

A note on a late Bronze Age ringwork at Great Westwood Quarry, Watford

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Introduction

Excavations carried out between 2000 and 2002, in advance of mineral extraction at Great Westwood Quarry by St Albans Sand and Gravel Co Ltd (latterly RMC Aggregates (Greater London) Ltd and now Cemex UK Materials Ltd.), uncovered evidence of late Bronze Age (Phase 1) and late Iron Age to early Roman (Phase 2) settlement. The investigated area lies in the Three Rivers District *c.* 3km west of Watford (NG TQ0750 9850), near the hamlet of Chandlers Cross (Fig. 1). The site is situated on high ground above the Gade valley, which lies *c.*1km to the east.

The site was heavily truncated and this, combined with acidic soil which precluded survival of virtually all but burnt bone, has limited knowledge of the economy of the settlements. The ceramic assemblage has also suffered as a result of the truncation and despite a relatively high vessel to sherd ratio, the average weight of each sherd was between 4g (late Bronze Age) and 7g (late Iron Age to early Roman).

The late Bronze Age settlement comprised two phases of a palisaded enclosure and within, a single post-built roundhouse with porch. It is argued that the enclosure is one of a class of monuments becoming increasingly well known in south-eastern England, the ringwork. In common with ringworks along the Thames Valley and Estuary (Yates 2001), there is little evidence of early Iron Age activity at the Great Westwood ringwork. The site does not seem to have been exploited again until the late Iron Age when a series of three conjoined enclosures, one containing a small late Iron Age and early Roman cremation cemetery, were situated some 126.5m SSE of the ringwork. All the ceramics from the enclosure ditch fills is of late Iron Age date and only two cremation burials contained early Roman period pottery. The absence of later Roman period pottery suggests that the enclosures went out of use shortly after the late 1st to early 2nd century AD. Further enclosures however, may lie to the south, outside the area of investigation.

The full report on the excavation can be found on OASIS (ref?). This note presents a short summary of the Phase 1 late Bronze Age ringwork.

The Ringwork Fig.2

Phase 1 comprised a palisaded enclosure, with at least two episodes of alteration (G1 and G2), enclosing a roundhouse (G3). The Inner Palisade (G 1) comprised the inner ring of the palisade and its associated entrance ways (1A, 1B and 1C). Just over half of the southern circuit of the oval palisade survived in the form of a steep-sided ditch with flat base. Where best preserved, it was 0.58m to 0.43m wide and 0.25m to 0.34m deep. Evidence, in the form of post pipes, for closely set posts, with diameters of 0.30m to 0.40m and depths of 0.27m to 0.34m, survived in a few of the excavated segments (Fig. 2 inset and A). The relationship between the Inner (G 1) and Outer Palisades (G 2) is stratigraphically uncertain. Although the northern portion of the inner ditch did not survive, it is suggested that it may have followed a similar line to that of G2 (the outer ring of palisade). If this were the case, the enclosed area would have been approximately 26m wide and 32m long (*i.e.* about 832m²).

Three entrances were recorded in the surviving Inner Palisade ditch: 1A to the south-east, 1B to the south-west and 1C, only 6m distant from 1B, to the WSW (Fig. 2). The proximity of entrances 1B and 1C suggests that alterations to the layout of the enclosure occurred during its lifetime. The entrances were demarked by breaks in the palisade, ranging from 0.68m to 1.7m in width. In all three cases, the break in the palisade was also marked by the presence of a large posthole situated on the external, left hand side of the entrance. In the cases of entrances 1A and 1B there was also evidence for maintenance or alteration to these entrances in the form of re-cutting and additional posts. The position of these postholes on the west infers a short fence line. Such a fence line could have formed the western section of a funnel opening; the corresponding side being formed by an outward-opening hinged gate, hung on the final post of the east end of the palisade.

The dating of the Inner Palisade is based solely upon the pottery (84 sherds) from the fills of the post pipes and palisade trench. It was overwhelmingly of flint tempered fabric types F01A (coarse flint), F01B (fine flint) and F01C (flint and quartz), characteristic of many late Bronze Age assemblages across the region (*c.f.* Buncefield Lane, Hemel Hempstead (Harrison 2004a, 53), Cole Green, Hertford (Harrison 2004b, 24), Aldermaston Wharf, Berks (Bradley *et al.*1980, 232), South Hornchurch, Essex (Harrison 2000, 337).

The Outer Palisade G2 comprised a complete oval circuit with two entrance ways, enclosing an area 35.5m long and 28.35m wide (*i.e.* about 1,006m²). The palisade ditch had steeply sloping sides and a flat base; its greatest surviving width was 0.70m. It appeared to have suffered the most severe truncation to the north-east and NNW. The depth of the ditch in these areas ranged from 70mm to 0.15m. Elsewhere the ditch was up to 0.41m deep. Evidence, in the form of post pipes, for closely set posts with diameters ranging from 0.12m to 0.30m and depths of up to 0.33m, survived in a few of the excavated segments (Fig. 2 B).

