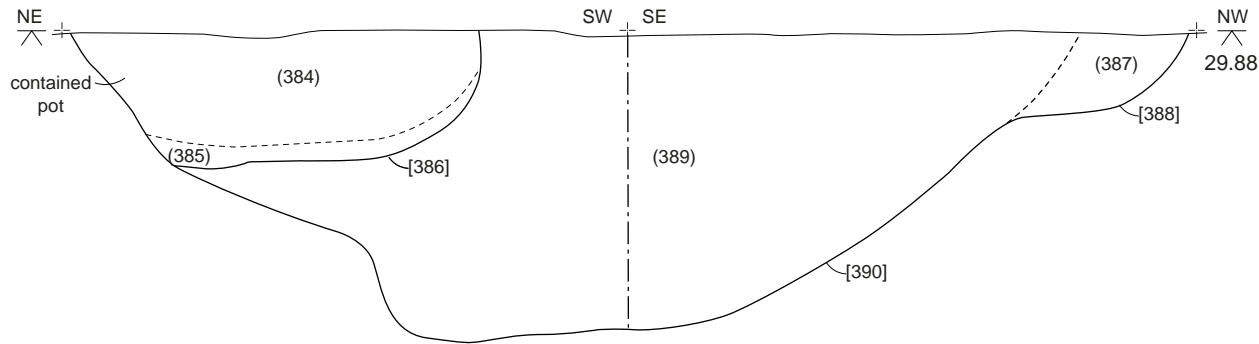
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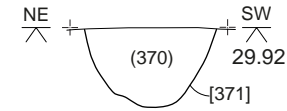
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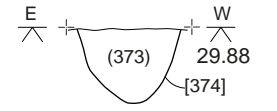
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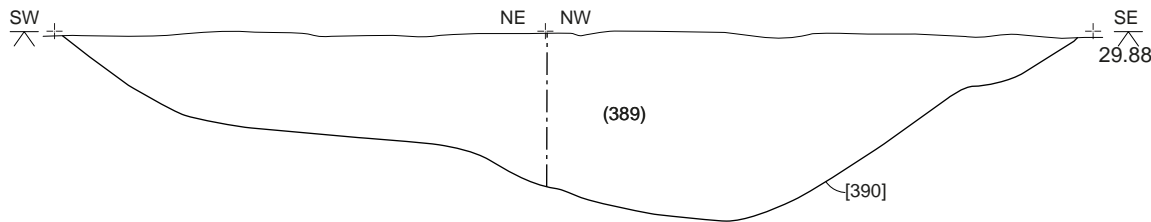
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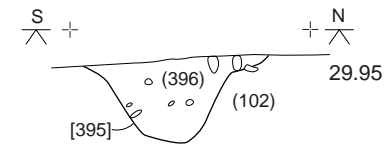
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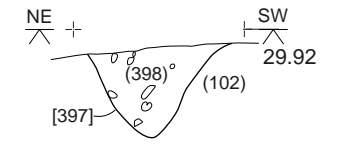
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Section 156



Section 158

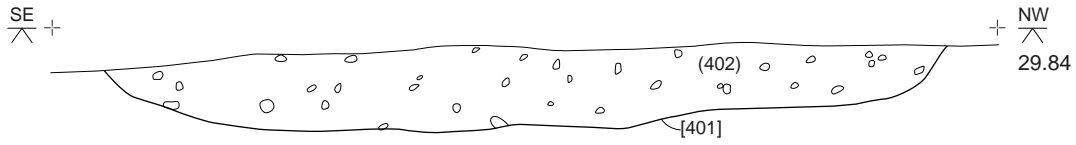


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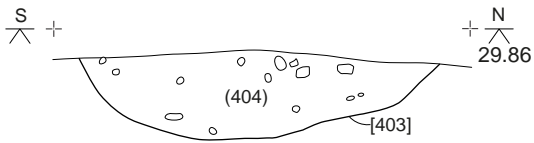
Sections of Context Group 7 and pits and postholes to the north east

Figure 9a

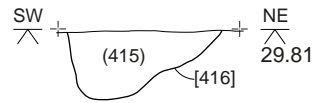
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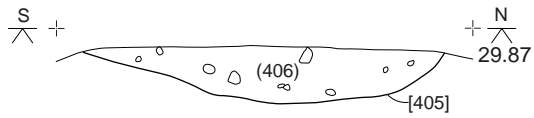
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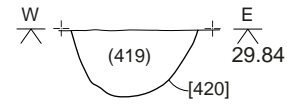
Section 169



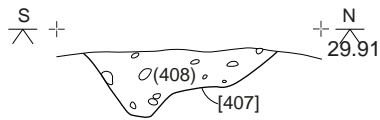
Section 164



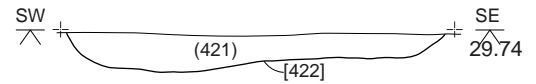
Section 172



Section 165

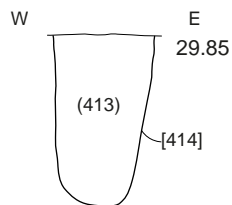


Section 174



Two small diagrams showing a cross-section of a surface with a slight dip, marked with a cross and a triangle on each side.

