

# An early–middle Iron Age settlement on the eastern Chilterns at Butterfield Green, Luton

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## SUMMARY

*In 2005–2006, Albion Archaeology carried out an open-area excavation in advance of industrial development at Butterfield Green, on the north-eastern fringe of Luton. The earliest evidence for human activity took the form of late Neolithic/early Bronze Age and late Bronze Age artefacts. Parts of an early–middle Iron Age settlement and the fringes of a late Iron Age/early Romano-British settlement were also discovered.*

*This article focuses on the early–middle Iron Age settlement, which extended over 1ha. It comprised two partially enclosed domestic foci, separated by an open area containing a variety of features including small pits, water pits and a four-post structure. One of the domestic foci contained a roundhouse which was unusual in that it had a west-facing doorway. It is clear that the settlement developed over time rather than being a single, planned entity: several of the ditches were re-dug; some original ditches truncated earlier pits; and, quite unusually, a roundhouse was replaced by a large water pit.*

*There is evidence to suggest that at least some of the early–middle Iron Age boundaries continued to function into the late Iron Age/early Romano-British period. A settlement of that date probably lay to the west of the excavation area.*

## INTRODUCTION

In 2004, planning permission was granted by Luton Borough Council for business development on land at Butterfield Green, Luton. A condition was attached to the planning permission requiring the investigation and recording of any archaeological remains on the site in advance of development. This article deals with a single c. 1.1ha land parcel developed by Easter Properties Ltd.

### SITE LOCATION (FIG. 1)

Butterfield Green lies on the north-eastern edge of Luton, centred on NGR TL 1100/2510. Topographically, the development area is situated on fairly flat ground in the eastern Chilterns, gently sloping NW–SE from 177–168m OD. The underlying geology consists of clay-with-flints over chalk, with localised silty channels and patches of sand and gravel.

At the time of the open-area excavation, the development area was disused farmland. Construction work had already begun on adjacent feeder roads, roundabouts and services, which bounded the site to the south and east; open fields lay to the north and west.

### ARCHAEOLOGICAL BACKGROUND

Butterfield Green lies within a landscape rich in evidence of prehistoric and Roman activity. The Icknield Way and the Edeway are located c. 1.5km to the north and a number of prehistoric ritual, burial and boundary monuments are present within a c. 3km radius. Approximately 4.5km to the north is the hillfort of Ravensburgh Castle.

An archaeological investigation associated with the EEDA Innovation Centre, immediately to the south (Fig. 1), located evidence for late Neolithic–early Bronze Age, late Bronze Age–early Iron Age, Romano-British and medieval activity (Albion Archaeology 2005a). The majority of the evidence comprised either artefacts such as struck flints, or dispersed features suggestive of boundaries and water pits, perhaps representing fields adjacent to a settlement. Further to the south-west, beyond the development area (Fig. 1), trial trenching also identified Iron Age, Roman and medieval remains at Vale Cemetery (Albion Archaeology 2005b).

### THE ARCHAEOLOGICAL INVESTIGATIONS

Initially, the study area was subjected to fieldwalking and geophysical survey (WYAS 2004), although neither identified any definite archaeological evidence. Out of ten subsequent trial trenches, six contained archaeological remains that were indicative of early–middle Iron Age settlement (AFU 2005). Although the evaluation had identified significant archaeological remains, they did not warrant preservation *in situ*. A specification and method statement were produced for a c. 1ha open-area excavation in advance of construction (Fig. 2; CPM 2005; Albion Archaeology 2005c). Due to spoil-storage issues, the work was undertaken in two stages: 75% in August–September 2005; and the remainder in January 2006.

An Assessment and Updated Project Design was produced on completion of fieldwork (Albion Archaeology 2007), which summarised the results and addressed the analytical and research potential of the recovered data. It also set out the methodological basis for the post-excavation analysis.

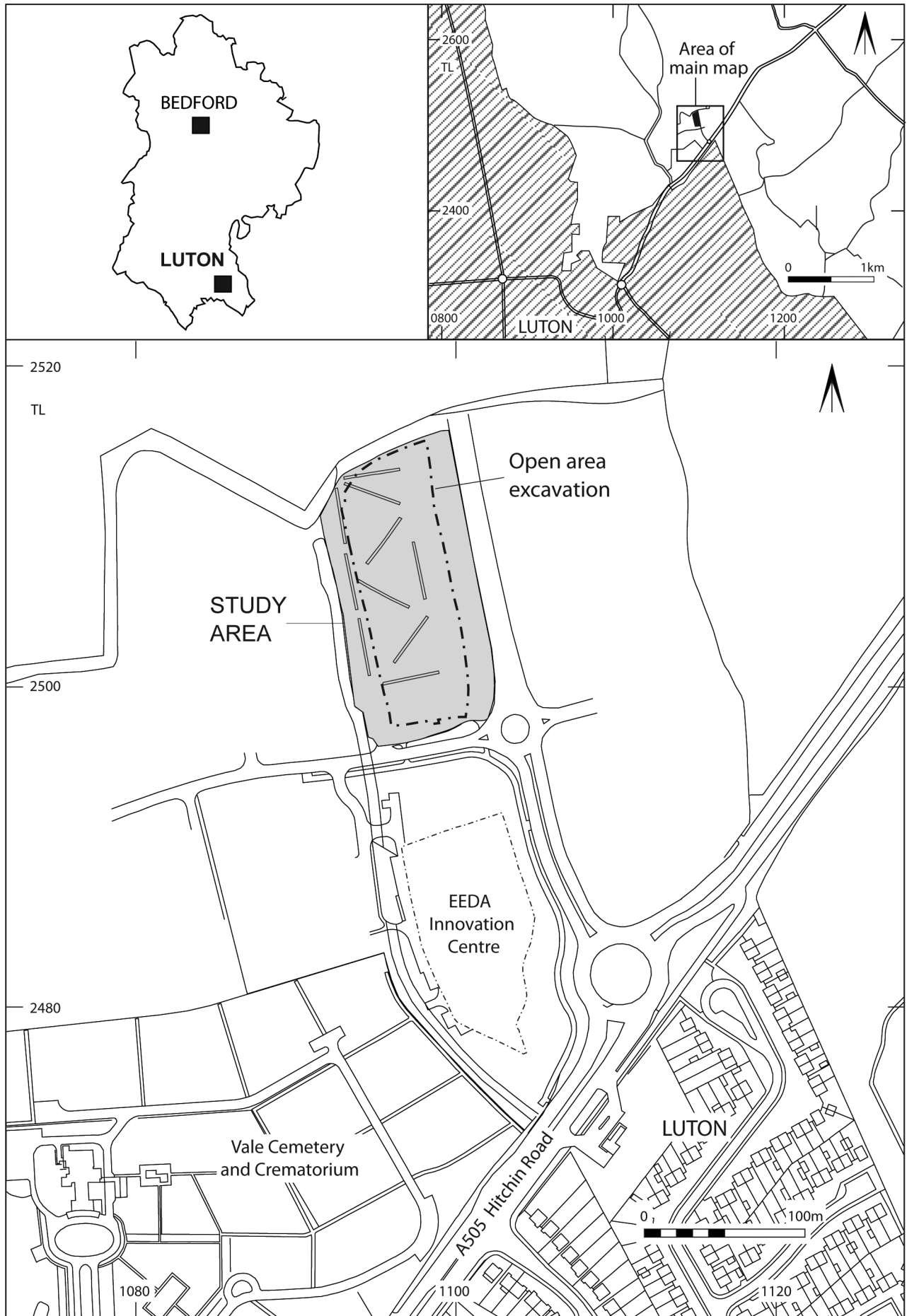


Figure 1: Site location map

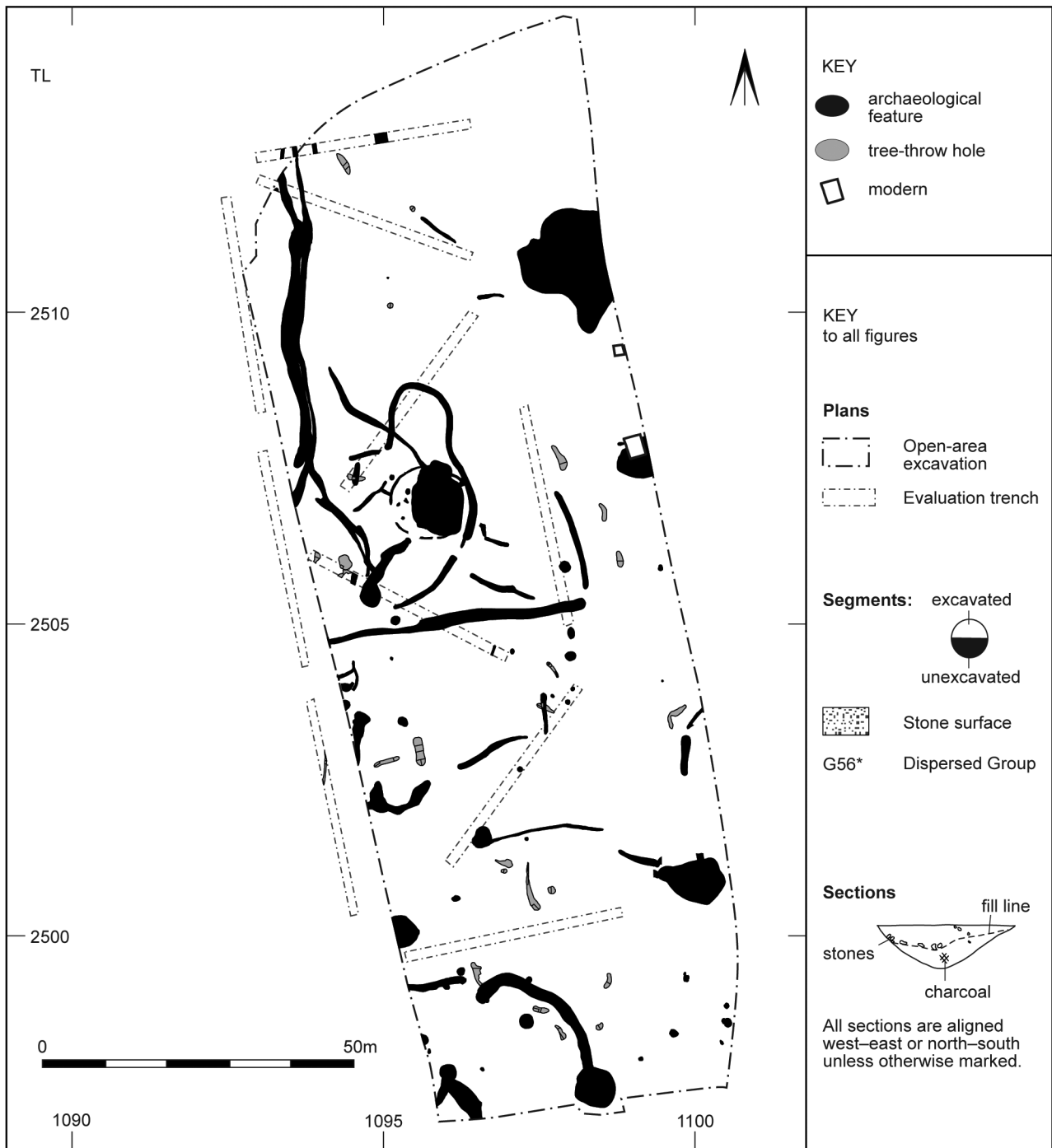


Figure 2: All-features plan

POST-EXCAVATION METHODOLOGY

During analysis, the contextual evidence was organised into a structural hierarchy comprising:

- S (*Sub-groups*) — e.g. feature ‘cut’ recorded in several excavated segments, primary fill of same ditch within several excavated segments, post-hole
- G (*Groups*) — e.g. building, boundary ditch, water pit
- L (*Land-use areas*) — collection of broadly contemporary and spatially coherent Groups, e.g. a ditched enclosure and all contemporary internal activity
- Phases — broad, chronological divisions, e.g. early-middle Iron Age, late Iron Age-early Roman

The methodologies employed for analysis of the artefacts and ecofacts are described in their relevant sections.

STRUCTURE AND TERMINOLOGY IN THIS ARTICLE

The site narrative presents the results of the investigations within a chronological framework of Phases. This is further subdivided by Land-use area (L prefix) and Group (G prefix). A decimal suffix is used to indicate non-primary fills associated with a Group. Sub-groups are only labelled on the illustrations if they are referred to in the text.

In addition to describing the archaeological features, the site narrative also summarises key artefactual and

ecofactual evidence, which is presented in more detail in separate sections. The article concludes with a discussion of the results of the investigations. Further technical data on the ceramic evidence is contained within an appendix.

## RESULTS OF THE INVESTIGATIONS

### PHASE 1: LATE BRONZE AGE–EARLY IRON AGE ACTIVITY

Fifteen sherds (197g) of late Bronze Age–early Iron Age pottery and part of a late Bronze Age loom-weight (RA 4) were recovered. The material was entirely residual within later features and there were no significant concentrations within its distribution.

### PHASE 2: EARLY–MIDDLE IRON AGE (FIG. 3)

The earliest firm evidence for settlement was dated by pottery to the early–middle Iron Age. Two domestic foci were identified (L1/L2 and L3) on the basis of the types of feature present and the quantities of domestic debris they produced. They were *c.* 55m apart and both were associated with curvilinear enclosures. The northern focus contained one definite roundhouse, while the curve of a ditch to the north may have surrounded a second. Between and to the east of the domestic foci were areas of unenclosed activity L4, L5, L6 and L9, consisting of water pits, smaller pits, post-holes and slots.