Two entrances were recorded in the Outer Palisade. Entrance 2A, to the north-east, was 1.2m wide. It had a butt-ended terminal to the west and a single posthole to the east, measuring 0.40m by 0.22m with a surviving depth of 0.23m. This posthole may have held the gate post. This entrance appears to have been altered. The eastern gate post was replaced, while on the west side a large posthole, 0.70m by 0.49m and 0.14m deep, was added, cutting the western side of the butt-ended terminal (Fig. 2).

Entrance 2B was located to the south-east. It was 0.65m wide and similar in configuration to the adjacent Entrance 1A in the Inner Palisade (Fig. 2 inset). It had a butt-ended terminal on the west with a series of three postholes at almost right angles to the palisade circuit (Fig. 2 inset and D). The positioning of the postholes on the west side of the entranceway suggests a similar arrangement to that of entranceway 1A, with a fence line on the west and hinged outward-opening gate on the final post of the east side of the opening. Again, a funnel-shaped opening would have been formed by the western fence line and the opened gate.

The fills of the Outer Palisade post pipes and palisade ditch contained 14 sherds of pottery (weighing 38g), the majority of flint tempered fabric types F01A, F01B and F01C thought to date predominantly to the late Bronze Age. As with the inner palisade, the fills of both the Outer Palisade ditch and the post pipes contained small fragments of oak charcoal.

Evidence for closely set posts did not survive in all investigated segments of the Inner and Outer Palisade ditches. However, this is thought to be the result of severe truncation, and it is suggested that the posts did form a continuous circuit. The relationship between the Inner and Outer Palisades is problematic; no clear stratigraphic relationship survived. The proximity of Entrances 1B and 1C do suggest that the south-western segment of the inner palisade underwent alteration during its lifetime. The line of the Outer Palisade also severely restricted these two entrances.

The line of the Outer Palisade suggests that it post-dates the Inner Palisade. Along its northern arc, it may have utilised the existing line of the Inner Palisade. The precise alignment and similarities in construction of Entrances 1A and 2B clearly imply a continuity of access and a degree of contemporaneity. Stratigraphically it is unclear whether the inner semi-circular palisade is a residual element retained when the enclosure was enlarged or whether it represents an internal division contemporary with the outer ring. The ceramic assemblages from both the inner and outer palisades are of a similar composition, overwhelmingly fabric types F01A, F01B and F01C, with F01A predominating. The consistency between these assemblages, while indicating a general date range for the palisades, unfortunately does not allow a more detailed chronology.

The Roundhouse (Group 3)

The remains of a post-built roundhouse G3 were situated centrally within the palisaded enclosures (Figs 2 and 3). The entrance to the structure faced ESE, broadly in the direction of Entrances 1A and 2B. Approximately half of the western external circuit of the structure survived. It comprised an arc of twelve postholes, five paired and two single (Fig. 3). The surviving circuit suggests the structure had an internal diameter of 7.5m. The postholes were either oval or circular in plan, with diameters of 0.28m to 0.40m and depths of 0.1m to 0.34m. Evidence for post pipes survived in six instances, the majority indicating posts ranging in diameter from 0.13m to 0.20m. It is unclear whether the posts were originally paired or whether the pairings represent repairs. A further three postholes were present within the structure (449, 447 and 559). It is, however, difficult to see these as any real form of internal division.

On the eastern side of the roundhouse, five postholes and two lines of stake holes enclosed a rectangular area. These features are interpreted as the remains of a porch. The width of the porch, some 3.6m between end-posts, is unusual but not unique in the late Bronze Age. Structure 1 at Aldermaston Wharf, Berks. was some 6.8m in diameter with a porch which was 3m wide and 1.7m deep (Bradley *et al* 1980, 231). The two closely set lines of stake holes (312 and 359, 365 and 366) may represent repairs to the porch or a separate wind-break (Fig. 3). The dating evidence for the roundhouse all derived from disuse fills. Four postholes and two post pipes produced a total of 14 sherds of pottery; the majority in fabric type

F01A; the remainder was in fabric type F01B. The dating evidence from the possible porch was similar in nature.