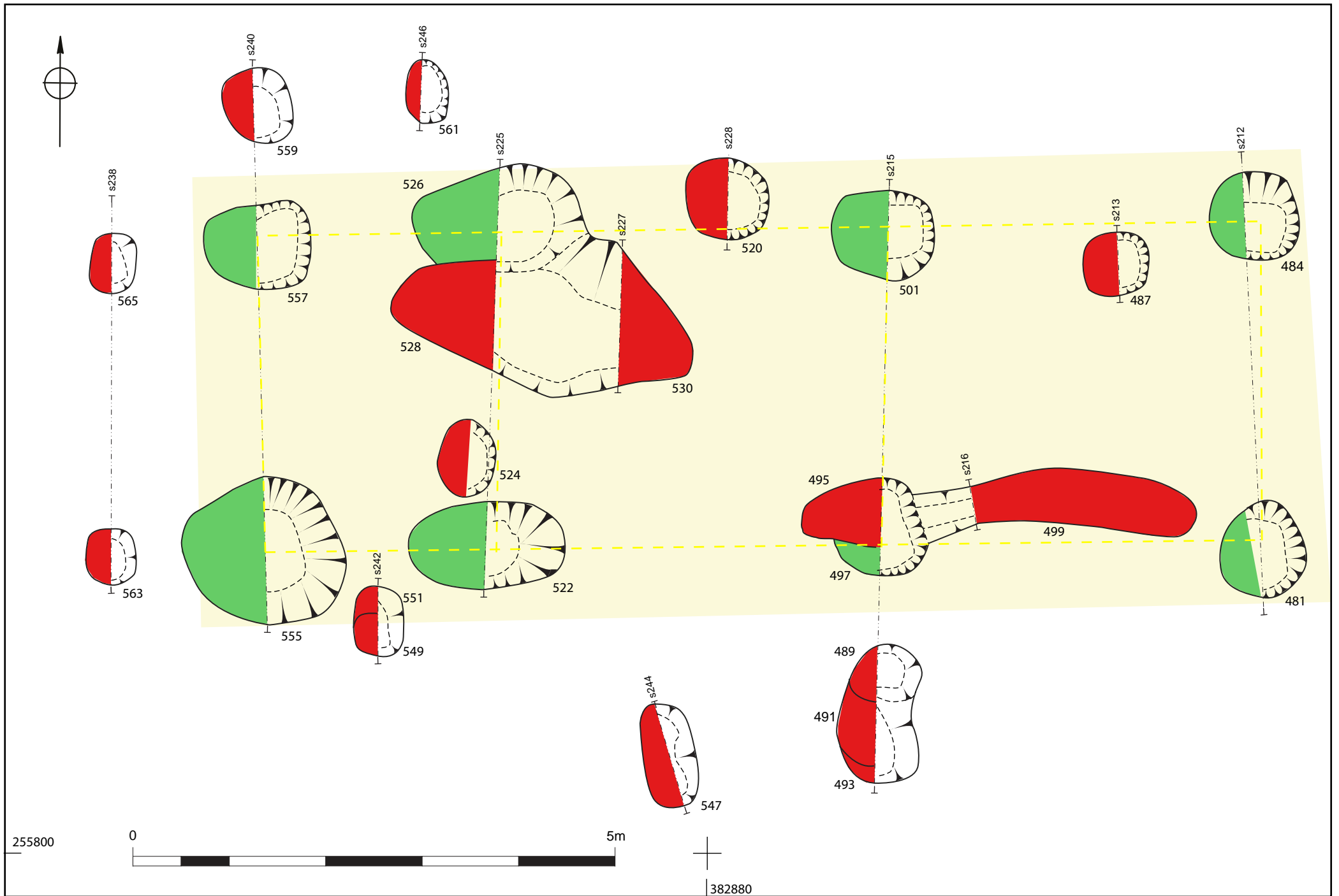
Section 168



Stone

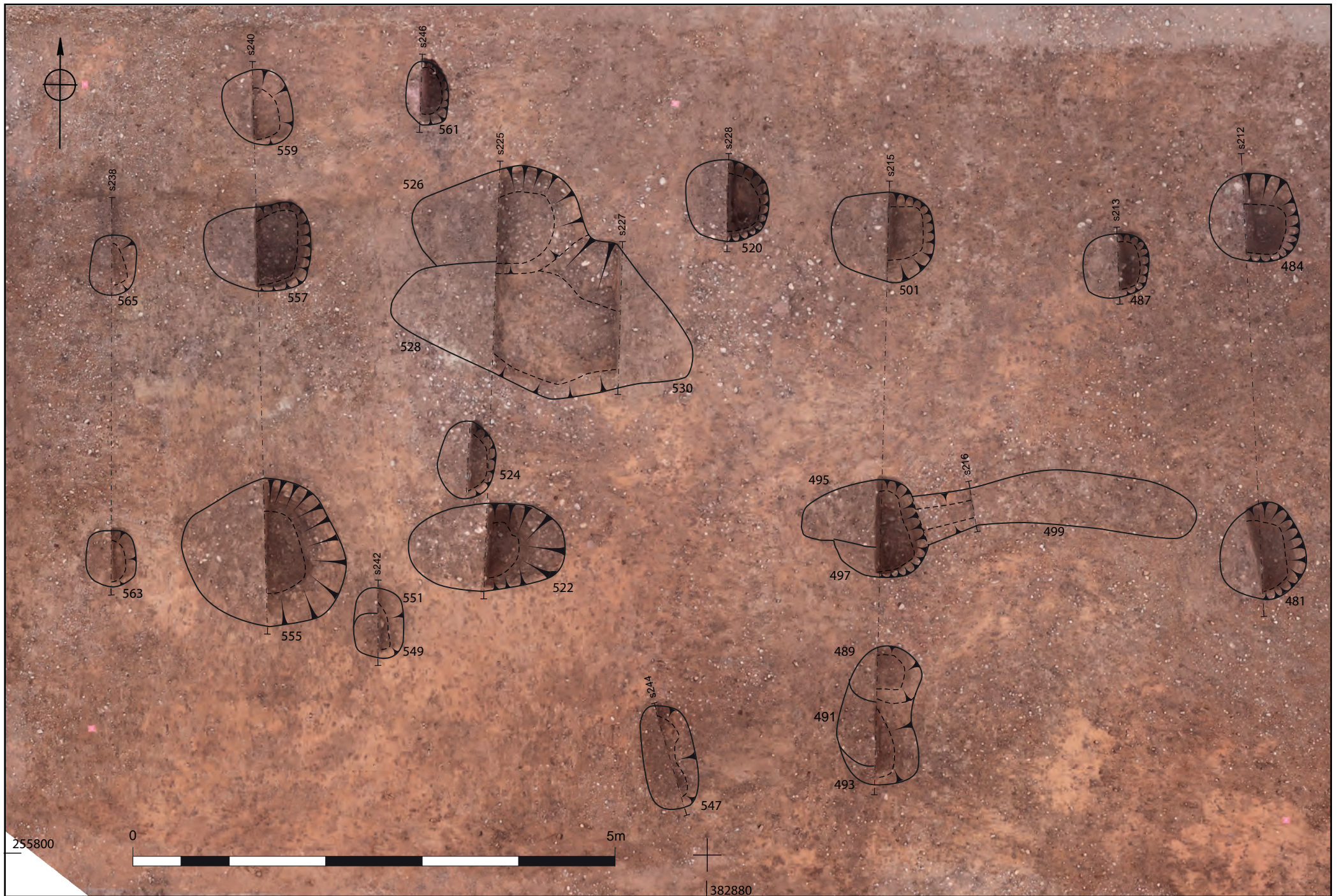
Sections of Context Group 7 and pits and postholes to the north east

Figure 9b



Plan of structure CG22 with interpretive position of wall and cross frame positions

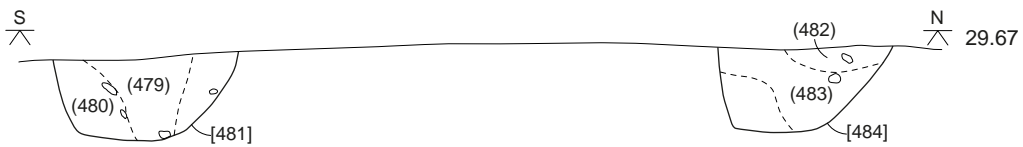
Figure 10



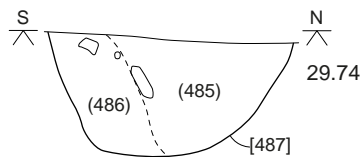
Plan of structure CG22 with background photogrammetric plan