Not all of the activity was contemporary — both domestic foci contained stratigraphic evidence for

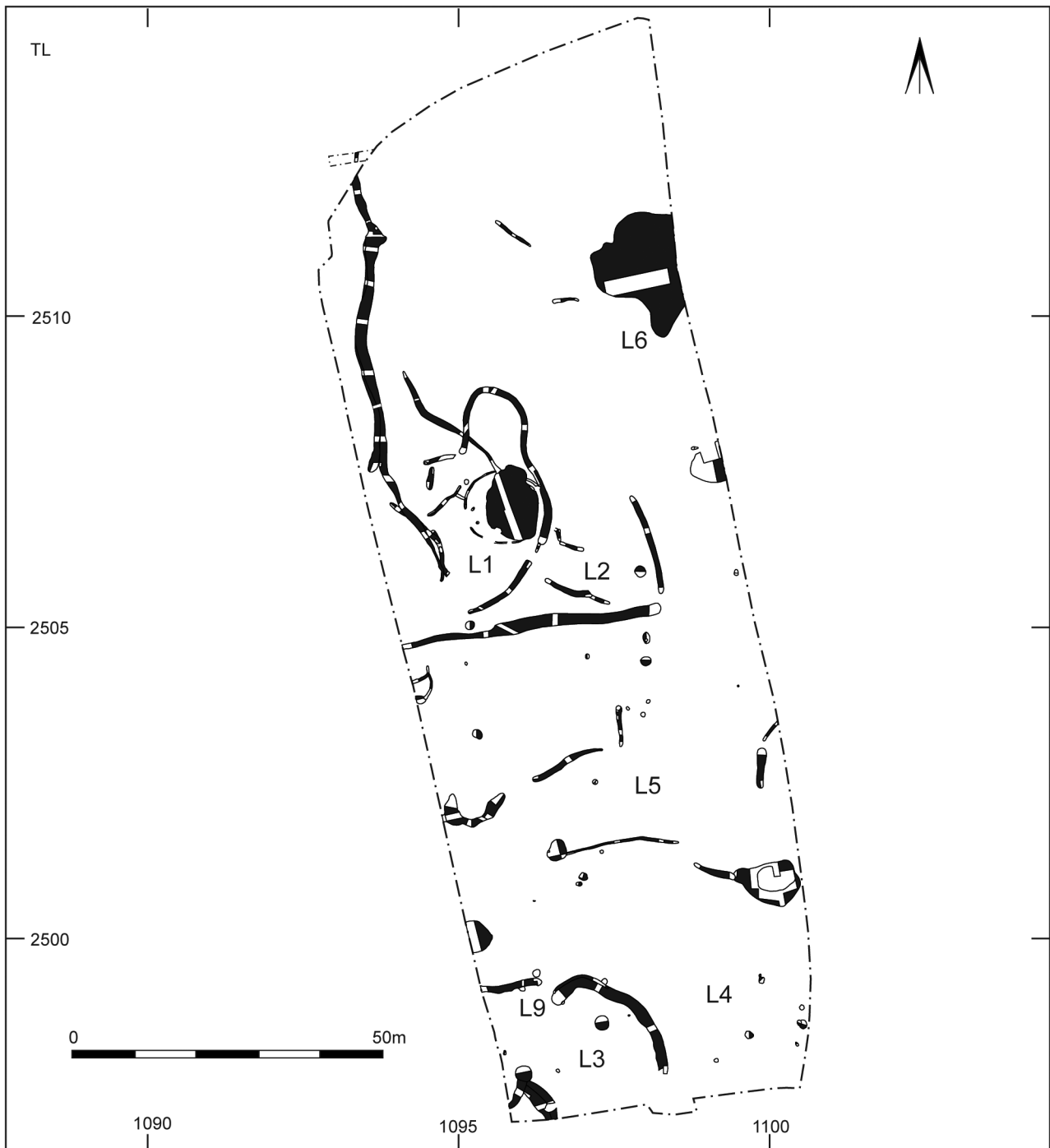


Figure 3: Overall plan of Phase 2 early–middle Iron Age settlement

sequential changes and amendments. In the northern focus, the earliest activity comprised a roundhouse and associated features L1. Some of the ditches were subsequently redug and the roundhouse was replaced by a large water pit (all designated L2). The ditches of the southern focus L3 truncated several unenclosed pits assigned to L9, demonstrating that they were not contemporary.

Overall, the excavation produced a moderate quantity of domestic debris: a large pottery assemblage; a moderate assemblage of fired clay; and a small number of other artefacts, including struck flints. Poor preservation resulted in the recovery of only a very small animal bone assemblage.

*Northern domestic focus L1 (Fig. 4)*

The earlier elements of the northern domestic focus were identified purely on stratigraphic grounds; no variation was observed in the moderate (620g) pottery assemblage. L1 comprised a curvilinear ditched enclosure defined by ditches G38/G53 and G2/G4. The enclosure contained at least one roundhouse, several short slots and a small number of post-holes. The roundhouse (G1) was defined by a pennanular drainage gully; its doorway clearly faced west. A small number of slots G42 and G43 on the west side of the roundhouse may have contained short fences associated with the control of movement within the enclosure.

*Ditch G38, G53*

Sinuuous, north-south aligned ditches G38 and G53 extended for c. 70m and may have defined the western side of this domestic focus. Two c.

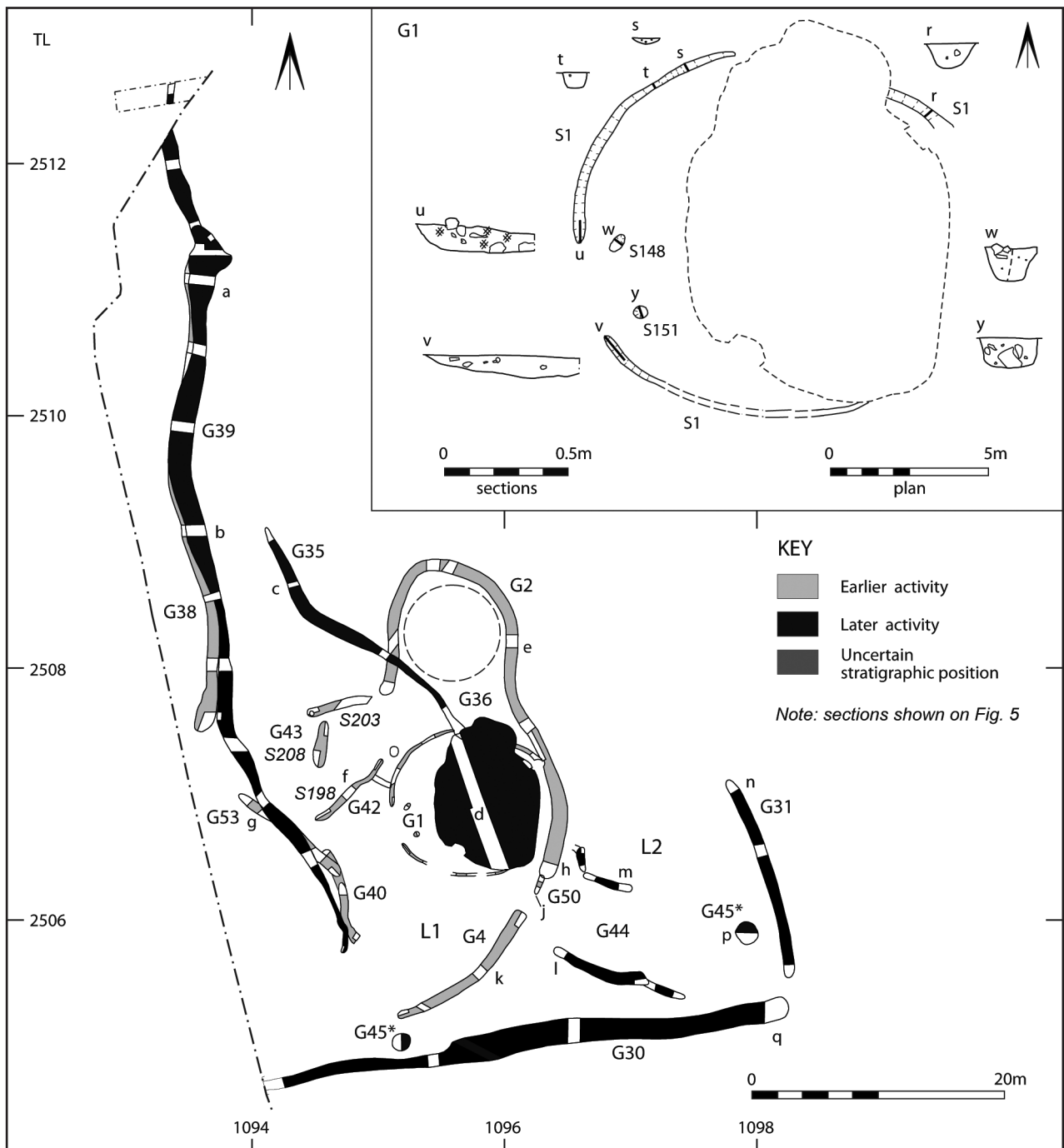


Figure 4: Detailed plan of domestic foci L1 and L2, with detailed plan and sections of roundhouse G1

5.7m gaps were identified: one adjacent to slots G42 and G43, the other corresponding with the terminal of ditch G4 (see below). The full extent of ditch G38 only survived at its southern terminal, where it was 1.5m wide and 0.15m deep with a concave profile and flattish base; it was similar to the north where it was partially truncated by a re-cut (Fig. 5b). Ditch G53 was c. 0.7m wide and no more than 0.25m deep (Fig. 5g), and contained frequent flecks of charcoal near its north-west terminal.

#### Curvilinear inner enclosure ditches G2 and G4

Curvilinear ditches G2 and G4 were separated by a 3m wide entrance to the south-east but had a combined length of c. 60m. Terminals at both ends lined up with the terminals of ditches G38 and G53, suggesting that the two sets of ditches were contemporary. Ditch G2 respected roundhouse G1; it also partially enclosed a circular area to the north which may have been the location of a second, smaller roundhouse, c. 8m in diameter, for which no other evidence survived. Both ditches were c. 1m wide (Fig. 5e and h), becoming wider and deeper towards the entrance terminals.

#### Roundhouse G1 (Fig. 4 inset)

Although truncated in places and only identifiable as a soil mark to the south, penannular gully S1 enclosed an area c. 12m in diameter. It was generally 0.3m wide and 0.15m deep, with a concave profile (Fig. 4r-t). Moderate quantities of contemporary pottery were recovered, mostly from its north-west length, the terminal of which also contained fairly numerous flecks of charcoal. A 3m gap on the west side of the gully indicates the position of an entrance into the roundhouse, probably associated with two post-holes S148 and S151. They were situated 1.8m apart and contained remnants of possible packing material in the form of large stones (Fig. 4w and y).

#### Slots G42 and G43

A number of short slots designed to control movement to and from the entrance in enclosure ditch G38/G53. Slot S198 was 7m long, up to 0.6m wide and up to 0.3m deep (Fig. 5f). It appeared to be linked by a smaller slot (0.4m wide and 0.1m deep) to the roundhouse drainage gully, while a large post-hole – c. 0.7m in diameter and 0.5m deep – was located next to its north-east terminal. Slot S203 was roughly parallel with S198 and was similar in width and depth, with a small post-hole in its western terminal. Slot S208 lay between the two others, roughly perpendicular to them.

#### Slot G40

Curvilinear slot G40 lay 4m south-west of roundhouse G1 on a north-west alignment. It was similar in width as S198 (G43), though slightly shallower and more U-shaped in profile, with a 2.4m wide gap between the two slots. It was truncated by ditch G53, although the two were indistinguishable in places.

#### Slot G50

A small, NE-SW aligned slot G50 (Fig. 5j) survived for 1.6m to the south-east of roundhouse G1, where it was truncated by enclosure ditch G2. It may have been part of another fence in the vicinity of the roundhouse.

