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Graven Hill
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Oxfordshire



Archaeological Watching Brief and Evaluation Report

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Bicester MOD, Graven Hill, Bicester, Oxfordshire

Archaeological Watching Brief and Evaluation Report

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Summary

Oxford Archaeology (OA) was commissioned by Graven Hill Village Development Company Ltd to undertake a watching brief and evaluation on separate occasions in 2016 at Graven Hill, Bicester, Oxfordshire. The watching brief was undertaken during the removal of the ground slab following the demolition of Rodney House during February. Subsequently, five additional targeted evaluation trenches were excavated in June to supplement the results of a primary evaluation stage undertaken by OA in September and November 2015.

No archaeological horizons were revealed during the removal of the ground slab with the demolition disturbance being limited to the underlying hardcore rubble layer.

From the evaluation phase, Trenches 60 and 61 produced inconclusive evidence for the extent of the archaeological features previously recorded in Trenches 32 and 35 during the 2015 investigation. Three shallow linear features were recorded in Trench 60, one of which produced a single sherd of Roman pottery. However, the remains did not provide more conclusive evidence for the extent or character of activity within this field.

The evaluation confirmed the presence of remains of Roman Akeman Street within Trenches 62 and 63. The sequence recorded within these was comparable to those of Trenches 49, 58 and 59 from the 2015 evaluation with a surface constructed of limestone pieces set within a shallow terrace into the slope of Graven Hill. A single sherd of Roman pottery was recovered from the surface in Trench 63.

Trench 64 was targeted on the shallow linear features of probable Iron Age date recorded within Trenches 12 and 13 from the 2015 evaluation. Excavation of an area measuring 25m by 25m revealed a more extensive arrangement of shallow curvilinear ditches and larger linear ditches dating from the late Iron Age.



1 Introduction

1.1 Location and scope of work

- 1.1.1 The Graven Hill development boundary encompasses approximately 186 hectares in area, centred on Ordnance Survey Grid Reference SP 58863 20834 (Fig. 1). The site is located 1.5 km south of the centre of Bicester and bounded by the Oxford to Bicester rail line to the west, by the A41 to the north and agricultural land to the east and south.
- 1.1.2 Oxford Archaeology (OA) was commissioned by Graven Hill Village Development Company Ltd to undertake a watching brief and evaluation on separate occasions in 2016 at Graven Hill, Bicester, Oxfordshire. The watching brief was undertaken during the removal of the ground slab following the demolition of Rodney House in February. Rodney House is centred on Ordnance Survey Grid Reference SP 5888 2127. Subsequently, five targeted evaluation trenches were excavated in June to supplement the results of a primary evaluation stage undertaken by OA in September and November 2015 (Fig. 2). The works were completed acting under the guidance and supervision of the client's archaeological consultant Susana Parker of Waterman Infrastructure and Environment Ltd.
- 1.1.3 The scope of the watching brief was established within a Written Scheme of Investigation (WSI) produced by Waterman and approved by Richard Oram, Planning Archaeologist for Oxfordshire County Council (Waterman 2016). Subsequently, OA produced and issued a WSI specific to the company, which was approved by Richard Oram ahead of the fieldwork (OA 2016a). The scope of the watching brief was limited to the removal of the ground slab where there was the potential to disturb or encounter archaeological remains.
- 1.1.4 The trial trenches were completed under the existing evaluation WSI produced by Waterman (Waterman 2015), although the additional scope and locations were separately agreed between the archaeological consultant and planning archaeologist. These trenches were targeted on specific areas where additional information was required to supplement the results of the 2015 investigation. Two trenches were targeted on the medieval remains encountered within Trenches 32 and 35 set within an open pasture field. Two further trenches were arranged to cross the assumed line of Akeman Street and the existing hedge boundary where this coincided with proposed breaks in the hedge line to allow the construction of footpaths within the development. A single trench/area was targeted on possible Iron Age remains recorded in Trenches 12 and 13.
- 1.1.5 The watching brief fieldwork was completed by Oxford Archaeology on 24th and 25th February 2016. The evaluation trenches were completed between 6th-17th June 2016.

1.2 Geology and topography

Topography

1.2.1 The development boundary encloses a variety of elevations from the lowest point on land within the western boundary at 65m aOD to the highest point at 96m aOD upon the slopes of Graven Hill within the eastern boundary of the site. Rodney House is set on relatively flat ground at approximately 67.5m aOD within the northern boundary of the development. Rodney House had been demolished to ground level immediate prior to OA's attendance, leaving the concrete slab to be removed under supervision. The evaluation trenches were set within existing pasture fields between 72m - 82m aOD on the lower northern slope of Graven Hill.

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Geology

1.2.2 The solid geology comprises clay from the Oxford Clay Formation with the Peterborough Member (mudstone) exposed across most of the site and part of the Stewartby Member exposed on the slopes of Graven Hill (BGS, nd).

1.3 Archaeological and historical background

1.3.1 The site history presented below is reproduced from the WSI (Waterman 2015), which summarises the beackground set out in the Environmental Statement (ES), authored by Amec (2011a and b), and submitted with the planning application. In addition, relevant information from the 2015 evaluation has been included by period (OA 2016b).

Prehistory

- 1.3.2 Prior to the 2015 evaluation there were no recorded remains dating to this period within the development boundary, but evidence from the surrounding area shows that the area was occupied during this period. There has been some suggestion in the past that the top of Graven Hill was the site of an Iron Age hill fort and that a linear earthwork, which is still visible within the Graven Hill Wood, formed part of the ramparts. However, these earthworks were investigated by means of a number of trial trenches in 1999, with no clear evidence of Iron Age activity being recovered. There is no other known evidence for Iron Age activity within Graven Hill Wood and an alternative interpretation of the earthworks representing the remains of post-medieval lynchets of agricultural origin appears to be more likely.
- 1.3.3 Evidence of prehistoric settlement and activity within the 1km study area used for the baseline presented in the ES comes from a variety of sources, including those which have been recorded by excavation, sites identified as cropmarks on aerial photographs, and as artefact finds.
- 1.3.4 Iron Age settlement sites have been identified at Chesterton Lane and Bicester Fields Farm. The Chesterton Lane site was investigated in advance of construction for dualling of the A41 (then the A421) and identified the presence of middle Iron Age gullies, postholes and sub-rectangular enclosures, all being indicative of settlement. An isolated Bronze Age burial was also identified. The Bicester Fields Farm site is north of Graven Hill and excavation identified an Iron Age enclosure of two phases, surrounded by other domestic features: pits, boundary ditches and both human and animal burials. A late Iron Age date was identified on the basis of the pottery assemblage, and other finds suggested an economy of pastoralism, with unusually large cattle and ironworking, indicating that the farmstead may have been of relatively high status. Evidence for earlier prehistoric (Mesolithic) activity was also identified.
- 1.3.5 Cropmark evidence from aerial photography includes two possible round barrows of probably Bronze Age date to the north-west of the site which are visible as ring ditches. In addition, a banjo type enclosure, three hut circles and a number of sinuous ditches have been identified on aerial photographs to the immediate south-west of the Alchester Roman town. These have been interpreted as possible evidence for pre-Roman settlement within this area. Further evidence recorded in the Oxfordshire Historic Environment Record (HER) has been found in the form of artefacts, including a Bronze Age palstave found in the vicinity of Alchester Roman Town and a Bronze Age spearhead from south of Graven Hill. There are also a number of finds of late Iron Age pottery recorded in the HER.
- 1.3.6 The 2015 evaluation did encounter prehistoric remains at three different locations. The earliest significant find was a Neolithic polished flint axe fragment. This was recovered



- from a subsoil deposit within the western part of the evaluation area (Trench 3) although additional artefacts or features of this date were absent.
- 1.3.7 Late Iron Age activity was evidenced by a dispersed group of ditches and pits focused on Trenches 21, 22 and 24. These remains appear to be moderately well preserved and entirely of pre-Roman conquest origin. The related activity seems to be relatively sprawling, with the features spread over a 100m long area around the lower slopes of Graven Hill. Further late Iron Age ditches were recorded to the north of Circular Road within Trenches 12 and 13.