Figure 11

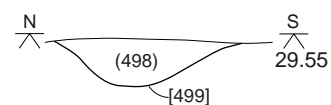
Section 212



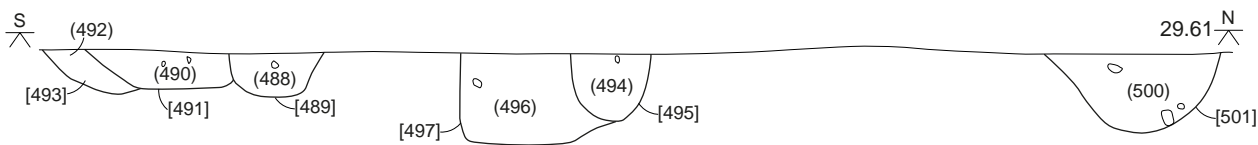
Section 213



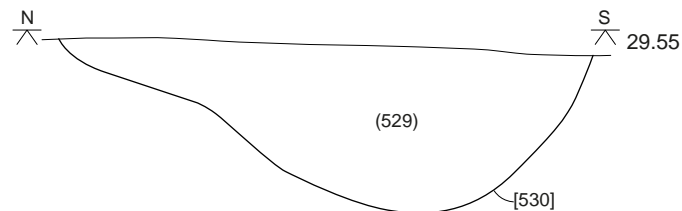
Section 216



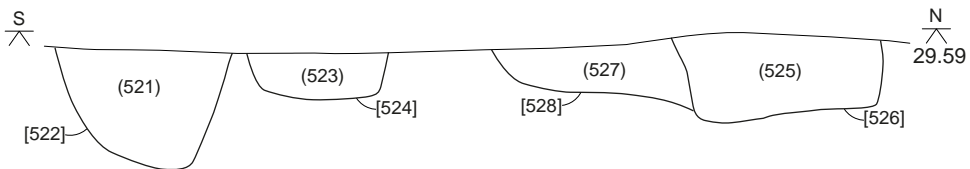
Section 215



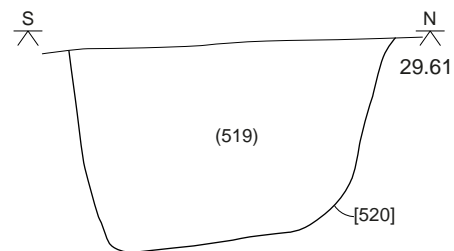
Section 227



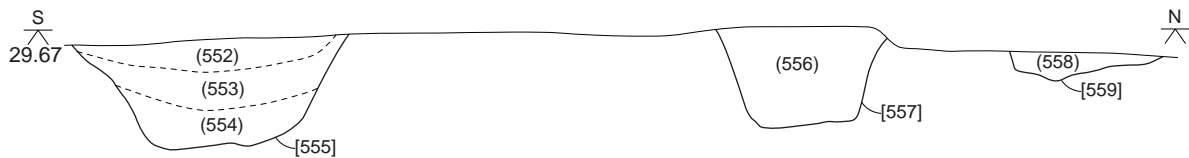
Section 225



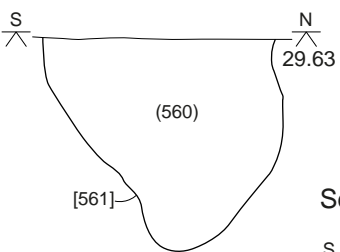
Section 228



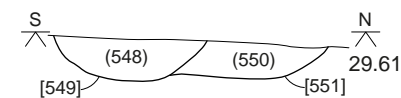
Section 240



Section 246



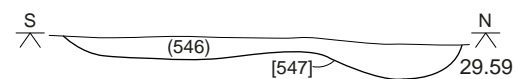
Section 242



Section 238



Section 244



Stone

Sections of Contact Group 22

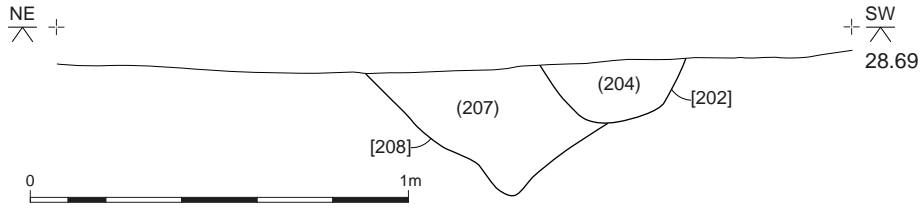
Figure 12



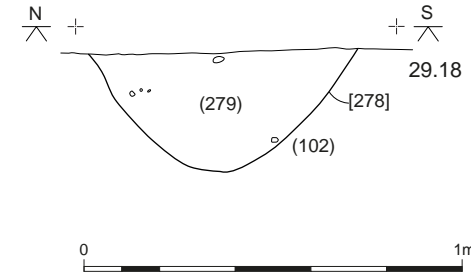
Interpretive reconstruction of the chapel, overlaid onto CG22 features, looking north-west