#### 'Later' northern domestic focus L2 (Fig. 4)

Additional ditches G30 and G31 and other features were dug in the vicinity of domestic focus L1. They produced moderate assemblages of pottery (1.6kg) and fired clay

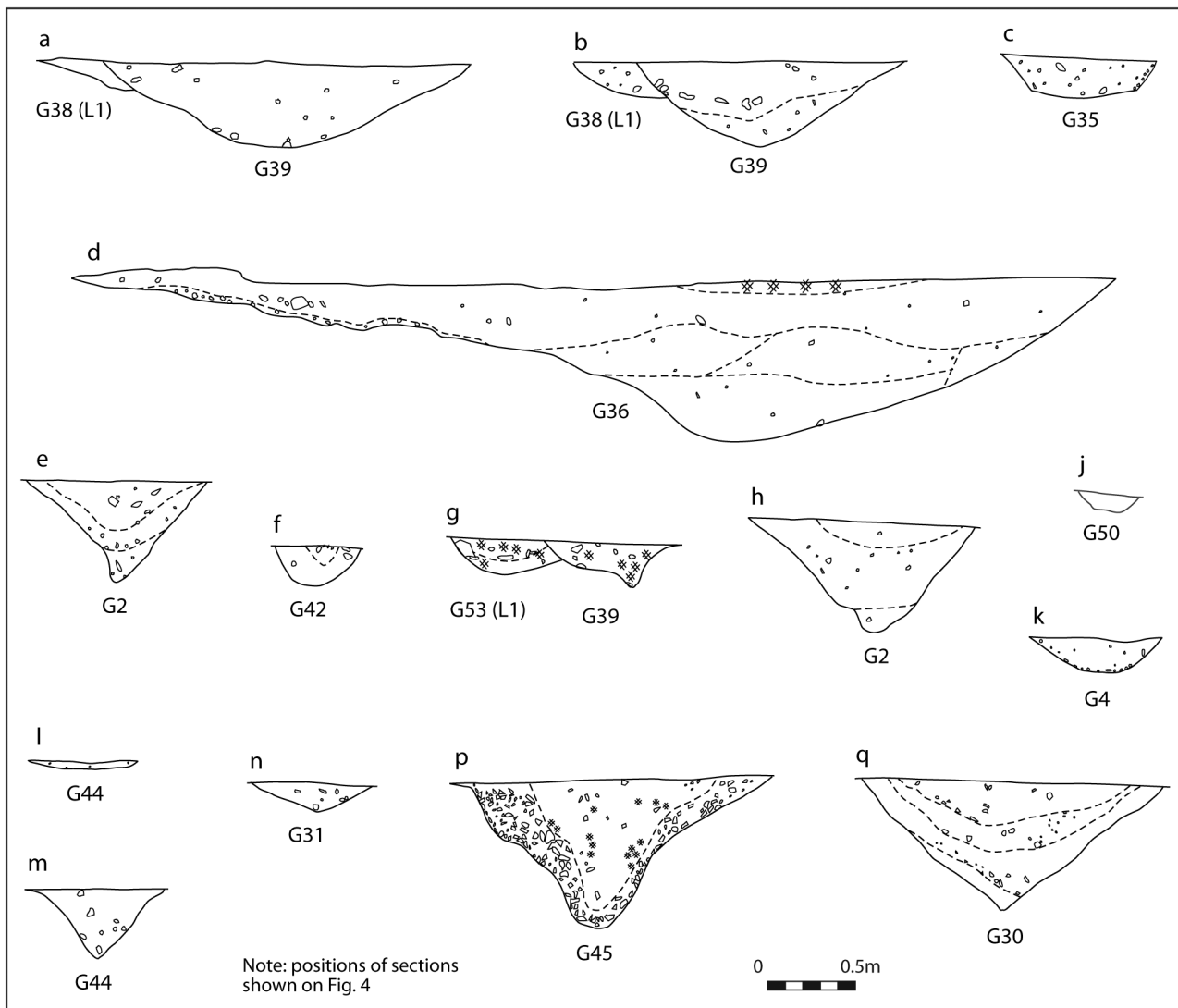


Figure 5: Selected sections of domestic foci L1 and L2

(895g). G30 and G31 appeared to respect the earlier curvilinear ditches G2 and G4 — entrances in both ditch systems were located in the south-east corners and were linked by slots G44. Two possible post-pits G45 were located adjacent to the new ditches.

To the west, ditch G39 replaced the L1 enclosure ditch, blocking the original western entrance. Within the original enclosure, a large water pit G36 replaced roundhouse G1. It is unclear if it was associated with ditch G35 on its north side.

#### *Ditches G30 and G31*

Ditches G30 and G31 may have formed the southern and eastern sides respectively of a rectilinear enclosure that encompassed earlier domestic focus L1. G30 was over 42m long, continuing beyond the western limit of excavation, although it was not found in the adjacent trial trench; G31 was only recorded as 16.5m long, but it was very shallow (no more than 0.2m deep) and its northern terminal may not have been genuine. Both ditches had V-shaped profiles (Figs 5n and 5q), with G30 measuring 0.65–0.95m deep; this ditch was 1m wide to the west and nearly 2m wide to the east, although no evidence for re-cutting was identified. A 1.6m wide gap between the two ditches may have formed an entrance into the enclosure.

In the terminal segment of G30, the primary fill was located on the north side and may represent the remains of an eroded bank (Fig. 5q). This segment produced most of the pottery recovered from the ditch, along with a dump of burnt clayey material that included frequent fragments of charcoal and fired clay.

#### *Ditch G39*

Curvilinear ditch G39 replaced the earlier enclosure ditch G38/G53 (L1). It was at least 66m long, terminating to the south and continuing beyond the limit of excavation to the north. It was 0.25–0.5m deep and at its widest point measured 1.7m, although *c.* 0.9m was more typical (Figs 5a and 5b). The fills in the vicinity of roundhouse G1 contained frequent flecks of charcoal (Fig. 4y).

#### *Post-pits G45*

Two possible post-pits G45 lay next to the southern enclosure ditch, one just inside its south-east entrance, the other 27m to the west. They were 1.4–1.7m in diameter and *c.* 0.8m deep, with either an irregular V-shaped or nearly vertical profile (Fig. 5p). The nature of the fills of both pits suggests the presence of post-pipes, surrounded by stony packing material.

#### *Slots G44*

The entrances of the inner and outer enclosures were linked by two parallel slots on a NW–SE alignment, 6m apart. The southern slot was 11m long, up to 0.95m wide and 0.1–0.3m deep, with a slight kink (Fig. 5l). The northern slot comprised two short lengths, 0.5m wide and 0.4m deep, with similar profiles (Fig. 5m).

#### *Water pit G36*

A large, sub-oval water pit G36 lay within the internal enclosure, measuring 12m by 8.5m in plan and 1.1m deep. It was shallower to the north, suggesting that water was accessed from that side (Fig. 5d). A horizontal, 0.15m thick layer of initial silting probably formed while the water pit was in use. However, the majority of the fills appear to have accumulated gradually until a deposit of silty clay with frequent charcoal flecks was deliberately dumped in the small remaining depression at the centre of the water pit.

#### *Curvilinear ditch G35*

Curvilinear ditch G35 was aligned broadly NW–SE, measuring 0.45–0.95m wide and 0.35m deep (Fig. 5c). It was 22m long and terminated to the north, while to the south it abutted the water pit and may have been associated with drainage or water collection.

#### *Southern domestic focus L3 (Fig. 6)*

Domestic focus L3 was located 50m to the south of domestic focus L1/L2. Its location in the very south-west corner of the excavation area means that its full layout is unknown. Ditches G6 and G14 may have defined one small enclosure, and ditches G9 and G13 another; a 2.5m wide entrance was identified on the north side between the terminals of G6 and G9. Evidence for internal activity was limited to a

scatter of post-holes G11 and two large, possible storage pits G12. A number of the ditches were re-dug, *e.g.* G6 as G7 and G14 as G15, while some of the ditches truncated small pits G8 and G54 (assigned to L9, see below), indicating that not all the activity was contemporary.

The ditches contained light, naturally eroded primary fills overlain by darker secondary fills; the pit fills were similar but generally lighter in colour. Although no buildings or other structures were identified, the large pottery assemblage (4.3kg), flint artefacts (mainly poor-quality flakes), fired clay and a possible loom-weight suggest these features were associated with domestic activity.

#### *Curvilinear ditch G6*

The north-west terminus of curvilinear enclosure ditch G6 formed a 2.5m wide entrance with ditch G9. The ditch was 1.3–2m wide and generally 0.7m deep, increasing to 1.15m at the terminal (Figs 6c and 6d).

The primary and secondary fills produced 1.1kg of pottery and were indicative of fairly rapid infilling. The pottery included sixty-seven sherds from the same incomplete, decorated vessel (Fig. 11, P3), although there was no indication that this represents a structured deposit. In one excavated segment, the primary fill was concentrated on the north side of the ditch (Fig. 6d), possibly indicating the presence of an external bank. The fills within the terminal were much darker and contained more charcoal flecks than those in the remainder of the ditch.

#### *Ditch G9*

Ditch G9, which formed a 2.5m wide entrance with ditch G6, was *c.* 1m wide and 0.3–0.65m deep (Fig. 6a). In contrast to ditch G6, its darker, charcoal-rich fills were located away from the terminal.

#### *Curvilinear ditch G13*

Curvilinear ditch G13, the north-east terminus of which was truncated by pit S48 (G12), was 0.85–1.4m wide and 0.95m deep, with a similar V-shaped profile to that of G6 (Fig. 6c and g). The primary fill was concentrated on the west side of the ditch, possibly indicating the position of an associated bank, and contained a modified flint nodule that may have been used as a weight (Fig. 12, RA2).

#### *Ditches G14 and G15*

The difference in profile between ditches G13 and G14 (Fig. 6g) suggests that they were separate features, although they did at least appear to terminate with respect to each other. Ditch G14 was 1.5m wide and 0.6m deep, while ditch G15, which is likely to represent a shallower re-cut of G14, was *c.* 1m wide and 0.2m deep (Fig. 6h). The primary fill of G14 was located on the west side of the ditch and may indicate the position of an associated bank.

#### *Gully G7*

Curvilinear gully G7, which was 0.35m wide and up to 0.15m deep (Figs 6b and 6d), could only be traced for 10m. It was located on the north side of ditch G6 and may represent a partial re-cut.

#### *Post-holes G11*

Three sub-oval post-holes G11, 0.3–0.5m in diameter and less than 0.3m deep, (Fig. 6f), were dispersed over a 20m area within the enclosures.

#### *Storage pits G12*

Two circular pits G12 were also situated within the enclosures, measuring *c.* 2m in diameter with steep sides and flat, slightly concave bases. Pit S48 to the west was 0.4m deep, while pit S41 to the east was 0.95m deep (Fig. 6e). Their size and profile suggest they may have been storage pits. Pit S48 produced a possible loom-weight (RA6).

#### *Dispersed unenclosed activity L4 (Fig. 7)*

Immediately to the north and east of domestic focus L3 was an area of unenclosed activity L4, bounded to the north by slot G22 (assigned to L5). It contained three discrete clusters of features: to the west, water pit G17, post-holes G18 and pits G10 and G19; to the east, water pit G20 and associated slot G21; and to the south-east a cluster of small pits G3.

With the exception of water pit G20, all the features contained single, homogenous deposits of naturally derived silty clay. Only a tiny quantity of pottery (under

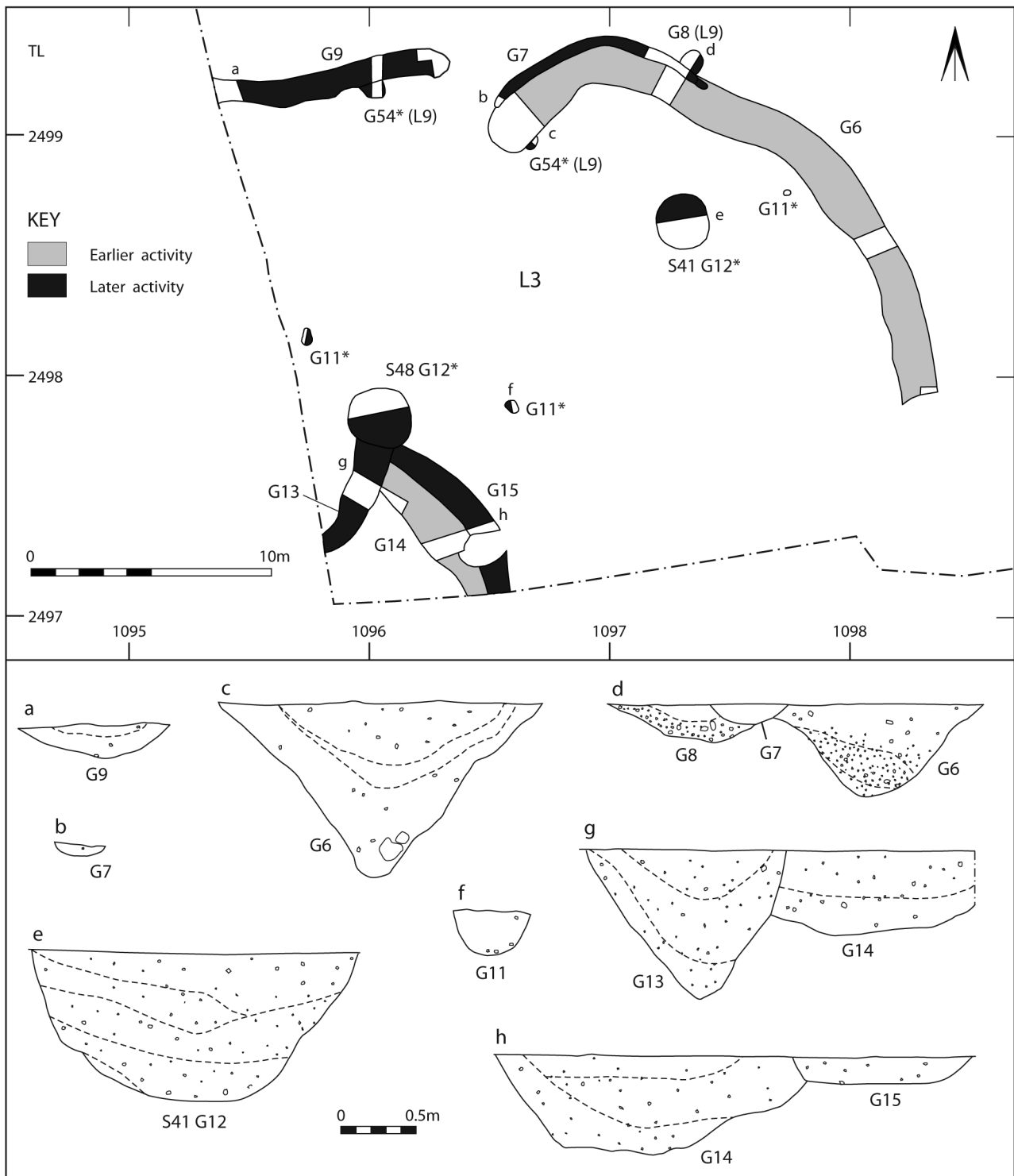


Figure 6: Detailed plan and sections of domestic foci L3/L9

100g) was recovered from these features, suggesting that this area was not directly associated with domestic activity. The water pits and slots may have been associated with livestock management.