Romano-British

- 1.3.8 The principal settlement site of Roman date within the area is the town of Alchester, a Scheduled Monument. Together with the associated Roman roads, one of which crosses the site. Alchester defines the Roman settlement pattern in the immediate surrounds of the site. Other areas of Roman settlement were also present, including a site which has been excavated at London Road in Bicester. This was within an area of raised ground between two palaeo-channels, and comprised a large number of ditches. pits and postholes. The excavation presented a picture of settlement within an area that was generally wet and marshy. Another Roman-period settlement site has been excavated to the north of Graven Hill at Oxford Road. Evaluation revealed extensive survival of late Iron Age and Romano-British settlement within the floodplain of Langford Brook. All identified features were preserved under post-Roman alluvium, and appeared to represent two phases of occupation. The first of these phases was dated to the 1st century AD, and the second to the 2nd century AD. It was interpreted as a low-status rural site typical of the Upper Thames region for the period, at a time when increasing agricultural intensification required use of previously marginal land.
- 1.3.9 A feature of interest in the early editions of OS mapping is the course of Langford Lane which ran within the Graven Hill site boundary. From its current location at Alchester, the lane continued toward Merton, remaining outside of the site boundary. The other branch continued to the east, following a line on the north side of Graven Hill, within the site boundary, joining the line of Akeman Street at Wretchwick Farm. Given its location, it is possible that this may be a survival of the original Roman road which led east from Alchester to link with Akeman Street, and it is marked as such on early editions of the OS map. This route appears to have survived the initial construction of the Graven Hill ordnance depot, as it can be seen on aerial photographs of 1945 as a double line of trees. There is also a significant body of evidence of Roman occupation documented in the Oxfordshire HER in the form of numerous artefact finds, many of which have been within and around the Alchester site or along the known routes of Roman roads.
- 1.3.10 Within the 2015 evaluation
- 1.3.11 The route of Akeman Street was investigated within the development boundary along its eastern extent where the hedge lines had been removed in the later 20th century. This identified a track or road surface constructed of limestone pieces set within a shallow terrace into the hill slope within Trenches 49, 58 and 59. No dating evidence was present, although the absence of modern material suggests that the road surface was sealed by silting layers prior to the military occupation and use of the site.
- 1.3.12 Further Roman remains were encountered within the northern part of the development boundary, adjacent to the current Rodney House building. Trenches 39-42 each produced a number of linear ditches, three of which produced moderate-large assemblages of pottery dated mid-late 2nd century. The relative sterility of several other ditches and the apparent phasing represented by intersections and recuts demonstrate



a degree of longevity to the activity here. The ditch arrangements are suggestive of field boundaries or other small enclosures. It is possible that this activity or occupation may relate to a known building of some pretension beyond the LTA1 and development boundary to the WNW near to Langford Park Farm.

Medieval

- 1.3.13 There is relatively little known of the early medieval settlement within the area. Bicester appears to have been established as a Saxon settlement in the 6th century and was named as Burencestre in the Domesday Book. The name has been described as either meaning 'fort of Bern' with 'Bern' being derived from the personal name for Beorna, or alternatively being derived from two separate elements 'byrgen' meaning burial mound, and 'ceaster' meaning Roman fort. The earliest excavated evidence for settlement within the town is from a site to the rear of the King's Arms, which lies to the north of Graven Hill. Excavated remains included pits, gullies and evidence for a number of sunken-feature buildings, which may represent former houses. The 1st edition OS map of 1885 includes the note 'site of battle between the Danes and Saxons in 871 AD' within Graven Hill Wood. However, there is no other known reference to an early medieval battle at this location and it is not clear on what this is based. Without further evidence, this record should be treated with caution.
- 1.3.14 The first edition OS also indicates the boundary between the parishes of Ambrosden and Merton cutting across Graven Hill Wood. The division into two halves may be significant since they are divided by a dry ditch starting at the northern 300 feet contour and rising with the landscape to about 370 feet and down again to the southern 300 feet contour. The two halves of woodland are approximately 53.333 acres each. It may be that the woodland was equally divided between the parishes of Ambrosden and Merton (Oxfordshire HER ref. 13593).
- 1.3.15 Ambrosden formed the principal medieval settlement within its parish, though other settlements are also known, such as the one at Arncott. During the medieval period, much of the land around Graven Hill appears to have been in arable use, and the Victoria County History records that the agricultural land of Ambrosden village was organised around three main fields known by the 17th century as East, South and West Fields. The extent of arable cultivation is indicated on aerial photographs of the 1940s which show ridge and furrow earthworks (derived from medieval and post-medieval ploughing) on much of the land surrounding the hill, including some of the lower slopes. In addition to the surviving settlements of medieval origin, there was also a medieval settlement at Wretchwick, to the north of Graven Hill, and possibly extending into its lower slopes. Wretchwick, now a Scheduled Monument, was in the possession of Bicester Priory, before being depopulated by the priory to make way for sheep grazing.
- 1.3.16 Previously unknown medieval activity was identified by the 2015 evaluation within the central area of the development boundary. Trenches 32 and 35 both produced evidence for medieval activity spanning the period 12th-14th century. This comprised a series of linear ditches, although it is unclear what these represent in terms of activity or settlement. However, the presence of domestic pottery and a buckle does suggest that some contemporary occupation was located within the vicinity.

Post-medieval

1.3.17 The site is shown in detail on a series of OS maps dating from 1880 onwards. In 1880, the Graven Hill site is shown comprising a series of enclosed fields arranged around Graven Hill Wood. A single farmstead was present within the site boundary in 1880, located on the southern edge of Graven Hill Wood, and known as Mount Pleasant. A



building is shown on this location on the aerial photographs of 1944-45 and it is possible that Mount Pleasant survived until the development of St David's Barracks in the 1950s.

20th Century

- 1.3.18 The major development of the 20th century, which has shaped the current form of the site, was the establishment of the Central Ordnance Depot I 1941 during World War Two (WWII). The Bicester site was chosen as being suitable as it was located within southern England, with good road and rail links, and with sufficient space for the creation of a dispersed complex required for protection against air attack. It was also felt that the presence of Graven Hill would provide some additional protection in this regard. The depot was to spread over a wide area, occupying a number of sites from Graven Hill in the north to Arncott and Piddington in the south, collectively known as MOD Bicester.
- 1.3.19 The selection of MOD Bicester was approved in May 1941 and construction began soon after. Initial construction involved the laying of a 42 mile military rail network within and linking the various sites, followed by construction of the warehouse buildings. Graven Hill comprised D Site (armaments stores) to the south and E Site (small arms) to the north. Stores began to be issued from the MOD Bicester depot in August 1942, and it remained a key supply point for the army for the remainder of the war.
- 1.3.20 The entry of the United States into the war led to the arrival of large numbers of American troops into Britain, and it was necessary to provide depot facilities for their equipment. This operation was codenamed Bolero and at Bicester it involved the construction of temporary warehousing in the form of groups of Romney huts served by rail spurs and roads. The completed depot at MOD Bicester served as a key facility in supplying equipment for the Normandy landings in June 1944 and the subsequent European campaign. It was also necessary to provide accommodation within the depot for a workforce which during construction reached 24,000, and this was provided by Nissen huts organised into nine self-contained camps. Three of these, Camp nos 5, 6 and 7 were located on the slopes around Graven Hill Wood. This is depicted in the earliest aerial photography available for the site. In 1944 much of the agricultural land surrounding the depot was occupied by ridge and furrow and areas of ridge and furrow also survived within the depot. Changes visible on aerial photographs within the Graven Hill site are:
 - Construction of St David's Barracks by 1954;
 - Removal of hutted accommodation north of Graven Hill Wood by 1959;
 - Removal of more hutted accommodation by 1966 and felling of trees within Graven Hill Wood;
 - Presence by 1975 of only a small number of accommodation huts. Graven Hill Wood had been replanted and no ridge and furrow earthworks are shown to survive within the site; and
 - Removal of all accommodation huts by 1989.
- 1.3.21 In addition, the sequence of aerial photographs shows the gradual removal by ploughing of ridge and furrow from the surrounding agricultural land, and this was largely absent by 1975. MOD Bicester continued to operate as a Central Ordnance Depot in the post-war period, though the military workforce was gradually replaced by an increasing number of civilian workers. This resulted in a need for civilian workers to move into the area and for some new housing to be built in Bicester to accommodate them. The temporary hutted accommodation camps were gradually removed and in



- 1956 new barracks had been completed to the west of Graven Hill Wood on the current St David's Barracks site. Other changes include the removal of the Bolero warehouses in the period after WWII.
- 1.3.22 In 2006, two trial trenches were excavated within a former tennis court at St David's Barracks in advance of the construction of an accommodation block, though no archaeological features were identified.
- 1.3.23 Activity relating to the 20th century military use of the site and the subsequent return to pasture was recorded across many parts of the 2015 evaluation. Numerous remains relating to the military camp were encountered. These were almost entirely represented by the destruction and demolition debris resulting from the clearance of the site as part of the reinstatement to pasture fields. These remains are not significant, although interesting pottery assemblages often depicting the date of manufacture within the war period were present. Notable assemblages were recovered from Trench 11.

