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# Between rivers: Iron Age and Romano-British 'island' farmsteads at Vine Farm, Shingay-cum-Wendy, Cambridgeshire

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*Archaeological investigations undertaken on 107 hectares of land at Vine Farm in Shingay-cum-Wendy revealed three areas of settlement and agricultural activity ranging in date from the mid-Iron Age to the Romano-British period, with relatively blank areas between. This paper places the results of investigation in the context of a watery landscape of converging river courses, with 'islands' of land suitable for farming and occupation located between braided streams.*

## Introduction

### *Site location, geology and topography*

Vine Farm is situated in the south of the village of Wendy, Cambridgeshire (Fig. 1), centred on NGR TL3217 4688. It is 19km north-northwest of Royston and 21km southwest of Cambridge. Land belonging to Vine Farm, now mainly covered by solar panels, stretched 1.5km right to the southwestern edge of the historic parish of Wendy (recently combined with Shingay into the larger parish of Shingay-cum-Wendy).

The main area investigated comprised 107ha of mostly flat fields used for growing arable crops, at an elevation averaging 23m AOD. The surrounding area – apart from the village of Wendy to the northeast, the historic house and registered park of Wimpole Hall several kilometres further in that direction, and the former airfield of RAF Bassingbourn to the southeast – is characterized by agricultural fields.

The solid geology of Wendy-cum-Shingay is mainly mudstone of the Gault Formation. These sedimentary bedrocks were formed approximately 100 to 112 million years ago in the Cretaceous Period when the local area was covered by shallow seas. The only superficial deposits mapped for the area are alluvial deposits along the North Ditch (British Geological Survey website).

Wendy-cum-Shingay is technically not located in

fenland, as the fen-edge is normally considered to be on the 5m above sea level contour, so the East Anglian fen-edge is roughly 25km away to the east. There are fen-like qualities to the landscape, but this part of the watershed of the River Rhee or Cam is characterised by converging tributary branching networks of flowing streams rather than standing water. The landscape lies in a transitional zone between the low-lying fens and the uplands, partaking of both but with its own unique attributes.

In that context, the local river system gives an important topographical context to this analysis. The village of Wendy is on the confluence of the River Rhee and its tributary known as North Ditch. The general direction of flow is from southwest to northeast. Upstream from Wendy, just over a kilometre to the southwest, North Ditch is formed from the confluence of Running Ditch and Mill River. Other streams converge with these to form a branching tributary network dividing up land into what would have been perceived and experienced, before modern drainage, as a series of islands.

This is reflected in place-name evidence. Both Shingay and Wendy have place-names (derived from Old English) which reflect the riverine character of the topography. Shingay means 'island of Scene's people' while Wendy means 'river-bend island' (Mills 2011).

The word 'island' as used here means something different from a small portion of land surrounded by a larger body of water, like an island in a lake or fen. The implication is rather of a relatively large area of land delineated on most sides by channels of flowing water. The landscape was divided up into a series of such islands by the network of rivers and streams converging into a tributary branching network. To understand the configuration of archaeological evidence we need to take account of this riverscape context (Edgeworth 2011).

The river-bend referred to in the Wendy place-name could be identified with the point where Mill River (flowing from the south) and Running Ditch



**Figure 1.** Location of site, showing river network and clusters of features as Areas 1, 2 and 3.

(flowing from the west) come together to form the North Ditch river, creating a sharp and almost right-angled turn. This configuration of watercourses is clearly of some antiquity because it is fossilized in the boundaries between the two parishes before they were amalgamated in 1957. A large 'river-bend island' can be identified here even today in the crook of the sharp and almost right-angled river-bend formed by

the confluence. It is about 44ha in area and centred at TL 3174 4666, with Whitelands Barn just to the east of centre. Its southwest side is delineated by Mill River, its northwest side by North Ditch, and its northeast side by an unnamed stream that crosses the site from south to north. Incoming stream channels on the southern side funnel in so close to each other that they probably once formed a single channel or system

of braided channels running through a wetland area of marshy ground, marked on maps as 'Fen Spinney' (so-called because of its propensity to flood – see the Environment Agency flood risk map for this area, available online). It was on this 'island', thus encircled by river channels and marshy ground, that the largest of the three areas of archaeological activity was located.

It is not implied that the river system today is the same as it was in Romano-British or Iron Age times. Modern drainage has transformed formerly braided channels into a network of partly ditched or canalised channels. The fact that Running Ditch and North Ditch are called ditches rather than streams itself indicates substantial human modification. But stability of channel position through time is suggested by the way in which parish boundaries follow the courses of both Mill River and North Ditch round a substantial part of the 'river-bend island'. Perhaps the main insight to be gained from place-name evidence is that the local landscape was once perceived in a fundamental way as a series of river-interspersed islands, at least in the early medieval period, and it is likely that this applied in preceding Romano-British and Iron Age times. Following Oosthuizen (2017), a measure of continuity as well as change in cultural and linguistic traditions might be assumed across period boundaries, rather than the wholesale replacement of one language and culture by another. The evidence of Old English placenames can sometimes be taken to be indicative of deeply-rooted perceptions of landscape, originating much further back in time.

### Project background

Planning permission for the construction of a solar energy farm was granted subject to a condition requiring a scheme of archaeological investigation. Headland Archaeology were commissioned by BayWa r.e. Renewable Energy to carry out the work. The suite of investigative techniques deployed included desk-based research (Headland 2014), aerial photo analysis (Air Photo Services 2014), geophysical survey (Stratascan 2014) and LIDAR analysis, followed by the excavation and recording of over 164 trial trenches (Headland 2015). Further work took place in the three areas which had emerged as being of special archaeological interest, focusing on cable runs and other infrastructure which would impact on the ground. This was part of a phase of mitigation works designed to minimise damage to areas of archaeological sensitivity, with solar panels to be placed on concrete feet in those parts of the site, thereby allowing *in situ* preservation of much archaeological evidence that would otherwise have been destroyed. A watching brief on unexploded ordnance removal works across the study area was also undertaken (Headland 2016). This paper summarizes the results of all phases of both evaluation and mitigation phases of investigation on the site. Locations of trenches are shown in Fig. 2. An additional watching brief was carried out

on the cable route from the solar farm to the main sub-station 7.5km away, providing a slice through the landscape from Vine Farm across Ermine Street and south to the course of the Iron Age and Roman trackway Avenell Way, which may once have linked Cambridge and Baldock (Atkins and Hurst 2014). The results of that work are not covered in this article, which focusses on the specific characteristics of the Wendy-cum-Shingay landscape.

### Archaeological background

Recent work has shown that Middle to Late Iron Age settlement was widely distributed across much of Cambridgeshire, especially on river terrace gravels but also to a lesser extent in more upland areas. Several large-scale excavations associated with big infrastructure projects, such as at Northstowe and the A14 (MOLA-Headland Infrastructure forthcoming), are adding to the considerable number of already excavated sites. Riverside settlements with enclosures have been excavated at Trumpington (Evans *et al.* 2018) and Harston Mill (O'Brien 2016). A general pattern to emerge is of enclosed farmsteads and their associated systems of field boundaries, typically spaced 300–500m apart (Brudenell 2018). The picture of developed and densely occupied agricultural landscapes also applies to the Romano-British period. Relevant sites in the vicinity of Vine Farm include several found on the A428 road scheme (Abrams and Ingham 2008) and during the creation of the new town at Cambourne, where there was evidence of continuous occupation from at least late Iron Age to Romano-British times with a major realignment of enclosures during the transition period (Wright *et al.* 2009). On recent excavations on the A14, of the 21 sites of Romano-British settlement discovered, 18 were at least partially developed from preceding Iron Age sites, adding on to or modifying existing features. In some cases, on the other hand, new rectilinear enclosures were created which ignored earlier enclosure and field boundary systems (MOLA-Headland Infrastructure forthcoming). Just over 1km to the east of Vine Farm on the line of the A1198 is Ermine Street, a Roman road running roughly north-south between Lincoln (*Lindum Colonia*) and London (*Londinium*). Such a major route would have had major effects on the countryside, and implications for the agricultural economy and patterns of settlement on either side (Fig. 3).

A Roman settlement straddles the road at Arrington Bridge about 2km northeast of Vine Farm (Scheduled Monument number 1006874), just south of the point where Ermine Street crosses the River Rhee (where it is presumed there would have been a wooden bridge). Here evidence of buildings of Roman date has been interpreted as a Roman mansion or posting station (Smith 1987, Taylor 1997). Narrow linear rows of enclosures extended up both sides of the road for 0.5km to the modern roundabout, where excavations uncovered dense settlement evidence in