#### Water pit G17

Water pit G17 measured at least 5m across and 1.2m deep, lying partially beyond the western edge of the excavation area. It was at least 5m in extent and 1.2m deep. A shallow lip on the southern side perhaps indicates that water was accessed from that side (Fig. 8v).

#### Post-holes G18

Two post-holes G18 were situated 13m apart, measuring 0.3m and 0.5m in diameter and up to 0.3m deep.

#### Pits G19

G19 comprised two adjacent pits, separating post-holes G18. One was sub-circular in plan, c. 1.2m in diameter and 0.35m deep; the other was oval, 0.9m long, 0.6m wide and 0.25m deep. Both had steep, concave profiles (Fig. 8r).

#### Pit G10

Sub-circular pit G10 was located 8m south-east of water pit G17. It was 1.15m in diameter and 0.35m deep (Fig. 8w).

#### Water pit G20 and slot G21

Sub-oval water pit G20 was 10m long, 8m wide and 1m deep, with nearly vertical sides to the south and shallower sides to the north (Fig. 8u). A cobbled surface of 6m by 4m on the shallower north side was presumably designed to facilitate access to the water. A 7m long slot G21



may have drained into the water pit from the west. It was 1m wide and 0.25m deep near the water pit (Fig. 8t), reducing in size to the north-west (Fig. 8s).

#### *Pit cluster G3*

Eight small circular pits, two of them intercutting, were clustered within a 15m area to the east of domestic focus L3. They were 0.2–0.5m deep and ranged from 0.4m to just over 1m in diameter (Fig. 8y).

#### *Unenclosed domestic focus L5 (Fig. 7)*

L5 comprised a focus of unenclosed domestic activity between domestic focus L2 and activity area L4. It was bounded to the north by enclosure ditch G30 (L2) and to the south by slot G22. It contained two water pits G23 and G48, dispersed small pits G26 and a number of short slots G22, G24, G28, G29 and G55 which were possibly associated with fences. A possible four-post structure G49 was identified, while curving gullies G46 might represent the fragmentary remains of a roundhouse. The features to the west, principally water pit G48, produced a large assemblage of pottery (2.1kg) and fired clay.

#### *Slot G22*

East–west slot G22 was c. 18m long and parallel to enclosure ditch G30 (L2). It was c. 0.4m wide and 0.1–0.35m deep, with a V-shaped profile to the east (Fig. 8q) which became more rounded to the west (Fig. 8p).

#### *Water pit G23*

Sub-circular water pit G23 was located at the west end of slot G22, although the stratigraphic relationship between the two was uncertain. The pit was c. 3.2m in diameter and 1.5m deep (Fig. 8n), with a small post-hole dug through the primary fill into the base of the pit on its western side.

#### *Slots G24 and G55*

Two short slots were identified on the eastern edge of the excavation area. Slot G24 was 6.3m long, up to 1.5m wide and 0.6m deep, with a steep, concave profile (Fig. 8m). Slot G55 was at least 3.7m long, 0.5m wide and 0.35m deep, with a V-shaped profile (Fig. 8k). Despite their differences, these two slots may have contained short lengths of fencing, similar to other features on the site.

#### *Pits G26*

Three pits G26 were identified within focus L5, all of which were sub-oval in plan and c. 1.5m in diameter, with steep sides and flattish bases. The westernmost pit was very shallow (Fig. 8e), whereas the pits to the east were 0.35–0.7m deep (Fig. 8d). All contained either fired clay or charcoal.

#### *Slot G28*

North–south slot G28 was perpendicular to slot G22 and may have been part of a fence line. It was 6.5m long and less than 0.2m deep, narrowing from 0.9 to 0.5m from north to south. The north terminal contained a deposit of burnt clay that may have been derived from a nearby oven or similar structure that was not identified.

#### *Slot G29*

Slot G29, which lay 2.7m to the west of slot G28, was 12m long, 0.9m wide and up to 0.3m deep (Fig. 8j). Its recorded terminals may instead represent complete truncation of the feature, since they were much shallower than the rest of the slot.

#### *Possible roundhouse G46*

Two curvilinear gullies G46, which were 0.35–0.5m wide, up to 0.45m deep and had V-shaped profiles (Figs 8a and 8b), may have been associated with a roundhouse. Both curved to the north where they merged.

#### *Possible water pit G48*

Water pit G48 lay 15m to the south of possible roundhouse G46. It was only partially investigated but clearly comprised two main elements, the pit and a stone surface. The latter was 0.08m thick and identified on the east and west sides (Fig. 8g and h); it also extended beyond its edges. The pit was c. 2m in diameter and at least 0.6m deep to the east (Fig. 8h). The full extent of the water pit and its associated stone surface could not be fully determined and it is possible that both were larger than shown on Figure 7.

#### *Possible four-post structure G49*

The arrangement at right angles of three post-holes G49, c. 2.4m apart, suggests that they may have been part of a four-post structure. The post-holes were 0.45–0.6m in diameter and 0.15–0.5m deep (Fig. 8f).

#### *Dispersed post-holes G57*

Four isolated post-holes G57 were dispersed over a 40m area. They were 0.25–0.6m in diameter and 0.05–0.3m deep. The westernmost post-hole S104 contained a burnt deposit, including charcoal flecks and burnt stones, suggesting that the post may have been burnt *in situ*.

#### *Dispersed unenclosed activity L6 (Fig. 9)*

A group of dispersed features to the east of domestic focus L2 comprised two water pits G32 and G33, two small pits G51, and two slots G34. With the exception of some darker fills in water pit G33, these features all contained light-coloured silty clay. Only a minute quantity of domestic debris was recovered, suggesting that this area was on the periphery of the settlement.

#### *Water pit G32*

Water pit G32 lay partially beyond the eastern edge of the excavated area. It measured 6.4m by at least 5.3m in plan and was over 0.6m deep (Fig. 9d).

#### *Water pit G33*

Large, irregularly shaped water pit G33 also lay partially beyond the eastern edge of the excavated area. It was at least 20m by 13m in plan and was 1m deep with steep sides, except on the west where a gentler slope is likely to have allowed access to the water (Fig. 9c).

#### *Pits G51*

Two small, oval pits G51, c. 20m apart, were located on either side of water pit G32. They were similar in size and profile, measuring c. 1m in diameter and 0.15m deep (Fig. 8e).

#### *Slots G34*

Two short slots G34 were located 9m apart to the west of water pit G33. The ends of both were shallow and may represent complete truncation rather than genuine terminals. The northern slot was 7m long, c. 0.5m wide and 0.16m deep, while the southern slot was 4m long, 0.4–0.15m wide and c. 0.3m deep (Figs 9a and 9b).

#### *'Earlier' southern activity focus L9 (Fig. 6)*

Not all the features in the south-west corner of the excavation area were contemporary — a number of pits (L9) were truncated by enclosure ditches L3. Their naturally derived fills produced very small quantities of pottery.

#### *Pit G8*

Sub-oval pit G8 lay on the northern edge of enclosure ditch G6, although the stratigraphic relationship between the two could not be determined due to truncation by gully G7. The pit was 1m long, 0.85m wide and 0.25m deep (Fig. 6d).

#### *Pits G54*

Two sub-circular pits G54, c. 6m apart, were both truncated by the ditches of L3. They were 0.6–0.8m in diameter and c. 0.3m deep, with concave profiles.

### PHASE 3: LATE IRON AGE/EARLY ROMANO-BRITISH (FIG. 10)

Only limited evidence was identified for late Iron Age/early Romano-British activity, mostly along the western limit of the excavated area. Ditches L7 lay to the north, while to the south, dispersed features L8 included pits and a stone surface. The fragmentary remains of two late Iron Age/early Romano-British pots were found in the upper fills of two early–middle Iron Age (Phase 2) ditches, suggesting that they were at least still visible as hollows. The presence of fuel-ash slag (1.5kg) indicates the presence of domestic hearths or ovens in the vicinity. Two possible loom-weights were found, although they are probably residual from the early–middle Iron Age settlement.

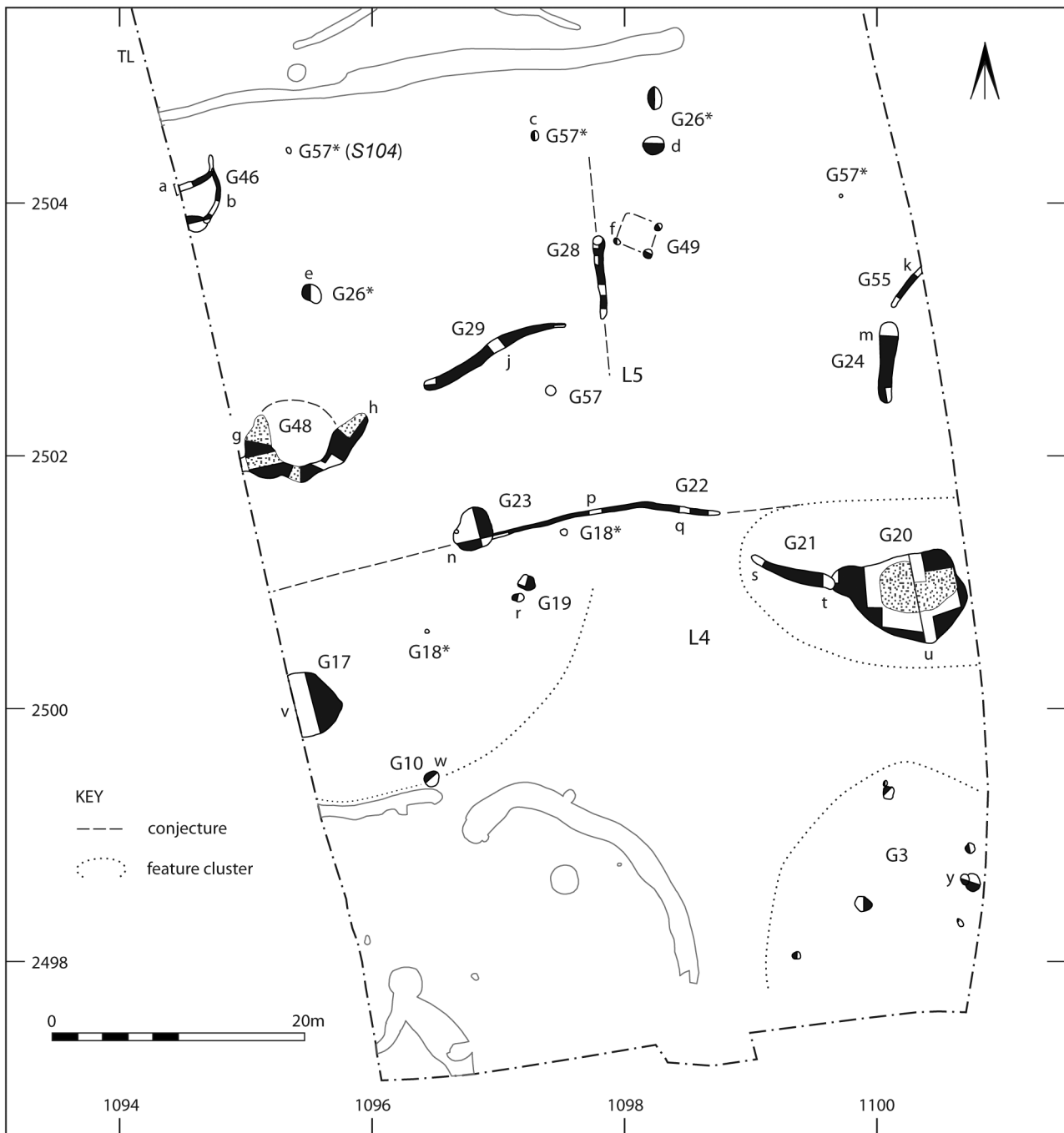


Figure 7: Detailed plan of unenclosed dispersed activity L4 and L5

#### Boundaries L7

Two ditches were found that date to this phase: north-south boundary ditch G37, which represents further re-cutting of early-middle Iron Age ditch G38/G39 (L1/L2); and a short length of ditch G41, whose function is uncertain. Both contained naturally derived fills which produced small quantities of contemporary pottery, including Roman wares (279g). In addition, a large quantity (1.2kg) of fuel-ash slag was recovered, mainly from G41.

#### Ditch G37

Ditch G37 was dug along the course of Phase 2 ditch G38/G39, and continued beyond the limit of excavation at both ends. It was 0.5–1.5m wide and 0.1–0.55m deep (Fig. 10a).

#### Ditch G41

Irregular, curvilinear ditch G41 was 9m long and had clearly defined termini at both ends. From the north-east it became progressively wider and deeper, until at its south-west end it was 3m wide and 1.1m deep (Fig. 10b and c). Its north-east end also contained a post-pit with a c. 0.4m diameter post-pipe.

#### Pottery vessel G58

The fragmentary remains of a fine, grog-tempered (F06A), late Iron Age/early Romano-British pot were found in the upper fill of the eastern terminal of early-middle Iron Age (Phase 2) ditch G30.