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2 WATCHING BRIEF AND EVALUATION AIMS AND METHODOLOGY

2.1 Aims

Watching brief

- 2.1.1 The principal aim of the watching brief was to to advise the demolition contractors, where appropriate, to minimise the below ground impacts that may otherwise remove potential archaeological deposits.
- 2.1.2 Where deeper ground intrusions were unavoidable, the watching brief aimed to establish the presence/absence, extent, condition, character and date of any archaeological deposits within the area affected by demolition to inform any future proposals for appropriate mitigation measures.

Evaluation

- 2.1.3 The principal evaluation aims as outlined within the 2015 WSI were to establish the presence/absence, extent, condition, character and date of any archaeological deposits within the area affected by invasive development.
- 2.1.4 The 2016 evaluation specifically aimed to provide additional information on the date, character, extent and quality of preservation of targeted features previously identified by the 2015 evaluation.

2.2 Methodology

Watching brief

- 2.2.1 An OA archaeologist was in attendance for all stages of the ground slab demolition that had the potential to disturb archaeological remains. The archaeologist also advised the site contractors on how best to minimise the disturbance during the slab removal. This was achieved by limiting all plant movement to the remaining slab areas and by working backwards from a leading edge of the slab, prising this up and breaking it along pre-pecked holes or weakness lines, rather than digging under and alongside the slab (Plates 1 and 2).
- 2.2.2 The demolition contractors fully cooperated and worked with the OA archaeologist to fulfil the aims of the investigation and ceased works when requested to allow appropriate archaeological recording. A full written and photographic record of the works was maintained throughout the attendance.

Evaluation

- 2.2.3 Immediately prior to starting excavation, the trench layout was established using GPS equipment by an OA surveyor according to the trench plan as agreed between the consultant and planning archaeologists. In the event it was not possible to site Trench 63 at the specified location within the historic hedge line owing to the presence of standing water and marshy conditions within the existing field boundary ditch. This trench was excavated at the next nearest break in the hedge line closer to Trench 62. Figure 2 presents the final trench layout.
- 2.2.4 Following survey of the trench locations, each trench was machine-excavated under the supervision of OA's Field Supervisor to the first significant archaeological horizon or the surface of the geological horizon, depending on which was encountered first. Where 20th century activity relating to the military camp was encountered, this was noted and machine excavated to reveal potential underlying features and/or deposits.



- Once archaeological deposits or those with the potential to contain artefacts were exposed, further excavation proceeded by hand. The excavation and recording of archaeological features was undertaken following established OA practices in line with CIfA and OCC standards.
- 2.2.5 Regular site monitoring meetings were arranged between the Planning Archaeologist, Consultant Archaeologist, OA Field Supervisor and Senior Project Manager to review the ongoing results and confirm that the fieldwork was meeting the aims of the investigation. Where it was not possible for the planning archaeologist to view the excavated remains, digital images of the results were forwarded by email and discussed. Upon completion of the excavation and recording, approval was sought from the planning archaeologist to confirm that no further site visits were required and that the trenches could be backfilled.



3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The following section presents the results by area and phase of work. Archaeological deposits were not encountered during the watching brief works and no formal context records were created. However, appropriate notes and annotated plans were created for the archive. For the evaluation, descriptive accounts of the remains recorded are summarised according to the focus of each area. (i.e. full trench and context inventories are presented in Appendix A.

3.2 Rodney House watching brief

- 3.2.1 Ground levels or horizons at which archaeological deposits may be expected were mostly not revealed within the watching brief (Plate 3). Natural clay deposits were only revealed within a series of small foundation pads spaced around the perimeter of the two larger buildings (Fig. 3 and Plate 4). These generally measured less than 1m wide by 0.7m and 0.6m deep. Each pad was easily removed with minimal disturbance to the surrounding deposits. The concrete slab coincided with the building footprints. This was up to 0.1m thick and lacked reinforcement iron bars and was easily removed without impact to potential underlying archaeological deposits. The removal of the slab only revealed hardcore rubble layers which sat directly on the surface of the underlying clay geology (Plates 3 and 4). The rubble layers remained *in situ*, although it was clear from the exposed edges of the foundation pad removals that all previous soft soil horizons had been removed to the surface level of the underlying clay geology prior to the deposition of the rubble.
- 3.2.2 No archaeological deposits or artefacts were encountered.

3.3 Evaluation trenches

Trenches 60 and 61

- 3.3.1 Trenches 60 and 61 were targeted upon linear features previously identified within Trenches 32 and 35 of the 2015 evaluation within in a pasture field to the west of the former military base theatre and north of Circular Road (Fig. 4). Trench 60 was sited to the west of Trench 35 with Trench 61 placed between Trenches 32 and 35. The surface centre point of each trench was at approximatively 74.5m aOD. Where artefact assemblages were recovered from the earlier evaluation stage, these suggested a mid-13th century origin for the ditch arrangements, although individual sherds of Roman pottery may also indicate a phase of activity from this period (OA 2016b).
- 3.3.2 Similar general soil sequences were recorded between Trenches 60 and 61 (Fig. 5 sections 6000 and 6100). These comprised the natural clay geology overlain by a greyish brown clayey subsoil layer 0.2-0.3m thick (60008 and 61002). Within Trench 61, this was overlain across the northern part of the trench by a spread of charcoal and clinker-rich deposit (61003) likely to have derived from the demolition and clearance of the military camp as recorded at several locations during the 2015 evaluation. A thin clayey soil horizon (60001 and 61001) was recorded over the lower subsoil horizon and sealing the military camp debris within Trench 61. This layer probably represents the landscaping and levelling undertaken when the military camp was returned to pasture in the mid 20th century. The current topsoil and turf (60000 and 61000) completed the sequence



3.3.3 No archaeological features, deposits or artefacts predating the military camp were encountered within Trench 61. Three linear features (60002, 60004, 60006) on varying alignments were present within Trench 60 (Fig. 5 section 6001). Each of these was shallow, being cut into the natural clay to depths of 0.1-0.15m deep and 0.5-0.7m wide. Only ditch 60004 shared a common alignment of E-W with the features previously identified in Trench 35. Each shallow ditch was infilled with a single unremarkable clayey silting fill. Deposit 60003 (ditch 60002) produced a single sherd of Roman pottery.

Trenches 62 and 63

- 3.3.4 Trenches 62 and 63 were targeted upon the line of Akeman Street as recorded on early editions of the OS map series and remaining within the current landscape as a single hedge line with an accompanying drainage ditch. This boundary was, until the mid 20th century, a double hedge line defining a track. These trenches were arranged according to the expected impacts of the development by the creation of a footpath through the hedge. However, it was not possible to excavate Trench 63 at the intended location and this was moved and excavated to the west at the next natural break in the hedge line.
- 3.3.5 The trenches were excavated 30m apart within the hedge line (Fig. 6). These revealed similar sequences with the remains of a road/track surface set within a terrace cut into the natural clay and hill side and with accompanying flanking ditches. The terrace (62012, 63007) was up to 2.6m wide and 0.4-0.5m at its deepest point measured from the existing ground level (Fig. 7 sections 6200 and 6301). This was aligned E-W and was present to the south and uphill side of the existing hedge line. Limestone pieces (62011, 63005) were set directly into the underlying clay (Plate 5). These were generally small, being no more that 50-100mm across. The surface was worn and patchy and survived only to a single stone depth, with a brown silty clay deposit between and around the stones. Hints of linear ruts in the surface were also present, although these were not clearly defined. A single sherd (11g) of Roman pink-grogged ware pottery was recovered from the silting deposit between the limestone pieces of surface 63005.
- 3.3.6 Within Trench 62 the southern extent of the road surface and terrace was defined by a shallow flanking ditch (62010). This was 0.8m wide but only 0.12m deep. The ditch contained a single silting fill (62009). A comparable ditch was not positively identified within Trench 63, although it is possible that this exists beyond the excavated southern limit of the trench. The road surface within both trenches and the ditch fill were overlain with a silty clay deposit (62004, 63002) to a maximum depth of 0.2m. This formed a subsoil-like deposit across the extent of each trench. Within Trench 62 this was overlain by a distinctive dark brown and humic buried former topsoil and turf horizon (62003) that was approximately limited to the line of the former track and probably relates to the historic and more recent use of the route until the northern hedge line was removed in the mid 20th century. A redeposited natural clay mixed with humic topsoil lumps (62001, 63001) sealed the buried turf horizon (62003) and earlier silting deposits (62004, 63002).
- 3.3.7 The hedge line crossing the northern part of each trench was accompanied by an existing field boundary and drainage ditch (62005, 63004) on the down slope side of the field. This ditch was cut into the subsoil-like layer (62004, 63002) and seemed to mark the northern limit of the redeposited clay deposits 62001 and 63001. The ditch was approximately 2.6m wide and 0.7m deep and was infilled with silting deposits and much leaf and twig litter (62006, 63006). Plastic objects were also present, along with fragments of corrugated cement sheet roofing. This ditch was recorded, although

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further hand excavation was not undertaken. A further shallow ditch (62007) was located parallel to 62005 on its northern side and cut into the lower subsoil horizon. A topsoil and turf deposit (62000, 63000) completed the sequence with this also extending across the hollows of the extant field boundary ditches.