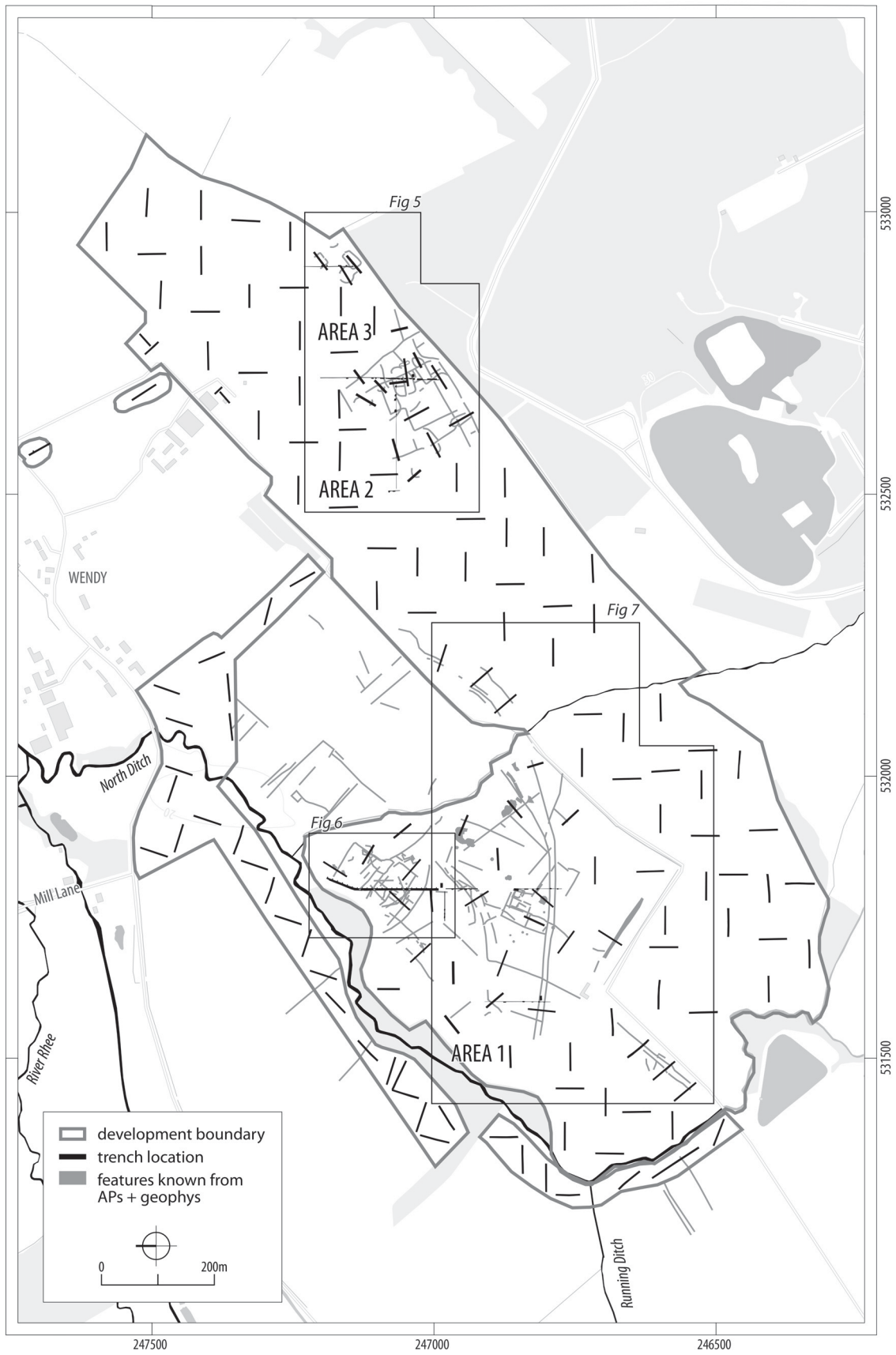


Figure 2. Locations of evaluation trenches, with inset showing watching brief trench from solar farm to sub-station 7.5km away.



the form of multiple enclosures on the same alignment as the road. From here it is speculated that a further Roman road ran westwards to the small Roman town at Sandy, though this is unproven.

The name Ermine Street derives from the Old English 'Earninga Straete' named for the tribe who inhabited a district which later became the Armingford (or Ermingford) Hundred, stretching from Arrington to Royston and including the study area. 'Armingford', 'Arrington' and 'Ermine' all come from the same Old English root, *Earninga* (Oosthuizen 2006, 30). But if the road derived its name from a local tribal grouping this was not necessarily an association that first formed in Anglo-Saxon times. It is likely that there was a substantial native British component to that population, and that the name may reflect an older association between a people and the road that passed through their territory.

Just to the south of the hypothetical east-west road and to the west of Ermine Street, a Roman villa (HER 368572) was located on the north bank of the River Rhee, 1.5km to the north of the study area. Excavations in 1974 uncovered several flint floors with postholes of substantial buildings. The footprint of a further building was indicated by a rectangular area of compacted black earth. Finds included Roman brick, plaster, mortar, coloured tesserae and a 2m long sandstone pillar. A flint causeway over a stream bed was found next to the buildings (information from Cambridgeshire HER). As will become clear, the proximity of this villa has some bearing on the interpretation of the results of excavation at Vine Farm.

The village of Wendy is described in the Domesday Survey of 1086 as having two manors, held by Count Odo and Alvred, with mills, meadow, ploughland and woodland. A system of open fields would have surrounded the village, as evidenced by visible remains of ridge and furrow across the study area and in surrounding fields. There are three moated sites in the village — Vine Farm itself, St John's House and Lordship Close — with more in the vicinity, taking advantage of plentiful supplies of water provided by converging river channels. The 12th century moated site of a preceptory belonging to the Knights Hospitallers (Scheduled Ancient Monument 1006852) is located to the west of the village, less than 1km to the northeast of the study area, on the south bank of the River Rhee. As is typical for many of the moated medieval sites in the Rhee/Cam valley, this was situated on a strip of land between river channels, creating its own islands through the further digging of moats and a complex of other water features (Carlsson 2014). Parts of the landscape thus continued to be experienced as a series of islands separated by linear water channels, some natural and some artificial or a combination of both, well into the medieval period.

Just to the east of the preceptory and on the same strip of land between river channels are the remains of a deserted medieval settlement, with traces of several house platforms and a water-meadow. Other me-

dieval earthworks and cropmarks can be observed in fields to the east of Wendy.

Little archaeological work had been carried out on the study area prior to the archaeological investigations described in this report.

## Results of excavation

The results are described in terms of three main areas or foci of archaeological activity, characterised as Areas 1, 2 and 3. These are dealt with in chronological order as far as possible, while at the same time keeping sight of the distinct areas within which most archaeological evidence is found, representing islands of firmer ground between rivers (using the word 'islands' in the specific sense already outlined). Areas 2 and 3 have the earliest features, overlapping in time and followed by developments in Area 1 — suggesting gradual shifts in occupation and use of land over time.

The scale of analysis is intentionally broad, looking at general patterns of development within the wider landscape rather than details of specific archaeological features. The aim is to shed light on certain key research themes, as set out in the Assessment and Updated Project Design (Headland 2016), particularly regarding landscape setting, agricultural economy and diet, and the impact of the Roman conquest on the site.

### Areas 2 and 3

#### *Bronze Age (2600–700 BC)*

Limited evidence for Bronze Age activity, in Area 2 consisted of three sherds of Bronze Age pottery, possibly from a beaker, from a small and shallow sub-circular pit, which was cut and disturbed by later Iron Age features, and a further three sherds (possibly residual) from a ditch. No other material of this early date was found anywhere else in the study area.

#### *Early Iron Age (800–300 BC)*

A steep-sided oval pit situated between Areas 2 and 3 contained a small collection of early Iron Age pottery.

#### *Mid to Late Iron Age (300–100 BC)*

In Area 2 a series of curving ditches constituted the earliest substantial phase of activity (Fig. 4). These formed a heavily truncated cluster of sub-circular or oval enclosures, in a range of sizes from 20 x 15m to 60 x 40m. At least five enclosures are probably discernible. External ditches were very substantial, up to 5m wide by 0.80m deep. In at least two cases there were internal ditches running perpendicular to the main ones: these were 3–4m in width and up to 1m deep. Smaller curving ditches may represent parts of the ring-gullies of roundhouses, of which there may be traces of up to three. Fills of all these ditches taken together contained a total of 156 sherds of Mid–Late Iron Age pottery, with 40 sherds of Late Iron Age

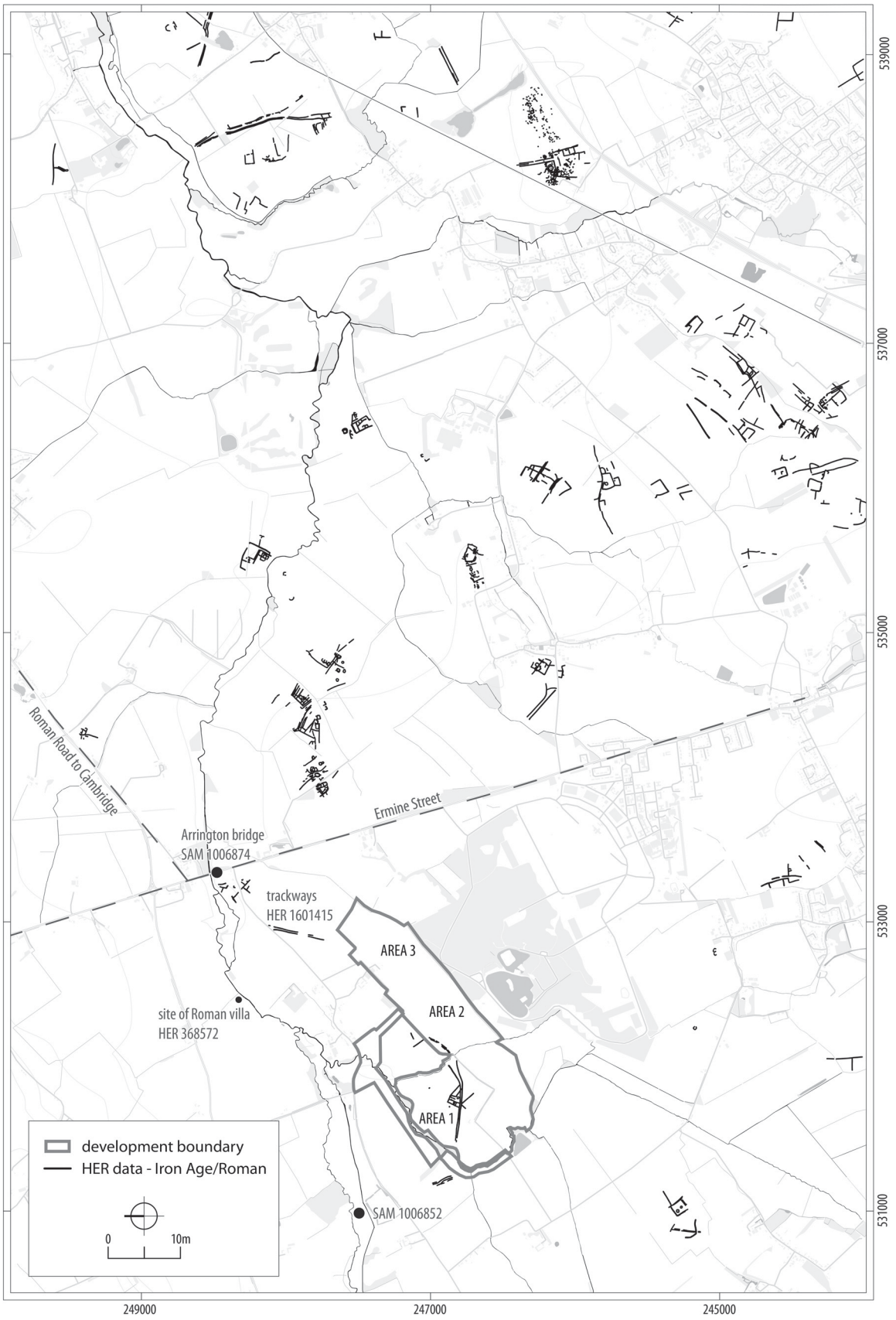


Figure 3. Archaeological sites and cropmarks in the vicinity of Vine Farm.

and 5 Romano-British sherds in the upper fills. The animal bone recovered was mainly cattle (180 bones), with some sheep (77 bones), horse (34 bones, plus a whole skeleton), pig (8 bones), dog (3 bones), goose (1 bone), unidentified wild bird (1 bone), and fish (1 bone) – giving a glimpse of the range of animals in local farming ecologies. Most of this is likely to have been casually deposited during the dumping of domestic rubbish, but there may also have been instances of more structured deposition, such as the complete horse skeleton in an enclosure ditch.