Ten pits lay within the roundhouse; their function and temporal relationships however remain enigmatic. The fills of the five inter-cutting pits (398, 400, 402, 423 and 787) contained charcoal and may represent periodic hearth deposits, although the absence of *in situ* burning would argue against this function. It is possible however, that the hearth may have been raised. Pit 272 contained cereal grain (emmer wheat, six-row hulled barley) and could represent a grain storage pit. However, this pit also yielded chaff, hazelnuts, charcoal of oak and pomoideae (hawthorn, apple etc.), fired clay and pottery which could suggest that this part of the roundhouse had special significance, either during or perhaps at the end of its lifespan. Its proximity to pit 89/244 which also contained a relatively high quantity of pottery and three cylindrical or bun-shaped loom weights may support this suggestion. It is possible that the deposition of the three loom weights may mark a significant point in space within roundhouse G3 or perhaps a critical point in time, for example its abandonment. Their deposition does, indirectly, indicate that the processing of wool, and presumably the presence of sheep, played a significant role in the settlement. The composition of the pottery assemblage from the roundhouse pits, although of greater quantity (224 sherds: 916g) mirrors that of the building's structural components; 87.9% of the sherds occurring in fabric type F01A. Noteworthy was the presence of 21 sherds, representing one vessel, in flint and quartz fabric type F01C, not represented in the assemblage from the postholes.

Excluding the roundhouse and its associated pits, only three features G4 were found within the area enclosed by the inner and outer palisades (Fig. 2). These comprised of two pits (569 and 574) and a single posthole (440), some 2m NNW of pit 569. The surviving post pipe suggests it held a 0.22m diameter post. Given the complete absence of finds from these features, their association with the ringwork remains uncertain. The paucity of pits and postholes within the palisaded enclosure contrasts with many later Bronze Age settlement sites. For example, evidence for storage pits, four to six post structures and sometimes hearths (*e.g.* South Hornchurch, Essex *c.f.* Guttman and Last 2000, 327) external to a roundhouse has been found. Whether this evidence has not survived due to severe truncation is uncertain.

Conclusions

The late Bronze Age phase of settlement at Great Westwood Quarry would appear to be one of a class of monuments becoming increasingly well known in south-eastern England: the ringwork. First defined by Needham (1993) as a circular ditched enclosure that is smaller than a hillfort, ringworks are usually situated on low hills and terraces in river valleys. Yates' (2001, 65-82) recent work in the Thames Valley and Estuary has highlighted the number of sites that now provide evidence of later Bronze Age agricultural intensification with ringworks or aggrandised enclosures, found in association with field systems, paddocks, droveways and stock enclosures. He stresses the relationship between the creation of land divisions and the emergence of these new forms of settlement. The agricultural revolution that was once thought to be associated with the early Neolithic emerges instead during the second millennium BC, when a new landscape with distinct boundaries was created (Yates 2001, 65).

Although current studies indicate a concentration of ringworks in Essex and the Greater London area, they are also distributed across south-eastern England, *e.g.* Whitely Hill, Herts. (Bryant 1993) and Thrapston, Northants. (Hull 2001). The Great Westwood settlement differs from many of the previously excavated ringworks in having a palisaded as opposed to ditched enclosure. There is no sign of any bank and given the proximity of the two palisades this may be unlikely, although the truncated nature of the deposits prevents certainty. Ringworks generally have diameters of less than 160m, although there are variations at either end of the scale (Guttman and Last, 2000, 350). The Great Westwood ringwork is a small site, but is not too dissimilar in size to the enclosure B ringwork at South Hornchurch, Essex, which had a diameter of 36m (Guttman and Last 2000, 327).

The ubiquity of smaller fragments of oak charcoal in the late Bronze Age samples suggests that a lot of oak was burnt either before the ringwork was established or early in its existence. This might have been associated with woodland clearance. No evidence for associated land divisions, paddocks or droveways was recovered, although the presence of three loom weights in a pit within the roundhouse hints that wool, and therefore sheep, may have played a role in the settlement's economy. Unfortunately soil conditions precluded survival of virtually all but burnt bone. The small, fragmentary Phase 1 assemblage was not identifiable beyond mammalian. However, the funnel arrangements at some of the entrance ways into the ringwork may also support the suggestion that livestock management played a part in the life of the settlement.

A limited quantity of food plant remains, in the form of grain and chaff of *Triticum dicoccum* (emmer wheat), hulled *Hordeum vulgare* (six-row hulled barley), and hazel nut shell fragments, were found in pit fills within the roundhouse. Concentrations of food plant remains were, however, low. The presence of chaff remains indicates the use of crops, but it is possible that they were transported some distance as whole ears and processed locally for domestic use (Scaife 2000, 346; Jones 1981).

In common with ringworks along the Thames Valley and Estuary (Yates 2001), there is little evidence of early Iron Age activity at the Great Westwood ringwork. The investigated area does not seem to have been exploited again until the late Iron Age. Yates notes that social dislocation appears to have affected many farming communities at the end of the Bronze Age; the extent of collapse is so widespread that it suggests a general crisis (2001, 78).

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