Trench 64

- 3.3.8 Trench 64 was targeted upon a group of possible Iron Age ditches revealed in the primary evaluation phase within Trenches 12 and 13 (OA 2016b). The existing topography in the vicinity of the current trench was generally flat with an imperceptible gentle slope with elevations of 72.02m in the south rising to 72.44m in the north. The field had been left to long grass.
- 3.3.9 The general soil sequence recorded during the machine excavation of this trench corresponded to that of Trenches 12 and 13. The natural clay geology was overlain with a clayey subsoil horizon (64003) within which traces of ridge and furrow profiles were recognisable. This was sealed with a distinctive former topsoil and turf horizon (64002) through which two parallel wheel ruts (64013) were cut into the underlying subsoil and clay geology. A thick layer of redeposited natural clay (64001) overlay the former turf level and had levelled and raised the local topography masking the former ridge and furrow earthworks (Plate 6). A redeposited topsoil deposit with turf (64000) completed the sequence. These deposits had a combined depth of 1-1.2m across the excavated trench.
- 3.3.10 Following machine excavation of the overlying soil sequence, numerous archaeological features were exposed. These comprised linear and curvilinear ditches, a pit, a posthole, a treehole and a cremation pit (Fig. 8 and Plate 7). These were cut into the clay geology, although a number of features were also intercut, suggesting a sequence or phases of activity. Each had upper fills showing of a very similar silty clay dark grey brown appearance. A number of archaeological features, primarily the curvilinear remains of shallow ditches, were very ephemeral and only just visible in the interface between the subsoil and the natural clay making clear identification difficult in poor light or ground conditions.
- 3.3.11 The sequence of segmented curvilinear ditches dominated the remains encountered and appear to define three or four small subcircular enclosures, each with an internal diameter of 8-10m. The most complete of these lies within the NE part of the trench comprising four individual ditch segments. Of these, two (64009, 64023) were sample-excavated, demonstrating that the ditches had shallow, concave profiles, being approximatively 0.1m deep and infilled with single silting deposits (Fig. 9 sections 6403 and 6410). Neither of these produced any artefacts. A small pit (64037) was present centrally located to this enclosure. The pit contained a single fill (64038), which included a crushed and folded iron sheet object (Fig. 9 section 6418). This was block-lifted, although it appears to be lacking in details that could define it as being ancient. At this point it is unclear if it is a coincidentally placed modern intrusion or an artefact contemporary with the subcircular enclosure.
- 3.3.12 Immediately to the SW of this enclosure, and possibly associated with an entrance into it, was a shallow posthole (64021). This was oval, 0.09m deep, with the sterile fill which also lacked any evidence of a postpipe or packing material (Fig. 9 section 6409).
- 3.3.13 West of this posthole and enclosure were the truncated remains of a second set of curvilinear ditches (64007, 64019/64039). Ditch 64007 formed the NE side to this and 64019/64039 the SW side. Ditch 64019/64039 is a re-cut of earlier ditch 1205 recorded within Trench 12 of the primary evaluation phase. As with the first set of enclosure



- ditches, these were generally unremarkable, being a maximum of 0.15m deep and infilled with a single sterile dark grey brown silty clay silting deposit (Fig. 9 sections 6401, 6408 and 6411).
- 3.3.14 A third potential enclosure of similar appearance was partly exposed within the northern edge of the trench, although this appears to substantially extend beyond the excavated limits. This comprised ditches 64011 and a possible continuation of this (64036). A later and more substantial ditch (64034) truncated much of 64036. As with the ditches of the first two enclosures, ditch 64011 was shallow, containing a single sterile fill (Fig. 9 section 6404). Ditch 64036 had a comparable profile with steeper sides, 0.42m wide by 0.22m deep (not illustrated). The single fill contained within this ditch included frequent charcoal inclusions lumps and produced an assemblage of late Iron Age pottery and a small amount of burnt animal bone.
- 3.3.15 Within the southern part of the trench a single curving ditch (64026) may represent another enclosure that extended to the south of the excavation limits. Again, this was of a similar appearance, both in profile and the fill contained within it, to the other curvilinear ditches (Fig. 9 section 6415). However, the fill (64025) produced a small assemblage of late Iron Age pottery. West of this, a barely visible soil mark appeared to curve to the WSW representing a continuation of the ditch alignment.
- 3.3.16 Possibly associated with this phase of occupation were two small segments of slightly curving ditches (64046 and 64050). These did not seem to be clearly associated with any of the ditch arrangements, although the profiles and fills were consistent with the other excavated ditches (Fig. 9 sections 6416 and 6417).
- 3.3.17 In the centre of the trench was an apparent paired arrangement of L-shaped ditches (64015 and 64028/64041), both truncating two of the terminal ends of the subcircular enclosures to the north. These possibly form part of a rectangular enclosure. Ditch 64028/64041 forms the western flank of this enclosure, running N-S for 5.8m. At its northern end it truncates ditch 64039 before terminating, and at its southern end its terminus appears in plan to truncate ditch 64050. The eastern ditch (64015) comprises an L-shaped ditch with a curved corner. The ditch extends 3.5m to the west and south from the corner point, truncating the fill of ditch 64023. The dimensions, profiles and general character of these ditches was consistent with those of the subcircular enclosures (Fig. 9 sections 6406 and 6412 and Plate 8). The fills of both ditches also produced moderate-sized assemblages of late Iron Age pottery, including several sherds from a single vessel from fill 64027.
- 3.3.18 A treehole (64017) with a broad shallow irregular profile was revealed south of the southern terminus of ditch 64015. This was aligned on a similar axis to ditch 64015 and may alternatively be a continuation of that ditch. It is 2.18m long and 0.83m wide and filled by a dark grey brown silty clay (Fig. 9 section 6407).
- 3.3.19 Just within the southern limit of excavation a small cremation burial was encountered. This was set within a shallow oval pit (64005) measuring 0.15m in diameter and 0.08m deep (Plate 9). The cremation deposit (64006) comprised a compact dark grey clayey silt with ash and frequent small fragments of cremated bone. No container was found and there was no evidence of burning *in situ*.
- 3.3.20 Two larger linear ditches (64034, 64044) aligned roughly E-W were present within the NW part of the trench accompanied by a NW-SE aligned ditch (64030) that terminated shortly before meeting ditch 64034. Each of these ditches was also larger than the shallow segmented ditches. Ditch 64034 was the largest with a broad U-shaped profile measuring 1.3m wide and 0.53m deep and this appeared to truncate the fill of the small



curvilinear ditch 64007 (Fig. 9 section 6414 and Plate 10). Ditch 64034 contained a sequence of three fills: a primary sterile light yellowy blue clay; a thin secondary deposit that included domestic debris (64032) tipping in from the southern; and an uppermost yellowy brown silty clay silting fill levelling the ditch. The secondary fill included frequent fragments of charcoal, several large sherds of late Iron Age, burnt and unburnt animal bone and burnt stone.

3.3.21 Ditch 64044 was shallower at 0.25m deep and contained a single silting fill from which four sherds of late Iron Age pottery were recovered (Fig. 9 section 6416). Ditches 64044 and 64034 both appeared to end in rounded terminals to the east of the excavated sections within the trench area, although the visibility within this part of the trench was poor due to wet weather and localised inundation and it remains possible that these may continue unbroken eastward and beyond the trench limit. Ditch 64030 did have a clear terminal ending just before the junction with ditch 64034. This ditch appears to have been arranged perpendicular to 64044, suggesting that they were part of a contemporary arrangement. This ditch also had a very similar profile, dimensions and fill (64029) which produced three sherds of late Iron Age pottery (Fig. 9 section 6413).

3.4 Finds summaries

Pottery

3.4.1 A total of 172 sherds of pottery, weighing 1362g, was recovered from the evaluation. The pottery was largely confined to the late Iron Age, although the middle Iron Age, and Roman and post-Roman periods were also represented. The Iron Age assemblage was dominated by grog-tempered ware, with smaller quantities of sand-tempered fabrics. The Roman pottery included a fragment from a pink-grogged ware storage jar of middle or late Roman date. Sherds of medieval and post-medieval pottery were also recovered.