Alongside the abundant pottery sherds and animal bone inclusions, a distinctive bone object was found in the fill of one of the curving ditches. This was a cattle tibia sawn off at one end, and possibly sawn/modified at the other, leaving a large hand-sized handle with large sub-triangular hole. The size of the handle suggests use with a tanged tool, such as a reaping hook, pointing to the cultivation of arable crops alongside animal husbandry.

In Area 3, a single sub-circular enclosure with an internal diameter of about 26m and a possible entrance to the south-south-east was identified. A small quantity of animal bone was recovered, comprising 8 pieces of cattle bone, 1 sheep, 1 horse, and 1 dog bone. In this case, no dating evidence in the form of pottery was recovered from the ditch fills themselves, but the enclosure can be grouped with those of similar shape and size in Area 2 on morphological grounds. The implication is that Area 2 and 3 co-existed, their periods of use at least partly overlapping. Perhaps Area 3 was an outlier of the Area 2 farmstead, with the greater quantities of domestic rubbish in Area 2 indicating that this was the focus of settlement.

#### *Late Iron Age to Early Romano-British (100 BC–AD 100)*

In Area 2, a co-axial system of field boundaries extending over an area of about 200m by 160m was set out, cutting through and overlying the earlier sub-circular enclosures described above. Pottery evidence obtained from the ditch fills indicates that construction and use of these boundary ditches occurred mainly in the Late Iron Age period, with some evidence for subsequent backfilling in the Romano-British period.

There were five north-north-west to south-south-east aligned field boundaries within Area 2, positioned approximately 30m apart. The largest central ditch was shown by excavation to average 4.00m wide by 1.00m deep. Significant quantities of Late Iron Age pottery were found in the ditch fills, along with 115 pieces of cattle bone, 41 sheep bones, 14 horse bones, 1 pig, 5 dog, and 1 chicken bone. Two human foetal bones, a tool handle and a fragment of the top of a triangular oven brick or loom-weight were also recovered. The other ditches had similar assemblages of pottery and animal bone.

Perpendicular to the ditches described above, but part of the same system, were six north-north-east to south-south-west aligned ditches. The southernmost ditch measured 4.35m wide by 0.90m deep. It contained 1 sherd of Iron Age date, 2 Romano-British pottery sherds, 8 cattle bones, and 5 sheep bones.

About 30m to the north of this was another ditch, running exactly parallel, which measured 1.72m wide by 0.83m deep. As well as pottery and animal bone it also contained fired clay fragments which may have formed part of a triangular oven brick or loom-weight. The fills of the ditches in this group contained the greatest quantities of animal bone from the whole site: 214 cattle bones, 70 sheep bones, 18 horse bones, 2 pig bones, 6 dog bones, and 1 chicken bone. This strongly indicates a cattle-based economy, and that the fields were used primarily for holding cattle.

In Area 3 two small rectilinear enclosures were also identified. Both were oriented north east to south west. The smallest of the two measured 20m by 15m, with a potential entrance on its southern side. Two sides of this enclosure were investigated through the excavation of segments. Ditch fills contained an abundance of animal bone (22 pieces of cattle bone, 17 pieces of sheep bone, and 3 pieces of pig bone), and eleven sherds of Iron Age pottery. There was evidence of re-cutting of the ditch, indicating continued use and upkeep of the enclosure for some time. About 30m to the south but on the same alignment, the larger of the two enclosures measured 32m by 19m, with a possible entrance on its north-eastern side. Ditch fills produced a similar assemblage of animal bone – 20 cattle bones, 16 sheep bones, and 2 pig bones – as well as 33 sherds of Mid-Late Iron Age and 14 sherds of Late Iron Age pottery. Like the enclosures of similar date and form in Area 2, these are thought to have served as animal enclosures.

#### *Area 1*

The complexes of archaeological features in Area 1, it has been argued, were effectively located on an 'island', surrounded by small river channels which were prone to flooding. Two foci of intense activity were identified within this river-encircled portion of land, and these are referred to as the northern and southern parts of Area 1. Not only are these reasonably distinct in spatial terms: they also have different (though overlapping) periods of use, demonstrating some shift of settlement and agricultural activity within the landscape over time.

#### *Late Iron Age to Early Romano-British (100 BC–AD 100)*

The northern settlement and associated system of enclosures in Area 1 covered a trapezoidal-shaped area measuring about 250m by 160m. It proved to have several elements, including boundary ditch, internal ditches, pits, roundhouses and external trackways (Fig. 5).

*Boundary ditches* on the northern, eastern and southern sides were quite substantial, measuring up to 4.80m wide by 0.35m deep, with evidence of re-cutting suggesting that these were periodically maintained. Sixteen sherds of Late Iron Age pottery and two sherds of 1st century pottery came from a single segment excavated through the ditch on the north-

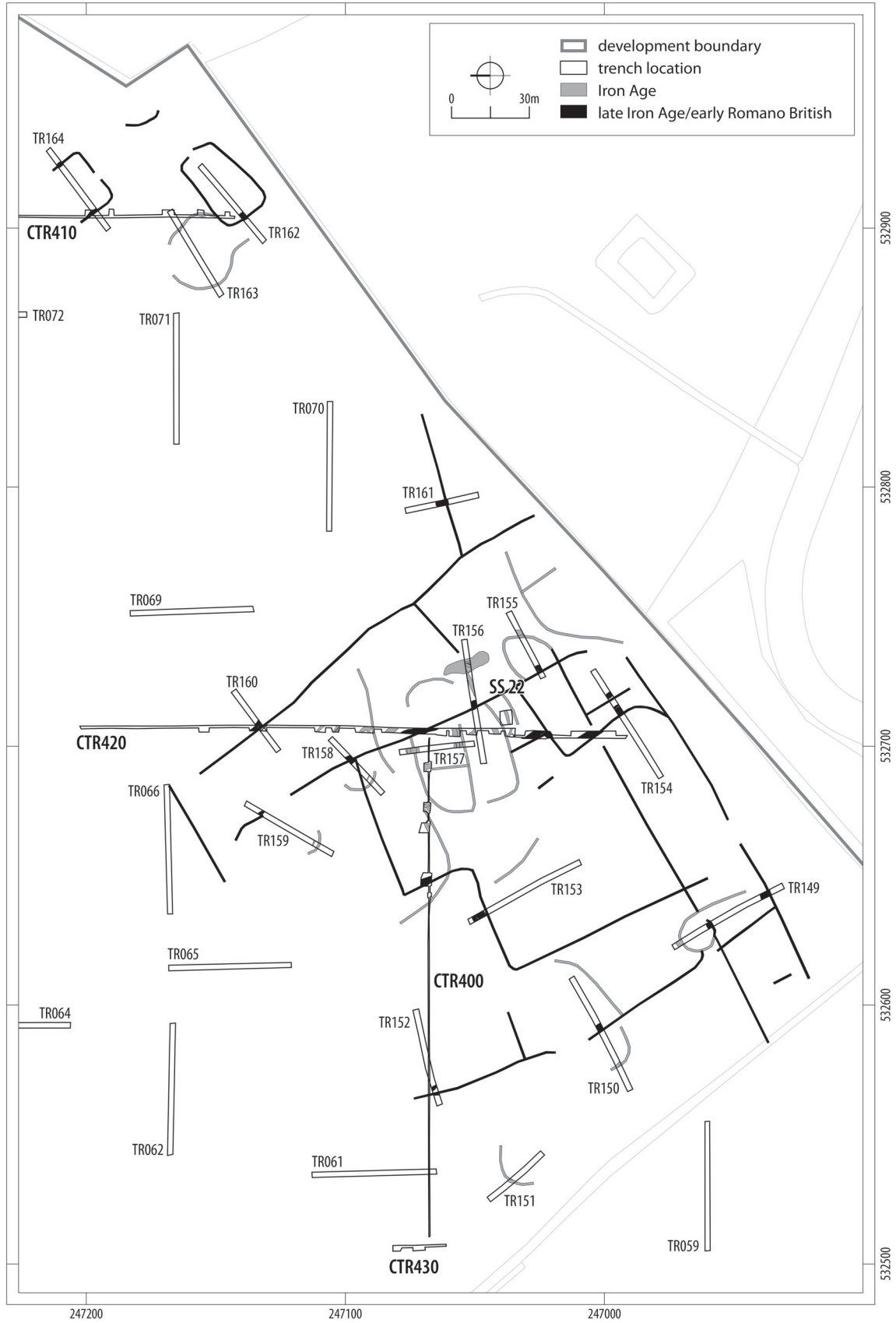


Figure 4. Areas 2 and 3, showing earlier sub-circular enclosures cut by the later and larger sub-rectangular enclosure system.





Figure 5. Area 1, northern part, showing features of the Late Iron Age to Early Romano-British farmstead, with locations of roundhouses and other features.

eastern side; and 58 sherds of Iron Age pottery, 4 sherds of early Romano-British pottery, and 17 sherds of 1st century AD pottery came from a segment through the ditch on the southern side. Animal bone of cattle, sheep, and horse were also recovered.