#### Dispersed activity L8

Water pit G5, two smaller pits G16 and G56, stone surface G52 and slot G47 were dispersed over the south-western part of the excavated area. Dating evidence is provided

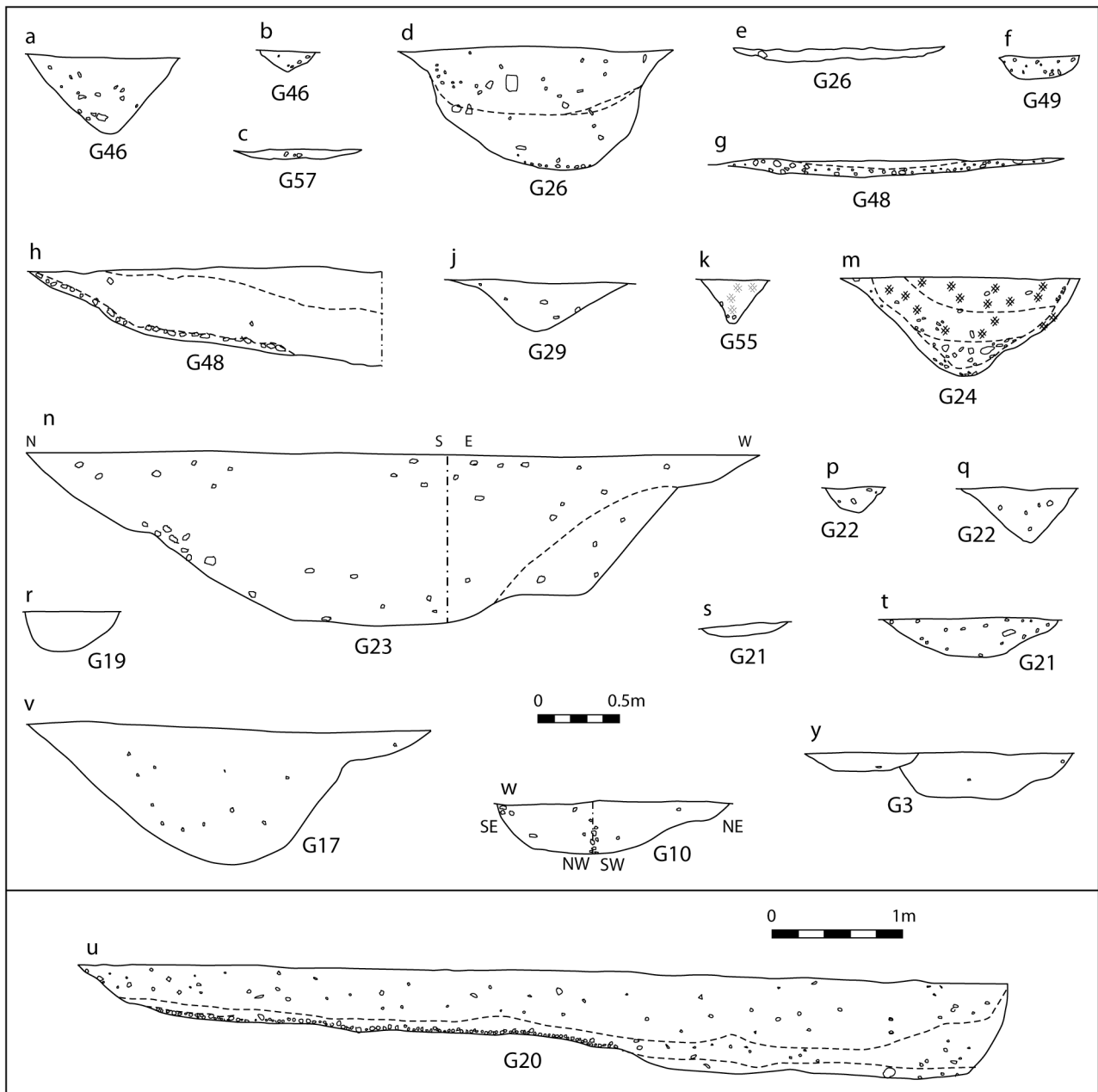


Figure 8: Selected sections of unenclosed dispersed activity L4 and L5

by a combination of ceramic typologies and stratigraphy: one of the smaller pits truncated two Phase 2 ditches, while the remainder of the features produced small quantities of late Iron Age/early Romano-British pottery. Most of the pottery was recovered from the stone surface and adjacent slot, which also contained fired clay and fuel-ash slag (182g).

#### Water pit G5

Sub-circular water pit G5 at the southern limit of excavation was 6m in diameter and 2.1m deep (Fig. 10g). It was infilled with alternate layers of flinty and silty deposits. Its lower fills produced some of the few animal bones recovered from the excavation, including fragmentary parts of a pair of horse mandibles. Nothing unusual or special about their position was noted during excavation, but it is possible that they were part of a structured deposit.

#### Pit G16

Oval pit G16 in the south-west corner of the excavated area was 2.1m long, 1.4m wide and 0.55m deep (Fig. 10f).

#### Pit G56

Circular pit G56 was located 12m north of pit G16, on the western edge of the excavated area. It was 1.8m long, at least 1m wide and 0.4m deep, with steep sides and a flattish base.

#### Stone surface G52

Stone surface G52 lay on the western edge of the excavated area and comprised two separate patches, covering an area of at least 10m by 3.5m. It consisted of tightly packed pebbles and flint nodules within a red-brown clay-silt, 0.1–0.3m thick, and was set into the underlying clay (Fig. 10d and e). In addition to sherds of late Iron Age/early Romano-British pottery and a residual fragment of loom-weight (RA 4), it contained charcoal and fired clay (260g).

#### Slot G47

Slot G47 appeared to be associated with stone surface G52. It was c. 0.6m wide and 0.2m deep, with a concave profile, and continued beyond the limit of excavation. It contained late Iron Age/early Romano-British pottery, a residual fragment of loom-weight (RA5), a small quantity of fired clay (34g), and fuel-ash slag (182g).

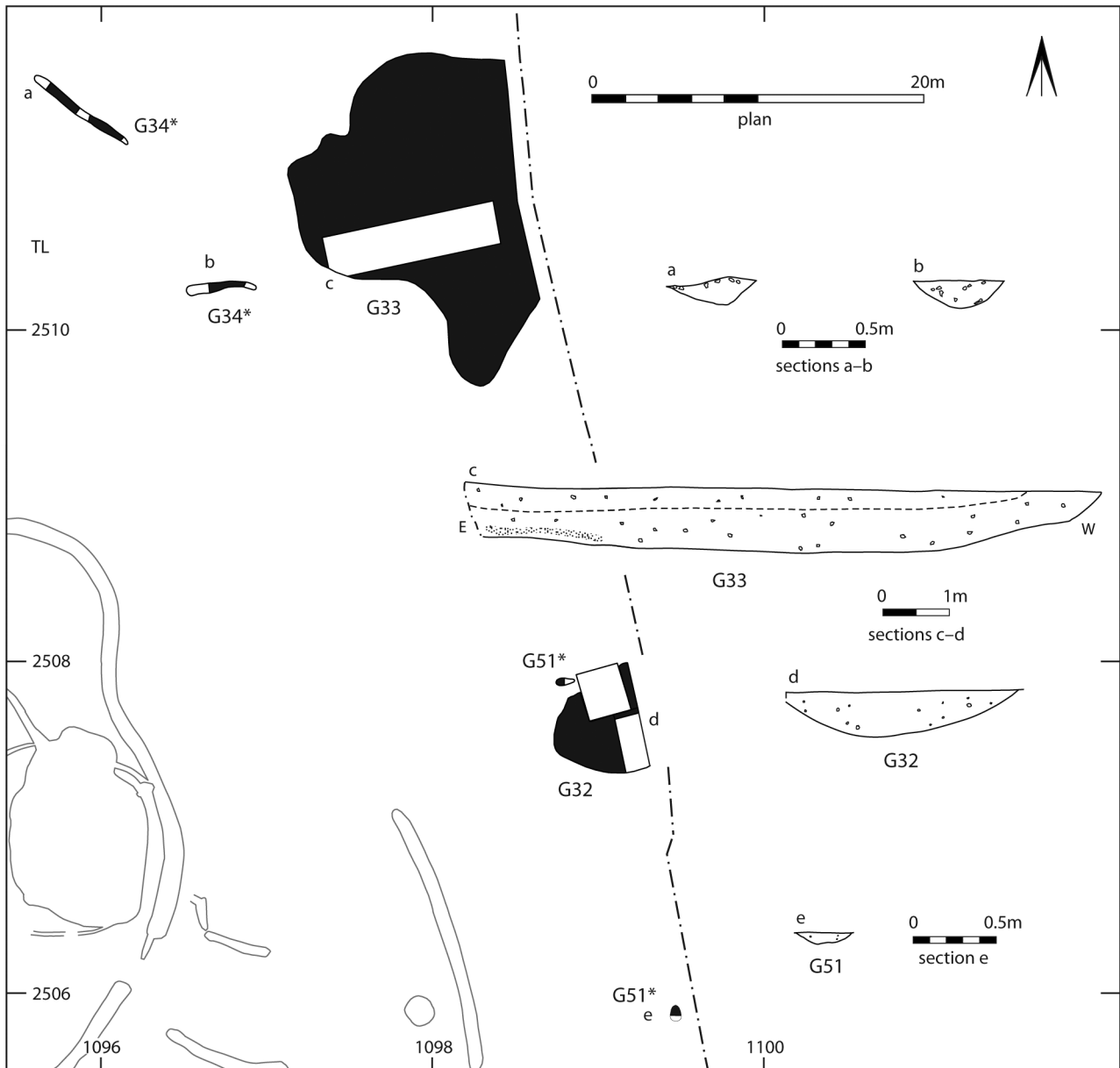


Figure 9: Detailed plan and sections of unenclosed dispersed activity L6

#### Pottery vessel G59

The fragmentary remains of a sand- and grog-tempered (F09), late Iron Age/early Romano-British pot were found in the upper fills of early-middle Iron Age (Phase 2) ditch G6.

### ARTEFACTS

Jackie Wells

#### POTTERY

##### Introduction and methodology

The investigations produced 986 pottery sherds (9.1kg), representing 276 individual vessels. The pottery was examined by context, and twenty-one fabric types were identified in accordance with the Bedfordshire Ceramic Type Series (see Appendix). Form codes were assigned and catalogued within fabric type. Quantification was by minimum vessel and sherd count, and weight. Sherds belonging to the same vessel, but deriving from separate contexts, were quantified as a single vessel. Attributes including decoration, manufacturing techniques, levels

of abrasion and evidence of use (such as the presence of residues, sooting and wear marks) were recorded.

##### Drawing conventions

A selection of the pottery has been illustrated (Fig. 11), all of which are handmade sherds from Phase 2 features. Standard drawing conventions have been used, with vessels shown at one-quarter size, external view on the right and a section and internal view on the left.

##### Discussion

The proportions of fabric types within each Phase and Land-use area are presented in Table 1. The pottery is discussed below by chronological period, with reference to the structural hierarchy (Phases, Land-use areas and Groups) where appropriate. Most of the assemblage is datable to the early-middle Iron Age (c. 650–350 BC) — the lack of diagnostic forms precludes further chronological refinement — while small quantities of late Bronze Age/early Iron Age, late Iron Age and early Roman material were also identified. The pottery survives in moderate to

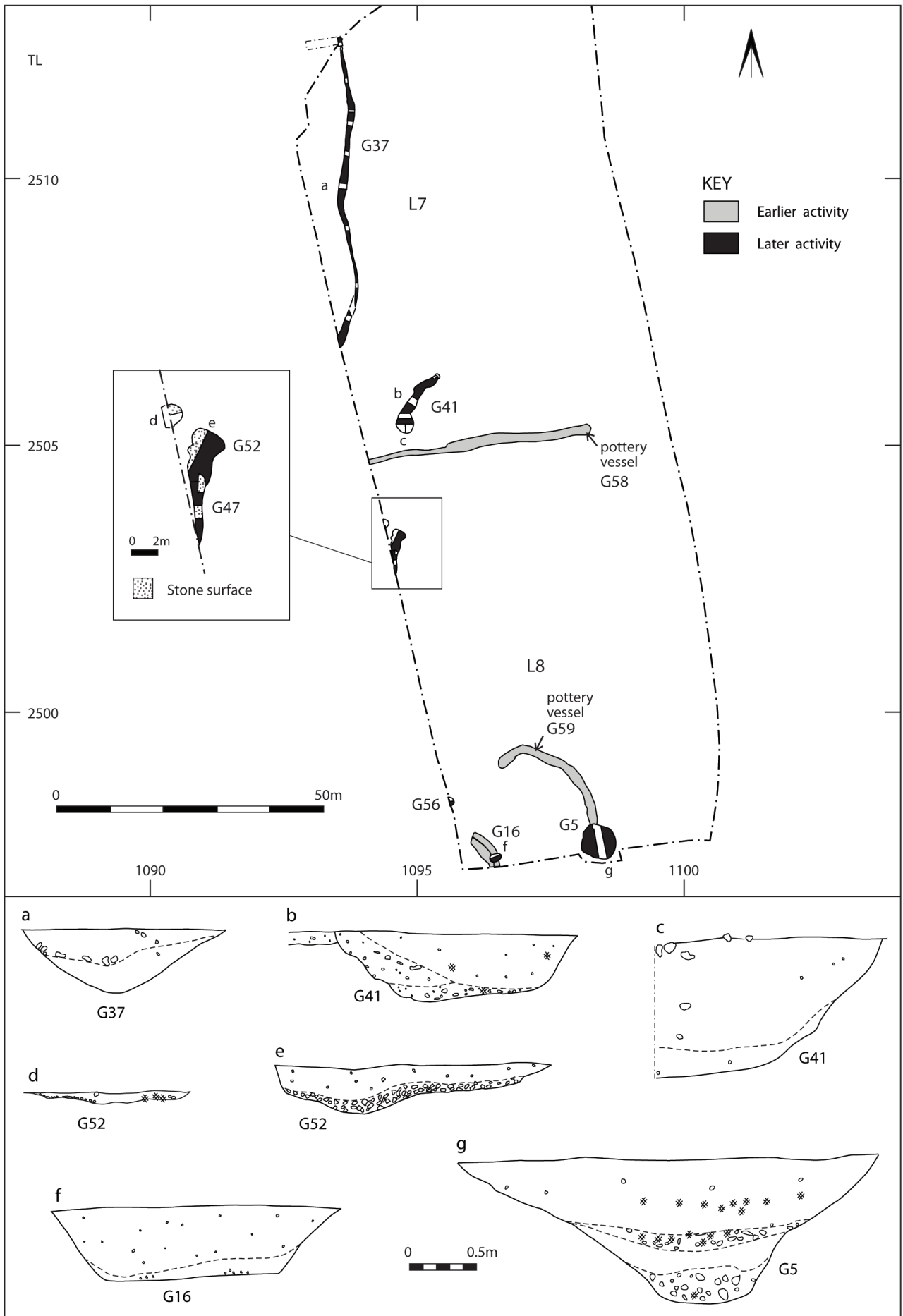


Figure 10: Overall plan and sections of Phase 3 late Iron Age-early Romano-British activity