Ceramic building material

3.4.2 A total of 3 fragments of tile, weighing 62g, was recovered from a single context 64014. The assemblage comprised a single abraded Roman tile fragment and two fragments of probable late medieval or early post-medieval flat roof tile.

Iron

3.4.3 A total of 3 iron objects was recovered from a two contexts in Trenches 63 and 64. These comprised a possible knife blade fragment, a domed hollow disc that may be a button or head of a thumbtack, and a folded sheet object. These all appear to be of 20th century origin.

Glass

3.4.4 A single small sherd of vessel glass was recovered from a probable wheel rut within Trench 64. This is very likely to be 20th-century or later in date.

Stone

3.4.5 A total of 23 pieces of unworked and burnt stone, weighing 1481g, was recovered from contexts 64012 and 64032.

Human bone

3.4.6 A single deposit of cremated human bone was recovered from a small shallow pit in Trench 64. The total weight of the sorted cremated bone from all samples was 42.5g and the individual fragment size of the material was small. The MNI was estimated to



be 1 based on the lack of repeating elements. There were no elements present for the estimation of age or sex. However, the general morphology of the bone, especially the thickness of the skull vault fragments, suggests an adult. No pathology was observed.

3.5 Environmental remains summaries

Charred plant remains

3.5.1 Four samples were recovered from a gully and a cremation excavated within Trench 64. Identifiable charcoal remains from the gully comprised entirely shrubby/small trees of Pomoideae type (hawthorn / apple / rowan / wild service / whitebeam) and *Prunus* (blackthorn / cherry). Charcoal remains from the cremation deposit were often vitrified although, oak dominated the identifiable remains. No other charred plant remains were present.

Animal bone

- 3.5.2 A total of 229 animal bone fragments, weighing 397g, was recovered from Trench 64. No animal bone remains were present or recovered from Trenches 60-63. The animal bone assemblage was entirely derived from features dated to the late Iron Age and possibly into the early Roman period.
- 3.5.3 The assemblage and individual bones displayed a high degree of fragmentation. The assemblage contains bones from cattle, sheep/goat and horse, as well as a small number of fragments from large mammals (cattle, horse or deer). The assemblage size is also very small making detailed analysis unlikely to yield any information beyond species presence.



4 Discussion

4.1 Reliability of field investigation

Rodney House watching brief

4.1.1 Limited results were gleaned from the watching brief with regard to identifying archaeological remains and the potential for these to exist under the remaining hard core layers. No excavation was possible to effectively evaluate the degree of truncation caused by the 20th century structures at this location.

The evaluation

- 4.1.2 The ground and weather conditions during the evaluation were variable. The first week of the evaluation was fine and all trenches were machine excavated in reasonable dry conditions. Trenches 60-63 were each excavated and recorded under good weather and visibility conditions with little perceivable impact of these upon the results. The visibility and the distinction of the soils within Trenches 62 and 63 was initially difficult, although the archaeological deposits became more obvious once the ground had dried a little and hand-cleaning was undertaken. Within Trench 64, the archaeological features were reasonably well defined immediately following machine excavation without the need for substantial hand cleaning. However, heavy rain fell on the exposed remains and flooded part of the site for a short period, making visibility more challenging (Plate 7). Fortunately, the pre-excavation plan had been completed prior to the rain storms allowing the identification and sample excavation of all required features and limiting the impact of the rain on the results of this trench.
- 4.1.3 The positive identification of the targeted remains, perhaps with some limitation on the success of Trenches 60 and 61, suggests that these results are very reliable for indicating the presence of both the reasonably well preserved remains of Akeman Street along the existing hedge line and the presence of a late Iron Age site of undefined extent at Trench 64.

4.2 Interpretation and discussion

Rodney House watching brief

4.2.1 All soft deposits (rubble hard core) related to the 20th century construction of Rodney house remained *in situ* as part of the watching brief (Plate 3). Therefore, it was not possible to conclusively establish the degree of truncation that may have been undertaken here and if this has removed, or significantly affected, the archaeological potential under the footprint of the structure. Based upon the site observations, it was clear that the site had been stripped to at least the surface level of the natural clay before the hard core deposits had been laid, although significant deep foundations were absent. The removal of the previous topsoil prior to construction is likely to have caused some impact to any remains and it is possible that some levelling was also undertaken. It is equally possible that this is the limitation of disturbance, with the natural clay being firm and stiff and providing a sufficient level for the construction. In conclusion, whilst the watching brief ensured that the integrity of potential buried remains was preserved and not impacted upon by the demolition works, the scope did not permit an evaluation of this potential.

Trenches 60 and 61

4.2.2 Trenches 60 and 61 had limited success. None of the linear features identified in Trenches 32 and 35 from the 2015 evaluation was encountered in Trench 61. It is just

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possible that the ditches from Trench 32 could pass to the south of the excavated trench. However, it is clear that those from Trench 35 do not continue on their projected alignment into Trench 61. Three small linear ditches were encountered in Trench 60. These appeared shallower and more sterile than those from Trench 60 suggesting that these could be peripheral to any foci of activity possibly represented by the artefact assemblages recovered from Trench 35.

4.2.3 In summary the additional trenches proved inconclusive in defining the extent of activity associated with results of Trenches 32 and 35.

Akeman Street Trenches 62 and 63

- 4.2.4 Remains of Akeman Street were positively identified within Trenches 62 and 63 set across the former track and hedge boundaries. The recorded deposits were closely comparable to the results of the 2015 evaluation trenches located 280m to the east. The conformity of the road construction and materials used strongly points to these being the remains of the Roman construction, as opposed to later repairs and reuse. Likewise, the absence of modern artefacts from anything other than the ditch along the northern side of the road strongly supports the view that these deposits are of Roman, or at least pre-military camp, origin.
- 4.2.5 The results of the current evaluation confirm that the hedge line along this part of the route reflects the northern limit of the Roman road. It also suggests that a roadside flanking ditch was absent on the down slope side as also proposed by the 2015 evaluation. No disturbance associated with the removal of the southern hedge line was recorded within the limit of the trenches. It was also clear that the reinstatement works that returned the land to pasture in the mid 20th century did not impact upon the buried remains of the road. Indeed, this phase of activity was represented clearly in the trench sequence by a redeposited clay levelling layer directly overlying a former topsoil and turf line over the line of the road. This demonstrates that the track was covered over and effectively protected rather than disturbed. Based upon this evidence and the surviving topography and hedge line south of circular road, it is reasonable to conclude that Akeman Street is well preserved as it passes Graven Hill within the development boundary.

Trench 64

- 4.2.6 Trench 64 confirmed that the remains recoded during the 2015 evaluation represent a larger Iron Age site of some complexity and distribution. This trench measured 25m by 25m and archaeological remains were recorded in all directions. The artefact assemblage also confirms that these are of late Iron Age origin, with pottery from other periods absent. Clearly these remains cannot extend beyond the field boundary to the north, as the military buildings were constructed in deep terraces that have conclusively removed all archaeological potential here and resulted in the deep levels of redeposited clay overburden with this field. This provides some limit to the potential extent of the site. Also, features were absent from Trenches 11 and 14 from the 2015 evaluation approximately 90m to the SW. Significant features were also absent from the western end of Trench 12 so it may be possible that this is a relatively localised site. However, this uncertainty serves to demonstrate that it is not currently possible to define a detailed extent to this site on the available evidence.
- 4.2.7 The type of site represented by these remains is equally difficult to interpret. The shallow segmented ditches or gullies do not appear to represent structural remains such as houses with these being too irregular and closely spaced and generally lacking the appearance of a settlement. However, this is not conclusive evidence as they do fit



within the known diameter range for structures of this period and the closely-spaced features may simply reflect multiple phases. Likewise, they gullies do not make much sense as small enclosures, as it is difficult to see how such shallow features would function unless a substantial depth has been lost through historical arable activities. The larger linear ditches could easily be field or other boundaries within or close to a settlement, as suggested by the presence of larger sherds of pottery and burnt inclusions. A more accurate and informed interpretation on the function of this site will necessarily await more detailed investigation if this is appropriate.



APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Please note that the date ranges indicated in the following tables reflect the artefact assemblages recovered from these rather than precisely identifying the feature/deposit date. For relevant discussions of potential feature dates see the main description text and discussion section.