*Internal ditches.* Several internal dividing ditches, broadly aligned northwest to southeast and northeast to southwest, were identified within the main settlement enclosure. These were typically 0.30m wide by 0.45m deep. Pottery recovered included 84 Iron Age sherds; 66 Late Iron Age sherds; 50 1st century sherds; and 77 Romano-British sherds. A relatively small quantity of animal bone was recovered from ditch fills – 20 cattle bones, 10 sheep bones, 1 pig bone, and 2 horse bones.

*Roundhouses.* The remains of three roundhouse gullies were found within the northern part of Area 1, all within Cable Trench 310. Roundhouse 1 at the northern end had a projected internal diameter of 5.50m with an entrance on its eastern side. The gullies measured about 1.00m wide and up to 0.27m deep. Three sherds of Late Iron Age pottery and three sherds of 1st century AD pottery came from the fills. A single pit was positioned within the internal area of the roundhouse gully.

About 30m to the south, a second, somewhat larger, roundhouse was located. It had a projected internal diameter of 15.00m. The ditch measured 0.29m wide and was only 0.06–0.10m deep. Like the ring-gully of Roundhouse 1, it had a single light grey silty clay fill. There were no internal features and no datable finds were retrieved.

A further 30m to the south, two curvilinear ditches were taken to be part of a single roundhouse ring-gully, with a projected internal diameter of about 9m. The gully was up to 1.12m wide by 0.24–28m deep. It had a single firm brownish-grey silty clay fill. No datable finds were found, though one cattle bone and one sheep bone were recovered.

Some of the other small curvilinear gullies revealed through the excavation of the cable trench may also have formed part of roundhouses. It seems likely there are many more roundhouses than the three identified in the cable trench, and these would have been discovered if further trenches or wider areas had been excavated. It might therefore be concluded that there was a considerable number of roundhouses in the northern part of the farmstead, many of which will still be preserved under the concrete footings of the solar panels.

*Pits.* Nine truncated pits were identified in Area 1, loosely distributed and with no noticeable clustering. They were all circular or sub-circular, up to 1.80m in diameter and 0.42m deep. Fills were grey-brown silty clays. Five sherds of pottery, dated to the Late Iron Age and 1st century AD, were recovered from one of the pits. Seven sherds of similar date were found in another. The original function of these pits is unknown. They may have been created as storage pits,

while later in their disuse phase they provided a convenient place for the dumping of domestic rubbish.

*Postholes.* Four postholes were investigated to the south of the enclosed settlement area – These were positioned in a north-south line, measuring about 5m from end to end. No finds were recovered. These may have formed part of a fence-line, potentially dividing the land outside the settlement centre.

*Trackways.* Evidence of small external trackways was found in the southern part of the northern settlement of Area 1. This comprised four northwest-southeast aligned ditches in Trench 139, arranged in parallel sets of two ditches, positioned about 3.00m apart. Two sherds of Late Iron Age pottery, three early Roman sherds, and 15 sherds dated 50–200AD were recovered from the fills of these trackway ditches.

*External features.* From the fill of a Late Iron Age ditch outside of and to the south of Area 1, a dog skull complete with mandible was found. It was unusually large and at the extreme end of the dog spectrum, but not quite in the area of European Wolves. The context produced one other dog bone: a claw. It is speculated that the skull could have been deposited with an attached skin, perhaps as a ritual deposit.

#### *Romano-British (AD 43–AD 410)*

In the southern part of Area 1 another system of enclosures came into being during the Romano-British period. This took the form of a large sub-rectangular enclosure with internal ditched divisions, a smaller rectangular enclosure in the northeast corner, some discrete pit features, and a pair of parallel driveway ditches running along its southern side. It is assumed that it was mainly for animal movement, associated as it is with animal enclosures, but that does not preclude use by wheeled vehicles also, for transport of agricultural materials and produce (Fig. 6).

*Boundary ditches.* The sub-rectangular enclosure covered an area of about 70m x 50m. It was oriented north-north-east to south-south-west, bordering onto the driveway running east-west on its southern side. Apart from the driveway ditch, the enclosure seems to have had boundary ditches on two sides only, making a sharp right-angled turn at the corner. These ditches fell outside the evaluation and cable trenches so were not investigated through excavation.

*Internal ditches.* Several of the internal ditches showing on the geophysical survey were sampled by excavation. These were quite substantial, measuring up to 2.50m wide and 0.70m deep. The pottery recovered was all Romano-British in date (20 sherds), with eight sherds more precisely dated to the 2nd–4th centuries. These ditches could have formed property boundaries within the larger complex, or more likely divisions between different animal enclosures.

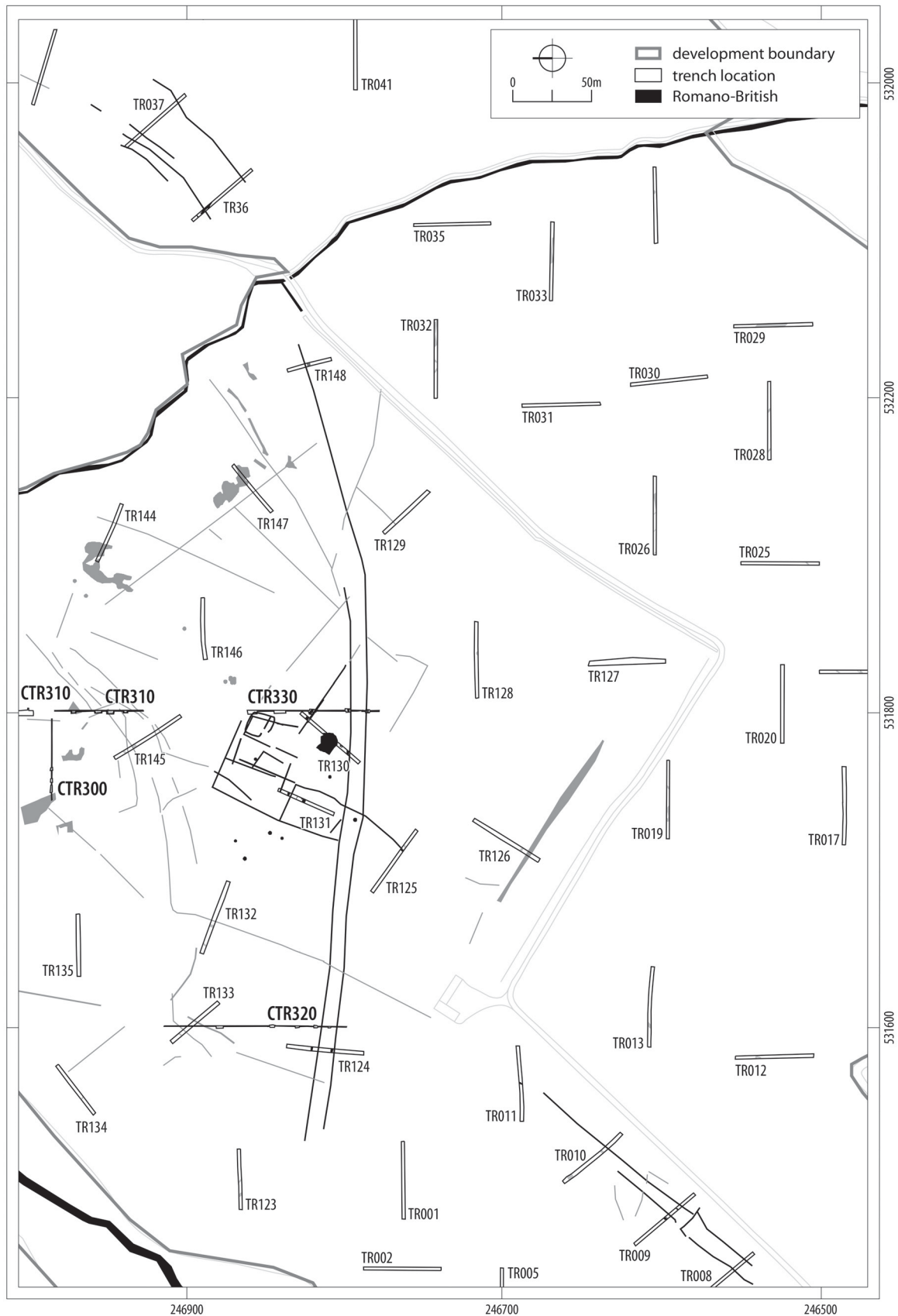


Figure 6. Area 1, southern part, showing Romano-British enclosures and droveway.

*Internal rectangular enclosure.* According to the geophysical survey, the overall area of this ditched enclosure measured roughly 12m x 12m. The ditch was shown by excavation to be on average 1.30m wide by 0.80m deep, with evidence of re-cutting. Pottery recovered was dated from the mid-2nd to the 4th century AD. Small amounts of Roman brick and tile were found in the ditch fill, raising the possibility that a substantially-built structure could have been located here.

*Midden.* About 20m to the south, a spread of material identified on the geophysical survey was investigated in Trench 130, where it stretched for 11m (along the trench) and was 0.6m deep. The geophysics indicated that it covered a larger irregular-shaped area of 13.5m by 12m in total. It consisted of a friable grey-brown silty-clay deposit, with animal bone, eight sherds of pottery dated to the Romano-British period, 12 pieces of cattle bone and 3 sheep bone, and a fragment of metal which may have functioned as a tool. It is thought to have been a large rubbish pit or midden. Material was dumped within a roughly rectangular area, which could have been delineated as such by a boundary of some sort, traces of which no longer survives.

*Pits and gullies.* Only one pit was excavated. It was circular with a diameter of 1.90m and a depth of 0.30m. No finds were recovered. No other pits were identified in the trenches or mitigation work, although the geophysical and cropmark evidence indicates that others probably exist.

*Droeway.* A pair of parallel droeway ditches was aligned east-west across the centre of the 'island' and the southern part of Area A, along the edge of the Romano-British set of enclosures, before turning slightly to the north-east at its eastern end. These were about 7.00m apart, widening out to 20.00m apart towards the east. The total known length of this stretch of droeway is about 500m, though there are traces of a further continuation of it on the other side of the stream, where it curves slightly towards the north-east. Ditches had been re-cut several times in places, indicating continued use and maintenance over time. Pottery dated to the Romano-British period was recovered from the ditch fills, some dated precisely to the mid-2nd to late 3rd centuries AD. A piece of Roman tile and four iron objects (two nails, a hobnail, and an unidentified object) were also found.