		Pottery Date												
		LBA/EIA	Early–middle Iron Age							LIA	Roman			
Phase	L no	F04	F19	F22	F27	F03	F28	F29	F32	F35			Total	
2	1		1:1										1:1	
	1.1		2:7			4:3	6:27	8:47					20:84	
	1.2	1:14	1:5	24:70			12:82	12:86	1:9	7:43			58:309	
	1.5		1:12	5:20		1:3	13:66	11:100		4:25			35:226	
	2													
	2.1		24:227	6:18			66:790			1:2			97:1,037	
	2.2		5:23				7:33	14:118		21:92	1:6	1:1	49:273	
	2.3		1:3			4:20	4:16			2:14			11:53	
	2.5		5:18				10:139			19:123			34:280	
	3													
	3.1		7:66			29:775	3:63	1:25		5:18			45:947	
	3.2	4:27	8:36	1:6		96:1,086	9:42	1:6	7:141	34:484	1:3		161:1,831	
	3.3		5:35		2:48	1:5	12:62	5:55		11:84		2:5	38:594	
	3.5					2:47	1:10	16:464		4:12		11:27	34:560	
	4					3:9	1:7				1:4		5:20	
	4.2					3:10		3:10			2:8		8:28	
	4.5		2:8						6:24				8:32	
	5						1:6				2:4		3:10	
	5.1		1:2				8:29	10:62		1:5			20:98	
	5.2		11:55					6:64					17:119	
	5.5		14:96		8:59	74:577	56:443	19:337	14:185	9:112			94:1,809	
	6													
	6.2							10:61					10:61	
	6.5							1:22					1:22	
3	7.1	1:5				2:59	5:20	1:12		5:25	24:223		38:344	
	7.2						5:58	1:5			11:56		17:119	
	7.3										13:37		13:37	
	8.5										65:481	4:51	69:532	
		<b>6:46</b>	<b>2:17</b>	<b>115:667</b>	<b>7:24</b>	<b>10:107</b>	<b>219:2594</b>	<b>219:1,893</b>	<b>119:1,474</b>	<b>28:359</b>	<b>123:1,039</b>	<b>120:822</b>	<b>18:84</b>	<b>986:9,126</b>

Table 1: Pottery fabrics by Phase and Land-use area (sherd count:weight in g)

poor condition: soil conditions have had a damaging effect on many fabric types, particularly those containing organic and calcareous material, which are heavily leached.

### The assemblage

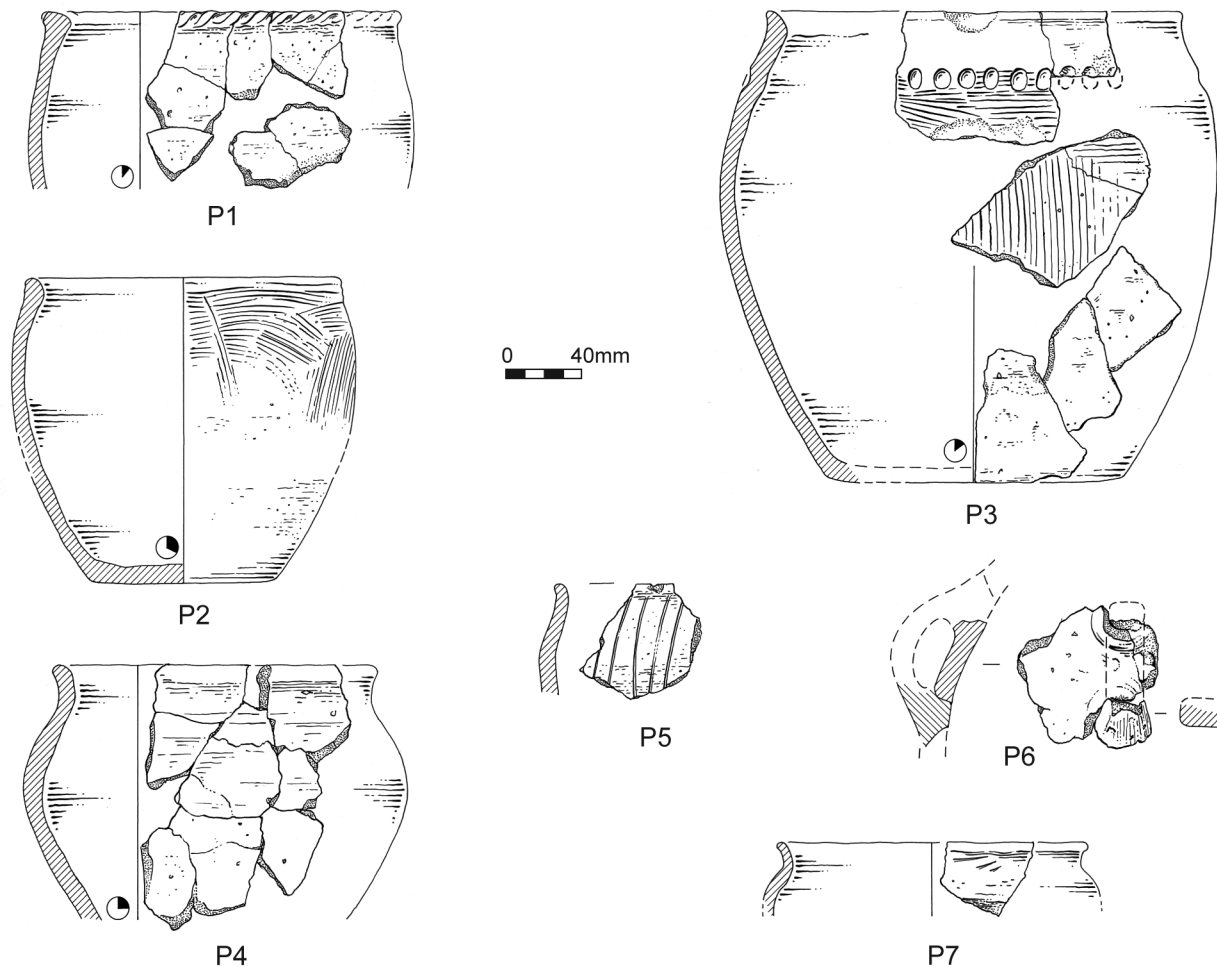
Late Bronze Age/early Iron Age (0.6% total assemblage)  
Late Bronze Age/early Iron Age pottery was entirely residual in later features (Phase 2 domestic foci L2 and L3, and Phase 3 boundaries L7). Six sherds (46g) were recovered, representing three vessels in coarse and fine flint-tempered fabric types F01A, B and C, characteristic of the period.

Early–middle Iron Age (85.4% total assemblage)  
Pottery datable to the early–middle Iron Age comprises 842 sherds (8.2kg), representing 247 vessels. The material is fairly fragmented, with an average sherd weight of 10g and a low vessel to sherd ratio of 1:3. Although the incidence of abrasion is high, many vessels are represented by more than one sherd. None of the pottery shows evidence for repair or modification, and very few sherds bear attributes such as sooting, residues or wear-marks that relate to their use.

Vessels tempered either entirely or partly with quartz sand (fabric types F28, F29, F32, F35, F19 and F03) constitute 98% of the assemblage, probably reflecting localised occurrences of sand within the clay geology. Those containing grog, organic or calcareous inclusions account for the remainder (types F04, F22 and F27). A number of vessels exhibit variations in surface colour and appearance, indicating imprecise control of bonfire or clamp-kiln firings.

Identifiable forms mainly comprise handmade, round-shouldered vessels with flat, upright rounded, beaded, hooked, or slightly tapering everted rims. Fragments of ovoid vessels also occur (Fig. 11, P7). Bases are generally flat, although a possible omphalos base was identified; this is a small and internally convex boss on the base of a vessel, dating particularly to the first millennium. Part of a handle was also recovered (Fig. 11, P6). Vessels show considerable variation in thickness, ranging from 3 to 14mm, with an average of 6–7mm. Thin-walled vessels generally occur in finer fabric types F28 and F35; some have smoothed/wiped surfaces and a few are properly burnished. Decoration is rare and comprises ‘restricted’ fingertip and fingernail impressions along rim tops and vessel shoulders, conforming to the regional pattern (Knight 1984 and 2002). Several of the coarse-ware vessels have vertical or horizontal combing and vertical or diagonal incised/scored decoration, the latter a surface treatment characteristic of the middle Iron Age.

The majority of the Phase 2 assemblage derived from the ditches associated with domestic focus L3. These produced 4.3kg of pottery, including twenty-two sherds (648g) from a combed/scored jar (Fig. 11, P2) and thirty sherds (460g) from a round-rim vessel (Fig. 11, P4). Sixty-seven sherds (1.1kg) from a single decorated jar (Fig. 11, P3) were recovered from the primary and secondary fills of ditch G6. This may indicate the episodic, but fairly rapid, infilling of the feature with material from a deposit such as a midden in the vicinity of the ditch. Assemblages recovered from L1, L2, and L4–6 are smaller and more fragmented than those from L3, with domestic foci L2 and L5 respectively yielding 1.6kg and 2.1kg of pottery. Features associated with domestic focus L1 yielded 620g.



Illust.	Fabric type	Description	L No.	G No.
P1	F03	Vessel with 'restricted' fingernail ornament	L5.5	G57.5
P2	F03	Bowl with combed/scored decoration	L3.1	G6.1
P3	F03	Jar with fingertip and combed/scored decoration	L3.2	G6.2
P4	F35	Round-shouldered vessel	L3.2	G6.2
P5	F29	Scored vessel	L3.3	G12.3
P6	F32	Handle fragment	L5.5	G29.5
P7	F28	Ovoid vessel	L2.5	G2.5

Figure 11: Illustrated selection of handmade pottery from Phase 2 features

Negligible quantities of less than 100g were recovered from dispersed, unenclosed activity areas L4 and L6.

Late Iron Age and Roman pottery constitutes 6% of the Phase 2 assemblage, the majority associated with the infilling of enclosure ditches in L3.

Late Iron Age/early Romano-British (14.0% total assemblage)

The late Iron Age assemblage comprises 120 sherds, representing twenty vessels (822g) in predominantly grog-tempered fabric types (F06A, B and C, and F09). Although abraded and small, with an average sherd weight of 7g, the late Iron Age pottery has a vessel to sherd ratio of 1:6. Both handmade and wheel-thrown sherds occur. Rim fragments from a large jar or storage vessel and a small portion of a pedestal base constitute the only diagnostic elements. Fine grog-tempered (F06A) and sand-and-grog-tempered (F09) pottery vessels G58 (L7) and G59 (L8) were found in the upper fills of early-middle Iron Age ditches; the latter comprised an everted-rim jar with a flat base (346g).

The small Roman assemblage comprises eighteen sherds (84g), representing six vessels. Fabrics comprise reduced and oxidised, sand-tempered wares of probable local manufacture (respectively types R06, R07 and R05). No diagnostic forms occur. Thirty-five sherds, representing seventeen vessels (279g), were recovered from the L7 ditches G37 and G41 (Phase 3). Four abraded Roman sherds (51g) were the only ceramic finds recovered from water pit G5 (L8), from its final infilling.

#### FIRED CLAY

Ninety-eight fragments (1.8kg) of fired clay were recovered, mostly from Phase 2 features, with smaller quantities from Phase 3. Although typologically undatable, their association with early-middle Iron Age pottery suggests they are of similar date. Fabrics are predominantly sand-tempered, similar to pottery types F28 and F29. A small proportion also occurs in a coarse, sandy and flinty fabric, similar to pottery type F32. In many cases, fragments

have oxidised surfaces and reduced cores. Most pieces are small (average weight 19g) and amorphous. One retains a finished surface and partial edge, suggesting it may be a portion of a handmade slab or brick, and two are daub fragments with 13–17mm-diameter wattle impressions.

The greatest concentration (895g) was recovered from ditches associated with domestic focus L2 (G2, G30, G31, G44 and G53). Smaller assemblages derived from features within domestic foci L1 (G40), L3 (G6 and G12), L5 (G28, G28 and G48) and Phase 3 dispersed activity L8 (G47 and G52). Although all the material is redeposited, it may derive from features such as roundhouses, or smaller structural elements such as ovens or hearths.

#### CERAMIC LOOM-WEIGHTS

The excavations produced fragments from three possible fired-clay loom-weights. RA6, from pits G12 (domestic focus L3, Phase 2), is of indeterminate form. Pieces of two other possible loom-weights were recovered from unenclosed activity focus L8 (Phase 3): RA4, from stone surface G52, appears to be part of a late Bronze Age cylindrical loom-weight, while RA5, from slot G47, is of a more triangular form, broadly characteristic of the Iron Age. All are highly abraded and survive in poor condition.