Figure 13

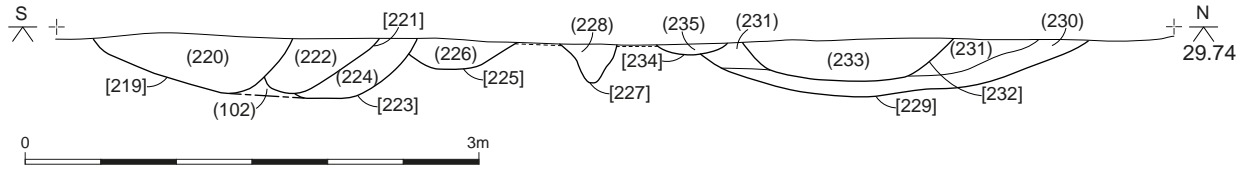
Section 47 CG15



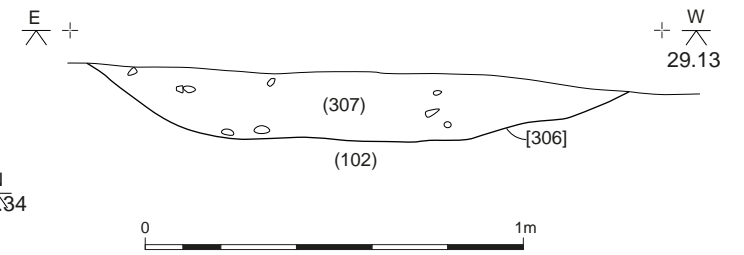
Section 96 CG18



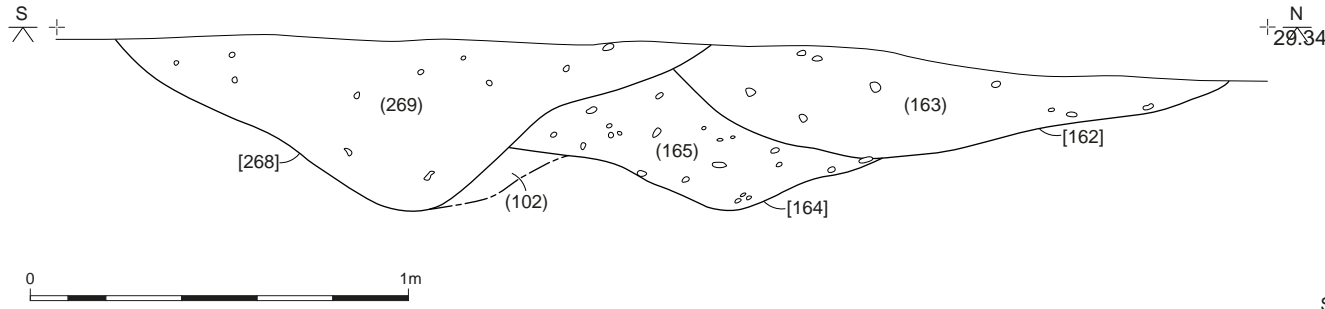
Section 64 CGs 20, 21, 25



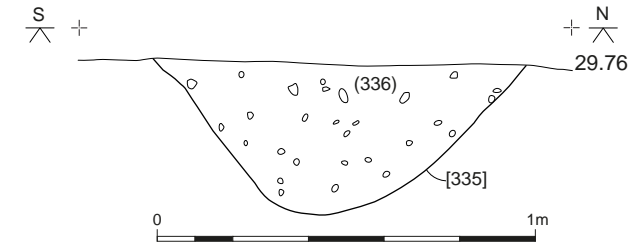
Section 107 CG17



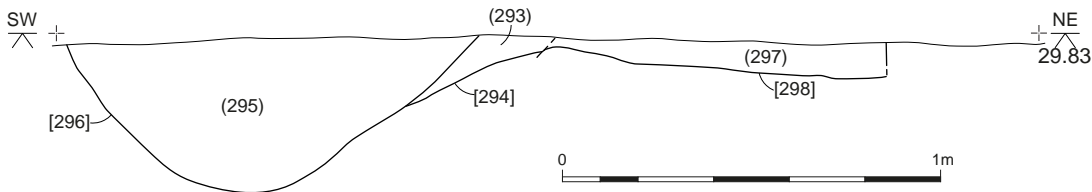
Section 82 CG24, 18, 19



Section 116 CG13



Section 102 CG9

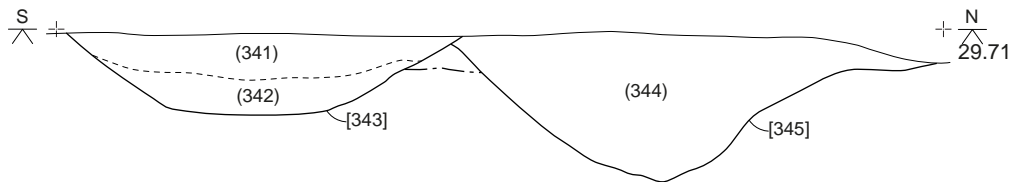


Stone

Sections of ditches

Figure 14a

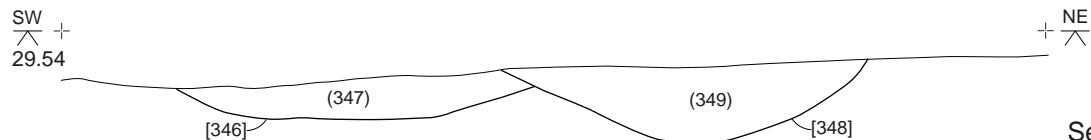
Section 120 CG10



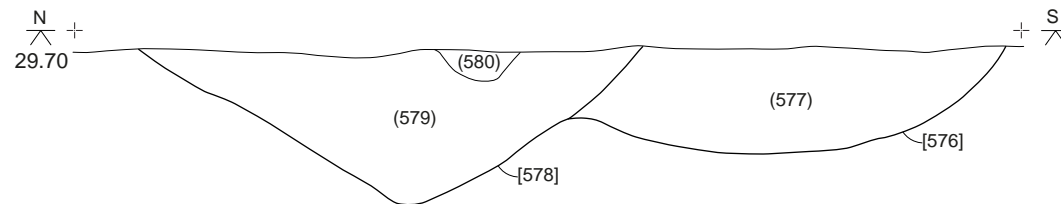
Section 232 CG2



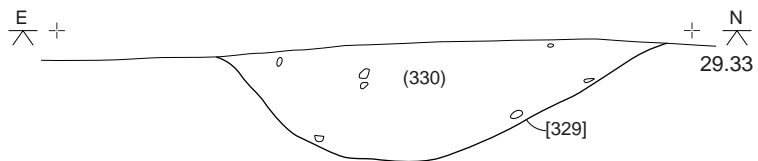
Section 122 CGs 3 and 10



Section 257 CG20



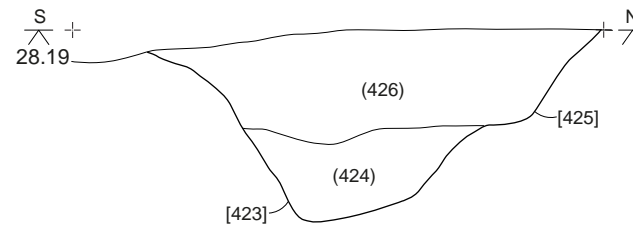
Section 131 CG18



Section 116 CG13



Section 179 CG1



Section 230 CG1



Stone

Sections of ditches

Figure 14b



Knight jug

Figure 15

Plates



Plate 1 Trench 3 looking east, scale 2x1m



Plate 2 Trench 52, looking south, scale 2x1m



Plate 3 General view of the excavation area during soil strip, looking north-east