Another possible droeway was visible as cropmarks in the southwestern part of the study area, oriented northeast-southwest and pointing towards and away from Area 1. Consisting of a pair of parallel ditches, it can be traced for a total distance of about 200m. The only dating evidence recovered was a sherd of 2nd century AD Central Gaulish Samian Ware from an upper fill. It could well have formed part of the same system as the east-west droeway described above, contemporary with the Romano-British settlement. Droeways such as these formed

important routeways across much of Cambridgeshire in the Iron Age and Romano-British periods. As components of a mobile and fluid landscape, they intermeshed with rivers in ways which will be explored in the concluding discussion.

## Finds

### Pottery

*Summary of report by I M Rowlandson  
with contributions by Paul Blinkhorn and G Monteil*

A total of 1770 sherds (21628g) of pottery was recovered from the excavations, almost all of Iron Age and Roman date.

#### Bronze Age Pottery

Six sherds (37g) of possible Bronze Age pottery were retrieved from a ditch and pit in Area 2. A single thin-walled sherd with incised vertical and horizontal lines appears likely to be from a Bronze Age beaker.

#### Iron Age Pottery

The only Early Iron Age pottery comprised nine sherds from a pit between Areas 2 and 3, including a sherd of flint-tempered pottery with a sharply carinated shoulder, typical of the early Iron Age in the region (Jackson 2003, 24). The remainder recovered during the excavation phase fell into two groups: a mid- to late Iron Age tradition that can be paralleled in assemblages from Duxford (Percival 2011) and Gatesbury, Puckeridge (Partridge 1981, fig. 41); and the Aylesford-Swarling or 'Late La Tène III' tradition of wheel-made and wheel-finished wares that were abundant at Puckeridge-Broughton, Hertfordshire (Partridge 1981). A small number of groups appeared to exclusively contain sherds that would conform to a middle Iron Age date (e.g. Fig. 7, Nos. 2–3) but most other contexts which yielded any diagnostic forms or feature sherds contained vessels in the late Iron Age tradition (Table 1).

The range of fabrics is closely comparable to those recorded at Skeleton Green (Partridge 1981, SK1–7) with the addition of a group of smooth shell-gritted wares, probably from the South Midlands and used for the manufacture of channel-rimmed jars (recorded as SK7A, not categorised in the original fabric scheme by Partridge 1981, cf. fig. 49.112). A larger proportion of these types would perhaps have been expected given the more northerly location of the Vine Farm site and its proximity to the Northamptonshire/Cambridgeshire area where such vessels were more common (Friendship-Taylor 1999). Unsurprisingly the pottery in the mid- to late Iron Age tradition was more commonly in the coarser fabric variants. In the latest Iron Age groups, the finer fabric variants were most common with the coarser fabrics only being utilized for production of large jars.



Table 1. Mid- to late Iron Age pottery fabrics

Fabric Code	Description	Sherds	Weight
SK1	Skeleton Green: Fine sandy with grog	178	1433g
SK2	Skeleton Green: Grog with sand	403	3971g
SK3	Skeleton Green - Coarse grog with quartz	256	4545g
SK4	Skeleton Green: Very coarse grog with vesicules, large quartz & flint	76	2001g
SK5	Skeleton Green: Sandy, micaceous, small amounts of grog, quartz & flint	51	630g
SK7	Skeleton Green: Coarse grog with shell, voids	26	420g
SK7A	Shell-gritted with a smooth fabric- South Midlands source?	107	1783g
SK7B	Coarse limestone or chalk gritted fabric with some quartz inclusions.	1	47g
SK7C	Fine shell and quartz gritted late IA to early Roman	1	17g
SK7D	Fine shell gritted with orange slip paint	2	38g
<b>Total</b>		<b>1101</b>	<b>14885g</b>

The SK3 'coarse grog with quartz' fabric group (Fig. 7, Nos. 1–3) appeared mainly to have been used for a few larger late Iron Age necked storage jars featuring combed surface treatment and also channel-rimmed jars, although examples of vessels with Scored ware and scored diagonal line surface treatment also appear to have been manufactured in a similar fabric. The decorative techniques evident on the mid- to late Iron Age pottery included a frilled rim and scored diagonal lines (Fig. 7, No. 1, as Percival 2011, nos. 20–21). The coarse SK4 'grog and vesicular' fabric appears to have been used to manufacture a similar range of vessels to SK3. The forms included globular jars with everted rims, funnel necked jars and shouldered bowls with everted rims. A jar with a rounded rim (Fig. 7, No. 4) was a noteworthy example as it was the only vessel in the shell-gritted SK7A fabric that could be attributed to this ceramic phase. None of the imported types found at the Skeleton Green site were present here, but this is not surprising as this is a more functional suite of pottery with fewer examples of exotic tableware.

The fine 'sand and grog-gritted' fabric SK1 appeared to be of late Iron Age date with a platter copying Gallo-Belgic prototypes, necked jars and bowls, necked storage jars with combed decoration, an example of a carinated tazza type bowl, a girth beaker and butt beaker types (Hawkes and Hull 1947, Types 113 and 84a). A similar range of late Iron Age forms were produced in the commonest fabric group, SK2 'Grog with sand', including a butt beaker copy with the addition of zones of combed chevrons (Fig. 7, No. 8; see

Thompson 1982, G5.2.10). Necked bowl types included a nearly complete vessel (Fig. 7, No. 5; Thompson 1982 D2–4.1) with six irregularly spaced post-firing holes of up to 4mm pierced in the base, and another example (Thompson 1982, D2–4.1/2) that had been pierced below the rim (Fig. 7, No. 6). Necked jars included an example with cordoned decoration (Thompson 1982, D1-1.3) and a vessel with a rilled shoulder. Also present were sherds from necked Late La Tène III type storage jars (as Partridge 1981, fig. 50.126).

The SK5 fabric appears to have mostly been used for production of late Iron Age necked jars, while the shell-gritted SK7 and SK7A fabric variant was mostly used for the production of channel rimmed jars (e.g. Fig. 7, No. 7; see Friendship-Taylor 1999). Many of the channel rimmed jars had rilled surfaces. A few examples of necked jars and necked storage jars were also recorded in the SK7 and SK7A fabric groups. Examples of shell-gritted forms in the earlier tradition were limited to a jar that could be paralleled at Duxford (Fig. 7, No. 4).

Another significant fragment of a table ware vessel was a flagon or flask with an ellipsoidal body in a fine shell-gritted fabric with red slipped painted cordon decoration (Fig. 7, No. 9). This vessel resembles examples from the Rushden kilns in Northamptonshire and probably represents conquest period activity (Woods and Hastings 1984, fig. 9.22–3).

### Roman Pottery

A modest-sized assemblage of mostly early Roman pottery was present (Table 2), some found in association with groups of Iron Age tradition pottery dating to the first century AD. Imported wares included 15 sherds of samian, a very low amount even for a rural site. The samian comprises South Gaulish fragments from La Graufesenque and Central Gaulish sherds from Les Martres-de-Veyre and Lezoux. These sherds point to occupation from the Flavian period to the mid-2nd century AD. The range of forms is limited to dishes and cups, consistent with a basic rural site (Willis 2005, chart 17) and comparable to other contemporary assemblages in Cambridgeshire (Monteil 2012).

An unusual fragment from a vessel in an oxidised fabric similar to Southern Spanish Dressel 20 amphora types appeared to be from a lid although it may have been reworked from a globular amphora foot as it had been abraded (Fig. 7, No. 11).

Regionally imported wares include a single fragment from a Nene Valley mortarium with worn trituration grits, a small group of colour coated wares mostly beakers (CC and NVCC), Black Burnished sherds representing a bowl or dish, and Nene Valley greyware sherds from bowls, dishes or necked jars. Much Hadham type Red-slipped fine ware from eastern Hertfordshire was present in small quantities including sherds from a hemispherical flanged bowl and a closed form with dimpled decoration. There was also a limited range of Verulamium ware sherds, mostly consisting of body sherds from flagons and

Table 2. Roman pottery fabrics.

Fabric code	Fabric Group	Common name	Sherds	Weight
SA	Samian	South Gaulish and Central Gaulish	15	46g
DR20	Amphora	Dressel 20	1	125g
MONV	Mortarium	Nene Valley- slag trituration grits	1	16g
CC	Fine	Miscellaneous colour-coated wares	3	14g
MHAD	Fine	Hadham oxidised ware	3	25g
NVCC	Fine	Nene Valley colour-coated ware	1	8g
OXID	Oxidised	Un sourced oxidised wares	63	458g
SK9	Oxidised	Skeleton Green transitional oxidised ware (Partridge 1981).	54	453g
VCWS	Oxidised	Verulamium region coarse white-slipped ware	2	9g
VRW	Oxidised	Verulamium region white ware	40	1026g
BB1	Reduced	Black Burnished ware 1	7	32g
GREY	Reduced	Miscellaneous grey wares	223	2001g
GROG	Reduced	Un sourced grog-tempered wares	5	119g
NVGW	Reduced	Nene Valley grey ware	8	175g
SK8	Reduced	Skeleton Green transitional reduced ware (Partridge 1981)	188	1690g
SHEL	Calcareous	Roman wheelmade shell-gritted wares	27	203g
<b>Total</b>			<b>626</b>	<b>6354g</b>

necked jars. One vessel had traces of a resin glue repair, with similar repairs noted on the Roman pottery from Cambourne (Seager Smith 2009).

A range of other local oxidised wheel made vessels (OXID) were present including a sherd from a beaker, a flagon (Fig. 7, No. 12) and a Hofheim type flagon. Transitional oxidised wares (SK9) made up a significant proportion of the assemblage, with forms comprising butt beakers, necked jars and a lid. Transitional reduced wares (SK8) also made up a large proportion of the assemblage. Types present included necked bowls and jars, including a tazza type bowl with a low carination, platters, channel rimmed jars, and large-necked Late La Tène III storage jars, some with combed decoration. These suggest activity in the mid- to late 1st century AD.