#### FLINT

Thirty-five pieces of worked flint (315g) were recovered, including twenty-five from Phase 2 features, principally

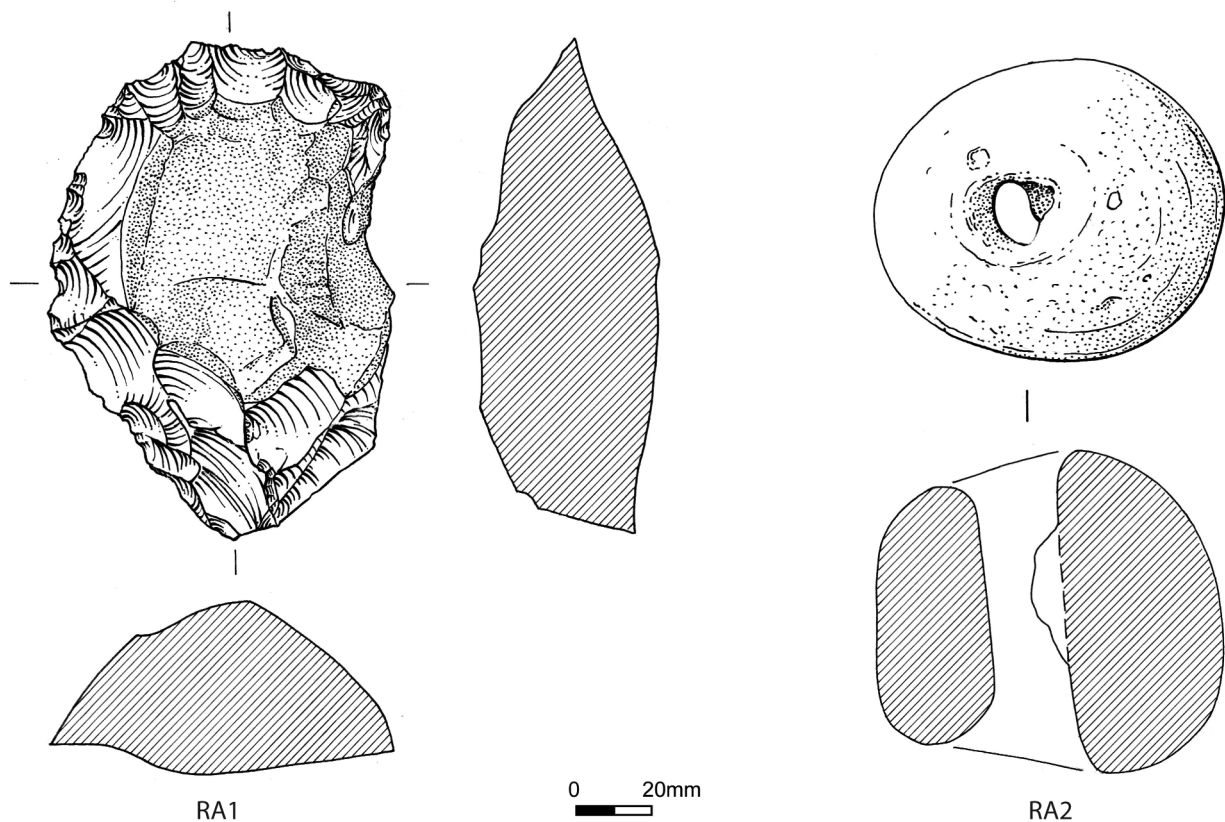
domestic focus L3 (G6 and G9). Most comprise waste flakes of poor quality, several of which are broken. Single examples of a core-testing fragment, a possible core and a broken blade were also identified. Tools are represented by two crudely fashioned end scrapers which were found in the topsoil (RA1 (Fig. 12) and RA3). Although it cannot be demonstrated with any certainty that the assemblage is not entirely residual, attesting instead the working of flint during the Iron Age, nor can this possibility be discounted. The use of low quality raw material and the limited range of diagnostic tool-types seen at Butterfield Green are two of the characteristics which have been postulated as being potentially indicative of later Bronze Age and Iron Age flint-working (Young and Humphrey 1999, 232–3).

The primary fill of L3 enclosure ditch G13 yielded a naturally formed, cylindrical nodule of flint (Fig. 12, RA2), weighing 110g. The piece has a natural central perforation that may have been enlarged at the top and bottom to facilitate its use as a weight.

Seven pieces of unmodified burnt flint (176g) were recovered from Phase 2 features (L1–3 and L5) and a single piece (14g) from the Phase 3 boundaries L7.

#### FUEL-ASH SLAG

Fuel-ash slag weighing 1.5kg was recovered, nearly all from Phase 3 ditch G41, L7 (1.2kg) and slot G47, L8 (182g). Phase 2 features yielded only 51g. Fuel-ash slag is formed by the combination of hot ash remains with other siliceous materials in high-temperature fires; it is likely to represent redeposited residues from domestic hearths or ovens.



Illust.	Description	L No.	G No.
RA 1	Flint end scraper	L11	G60
RA 2	Cylindrical flint nodule	L3.1	G13.1

Figure 12: Illustrated selection of registered artefacts



Sample Group	1	2	8	22
Land use area	L3	L2	L1	L4
Sample volume (litres)	20	10	10	2
Cerealia indet (indeterminate grain)		1	2	
<i>Poaceae</i> sp. (grass)			1	
<i>Fabaceae</i> sp. (legume)				1
<i>Atriplex patula</i> (common orache)	4			
<i>Chenopodium album</i> (fat hen)	3			
Charcoal	+++	+++		+++

Table 2: Charred plant remains from Phase 2 early-middle Iron Age deposits

## ECOFACTS

### CHARRED PLANT REMAINS

#### Alistair Hill

Twenty soil samples were processed by bulk flotation, producing an assemblage of poorly preserved plant remains. Only four contained archaeobotanical charred plant remains (Table 2), all of which derived from early-middle Iron Age deposits (Phase 2). These include cereal grains which, although unidentified, are likely to be from cultivated species such as wheat. The remainder include grasses and wild plants; those in the latter category are often found associated with disturbed ground or arable land.

### ANIMAL BONE

#### Mark Maltby

Animal bone was recovered from only two features. Both were located in the southern part of the excavated area where conditions for preservation were perhaps slightly more favourable, although their preservation was still generally poor.

The fragmentary remains of a cattle lower molar were recovered from the early-middle Iron Age (Phase 2) ditch G13. The tooth was unworn and belonged to an immature animal. The primary fill of the late Iron Age/early Roman (Phase 3) water pit G5 contained cheek teeth, an incisor and fragmentary parts of bone from a pair of horse mandibles. The wear of the molar teeth and heights of the cheek teeth indicate that the mandibles belonged to an adult horse, though not very old.

## DISCUSSION

The investigations at Butterfield Green revealed evidence for three phases of past human activity. The earliest dated to the late Bronze Age/early Iron Age (Phase 1) but only comprised residual artefacts from later features. Most of the archaeological evidence relates to a previously unknown early-middle Iron Age settlement (Phase 2). Two domestic foci with associated enclosures were revealed, but the settlement's full extent could not be determined because it continued beyond the limit of the excavated area. The Phase 3 late Iron Age/early Romano-British activity may have been associated with a postulated settlement to the west of the excavated area. The layout of the Iron Age settlement is interesting — it was not fully enclosed, but neither was it unenclosed

as most contemporary settlements in the region were (Bryant 1997, 25). It represents, therefore, a significant addition to the range of early-middle Iron Age settlement-types, and may indicate that a distinction between enclosed and unenclosed settlements is too simplistic for this period.

### PHASE 2: EARLY-MIDDLE IRON AGE SETTLEMENT

#### Origins

The small assemblage of residual late Bronze Age/early Iron Age pottery and the possible late Bronze Age loom-weight suggest the presence of a contemporary nearby settlement. Within Bedfordshire, artefacts still provide the majority of the settlement evidence for this period: sub-surface features have only been identified on a handful of sites (Dawson 2007, 61), a situation which has changed little since Bryant's survey of the evidence from the north Chilterns (Bryant 1995, 19). However, early-middle Iron Age settlements in the county often do produce similar evidence for earlier activity, *e.g.* Toppler's Hill (Luke 2004, 46) and Beauford Farm, Biggleswade (Edmondson and Preece in prep.).

The early-middle Iron Age date ascribed to the settlement at Butterfield Green derives from *c.* 8kg of pottery and two possible loom-weights of this period. Where present, decoration comprises 'restricted' fingertip and fingernail impressions along rim tops and vessel shoulders, in keeping with the contemporary regional pattern (Knight 1984 and 2002). Several coarse-ware vessels also display incised or scored decoration, characteristic of the middle Iron Age.

#### Extent and type (Fig. 13)

The early-middle Iron Age settlement covered an area of at least 1ha and continued beyond the western limit of excavation. It comprised two partially enclosed domestic foci, *c.* 60m apart, with evidence for dispersed activity beyond the enclosures.

In simple terms, Butterfield Green can still be loosely described as an enclosed settlement, even though it was not fully enclosed. This sets it apart from most contemporary settlements in the region, which were unenclosed (Bryant 1997, 25), *e.g.* Biddenham Loop (Luke 2008, 39) and Salford (Dawson 2005). However, the curvilinear nature and apparent incompleteness of some of the Butterfield Green ditches is in contrast to the series of interlinked enclosures on some Iron Age settlements, *e.g.* Scotland Farm, Cambridgeshire (Abrams and Ingham 2008, fig. 2.1), Toppler's Hill (Luke 2004, fig. 4), and Hinksley Road, Flitwick (Luke 1999, fig. 5). This perhaps suggests that a distinction between enclosed and unenclosed settlements is too simplistic for this period. The layout of the Butterfield Green settlement — its small enclosures, sinuous ditches and unenclosed activity — has some similarities with Fairfield Park, Stotfold (Webley *et al.* 2007, fig. 6.2) and Gypsy Lane, Broom (Cooper and Edmonds 2007, fig. 5.7).

#### Sequence/development

Although the stratigraphic evidence was limited and in places difficult to interpret, it is clear that the settlement developed over time rather than being a single, planned entity. Unenclosed activity (pits L9) did predate the creation of some of the enclosures, perhaps suggesting a

change from unenclosed to enclosed settlement, as seen at Hinksley Road, Flitwick (Luke 1999, 81) and possibly Puddlehill (Bryant 1995, 21–2) — there was a general trend towards enclosure in the middle Iron Age (Cooper and Edmonds 2007, 185). Several of the ditches at Butterfield Green were re-cut, demonstrating that even the enclosed settlement was occupied for an extended period of time. More unusually, a large water pit was dug on the site of roundhouse G1 (L1). The water pit's juxtaposition with enclosure ditch G2 suggests that it was contemporary with the domestic activity in this area, although it is impossible to demonstrate this with any certainty.

### Components

#### Enclosures

The curvilinear ditches L1 at Butterfield Green are closely paralleled by an enclosure at Newnham, Bedford (Ingham *et al.* forthcoming), Bourn Airfield, Cambridgeshire (Abrams and Ingham 2008, 33–34; fig. 2.12). The Bourn Airfield example was interpreted as a stock enclosure, due partly to the absence of settlement-type features and domestic debris. It is clear that the enclosures at Butterfield Green were part of a settlement, however, not least because of the way some of the ditches appeared to curve around roundhouses. It is more difficult to explain the function of ditch lengths like G39 (L2), although similar features do connect enclosures at Gypsy Lane Broom (Cooper and Edmonds 2007, fig. 5.7).

#### Domestic foci

The quantity and distribution of the domestic debris recovered suggest there were at least two domestic foci within the settlement. The northern one contained at least one roundhouse and possibly a second, although the latter is suggested only by circumstantial evidence rather than any actual remains. No buildings were identified within the southern focus, but again, it is possible that the curving ditches accommodated another roundhouse.

#### Roundhouses (Fig. 4)

The 12m diameter of the drainage gully around roundhouse G1 is comparable to those found at Topler's Hill (Luke 2004, 34), Hinksley Road, Flitwick (Luke 1999, 48) and Puddlehill (Matthews 1976, 67). It also falls within the range of roundhouse gullies identified at Broom (Webley *et al.* 2007, 143). Two doorposts survived adjacent to the west-facing gap in the gully, in a similar arrangement to that on the east side of hut 5 at Puddlehill (Matthews 1976, fig. 23). The west-facing doorway at Butterfield Green is relatively unusual, and contrasts with the more commonly seen east or south-east alignment (Oswald 1997, 87; Knight 1984, 144).

The curve of enclosure ditch G2 may have enclosed another circular structure, less than 8m in diameter, to the north of roundhouse G1. Pairs of roundhouses, with one smaller than the other and often ascribed a different function, are not uncommon, *e.g.* Fairfield Park, Stotfold (Webley *et al.* 2007, fig. 2.12), Topler's Hill (Luke 2004, fig. 5) and Hinksley Road, Flitwick (Luke 1999, fig. 5). If there were two such structures at Butterfield Green, the arrangement of ditches and short slots around them suggests they may have been contemporary.

#### Four-post structure

Only one possible four-post structure G49 (L5) was identified at Butterfield Green, represented by just three post-holes. They are common on some early–middle Iron Age sites — twenty were identified at Fairfield Park (Webley *et al.* 2007, 144) — but absent from others such as Biddenham Loop (Luke 2008, 42). Four-post structures have been interpreted as the foundations for corn drying racks (Bersu 1940, 95) and for vertical looms (Brewster 1963, 25–6), though, Ellison and Drewett (1971, 190) noted that 'a wide range of possible superstructure and function must be envisaged'. The single example from Butterfield Green cannot contribute to the discussion on function but it is worth noting that it is located in an area of dispersed, peripheral activity and that, unlike most, it is not aligned on cardinal points.