Plate 4 Structure CG4



Plate 5 Pits 433 and 437



Plate 6 Pit 367



Plate 7 Beam slot gully 397, part of CG7, looking east, scale 0.5m



Plate 8 CG20, looking south, scale 2x1m



Plate 9 Pit 903, trench 9, 0.5m scale, looking north

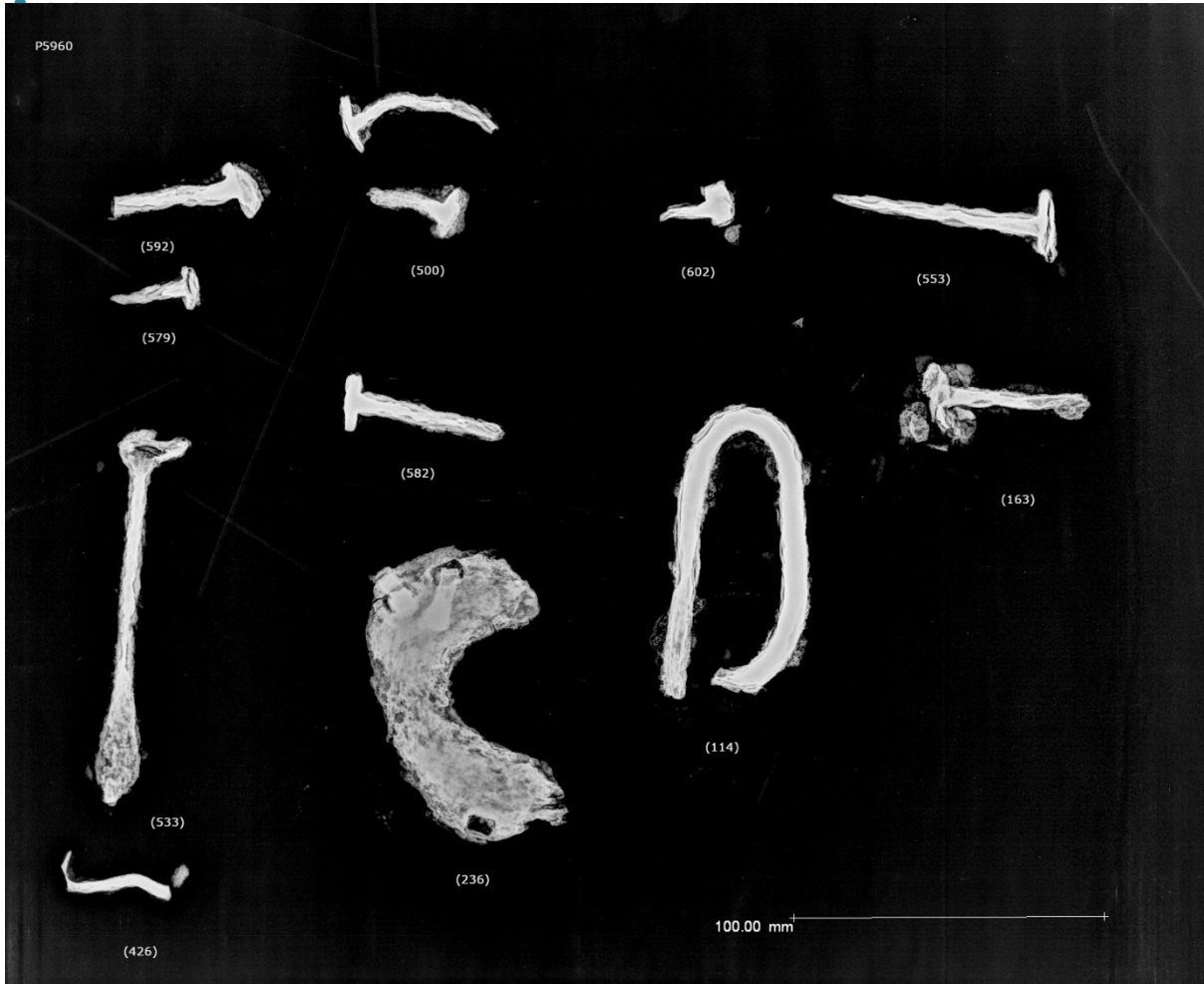


Plate 10 Radiograph of metalwork

Appendix 1: Evaluation trench descriptions

Context summary:

Context	Feature type	Context type	Interpretation	Height/ depth	Deposit description
100	Topsoil	Layer	Topsoil	0.3	Loose Dark brown Silty clay/sandy clay
101	Subsoil	Layer	Subsoil	0.12	Moderately compact, friable Dark orangey brown Sandy clay
102	Natural	Layer	Natural		Compact Light yellowy brown/dark orangey brown Sandy clay
200	Topsoil	Layer	Topsoil	0.35	Loose Dark brown Sandy clay
201	Subsoil	Layer	Subsoil	0.12	Moderately compact Mid yellowish brown Sandy clay
202	Natural	Layer	Natural		Moderately compact Mid reddish brown Gravel - small to large sub rounded pebbles with sand and sandy clay
300	Topsoil	Layer	Topsoil	0.35	Loose Dark brown Silty
301	Subsoil	Layer	Subsoil	0.18	Moderately compact Light yellowish brown Sandy clay
302	Natural	Layer	Natural		Compact Light yellowish/orangey brown Sandy clay
400	Topsoil	Layer	Topsoil	0.3	Mid loose Mid greyish brown Silty clay
401	Subsoil	Layer	Subsoil	0.15	Moderately compact Mid yellowish brown Sandy clay
402	Natural	Layer	Natural		Moderately compact Mid reddish brown Gravel - small to large sub rounded pebbles with sand and sandy clay
500	Topsoil	Layer	Topsoil	0.38	Mid loose Mid greyish brown Sandy clay
501	Subsoil	Layer	Subsoil	0.38	Moderately compact Mid yellowish brown Sandy clay
502	Natural	Layer	Natural		Moderately compact Mid reddish brown/mid yellowish brown Sandy
600	Topsoil	Layer	Topsoil	0.35	Mid loose Mid greyish brown Sandy clay
601	Subsoil	Layer	Subsoil	0.05	Moderately compact Mid yellowish brown Sandy

						clay
602	Natural	Layer	Natural			Moderately compact Mid yellowish brown Sandy clay
700	Topsoil	Layer	Topsoil	0.34		Mid loose Mid greyish brown Sandy clay
701	Subsoil	Layer	Subsoil	0.34		Moderately compact Mid yellowish brown Sandy clay
702	Natural	Layer	Natural			Moderately compact Mid yellowish brown Sandy clay
800	Topsoil	Layer	Topsoil	0.35		Mid loose Mid greyish brown Sandy clay
801	Subsoil	Layer	Subsoil	0.07		Moderately compact Mid yellowish brown Sandy clay
802	Natural	Layer	Natural			Moderately compact Mid reddish brown Gravel - small to large sub rounded pebbles with sand and sandy clay
900	Topsoil	Layer	Topsoil	0.32		Moderately compact Mid greyish brown Sandy clay
901	Subsoil	Layer	Subsoil	0.12		Moderately compact Mid yellowish brown Sandy clay
902	Natural	Layer	Natural			Moderately compact Mid reddish brown Gravel and sandy clay
903	Pit	Cut	Pit	0.2		
904	Pit	Fill	Fill of pit [903]	0.2		Mid loose Dark brown Sandy clay
1000	Topsoil	Layer	Topsoil	0.3		Loose Mid greyish brown Sandy clay
1001	Subsoil	Layer	Subsoil	0.1		Moderately compact Mid yellowish brown Sandy clay
1002	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
1100	Topsoil	Layer	Topsoil	0.35		Mid loose Mid greyish brown Sandy clay
1101	Subsoil	Layer	Subsoil	0.1		Moderately compact Mid yellowish brown Sandy clay
1102	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
1200	Topsoil	Layer	Topsoil	0.35		Mid loose Mid greyish brown Sandy clay