The wheel made greywares (GREY) make up the largest group of the Roman assemblage (34% by sherd count). The range of vessels present (mostly necked jars) suggests a 1st to 2nd century AD bias. A small quantity of grog-gritted wares (GROG), all from large jars, were recorded along with a range of Roman shell-gritted wares including a South Midlands type shell-gritted jar with an undercut rim (as Brown 1994, fig. 37.318).

The range of pottery suggests activity on the site may have continued from the pre-Conquest period throughout the 1st and into the 2nd century AD, with lesser evidence for continued activity in the 3rd and 4th centuries. The fabrics present are almost exclusively from what is now Cambridgeshire and Hertfordshire and suggest that the inhabitants were predominantly using pottery from local industries in a similar fashion to the trends observed at Cambourne in the 1st and 2nd centuries AD (Seager Smith 2009, 27).

### *Ceramic Building Material and Fired Clay*

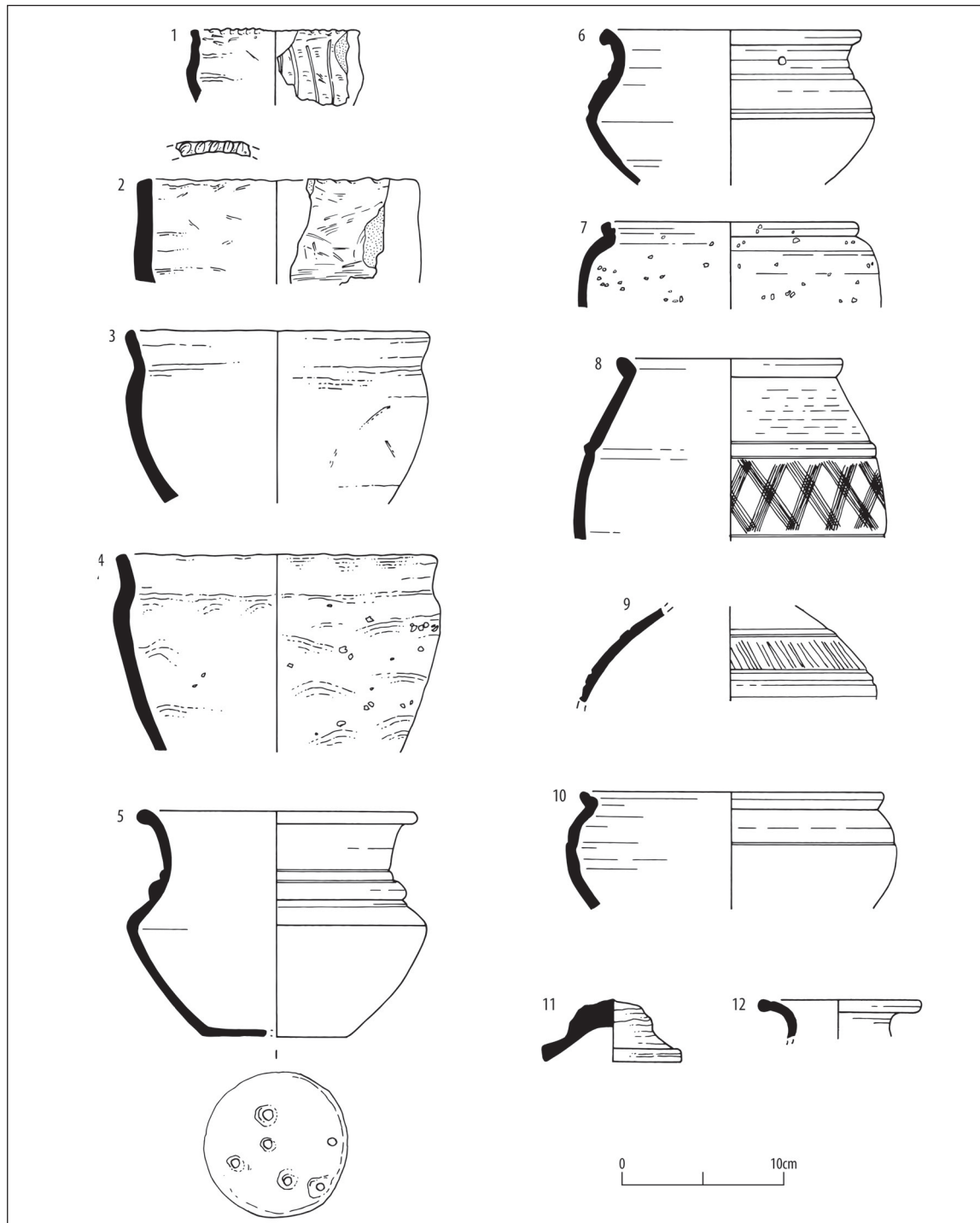
*Summary of report by P Mills*

A total of 101 fragments of ceramic building material (CBM) weighing 1370g was recovered from the excavations. The assemblage comprised Roman and some medieval or later material. The Roman material is typical for the small quantities of CBM often found on rural sites in this period. The mixed range of fabrics, small fragment size and lack of much in the way of identifiable forms and lack of corners strongly suggest that it was brought onto the site for a secondary purpose. The material is concentrated in Area 1 and 2 and the occurrence of T51, Horningsea fabric, in phase 2 at Area 2, and from phase 3 in Area 1, may imply transfer of the material between the areas, although several incidences of CBM being brought into the site are also possible. T51 has been noted at several sites in the region (Mills 2013; Evans *et al.* 2017).

Forty-two fragments of fired clay were recovered, mainly of Roman date. Identifiable objects were few, comprising loom weight fragments and four clay plates typically used as mobile kiln furniture in La Tène type pottery kilns (Swan 1984, Evans *et al.* 2017).

### *Glass*

Only two fragments of ancient glass were found, both of Romano-British date. The first was a sherd from the shoulder of a blue/green bottle, found in the upper fill of a ditch in the north settlement of Area 1, together with Late Iron Age and early Roman pottery. It was not possible to say whether it was cylindrical or square, but it can be given a general date of late 1st to early 3rd century (Price and Cottam 1998, 191–200). The second was a small chip which probably derived from a melon bead, recovered in a sample from a ditch to the east of the Area 1 southern set-



**Figure 7. Iron Age and Roman pottery.**

1. SK3 A handmade jar with a notched rim and diagonal scored lines (Area 2).
2. SK3 A large handmade vessel (Area 2).
3. SK3 A large handmade vessel (Area 2).
4. A large handmade vessel (Area 2).
5. SK2 Near complete vessel with six irregularly spaced post-firing piercings in the base (Area 1 North).
6. SK2 A similar necked vessel to number 5 but with a pierced neck (Area 1 North)
7. SK7A A channel-rimmed jar in a shell-gritted fabric (Area 1 North)

8. SK2 A butt beaker with zones of combed chevrons (Area 1 North)
9. SK7D A paint decorated ellipsoidal vessel, possibly a flagon (Area 1 North)
10. SK8 A channel rimmed jar in a transitional reduced ware fabric (Area 1 North)
11. DR20 An amphora fragment fashioned into a lid (Area 1 North)
12. OXID A rim and neck fragment from a flagon (Area 1 North)

tlement, part of the east-west driveway. These were in use from the mid-1st to mid-2nd century AD (e.g. Crummy 1983, no.20–21).

### *Metalworking debris*

*Summary of report by R Mackenzie*

The industrial waste amounted to 4.062kg of material. There were significant concentrations in fills of Late Iron Age ditches in the southern part of the northern settlement of Area 1. The most diagnostic fragments of residue appear to be a slag type known as smithing hearth cakes or bottoms; this type of slag collected in the base of blacksmiths' hearths when traditional wrought iron was heated prior to forging. The samples of micro-residues contained a small amount of metallurgical material, although many of the possible flakes of smithing hammerscale present may actually be small flakes of iron oxide (rust) that have flaked off rusty iron objects as their surfaces corroded. The overall impression is that iron was being forged in the immediate area of the Roman ditch, with the amount of slag found suggesting either small scale production for occasional trading, or domestic production of tools and other iron goods for a small settlement or farmstead.

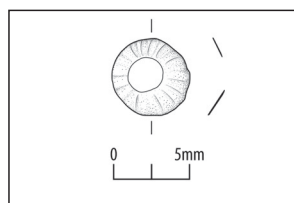
### *Other finds*

*Summary of report by H B Duncan*

A total of 33 items were submitted for analysis. Apart from objects manufactured from animal bone, the assemblage survived in fragmentary condition with few complete objects. Several metalwork items could only be identified as fragments of sheet, strip, strap, bar or wire (Table 3).

#### *Copper alloy*

Four copper alloy items were identified. A single example of a tiny domed mount was found within the upper fill of a ditch in the south settlement in Area 1 (Fig. 8). The mount is centrally perforated and presumably served as the head of a two-piece rivet. This type of mount is not closely datable, but examples can be found on Roman period metalwork.



**Figure 8.** Copper alloy mount of Roman date from fill of ditch in Area 1, south settlement.

Mount. Copper alloy. Tiny domed circular mount with central perforation and radiating grooves. Diam. 4.5mm; ht. c. 1.5mm; perforation diam. 2.2mm.

From the upper fills of ditches in Area 1 north and south settlements came two fragmentary remains of round to oval-sectioned 'wire'. The first could be part of a brooch pin or coil. The second could conceivably have formed part of a 1st century one-piece 'simple-wire' brooch (Olivier 1988, 37–8), but equally may have been part of a shank from a needle or handle from a toiletry implement.

The upper fills of a field boundary ditch in Area 2 yielded a single 26.5mm length of oval-sectioned wire. Again, dating and determination of its original function remains uncertain, but possible uses include a brooch pin or similar.

#### *Iron*

Iron objects were more plentiful and were noticeably concentrated in Area 1. Nails were the best represented object type amongst the ironwork with eleven examples, all from Area 1. Most were from the northern settlement, but three came from the later settlement to the south. Also from Area 1 north settlement was a convex-sectioned strap fragment with a rounded and perforated terminal. This is likely to have served as a hinge, possibly part of a small drop hinge or looped hinge (Manning 1985 fig.31), which suggests the presence of a door or gate.