#### Slots

Numerous short, linear features were identified at Butterfield Green. Where their full extent was identified, they tended to be around 4–7m long and 0.4m wide with concave profiles. Similar features identified elsewhere on contemporary sites have been interpreted in a variety of ways (Knight 1984, 214). Suggestions include: discontinuous fences for controlling human and animal movement around settlements (*e.g.* G42 and G43 in L1 and G44 in L2); divisions between activity areas (*e.g.* G22 and G28 in L5); windbreaks; and discontinuous drainage ditches for removing surplus surface water from poorly drained areas of a site (*e.g.* G21 in L4).

#### Water pits or ponds

Seven features at Butterfield Green have been interpreted as water pits on the basis of their large dimensions. Three of them — G20 (L4), G33 (L6) and G36 (L2) — had diameters in excess of 10m and could even be classed as ponds, while the others ranged in diameter from *c.* 2m (G48, L5) to 6.5m (G32, L6). Most were at least 1m deep and were dug into areas of clay geology. This would have allowed them to serve as sumps for the collection and storage of water, perhaps after heavy rainfall or on a seasonal basis, rather than as wells which would have had to penetrate the water table.

The number of water pits is perhaps unusual when compared to contemporary settlements elsewhere, *e.g.* two at Fairfield Park, Stotfold (Webley *et al.* 2007, 38) and one within the adjacent enclosures at Hinksley Road, Flitwick (Luke 1999, 51). The larger number of pits at Butterfield Green is perhaps explained by the fact that none appeared to have been re-dug.

Some of the Butterfield Green water pits, *e.g.* G20 (L5), G36 (L2) and G48 (L48), had shallow sides and associated cobbled surfaces that may have allowed direct access to the water. Whether this was by animals or by the occupants of the settlement is uncertain. At Beauford Farm, the movement of livestock to and from a large water pit was controlled by a series of ditches (Edmondson and Preece in prep.). This may have happened with the larger water pits/ponds at Butterfield Green, while the smaller ones required the use of buckets to extract the water.

#### Storage pits

Only two possible storage pits (G12, L3) were identified at Butterfield Green, on the basis of their dimensions and profiles. The presence of such a small number is unusual,

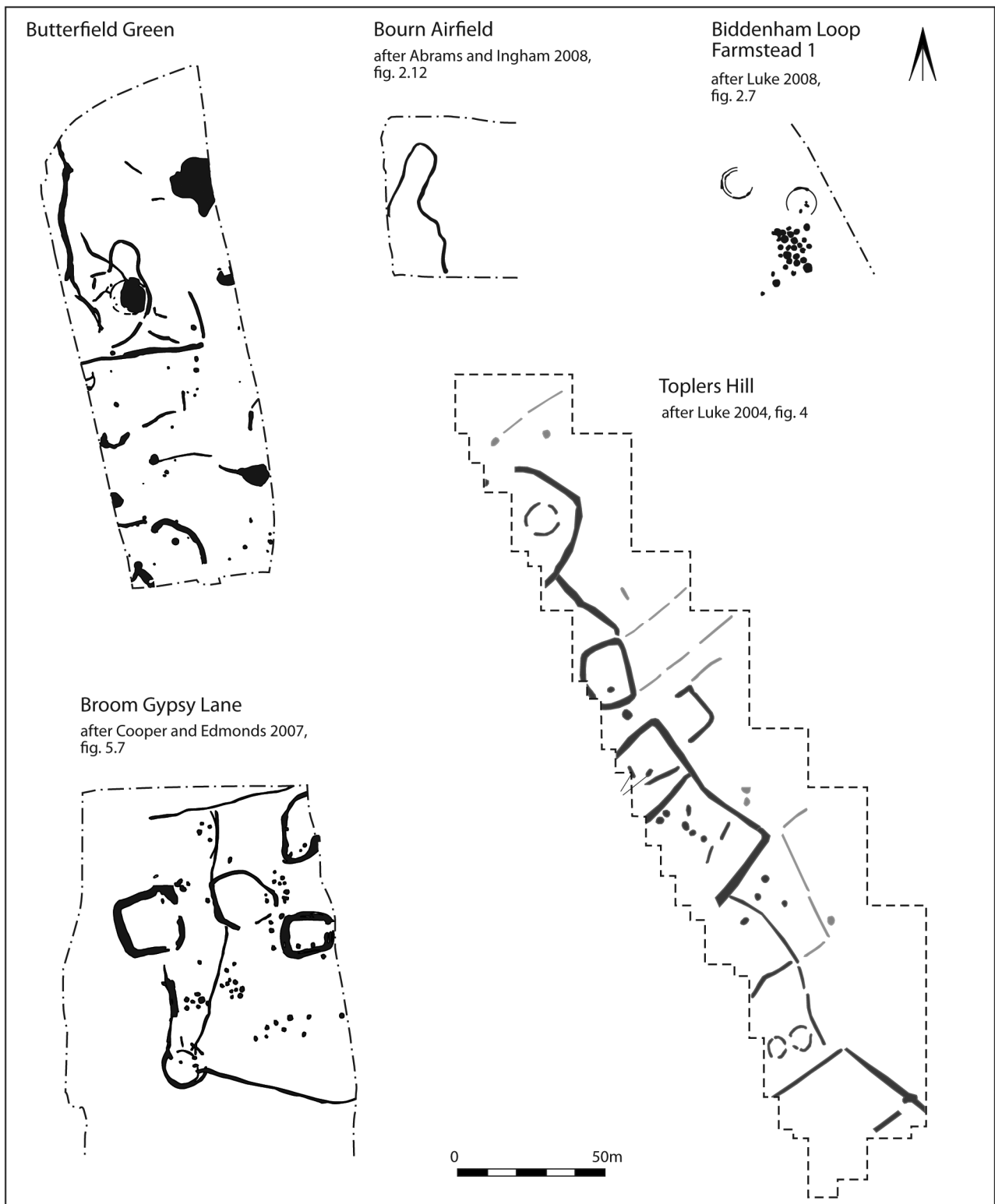


Figure 13: Comparative plan of early-middle Iron Age settlements/enclosures

since clusters of storage pits are a common feature of early-middle Iron Age settlements, *e.g.* Biddenham Loop (Luke 2008, 42), Fairfield Park (Webley *et al.* 2007, 145) and Puddlehill (Matthews 1976, 21 and 22). However, their absence has been noted at other settlements in the county, *e.g.* Salford (Dawson 2005) and Hinksley Road Flitwick (Luke 1999, 82). Elsewhere, this has been attributed to poorly drained geology making the ground unsuitable for below-ground grain storage (Williams and Zeevat 1994, 55), as is likely to be the case at Butterfield

Green. This makes the interpretation of the four-post structure as a grain store more plausible, assuming that seed grain had to be stored in significant quantities.

**Other pits and post-holes**

As at other early-middle Iron Age settlements, it is difficult to offer an interpretation for the dispersed, individual post-holes and smaller pits at Butterfield Green. It is possible that some of the post-holes, *e.g.* G57 (L5) and G18 (L4), represent all that remains of four-post structures,

especially as they occur in the same area as structure G49. Some of the shallow pits may have been dug to extract small quantities of gravel and clay on an *ad hoc* basis. Only pits G26 (L5) contained sufficient quantities of fired clay and charcoal to suggest the presence of nearby hearths or ovens.

### Economy

The tiny quantity of charred plant remains include cereal grains that are likely to be from cultivated species such as wheat, but provide little other information. As already discussed, the absence of storage pits is not thought to be significant in terms of indicating limited crop-production and processing. The absence of quern stones is also not thought to be significant — although frequently found on contemporary settlements, they are not always present in high numbers, *e.g.* two fragments from three excavated farmsteads at Biddenham Loop (Luke 2008, 44) and two fragments from Hinksley Road, Flitwick (Luke 1999, 83). The meagre animal bone assemblage is equally of no statistical value.

Evidence for craft activities was scarce at Butterfield Green, although ground conditions would certainly account for the absence of bone objects, and possibly those made from iron or copper alloy. Surface variations on a number of pots suggest they may have been fired within the settlement in bonfire or clamp kilns; local clay sources were presumably exploited for their manufacture. Fragments of two Iron Age loom-weights are evidence for textile-working. Notwithstanding the sparse evidence for craft activities, each household at Butterfield Green was probably able to supply its own needs, as Cunliffe has suggested for lowland Britain as a whole (Cunliffe 1991, 444).

### PHASE 3: LATE IRON AGE/EARLY ROMANO-BRITISH SETTLEMENT PERIPHERY

The distribution of late Iron Age/early Romano-British features suggests the presence of a settlement to the west of the excavated area. Some elements of the early–middle Iron Age settlement, including the ditched boundaries, appear to have survived into this period; for example, two fragmentary pots G58 (L7) and G59 (L8) were found in the upper fills of two of the earlier ditches, while ditch G37 (L7) re-cut the early–middle Iron Age boundary G39 (L2). At Beauford Farm, there was also direct continuity between the early–middle Iron Age and late Iron Age/early Romano-British periods, with some of the enclosures continuing in use (Edmondson and Preece in prep.). One of the more substantial Phase 3 features, water pit G5 (L8), was dug into an earlier boundary ditch. A hint of a possible structured deposit was found at its base in the form of a pair of horse mandibles; such deposits are often identified on Iron Age sites (Hill 1995) but are also known from the Romano-British period, *e.g.* Luton Road, Wilstead (Luke and Preece 2010).

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## APPENDIX: POTTERY TYPE SERIES

Jackie Wells

Fabrics are summarised below by chronological period, using type codes and common names in accordance with the Bedfordshire Ceramic Type Series. Full fabric descriptions are given only for those types not previously published. Bracketed figures after each fabric type denote a percentage, by sherd count, of the total excavated assemblage.

### EARLY-MIDDLE IRON AGE

#### Type F32 Sand and flint (3%)

Fabric: hard-medium fired, sandy or occasionally harsh to feel, with uneven fracture. Variable colour, with mid-brown or reddish-brown surfaces and dark grey or black core. Contains abundant poorly sorted, subrounded to subangular, multi-coloured quartz, 0.2–2.5mm and frequent, poorly sorted, angular flint, 0.5–3.0mm. Additionally, the matrix may contain sparse, fine, red and black iron ore, c. 0.3mm and sparse, black voids or patches where organic matter has burnt out.

Forms: handmade vessels with upright rounded rims and flat bases, and a handle fragment. Vessel wall thickness ranges from 6–9mm.

Illustration: Fig. 11, P6

### ROMAN

#### Type R05B Fine orange (<1%)

Fabric: hard fired, smooth fabric, orange-buff throughout, or with a light to mid grey core. Contains frequent, poorly sorted subangular quartz, c. 0.1–0.5mm.

Forms: wheel-thrown body sherds.

Fabric code	Common name	Reference	Forms
<i>Late Bronze Age/early Iron Age</i>			
F01A (<1%)	Coarse flint	Wells 2006, 146	Handmade body sherd
F01B (<1%)	Fine flint	Wells 2006, 146	Handmade body sherd
F01C (<1%)	Flint and quartz	Wells 2006, 146	Handmade body sherds
<i>Early-middle Iron Age</i>			
F03 (21%)	Grog and sand	Slowikowski 2005, 102	Handmade vessels with flat, rounded and tapering, slightly everted rims. Decoration comprises fingertip impressions along rim tops and vessel shoulders, and horizontal and vertical combing and/or scoring.
F04 (<1%)	Organic	Wells 2006, 146	Handmade body sherds
F19 (12%)	Sand and organic	Wells 2006, 146	Handmade vessels with upright rounded, flat and bead rims, and flat bases. Some sherds have smoothed/wiped surfaces. Vessel wall thickness ranges from 3mm to 11mm.
F22 (1%)	Grog and organic	Slowikowski 2005, 103	Handmade flat rim vessel
F27 (1%)	Shell and grog	Slowikowski 2005, 103	Handmade flat rim vessel
F28 (22%)	Fine sand	Wells 2006, 147	Handmade round-shouldered vessels with flat, upright rounded, beaded, hooked and slightly tapering everted rims. Bases are generally flat, although a possible omphalos base was identified. A number of vessels have smoothed/wiped surfaces and a few are properly burnished. Decoration is rare and comprises vertical or horizontal combing and vertical or diagonal incised/scored decoration. Vessel wall thickness ranges from 3 to 11mm.
F29 (13%)	Coarse sand	Wells (2006, 147)	Handmade round-shouldered vessels with flat, upright rounded, beaded, hooked and slightly tapering everted rims and flat bases. Decoration comprises vertical or horizontal combing and vertical or diagonal incised/scored decoration. Vessel wall thickness ranges from 7mm to 13mm.
F35 (12%)	Micaceous	Wells 2006, 147	Handmade vessels with rounded, upright, flat and everted rims, some with smoothed/wiped surfaces. One flat rim bears fingernail-impressed decoration.
<i>Late Iron Age</i>			
F06A (2%)	Fine grog	Slowikowski 2005, 102	Undiagnostic body sherds
F06B (2%)	Medium grog	Slowikowski 2005, 102	Undiagnostic body sherds
F06C (1%)	Coarse grog	Slowikowski 2005, 102	Everted-rim jar
F09 (7%)	Sand and grog	Slowikowski 2005, 102–3	Everted-rim jar, pedestal-base fragment
<i>Roman</i>			
R05A (<1%)	Orange sandy	Slowikowski 2005, 103	Wheel-thrown body sherd
R06C (<1%)	Fine grey ware	Wells 2006, 148	Wheel-thrown body sherd
R06F (<1%)	Grey ware	Wells 2004, 126	Wheel-thrown body sherd
R07B (1%)	Sandy black ware	Wells 2004, 126	Wheel-thrown burnished body sherds

Table 3: Ceramic Type Series