1201	Subsoil	Layer	Subsoil	0.12	Moderately compact Mid yellowish brown Sandy clay
1202	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
1300	Topsoil	Layer	Topsoil	0.32	Mid loose Mid greyish brown Sandy clay
1301	Subsoil	Layer	Subsoil	0.16	Moderately compact Mid reddish brown Sandy clay
1302	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
1400	Topsoil	Layer	Topsoil	0.38	Mid loose Mid greyish brown Sandy clay
1401	Subsoil	Layer	Subsoil	0.08	Moderately compact Mod yellowish brown Sandy clay
1402	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay
1500	Topsoil	Layer	Topsoil	0.38	Mid loose Mid greyish brown Sandy clay
1501	Subsoil	Layer	Subsoil	0.09	Moderately compact Mid yellowish brown Sandy clay
1502	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay
1600	Topsoil	Layer	Topsoil	0.32	Mid loose Mid greyish brown Sandy clay
1601	Subsoil	Layer	Subsoil	0.08	Moderately compact Mid reddish brown Sandy clay
1602	Natural	Layer	Natural		Moderately compact Mid yellowish brown Sand clay and gravel
1700	Topsoil	Layer	Topsoil	0.34	Mid loose Mid greyish brown Sandy clay
1701	Subsoil	Layer	Subsoil	0.12	Moderately compact Mid yellowish brown Sandy clay
1702	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
1800	Topsoil	Layer	Topsoil	0.34	Mid loose Mid greyish brown Sandy clay
1801	Topsoil	Layer	Subsoil	0.16	Moderately compact Mid yellowish brown Sandy clay
1802	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
1900	Topsoil	Layer	Topsoil	0.31	Mid loose Mid greyish

						brown Sandy clay
1901	Subsoil	Layer	Subsoil	0.21	Moderately compact	Mid yellowish brown Sandy clay
1902	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
2000	Topsoil	Layer	Topsoil	0.31	Loose	Mid greyish brown Silty clay
2001	Subsoil	Layer	Subsoil	0.08	Mid loose	Mid reddish brown Silty clay
2002	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandu clay and gravel
2100	Topsoil	Layer	Topsoil	0.35	Mid loose	Mid greyish brown Sandy clay
2101	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid yellowish brown Sandy clay
2102	Natural	Layer	Natural		Moderately compact	Mid yellowish brown Sandy clay and gravel
2200	Topsoil	Layer	Topsoil	0.34	Mid loose	Mid greyish brown Sandy clay
2201	Subsoil	Layer	Subsoil	0.09	Moderately compact	Mid reddish brown Sandy clay
2202	Natural	Layer	Natural		Compact	Mid yellowish brown and Mid brownish red Gravel and sandy clay, and clay
2300	Topsoil	Layer	Topsoil	0.35	Mid loose	Mid greyish brown Sandy clay
2301	Subsoil	Layer	Subsoil	0.09	Moderately compact	Mid yellowish brown Sandy clay
2302	Natural	Layer	Natural		Moderately compact	Mid yellowish brown and mid brownish red Sandy clay and gravel, and clay
2400	Topsoil	Layer	Topsoil	0.35	Mid loose	Mid greyish brown Sandy clay
2401	Subsoil	Layer	Subsoil	0.11	Moderately compact	Mid reddish brown Sandy clay
2402	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
2500	Topsoil	Layer	Topsoil	0.32	Mid loose	Mid greyish brown Sandy clay
2501	Subsoil	Layer	Subsoil	0.12	Moderately comnpact	Mid yellowish brown Sandy clay
2502	Natural	Layer	Natural		Moderately compact	Mid yellowish brown and mid brownish red Sandy clay

						and gravel, and clay
2600	Topsoil	Layer	Topsoil	0.2	Mid loose	Mid reddish brown Sandy clay
2601	Subsoil	Layer	Subsoil	0.1	Moderately compact	Mid yellowish brown Sandy clay
2602	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
2700	Topsoil	Layer	Topsoil	0.28	Mid loose	Light greyish brown Sandy clay
2701	Subsoil	Layer	Subsoil	0.17	Moderately compact	Mid yellowish brown Sandy clay
2702	Natural	Layer	Natural		Moderately compact	Light yellowish brown Sandy clay and gravel
2800	Topsoil	Layer	Topsoil	0.36	Mid loose	Mid greyish brown Sandy clay
2801	Subsoil	Layer	Subsoil	0.06	Moderately compact	Mid reddish/orangey yellow Sandy clay, and clay
2802	Natural	Layer	Natural		Compact	Mid orangey red Sandy clay and clay
2900	Topsoil	Layer	Topsoil	0.35	Mid loose	Mid greyish brown Sandy clay
2901	Subsoil	Layer	Subsoil	0.11	Moderately compact	Mid reddish brown Sandy clay
2902	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3000	Topsoil	Layer	Topsoil	0.29	Mid loose	Mid greyish brown Sandy clay
3001	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid yellowish brown Sandy clay
3002	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3100	Topsoil	Layer	Topsoil	0.31	Mid loose	Mid greyish brown Sandy clay
3101	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid reddish brown Sandy clay
3102	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3200	Topsoil	Layer	Topsoil	0.34	Mid loose	Mid greyish brown Sandy clay
3201	Subsoil	Layer	Subsoil	0.09	Moderately compact	Mid yellowish brown Sandy clay
3202	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay

						and gravel
3300	Topsoil	Layer	Topsoil	0.28	Mid loose	Mid greyish brown Sandy clay
3301	Subsoil	Layer	Subsoil	0.11	Moderately compact	Mid yellowish brown Sandy clay
3302	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3400	Topsoil	Layer	Topsoil	0.28	Mid loose	Mid greyish brown Sandy clay
3401	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid yellowish brown Sandy clay
3402	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3500	Topsoil	Layer	Topsoil	0.28	Mid loose	Mid greyish brown Sandy clay
3501	Subsoil	Layer	Subsoil	0.09	Moderately compact	Mid yellowish brown Sandy clay
3502	Natural	Layer	Natural		Moderately compact	Mid reddish brown Sandy clay and gravel
3600	Topsoil	Layer	Topsoil	0.33	Mid loose	Mid greyish brown Sandy clay
3601	Subsoil	Layer	Subsoil	0.11	Moderately compact	Mid yellowish brown Sandy clay
3602	Natural	Layer	Natural		Moderately compact	Mod reddish brown Sandy clay and gravel
3700	Topsoil	Layer	Topsoil	0.32	Mid loose	Mid greyish brown Sandy clay
3701	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid yellowish brown Sandy clay
3702	Natural	Layer	Natural		Moderately compact	Light reddish brown Sandy clay and gravel
3800	Topsoil	Layer	Topsoil	0.32	Mid loose	Mid greyish brown Sandy clay
3801	Subsoil	Layer	Subsoil	0.12	Moderately compact	Mid yellowish brown Sandy clay
3802	Natural	Layer	Natural		Moderately compact/ Friable	Mid reddish brown Sandy clay and gravel
3900	Topsoil	Layer	Topsoil	0.25	Mid loose	Mid greyish brown Sandy clay and gravel
3901	Subsoil	Layer	Subsoil	0.08	Moderately compact	Mid

						reddish brown Sandy clay
3902	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
4000	Topsoil	Layer	Topsoil	0.38		Mid loose Mid greyish brown Sandy clay
4001	Subsoil	Layer	Subsoil	0.12		Moderately compact Mid yellowish brown Sandy clay
4002	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
4100	Topsoil	Layer	Topsoil	0.27		Mid loose Mid greyish brown Sandy clay
4101	Subsoil	Layer	Subsoil	0.1		Moderately compact Mid yellowish brown Sandy clay
4102	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
4200	Topsoil	Layer	Topsoil			
4201	Subsoil	Layer	Subsoil			
4202	Natural	Layer	Natural			
4300	Topsoil	Layer	Topsoil	0.38		Mid loose Mid greyish brown Sandy clay
4301	Subsoil	Layer	Subsoil	0.07		Moderately compact Mid orangey brown Sandy clay
4302	Natural	Layer	Natural			Moderately compact Light orangey brown Sandy clay and gravel
4400	Topsoil	Layer	Topsoil	0.38		Mid loose Mid greyish brown Sandy clay
4401	Subsoil	Layer	Subsoil	0.12		Moderately compact Mid yellowish brown Sandy clay
4402	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy clay and gravel
4500	Topsoil	Layer	Topsoil	0.24		Mid loose Mid greyish brown Silty sand
4501	Natural	Layer	Natural			Moderately compact Mid reddish brown Silty sand and gravel
4502	Ditch	Fill	Fill of ditch [4503]	0.46		Mid loose Mid greyish brown Silty sand
4503	Ditch	Cut	Cut of ditch	0.46		
4504	Ditch	Fill	Fill of ditch [4503]	0.42		Mid loose Light to mid greyish brown Silty sand
4505	Pit	Cut	Cut of pit	0.42		
4600	Topsoil	Layer	Topsoil	0.3		Mid loose Mid greyish

						brown Silty sand
4601	Natural	Layer	Natural			Moderately compact Mid reddish brown Silty sand and gravel
4602	Ditch	Fill	Fill of ditch [4602]	0.22		Mid loose Mid greyish brown Silty sand
4603	Ditch	Cut	Cut of possible pit	0.22		
4604	Pit	Fill	Fill of pit [4605]	0.34		Mid loose Mid greyish brown Silty sand
4605	Pit	Cut	Cut of pit	0.34		
4700	Topsoil	Layer	Topsoil	0.28		Mid loose Mid greyish brown Silty sand
4701	Natural	Layer	Natural			Moderately compact Mid reddish brown Silty sand and gravel
4702	Ditch	Fill	Fill of ditch [4703]	0.54		Mid loose Dark greyish black Silty sand
4703	Ditch	Cut	Cut of ditch	0.52		
4800	Topsoil	Layer	Topsoil	0.36		Mid loose Mid greyish brown Sandy clay
4801	Subsoil	Layer	Subsoil	0.12		Moderately compact Mid yellowish brown Sandy silt
4802	Natural	Layer	Natural			Moderately compact Mid reddish brown Silty sand and gravel
4803	Ditch	Cut	Cut of ditch [4803]	0.36		
4804	Ditch	Fill	Fill of ditch [4803]	0.36		Mid loose Mid greyish brown Silty Sand
4805	Pit	Cut	Cut of pit	0.18		
4806	Pit	Fill	Fill of pit [4805]			Mid loose Mid blackish brown Silty sand
4807	Pit	Cut	Cut of pit			
4808	Pit	Fill	Fill of pit [4807]			Mid loose Mid orangey brown Silty sand
4809	Ditch	Cut	Cut of ditch	0.1		
4810	Ditch	Fill	Fill of ditch [4809]	0.1		Mid loose Mid greyish brown Silty sand
4900	Topsoil	Layer	Topsoil	0.33		Mid loose Mid greyish brown Sandy clay
4901	Subsoil	Layer	Subsoil	0.15		Moderately compact Mid yellowish brown Sandy clay
4902	Natural	Layer	Natural			Moderately compact Mid reddish brown Sandy silt and gravel
4903	Pit	Cut	Cut of possible pit	0.14		
4904	Pit	Fill	Fill of possible pit [4903]	0.14		Mid loose Light brownish yellow Silty sand

4905	Ditch	Cut	Cut of ditch	0.34	
4906	Ditch	Fill	Fill of ditch [4905]	0.34	Moderately compact Mid orangey brown Silty sand
4907	Pit	Cut	Cut of pit	0.31	
4908	Pit	Fill	Fill of pit [4907]	0.31	Mid loose Mid reddish brown Silty sand
4909	Ditch	Cut	Cut of ditch	0.3	
4910	Ditch	Fill	Lower fill of ditch [4909]	0.1	Mid loose Light reddish brown Silty sand
4911	Ditch	Fill	Upper fill of ditch [4909]	0.15	Mid loose Mid reddish brown Silty sand
4912	Pit	Cut	Cut of pit	0.16	
4913	Pit	Fill	Fill of pit [4912]	0.16	Mid loose Mid reddish brown Silty sand
5000	Topsoil	Layer	Topsoil	0.39	Mid loose Mid greyish brown Sandy clay
5001	Subsoil	Layer	Subsoil	0.2	Moderately compact Mid yellowish brown Sandy clay
5002	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
5100	Topsoil	Layer	Topsoil	0.38	Mid loose Mid greyish brown Sandy clay
5101	Subsoil	Layer	Subsoil	0.11	Moderately compact Mid yellowish brown Sandy clay
5102	Natural	Layer	Natural		Moderately compact Mod reddish brown Sandy clay and gravel
5103	Ditch	Fill	Fill of ditch [5104]	0.4	Mid loose Mid to light greyish brown Silty sand
5104	Ditch	Cut	Cut of ditch	0.4	
5105	Ditch	Fill	Fill of ditch [5106]	0.36	Moderately compact Mid greyish brown Silty sand
5106	Ditch	Cut	Cut of ditch	0.36	
5107	Ditch	Fill	Fill of ditch [5108]	0.2	Mid loose Mid greyish brown Sandy silt
5108	Ditch	Cut	Cut of ditch	0.2	
5200	Topsoil	Layer	Topsoil		
5201	Subsoil	Layer	Subsoil		
5202	Natural	Layer	Natural		
5300	Topsoil	Layer	Topsoil	0.3	Mid loose Mid greyish brown Sandy clay