A single implement thought to date from the Late Iron Age and Romano-British transition was found within the fill of a ditch, again in Area 1 north settlement. This is part of a blade, perhaps from a pair of shears or a knife; the absence of the tang/handle

*Table 3. Quantification of other finds by material and object type.*

Object type	Bone	Ceramic	Copper alloy	Iron	Glass	Total
bobbin	2					2
fragment				6		6
hinge/binding				1		1
handle	1					1
hobnail				1		1
loomweight		2				2
nail				7		7
Shears?				1		1
mount			1			1
wire			3	3		6
vessel glass					1	1
bead					1	1



precluding certainty as to function. The dimensions of the blade and possible arm fragments indicate that, if it was a shears blade, the shears were of Manning's type 2, medium shears of a size used for shearing sheep and the cutting of cloth (Manning 1985, 34).

From the upper fills of a ditch in Area 1 north settlement came a 6mm long fragment of circular-sectioned wire. As with the case of the copper alloy wire fragments, dating and determination of function remain unknown, but uses could include a brooch pin. The south settlement of Area 1 yielded a limited assemblage, including three nails and a small sheet fragment. The one datable find was a pyramidal-headed hobnail, providing evidence that at least one inhabitant/visitor had adopted Roman fashion in footwear.

#### *Worked bone*

The three bone objects identified all derived from Area 2, from contexts containing mid-late pottery. Two modified sheep metapodials each have a hole drilled through the articular surface of the proximal end and polish on their shafts (Fig. 9). Both are examples of what are thought to be 'bobbins' for yarn or use with a loom (Allen and Webley 2007, 82).

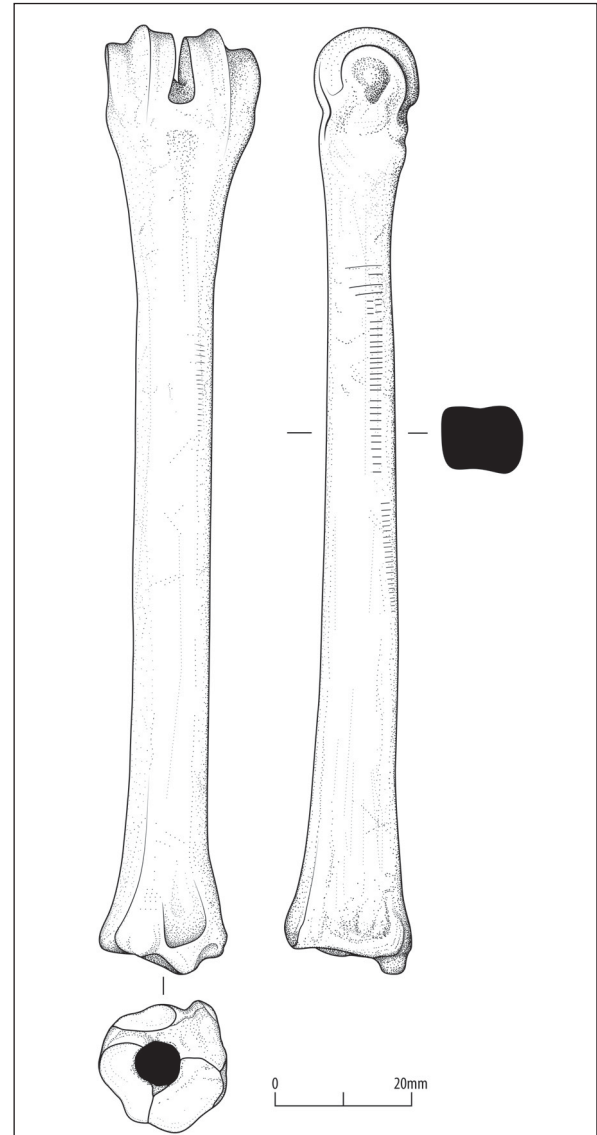
Metapodial bobbins are frequent finds on early to late Iron Age sites. The presence of these tools at Vine Farm is indicative of home-based textile production, supported by the presence of ceramic loom weights within the same area of Vine Farm

A curvilinear enclosure ditch in Area 2 contained a highly polished handle made from a modified cattle tibia. One end is sawn off at right angles to the long axis and the cancellous bone partially hollowed out. The opposing end has suffered damage but appears to have been rounded off, the cancellous bone remaining. The size of the handle suggests use with a tanged tool, possibly relating to crafts (e.g. an auger/drill) or horticultural activities (such as a reaping hook). The handle cannot be closely dated. It is likely to have been produced locally and this, along with the sheep metapodial bobbins suggests 'ad hoc' bone-working to meet the immediate needs of the residents.

#### *Ceramic*

Ceramic objects were limited to fragments of two loomweights, both from in Area 2. The more complete example is shown in Fig. 10.

The loomweight consists of a corner of a triangular loomweight which retains part of one side of a diagonal perforation. The corner of the weight has part of a wide groove, a feature that can be paralleled on loom weights from Dragonby, Lincs. (Elsdon and Barford 1996, 330 and fig. 13.3). Although just under half of its full thickness survives it is in excess of 66mm, suggesting it was sizeable when complete and hence may equate with Barford's mega-loomweight group (Elsdon and Barford 1996, 330). These mega-loomweights may not have been attached to individual bundles of warp thread, as is the case with lighter and smaller weights, but may have been attached to several bundles of warp threads, suggesting the use



**Figure 9.** Bobbin made from sheep metapodial, from fill of ditch in Area 2

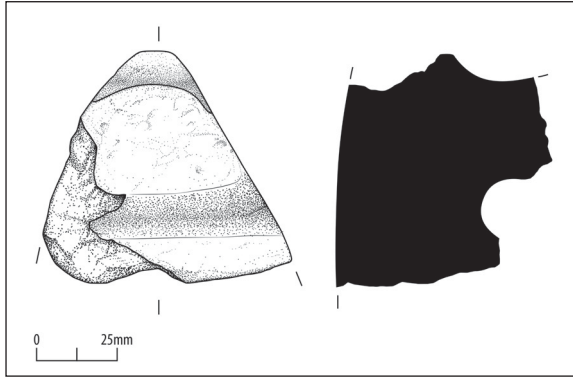
Bobbin. Sheep metacarpal. Complete. Axial hole drilled through articular surface of proximal end. Shaft surfaces polished, close set worn transverse grooves along one side of shaft and lower edge of anterior surface. L. 138.8mm.

of a beam-tensioned loom (Elsdon and Barford 1996, 332).

The second loom weight fragment was found in the fill of a ditch which also formed part of the same rectilinear field system. This example consists of a short section of the side wall of a loom weight, which suggests it may have been part of a triangular weight; however not enough survives to be certain.

Together with the sheep metapodial bobbins, also from Area 2, the loomweights are the earliest artefacts amongst the small assemblage examined here. These two categories of artefact confirm domestic occupation of this area during the Iron Age and indicate that both bone-working and textile production

were undertaken. Both loomweights and one of the bobbins displayed abraded/eroded surfaces. All three items were recovered from a rectilinear field system in Area 2, suggesting they had been re-deposited in what is presumed to be an early Roman field system.



**Figure 10.** Ceramic loomweight, from fill of ditch in Area 2

Loom weight. Ceramic. Part of triangular loomweight comprising part of a corner with wide groove, and part of one side of a diagonal perforation. The full thickness of the weight does not survive. Ht. 76.5mm+; l. 80mm+; th. 66.2mm+; Wt.348g+.

## Environmental Evidence

### Animal Bone

Summary of reports by D Henderson, and Veronica Aniceti and Mauro Rizzetto

Bone was recovered from 204 contexts (Table 4). Of the faunal remains, approximately 85% are unidentifiable fragments, mostly of longbones. Species identified are from the usual domesticated animals: Cattle (596 fragments), sheep (276), horse (76), pig (22) and dog (21, including a complete cranium). Of particular note was the complete skeleton of a 24- to 30-month old horse in a mid-late Iron Age ditch in Area 2. In general, the preservation of the material was good, and many of the bones of the larger domestic species (particularly the horses) were deposited whole, although some large limb bones had been broken open, presumably to extract marrow.

All but two fragments of pig and all but nine fragments of horse were recovered from the eastern area of the site (Areas 2 and 3), as were most of the ageable cattle and sheep remains, where fully grown and elderly animals predominate. Most sheep appear to have been slaughtered at around two years old, while cattle generally lived longer. A boundary ditch from the northern settlement of Area 1 produced a cattle metatarsal with arthritis, often taken as a sign that the animal had been used to pull a plough or cart. Some material had fine butchery cuts and paring, and there was extensive evidence of dog chewing marks on the bones.

Despite the very small size of the Romano-British sample, the evidence indicates the increasing importance of cattle during the transition between the Iron Age and the Romano-British phase. This is reflected

**Table 4.** Number of identified animal specimens (NISP) from hand-collected and sieved material.

Animal taxa	Hand-collected			Sieved			Total
	IA (Phase 2)	LIA-RB (Phase 3)	RB (Phase 4)	IA (Phase 2)	LIA-RB (Phase 3)	RB (Phase 4)	
Cattle ( <i>Bos taurus</i> )	66	112	25	3	9	1	216
Caprines ( <i>Ovis/Capra</i> )	40	57	4	7	19	0	127
Caprines/Roe Deer ( <i>Ovis/Capra/Capreolus</i> )	0	0	0	2	0	1	3
Pig ( <i>Sus</i> sp.)	7	9	0	8	1	1	26
Equids ( <i>Equus</i> sp.)	86	32	1	0	1	0	120
Dog ( <i>Canis familiaris</i> )	10	2	1	1	0	1	15
Red deer ( <i>Cervus elaphus</i> )	1	0	0	0	0	0	1
Human ( <i>Homo sapiens</i> )	3	3	0	0	0	0	6
Large rodent	0	0	0	18	5	1	24
Small rodent (small Murinae; small Microtinae)	0	0	0	33	21	4	58
Insectivora	0	0	0	3	1	0	4
Amphibians	0	0	0	43	24	16	83
Birds	0	0	0	1	0	1	2
Fish	0	0	0	3	0	0	3
<b>Total</b>	<b>213</b>	<b>215</b>	<b>31</b>	<b>122</b>	<b>81</b>	<b>26</b>	<b>688</b>

not only by a rise in the proportion of cattle bones but also a corresponding decrease in the incidence of sheep and goat (*Ovis aries/Capra hircus*), while pig remains rare in all phases. An increase in the frequency of cattle remains is sometimes taken as typical of the transition from Iron Age husbandry practices to the Roman period and has been observed at other sites (Grant 1989, Albarella 2007).