Trench 60							
General de	scription	1			Orientatio	n	N-S
This trench	contained	d three dit		Avg. deptl	h (m)	0.5m	
				stiff grey brown clay was	Width (m)		1.8m
	-			e features were sealed with the a mid brown silty clay	Length (m)	20m
redeposited	d natural c	lay and th	e existing	topsoil and grass.			
Contexts							
Context no	Туре	Width (m)	Depth (m)	Comment	Finds	Date	
60000	Layer	-	0.15	Topsoil			
60001	Layer	-	0.12	Made ground			
50002	Cut	0.49	0.09	Ditch			
60003	Fill	-	-	Fill of ditch 60002	Pottery	Roman	
60004	Cut	0.71	0.14	Ditch			
60005	Fill	-	-	Fill of ditch 60004			
60006	Cut	0.53	0.09	Ditch			
60007	Fill	-	-	Fill of ditch 60006			
60008	Layer	-	0.24	Subsoil			
60009	Layer	-	-	Natural clay			

Trench 61							
General d	escriptio	n			Orientati	on	N-S
No archae	ology pre	sent.			Avg. dep	th (m)	0.5m
				nid grey brown silt clay overlair n across the northern part of the		1)	1.8m
				er. This, and the subsoil horizon,		m)	20m
	topsoil w	ith demoli		ed by a series of land drains. A is inclusions completed the soi			
Context no	Туре	Width (m)	Depth (m)	Comment	Finds	Date	
61000	Layer	-	0.30	Topsoil			
61001	Layer	-	0.10	Redeposited clay			



v.01

61002	Layer	_	-	Subsoil	20th century
61003	Layer	_	0.10	Demolition spread	20th century
61004	Layer	-	-	Natural clay	

Trench 62							
General d	escription	1	Orienta	tion	NNE- SSW		
						0.55m	
				g ditch was present ditch to the north of	Width (m)	1.7m
the road co	ontained n	nodern ma	aterial (asl	pestos and plastic). A	Length	(m)	17.65m
relates to sealed the cutting into was filled redeposite	the mod road surf subsoil fo with a tops d natural nad been	ern field ace and d ollowing th soil type n clay with r reworke	boundary litches. A ne line of naterial wi mixed 20 th	of the trench probably of A subsoil horizon holloway had formed the roman road. This hich was sealed by a century debris. This matopsoil which			
Contexts					!		
Context no	Туре	Width (m)	Depth (m)	Comment	Finds	Date	
62000	Layer	-	-	Topsoil			
62001	Layer	-	0.20	Made ground			
62002	Cut	5.18	0.18	Holloway			
62003	Fill	-	0.18	Fill of 62002			
62004	Layer	-	0.1	Subsoil			
62005	Cut	1.1	0.15	Ditch			
62006	Fill	-	0.15	Fill of ditch 62005			
62007	Cut	0.72	0.1	Ditch			
62008	Fill	-	0.1	Fill of ditch 62007			
62009	Fill	-	0.12	Fill of ditch 62010			
62010	Cut	8.0	0.12	Roadside ditch			
62011	Layer	2.4	0.1	Road (limestone) surface			
62012	Cut	2.4	0.1	Road terrace			
62013	Layer	-	-	Natural clay			



Trench 63	3						
General d	descriptio	n			Orienta	tion	NNE-SSW
				surface set within a	Avg. de	epth (m)	0.5m
				surface was sealed by redepositeed clay	Width (m)	1.7m
resulting f	orm the recently. The	einsateme e exisitng	ent of the field boun	field to pasture in the dary ditch defines the	Length	(m)	14.2m
Contexts							
Context no	Туре	Width (m)	Depth (m)	Comment	Finds	Date	
63000	Layer	-	0.20	Topsoil			
63001	Layer	-	0.28- 0.52	Made ground			
63002	Layer	-	0.20	Subsoil			
63003	Layer	-	-	Natural clay			
63004	Cut	0.62	0.48	Ditch		Modern	
63005	Layer	2.60	0.18	Limestone surface and silting deposit	Pottery	3rd-4th century AD	
63006	Fill	0.62	0.48	Fill of Ditch 63004		Modern	
63007	Cut	2.60	0.2+	Road terrace	-		
	·				·		
Trench 64	1						
Conoral	lescrintio	'n			(Orientation	N/A

Trench 64	ļ.						
General d	escriptio	n	Orientat	Orientation			
The clay				oth (m)	1.1m		
-				and several larger linear pit and a posthole were also	Width (n	າ)	25m
				the later Iron Age. The	Length (m)	25m
enclosures although their function is not conclusive within the limits of the area. The arcaheological horizon was sealed with a buried subsoil horizon and former topsoil and turf level. These were overlain with a substantial layer of redeposited natural clay. A thin topsoil and turf caps the clay layer.							
Context no	Туре	Width (m)	Depth (m)	Comment	Finds	Date	
64000	Layer	-	0.10	Topsoil			
64001	Layer	-	0.63	Made ground			
64002	Layer		0.15	Buried topsoil			
64003	Layer		0.1	Subsoil			
64004	Layer			Natural			
64005	Cut	0.13	0.08	Cremation			



64006	Fill	-	0.08	Fill of cremation 64004	Pottery Cremated human bone	LIA
64007	Cut	0.4	0.12	Ditch		
64008	Fill		0.12	Fill of ditch 64007		
64009	Cut	0.4	0.1	Ditch		
64010	Fill		0.1	Fill of ditch 64009		
64011	Cut	0.78	0.22	Ditch		
64012	Fill		0.22	Fill of ditch 64011	Animal bone	
64013	Cut	0.88	0.12	Wheel rut		
64014	Fill		0.12	Fill of 64013	Pottery, glass, CBM	20th century
64015	Cut	0.66	0.18	Ditch		
64016	Fill		0.18	Fill of ditch 64015	Pottery, Animal bone	LIA
64017	Cut	0.83	0.21	Tree throw		
64018	Fill		0.21	Fill of tree throw		
64019	Cut	0.44	0.14	Ditch		
64020	Fill		0.14	Fill of ditch 64019	Fired clay	
64021	Cut	0.31	0.09	Post hole		
64022	Fill		0.09	Fill of post hole		
64023	Cut	0.59	0.09	Ditch		
64024	Fill		0.09	Fill of ditch 64023		
64025	Fill		0.1	Fill of ditch 64026	Pottery	LAI
64026	Cut	0.32	0.1	Ditch		
64027	Fill		0.17	Fill of ditch 64028	Pottery	LIA
64028 64029	Fill	0.48	0.17	Fill of ditch 64030	Pottery, Animal bone	LIA
64030	Cut	0.9	0.16	Ditch		
64031	Fill		0.3	Fill of ditch 64034	Pottery	LIA
64032	Fill		0.1	Fill of ditch 64034	Pottery, Animal bone, burnt stone; fired clay	LIA
64033	Fill		0.15	Fill of ditch 64034		



v.01

64034	Cut	1.3	0.53	Ditch		
64035	Fill		0.22	Fill of ditch 64036	Pottery Animal bone Fired clay	LIA
64036	Cut	0.42	0.22	Ditch		
64037	Cut	0.31	0.24	Pit		
64038	Fill		0.24	Fill of pit 64037	Iron object	
64039	Cut	0.18	0.09	Ditch		
64040	Fill		0.09	Fill of ditch 64039		
64041	Cut	0.54	0.15	Ditch		
64042	Fill		0.15	Fill of ditch 64041	Pottery	LIA
64043	Fill		0.23	Fill of ditch 64044	Pottery, Animal bone	LIA
64044	Cut	1.0	0.23	Ditch		
64045	Fill		0.12	Fill of ditch 64046	Pottery, Animal bone	LIA
64046	Cut	0.6	0.12	Ditch		
64047	Fill		0.24	Fill of 64048		
64048	Cut	0.52	0.24	Natural feature/tree throw		
64049	Fill		0.07	Fill of ditch 64050	Animal bone	
64050	Cut	0.21	0.07	Ditch		



APPENDIX B. FINDS REPORTS

B.1 Pottery

By Edward Biddulph

Introduction and methodology

B.1.1 Pottery recovered from the evaluation was quantified within context groups by sherd count and weight in grammes. Forms and fabrics were assigned codes from OA's standard guidelines for Iron Age and Roman pottery (Booth 2014) (Table B1.1). Forms identified by rim were additionally quantified by estimated vessel equivalents (EVE), which records the portion of the rim that survives (1 EVE equalling a complete rim, 0.1 EVE equalling 10% of the rim). The assemblage totalled 172 sherds, 1362g and 1.41 EVE (Table B1.2). The pottery was scanned to identify diagnostic forms and fabrics, assess condition, and provide spot dates.