5301	Subsoil	Layer	Subsoil	0.12	Moderately compact Mid reddish brown Sandy clay
5302	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
5400	Topsoil	Layer	Topsoil	0.31	Mid loose Mid greyish brown Sandy clay
5401	Subsoil	Layer	Subsoil	0.09	Moderately compact Mid reddish brown Sandy clay
5402	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
5500	Topsoil	Layer	Topsoil	0.28	Mid loose Mid greyish brown Sandy clay
5501	Subsoil	Layer	Subsoil	0.15	Moderately compact Mid yellowish brown Sandy clay
5502	Natural	Layer	Natural		Moderately compact Mid reddish brown Sand and gravel
5600	Topsoil	Layer	Topsoil	0.2	Mid loose Mid greyish brown Sandy clay
5601	Subsoil	Layer	Subsoil	0.1	Moderately compact Mid yellowish brown Sandy clay
5602	Natural	Layer	Natural		Moderately compact Mid reddish brown Sandy clay and gravel
5700	Topsoil	Layer	Topsoil	0.35	Mid loose Moderately greyish brown Sandy clay
5701	Subsoil	Layer	Subsoil	0.1	Moderately compact Mod reddish brown Sandy clay
5702	Natural	Layer	Natural		Moderately compact Mid yellowish/reddish brown Sandy clay and gravel

Appendix 2: Summary of project archive (Evaluation WSM77681, Excavation WSM77682)

TYPE	DETAILS*
Artefacts and Environmental	Animal bones, Ceramics, Environmental, Metal, other
Paper	Context sheet, Correspondence, Diary (Field progress form), Drawing, Matrices, Photograph, Plan, Report, Section, Survey
Digital	Database, GIS, Geophysics, Images raster/digital photography, Spreadsheets, Survey, Text

**OASIS terminology*

The project archive is currently held at the offices of Worcestershire Archaeology. Subject to the agreement of the landowner it is anticipated that it will be deposited at Worcestershire County Museum.

Appendix 3: Summary of data for HER

period	material class	material subtype	object specific type	count	weight (g)	start date	end date	specialist report?	key assemblage?
M-LBA	ceramic		pot	5	5			Y	N
?Iron Age	ceramic		?briquetage	7	39	MIA	LIA	Y	N
Roman	ceramic		pot	1	25	1C	3C	Y	N
Roman	ceramic		pot	2	20	AD100	AD200	Y	N
Roman	ceramic		pot	1	11	M1C	2C	Y	N
Roman	ceramic		pot	15	39	M1C	4C	Y	N
Roman	ceramic		pot	1	23	M2C	L3C	Y	N
Roman	slag	slag(Fe)		2	337	0		N	N
Roman	slag	slag(Fe)	smelting slag	2	258	0		N	N
Roman	slag	slag(Fe)	smelting slag(tap)	1	13	0		N	N
?Roman	ceramic		pot	1	9			Y	N
medieval	ceramic		pot	141	1138	L12C	M14C	Y	N
medieval	ceramic		?cbm	5	13	0		Y	N
medieval	ceramic		cbm	8	58	0		Y	N
medieval	ceramic		cbm	3	1	13C	15C	Y	N
medieval	ceramic		pot	3	17			Y	Y
medieval	ceramic		pot	1	12		13C	Y	Y
medieval	ceramic		pot	1	8	11C	M12C	Y	Y
medieval	ceramic		pot	65	680	12C	14C	Y	Y
medieval	ceramic		pot	49	436	12C	M14C	Y	Y
medieval	ceramic		pot	70	1049	13C	14C	Y	Y
medieval	ceramic		pot	11	72	13C	15C	Y	Y
medieval	ceramic		pot	1	2	13C	16C	Y	Y
medieval	ceramic		pot	1	5	E13C	L14C	Y	Y
medieval	ceramic		pot	84	494	L11C	M14C	Y	Y
medieval	ceramic		pot	2	15	L12C	13C	Y	Y
medieval	ceramic		pot	4	179	L12C	14C	Y	Y
medieval	ceramic		pot	26	341	L12C	E13C	Y	Y
medieval	ceramic		pot	1	22	L12C	M13C	Y	Y
medieval	ceramic		pot	1	67	L13C	14C	Y	Y
medieval	metal	copper alloy	strip	1	2			Y	N
medieval	metal	iron	hook	1	25			Y	N
medieval	metal	iron	nail	8	49			Y	N
medieval	metal	iron	nail	2	15	0		Y	N

period	material class	material subtype	object specific type	count	weight (g)	start date	end date	specialist report?	key assemblage?
medieval	metal	iron	padlock key	1	18			Y	Y
medieval	stone		quern	2	730	0		N	N
?medieval	ceramic		cbm	1	30	0		Y	N
late med/early post-med	ceramic		roof tile(flat)	3	48	0	L15C+	Y	N
late med/early post-med	ceramic		roof tile(flat)	3	505	L15C	M17C	Y	N
late med/early post-med	metal	copper alloy	spherical bell	1	3			Y	N
late med/early post-med	metal	iron	horseshoe	1	71			Y	N
post-medieval	ceramic		brick	2	1165	0		N	N
post-medieval	ceramic		pipe	2	9	1660	1680	N	N
post-medieval	ceramic		pot	4	115	L17C	18C	Y	N
post-medieval	ceramic		pot	1	75	M17C	18C	Y	N
post-medieval	glass		vessel	1	4	0		N	N
post-medieval	glass		vessel	14	320	0	L18C	N	N
modern	ceramic		pot	3	5		L18C	Y	N
modern	ceramic		pot	3	9	L18C	E19C	Y	N
modern	ceramic		pot	1	7	M19C	E20C	Y	N
modern	glass		vessel	4	51	0		N	N
undated	ceramic	fired clay		1	7	0		N	N
undated	stone	sandstone		3	10	0		N	N
undated	stone	sandstone	tile	1	351	0		N	N