A dog skull complete with mandible was found in a Late Iron Age ditch outside and to the south of the southern settlement of Area 1. It was particularly large, with a snout width index of 32.9 and an upper tooth-crowding index of 92 (Clark 1996, 214). Both these indices are at the very extreme end of the dog spectrum, but not quite in the area of European Wolves, as are the lengths of the teeth. The context produced one other dog bone, a claw. It may be that the skull was deposited with an attached skin, perhaps as a ritual deposit.

The identified specimens from sieved samples included the expected higher incidence of fragments from smaller domestic species and is large enough to allow some comments on the environment surrounding the site. The presence of small birds (starling/thrush (*Sturnus/Turdus*) and Eurasian skylark (*Alauda arvensis*) and rodents (see below) is very common; these can thrive in a wide range of habitats. However, many voles (*Microtinae*) tend to prefer damp areas and avoid large clearings and heavily grazed areas. Moles (*Talpa europaea*) and shrews (*Sorex* sp.) have also been identified. Despite flexible habitat requirements, shrews tend to prefer damp areas with dense/semi-dense vegetation. Amphibians such as frog (*Rana temporaria*) and toad (*Bufo bufo*) are very abundant in all phases and parts of the site. This high incidence of amphibians, along with the presence of voles and shrews, supports the existence of a relatively wet environment with semi-dense vegetation (e.g. vegetated clearings, meadows) and permanent or temporary waterbodies.

#### Human remains

Summary of report by Veronica Aniceti and Mauro Rizzetto

A very small quantity of human bone was present; this comprised four partial parietal bones from disuse fills of Late Iron Age to Romano-British ditches in Areas 1 and 3; as well as five foetal bones from ditches of similar date in Area 2. Both foetal assemblages are consistent with deposition of complete skeletons.

While the parietal bones from adult individuals could be the result of disturbance of earlier burials, disarticulated foetal/neonatal bones are not uncommon in ditch and pit fills, as aborted/stillborn/newborn individuals were often discarded along with food waste.

#### Plant remains

Summary of report by Laura Bailey and Tim Holden

Sixty-three samples, ranging in volume from ten to forty litres, were recovered. Cereal grain was present in 26 samples, generally very heavily abraded and in many cases not able to be identified to species. Three different types of cereal grain were identified, hulled barley (*Hordeum vulgare*), possible bread/club wheat (*Triticum* c.f. *aestivo-compactum*) and oats (*Avena* sp.). Hulled barley was present in seven samples and was the most commonly identified grain. Weed taxa from 14 contexts all comprised species common in arable fields and disturbed ground (Stace 1997).

#### Radiocarbon Dating

Five radiocarbon dates were obtained from organic carbonised material in environmental samples (Table 5). These broadly correspond to dates indicated by pottery from the same contexts. In most cases the material comes from disuse fills (relating to periods of silting up or backfill) and not primary fills (relating to periods of construction and use) that material for testing came from, so dates for the actual cutting of features would be earlier.

#### Discussion

The investigation brought to light three main areas of archaeological activity, characterised as Areas 1, 2 and 3. These are separated in space but overlap in their periods of use. The earliest activity seems to have occurred in or near Area 2, with some Bronze Age and Early Iron Age pottery coming from features in the vicinity. The first substantial evidence of settlement or agricultural activity here takes the form of a series of curvilinear enclosures assumed to be mostly animal enclosures (with traces of some possible roundhouses) dating from the Mid-Late Iron Age, and this seems to also occur at the same time on Area 3, which may be an outlier enclosure of Area 2.

These are replaced on both those areas by rectangular enclosure systems dated to the Late Iron Age

Table 5. Radiocarbon dates.

SUERC no	Radiocarbon date	Material	Context	Feature	Area
78732	290 BC +/- 35	Charcoal	Disuse fill	Ditch of sub- rectangular enclosure	3
78736	159 BC +/- 35	Charcoal	Base fill	Ditch of field boundary system	2
78734	155 BC +/- 35	Cereal grain	Base fill	Ditch of field boundary system	1 (North)
78735	64 BC +/- 35	Cereal grain	Disuse fill	Ditch of field boundary system	2
13825	AD 122 +/- 35	Nutshell	Disuse fill	Ditch	1 (North)

and early Romano-British periods. This is when all three areas may have been in use together, for rectangular enclosures in the northern part of Area 1 were also constructed and used during that time. On Area 1 there is evidence of domestic settlement in the form of three roundhouse gullies, which should be taken as an indicator of the likely existence of many more in the vicinity, outside the narrow windows of evaluation trenches. Roundhouses could likewise easily have been missed on Areas 2 and 3, given the degree of truncation by deep ploughing and the limitations of investigation by evaluation trench. Loomweights and bobbins found in Area 2 give some indication of craft activities taking place there, implying the existence of habitable structures. In Area 1, industrial waste in the form of slag residue indicated the likely existence of a forge.

The Roman conquest brought about considerable changes in the wider landscape, with the construction of Ermine Street and, at some later point in time, the establishment of the Roman villa close to the road on the north side of the River Rhee, just 1.5km to the northeast of the site. It seems probable that the farmsteads at Vine Farm became part of the agricultural estate of the villa, with layouts of fields and tracks subject to considerable reorganization as a result. The construction of the east-west droveway may have been part of these changes. It is a substantial feature, at least 500m long and continuing in both directions. At the eastern end of its known course it begins to curve to the northeast, and it might well have headed towards the roadside settlement at Arrington Bridge, skirting round the interposing watercourses and wet ground. Alternatively, it may have taken a steeper curve to the north to join up with the double-ditched trackway identified on aerial photos (HER 16011415), just to the southeast of the villa. Either way, the new droveway probably necessitated the construction of the southern enclosure system of Area 1 alongside it. The association of droveways with enclosures gives a clear signal of the importance of animals (and possibly wheeled vehicles drawn by animals), and the necessity of moving them from one part of the landscape to another. It seems likely that the agricultural economy was primarily pastoral from the Iron Age into the Romano-British period, though the finding of the handle of a possible threshing tool, and cereal grain from fills, suggests there were arable components too. Animal bone evidence indicates a strong emphasis, increasing over time, on the keeping of cattle relative to other domestic species such as sheep and pig.

Thinking of Area 1 as a stream-bounded island, and indeed of the landscape generally as being divided up by converging rivers and streams, adds some landscape context to the otherwise rather abstract general picture of the distribution of Iron Age/Romano-British farmstead enclosure systems, characteristically spaced 300–500m apart (Evans 2008, 181–6, Brudenell 2018). It invokes a more fluid and mobile landscape (Aldred 2014), with streams forming natural boundaries between farmsteads, con-

ferring a directionality of upstream/downstream to people's experience of the land. Droveways too, such as the one running alongside the southern settlement in Area A, might be envisaged as channels for material flows – in this case the movement of people and animals. These paths tend to be set roughly perpendicular to streams, in order to make the approach to fords more passable, in effect creating a kind of dynamic meshwork (Ingold 2007) of interweaving lines of flowing movement.

Fords were key nodes in mobile landscapes of pastoral communities (Edgeworth 2014). This is not only where streams were forded by herds of animals wading or swimming through, it is also where animals were washed and watered. Water was a vital element in the life of herdsmen/ herdswomen and their animals, and paths were inevitably oriented towards it. The actual location of fords can be inferred, at least if courses of both droveway and stream are known, the ford being at the point where the two lines of movement cross. Typically, droveways funnel outwards in the approach to fords and funnel back in again on the other side, to allow animals to cross side-by-side rather than in a single-line, preventing undue erosion of banks and stream-beds. This funnelling effect is epitomised by the eastern stretch of the Romano-British droveway skirting the southern enclosures of Area A, broadening out from 7m wide to as much as 30m as it approaches the stream, and 20m wide on the other side.

Rivers and streams infiltrated every aspect of farmstead activity through artificial extensions of the river system and its drainage functions in the form of networks of boundary and enclosure ditches. See Evans (1997) on the role of such mundane features – understood as components of water management systems – in the lives of the 'hydraulic communities' of the Iron Age in the Fenland (a term that is just as applicable to farmers living some distance away from the fen-edge). The material agency of flowing water impacted on sites in multiple ways, affecting their siting and their overall spacing in the landscape.

As Mattingley (2006) points out, the landscapes of Britain were transformed under Rome in various ways: "the driving through of major roads, the physical demarcation of lands of different uses, new types of sites". As a material expression of this, the new droveway crossing the site from east to west was not aligned to existing farmsteads: rather, the layouts of fields, enclosures and paddocks had to be realigned to it. In effect, the new routeway pulled enclosure systems towards it, necessitating their re-construction and re-location. But this was by no means a one-way process of Romanization. The Roman period enclosures next to the droveway are basically still Iron Age forms, though slightly more regular and neatly defined than those to the north: they are transformations of what was already there. Long-established British ways and rhythms of life, together with agricultural landscapes shaped by centuries of indigenous Iron Age practices, were integrated into imposed imperial systems in a more interactive process than the term



'Romanisation' might suggest (Taylor 2013).

Rivers played a part in this interaction, actively shaping as well as being shaped by the new agricultural regime. The curving course of the new drove-way, hypothesized to connect the farmstead at Vine Farm with the roadside settlement at Arrington Bridge and/or parts of the villa estate, was influenced by the presence of intervening watercourses and wet ground, which had to be avoided and worked round: a straight line connecting the points was not possible. The line taken by the droveway (and reconfigured patterns of fields and enclosures pulled in to border it on either side) would have been further influenced by available fording points on the streams that had to be crossed, diverting away from more impassable places. The story is as much about the impact of the countryside and its watercourses on Roman farming regimes as the other way around.

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