Fabric code	Description	Form code	Description
E20	Fine sand-tempered fabric	С	Jar
E30	Coarse sand-tempered fabric	CD	Medium-mouthed necked jar
E80	Grog-tempered ware (SOB GT)	CE	Squat, high-shouldered necked jar
O20	Sandy oxidised ware	CN	Storage jar
O81	Pink-grogged ware (PNK GT)	D	Jar or bowl

Table B1.1: Iron Age and Roman pottery forms and fabrics. Codes in parentheses from Tomber and Dore 1998

Context	Count	Weight (g)	EVE	Description	Date
60003	1	2		O20	AD43-410
63005	1	11		O81 storage jar body sherd	AD250-350
64006	2	3		E20 oxidised (?glauconite in fabric)	LIA
64014	2	47		Brill Boarstall ware jug (1250-1400); yellow ware sugar or mixing bowl	1850-1900
64016	12	29	0.06	C impressed/frilly everted rim (E30) E80	LIA
64025	8	20		E80, E20	LIA
64027	29	104	0.4	CD (E80) all sherds part of the same vessel	LIA
64029	3	17		E80	LIA
64031	22	507	0.4 0.12 0.11 0.05	CE (E80 oxidised) D (E80 reduced) C (E80 reduced) CN (E80 oxidised) E30	LIA
64032	43	425	0.12 0.1	CE (E80 oxidised), C (E80 oxidised) E80 reduced, E30	LIA
64035	6	64		E80, E30	LIA



Context	Count	Weight (g)	EVE	Description	Date
	11 24	49 10		Sample 2, E80 Sample 5, E80	
64042	2	41	0.05	CN (E80 oxidised) E30	LIA
64043	4	9		E80 sand also in fabric	LIA
64045	2	24		E80, E20	LIA
TOTAL	172	1362	1.41		

Table B1.2: Summary of Iron Age and Roman pottery

Description

- B.1.2 The pottery recovered from the evaluation was dated almost exclusively to the late Iron Age. With the exception of groups 6003, 63005, and 64014, all context-groups contained 'Belgic'-type grog-tempered ware (E80; cf. Thompson 1982), which in the region dates to the late 1st century BC to later 1st century AD. The absence from those groups of pottery that must date to the Roman period suggests that deposition was confined to the late Iron Age. Forms included high-shouldered necked jars (CE) in oxidised grog-tempered ware, a storage jar (CN) also in an oxidised fabric, and a medium-mouthed necked jar (CN) in a reduced fabric.
- B.1.3 Smaller quantities of sand-tempered fabrics (E20, E30) were typically found in association with fabric E80. The fabric of sherds from 64006 appeared to include glauconite, which is likely to derive from a band of greensand some 20km to the south of the site (BGS, nd).
- B.1.4 A sand-tempered jar with an out-turned frilly or impressed rim from context 64016 broadly resembles middle Iron Age pottery recovered from the extramural settlement of Roman Alchester (Evans 2001), and shares that date. It is, however, associated with grog-tempered pottery and likely to be residual.
- B.1.5 Roman pottery was confined to a fragment of pink-grogged ware (O81) in context 63005 and sand-tempered oxidised ware (O20) from 60003. The former was produced in the Stowe/Towcester area during the mid and late Roman period (Taylor 2004). The latter is unsourced and undated within the Roman period.
- B.1.6 Two sherds of post-Roman pottery were recovered from context 64014: a jug rim in Brill Boarstall ware, dating to the mid-13th to 15th century, and a base sherd from a 19th-century sugar or mixing bowl in yellow ware.
- B.1.7 The assemblage overall is fragmented, with a mean sherd weight (weight / sherds) of 8g. This, however, masks a wide range, from 0.4g to 23.5g. The 'completeness' value (EVE / number of vessels) is 0.15 EVE or 15%, highlighting that reasonably large proportions of vessels, even if fragmented, are present. The best-preserved vessels were recovered from contexts 64027 and 64031, with 40% of the rims of two vessels surviving. The condition of the assemblage is therefore mixed, pointing to varied histories of deposition.
- B.1.8 Nevertheless, the relatively narrow date range of the assemblage, confined mainly to the late Iron Age, suggests that the pottery derives from the same area of occupation. Given the absence of late Iron Age pottery from the previous phase of evaluation (AMOD15), the focus of Iron Age settlement appears to have been away from the location of the Roman-period activity.



B.2 Ceramic building material

By Cynthia Poole

- B.2.1 A small quantity of ceramic building material amounting to three fragments weighing 62g was recovered from a single context 64014. The assemblage is summarised in Table B2.1. All the pieces were broken and fragmentary and moderately abraded.
- B.2.2 There was a single fragment of probably Roman flat tile made in an orange sandy clay fabric containing red ferruginous and cream clay pellets 1-3mm in size. The form is uncertain, but the thickness in excess of 23mm suggests it is most probably *tegula* or brick.
- B.2.3 The two remaining pieces were flat roof tile of late medieval or early post-medieval date. They were made in an orange sandy clay with fine yellowish cream striations and contained small dark maroon red iron oxide grits up to 4mm. The fabric is similar to Oxford fabric group IV, which is generally thought to originate from the south-east of Oxfordshire. The roof tile measured 12-13mm thick and one had a narrow indented border 7mm wide along the side edge. The roof tile cannot be closely dated, though the general finish and thickness suggests it could be late medieval early post-medieval in date in the region of late 15th-17th century.

Context	Count	Weight (g)	Form	Fabric code	Date
64014	2	31	Roof flat	OX IV	Med/Pmed
64014	1	31	Flat	E	RB
Total	3	62			

Table B2.1 Summary and quantification of ceramic building material



B.3 Iron

By Ian Scott

- B.3.1 Three iron objects were recovered from two contexts in Trenches 63 and 64:
- B.3.2 Context 63005, Possible knife blade fragment, roughly rectangular fragment with triangular cross section. The object is quite dense. L extant: 39mm; W: 26mm.
- B.3.3 Context 64038, Slightly domed hollow disc, possibly a button or the head of a thumbtack. Fe. D: 15mm.
- B.3.4 Context 64038, Sheet metal object(s) Fragments of a sheet metal object. Some larger folded fragments of sheet iron and numerous small fragments of sheet iron originally embedded in a largely clay matrix. Many of the small pieces were slightly curved suggesting that they may derive from bowl-like vessel(s). A number of the larger surviving pieces appeared to comprises folded or crushed sheet iron. No rivets or other fittings were seen, but a small number of pieces revealed possible seams, which rather suggest more modern factory produced objects, rather than hand-made items. There were no features to suggest an early date for the material, but only limited evidence in the form of possibly soldered seams for a later date. Not measured.
- B.3.5 None of the metal objects appear to be very old although these observations are not conclusive. The possible knife blade is dense, suggesting that it may be forged from steel, possibly even drop forged. The small disc although a little corroded looks like it has been machine made. The sight evidence from the sheet metal object suggest that it is modern rather than ancient, machine made rather than hand formed.

B.4 Glass

By Ian Scott

- B.4.1 A single small sherd of vessel glass was recovered from Trench 64:
- B.4.2 Context 64014, Vessel glass. Small slightly curved sherd in a blue green glass with a hint of grey. Undiagnostic to form, but very likely to be 20th-century or later in date. Not measured.

B.5 Stone

By Ruth Shaffery

B.5.1 A total of 23 pieces of stone were recovered during the fieldwork. None of these are worked but 22 are burnt. This includes 4 fragments of limestone from context 64012 (154g) and 18 fragments from context 64032 (1327g).



B.6 Human bone

By Alice Rose

Introduction

B.6.1 A single deposit of cremated human bone was recovered from Trench 64. The deposit (64006) was unurned and was recovered from a shallow circular pit (64005), measuring 0.14m x 0.13m, with a maximum depth of 0.08m. The cremated bone was in a compact dark-grey clayey silt matrix, which also contained ash. The feature is currently assumed to be Iron Age in date although no dating material was present in direct association with the cremation deposit.

Methodology

B.6.2 Excavation and recording of the cremation deposit was carried out in accordance with IfA and BABAO guidelines (Brickley and McKinley 2004). The deposit underwent whole earth recovery and was recovered in three samples: <3>, <4> and <5>. The samples were processed by wet sieving and sorted into fractions (>10mm, 4-10mm, 2-4mm). The 0.5-2mm residues were also retained. The cremated bone was then analysed in order to assess colour, weight and maximum fragment size. Each fraction was examined for identifiable bone elements, the minimum number of individuals (MNI), age, sex and pathology.

Results

- B.6.3 A summary of the osteological data obtained from each sample from 64006 is presented in Table B6.1 and an overall summary of 64006 is presented in Table B6.2.
- B.6.4 The total weight of the sorted cremated bone from all three samples was 42.5g. Of this total, 30.1% (12.8g) was from the >10mm fraction, 43.8% (18.6g) was from the 4-10mm fraction and 26.1% (11.1g) was from the 2-4mm fraction. A total of 28.0g of unsorted 0.5-2mm residue was also present from the three samples. This contained frequent human bone fragments (*c* 30-50% by volume), although the fragments were too small to sort. When analysed by sample, sample <3> had a total weight of 17.1g, sample <4> had a total weight of 8.0g and sample <5> had a total weight of 17.5g.
- B.6.5 The majority of the bone fragments were buff white in colour (between 95% and 99%), with the remaining bone being pale blueish-white.
- B.6.6 The general morphology and texture of the fragments were consistent with human bone. The majority of the identifiable elements were skull fragments, making up 71.9% (12.3g) of sample <3>, 23.8% (1.9g) of sample <4> and 41.7% of sample <5>. Skull fragments included skull vault, possible petrous area, possible frontal foramen cecum area and possible occipital suture area. The only other elements that were identified were vertebra and rib fragments.
- B.6.7 The MNI was estimated to be 1 based on the lack of repeating elements. There were no elements present for the estimation of age or sex. However the general morphology of the bone, especially the thickness of the skull vault fragments, suggest an adult. No pathology was observed.



Sample number	Skeletal Region	>10mm fragments	4-10mm fragments	2-4mm fragments	Colour, MNI, Age, Sex, Pathology
<3>	Skull	6.1g (skull vault fragments, ? petrous)	2.6g (skull vault fragments, ? frontal foramen cecum area)	3.6g (skull vault fragments)	95% buff white in colour, 5% pale blueish-grey. MNI= 1 Age, Sex= ?, but
	Axial	1	0.6g (vertebral body margin, vertebral facet)	/	probably adult No pathology observed.
	Unid Long Bone	1.0g	0.4g	/	
	Unid Other	/	2.6g	0.2g	
	Total Unid	1.0g	3.0g	0.2g	
	TOTAL	7.1g	6.2g	3.8g	
<4>	Skull	0.9g (Skull vault fragments, ? maxilla)	0.9g (skull vault fragments)	0.1g (skull vault fragments)	98% buff white in colour, 2% pale blueish-grey. MNI= 1 Age, Sex= ? but probably adult No pathology observed.
	Axial	1	0.2g (rib shaft fragments, vertebral body end plate)	/	
	Unid Long Bone	1.0g	1.0g	/	
	Unid Other	0.3g	1.7g	1.9g	
	Total Unid	1.3g	2.7g	1.9g	
	TOTAL	2.2g	3.8g	2.0g	
<5>	Skull	2.6g (skull vault fragments inc. possible occipital suture area)	4.5g (skull vault fragments)	0.2g (skull vault fragments)	98% buff white in colour, 2% blueishgrey. MNI= 1 Age, Sex= ? but probably adult
	Unid Long Bone	1	0.2g	1	No pathology observed.
	Unid Other	1.0g	3.9g	5.1g	
	Total Unid	1.0g	4.1g	5.1g	
	TOTAL	3.6g	8.6g	5.3g	

Table B6.1: Summary of osteological data from samples 3-5 from deposit 64006



Context	Skeletal Region	>10mm fragments	4-10mm fragments	2-4mm fragments	Colour, MNI, Age, Sex, Pathology
64006	Skull	9.6g	8.0g	3.9g	98% buff white in
	Axial	/	1.6g	/	colour, 2% blueish-
	Unid Long Bone	2.0g	1.6g	/	grey. MNI= 1
	Unid Other	1.3g	8.2g	7.2g	Age, Sex= ? but probably adult
	Total Unid	3.3g	9.8g	7.2g	No pathology
	TOTAL	12.8g	18.6g	11.1g	observed.

Table B6.2: Overall summary of data of cremation deposit 64006

Discussion

- B.6.8 At 42.5g, the total weight of the cremation deposit is well below the expected range of 1000-2400g (average 1650g) for a full cremated adult (McKinley 2000a, 269). However, the pit which contained 64005 was extremely shallow (maximum depth of 0.08m) and there was considerable evidence of ploughing activity across the site, with ridge and furrow being present across the area where the cremation was recovered. It is likely that the feature has been truncated in antiquity and that the bone recovered does not represent the full amount of bone originally interred. Truncation of cremation features is extremely problematic for interpretation as it is then very difficult to determine whether the deposit originally contained an entire cremation deposit or whether it contained a token deposit or redeposited pyre debris (McKinley 2004a, 10; McKinley 2000b). The predominance of skull fragments in the recovered remains is interesting, and although it should be noted that skull fragments are the most easily recognisable element for cremation analysis, other skeletal elements appeared to be comparatively under represented. This could indicate there may have been some kind of deliberate deposition or zonation to the deposition of the cremated remains. In turn, this may indicate the deposition was less likely to have been pyre debris, which are more likely to be a mix of assorted small bone fragments mixed with other fuel debris.
- B.6.9 The buff white colour of the majority of the bone fragments indicate that they were fully calcined and that the cremation process was efficient, reaching a temperature of at least 600°C (bone (McKinley 2000b, McKinley 2004). The small amount of bone which was pale-blueish grey could indicate small fluctuations in the temperature during cremation.



APPENDIX C. ENVIRONMENTAL REPORTS

C.1 Charred plant remains

By Sharon Cook

Introduction

- C.1.1 Four samples (numbered <2> <5>) were recovered for assessment from two features excavated within Trench 64. Sample <2> (64035) was recovered from a gully dated to the Iron Age. Samples <3>, <4> and <5> (64006) were recovered from a cremation deposit set within a shallow pit.
- C.1.2 Sample <2> was a greyish brown (10YR 5/2) silty clay with infrequent sub-rounded stones. The sample was 17 litres in volume of which 100% was processed.
- C.1.3 Samples <3>, <4> and <5> were all a dark yellowish brown (10YR 4/4) silty clay rich in cremated human bone but otherwise lacking significant inclusions excluding the charred material discussed below. The combined volume of these samples was approximately 4 litres of which 100% was processed.

Methodology

C.1.4 The samples were processed in their entirety by water flotation using a modified Sirafstyle flotation machine. The flot was collected on a 250µm mesh and the heavy residues sieved to 500µm; they were dried in a heated room, after which the residue was sorted by eye for artefacts and ecofactual remains. The flots were scanned using a binocular microscope at approximately x10 magnification. Where possible the charcoal was examined to provide a species identification of the wood types used. 100% of all flots were scanned.

Results

- C.1.5 Sample <2> produced a flot of 25ml, this flot contains large amounts of modern roots with charcoal in good condition of which a small number of potentially identifiable items were present. Seven items in total were examined to provide a provisional identification; five are Pomoideae type (hawthorn/apple/rowan/wild service/whitebeam), one *Prunus* (blackthorn/cherry), and one was indeterminate. Generally this assemblage was characterised by shrubby/small trees.
- C.1.6 Samples <4> and <5> both produced flots of less than 5ml in volume. Charcoal was present in good condition within both samples. However, it was too small to be suitable for species identification. Sample <5> contained some fine modern roots although these were not present within samples <3> and <4>. Sample <3> also produced a flot of less than 5ml, although this did contain some charcoal which was large enough to identify. No other charred plant materials were present within these samples.
- C.1.7 The charcoal from sample <3> was often vitrified making definite identification more difficult. Nine items were examined to provide a provisional identification. One oak (*Quercus*) and five possible oak (cf *Quercus*) were identified, one ring porous type, and two indeterminate. Many of the items had very close together early vessels suggesting slow-grown mature wood. No definite non-oak charcoal was observed.



C.2 Animal bone

By Lena Strid

- C.2.1 A total of 229 animal bone fragments were recovered from Trench 64. No animal bone remains were present or recovered from Trenches 60-63. The animal bone assemblage was entirely derived from features dated to the late Iron Age and possibly extending into the early Roman period (Table C2.1).
- C.2.2 The bone condition was varied, but the bones displayed a high degree of fragmentation. A total of 31 fragments were burnt. Gnaw marks could not be observed (Table C2.2).
- C.2.3 The assemblage contains bones from cattle, sheep/goat and horse, as well as a small number of fragments from large mammals (cattle, horse or deer). The presence of cattle, sheep/goat and horse are common for both Iron Age and Roman assemblages, although due to the small sample size it is not possible to extrapolate on the frequency of the animals and their contribution to the economy and diet. No bones could be aged, although judging by size, the animals would have been sub-adult or adult when they died.

Context	64012	64016	64029	64032	64035	64043	64045	64049	Total
Cattle	6				1	1			8
Sheep/goat					2				2
Horse				1					1
Large mammal		2		4	3				9
Indeterminate	48	4	29	61	60	1	4	2	209
TOTAL	54	6	29	66	66	2	4	2	229
Weight (g)	87	18	31	196	53	8	2	2	397

Table C2.1. Bone assemblage from the Graven Hill (AMOD15) evaluation.

	N	0	1	2	3	4	5	Burnt	Gnawed
64012	54			6	48				
64016	6				6				
64029	29				29				
64032	66			65		1		4	
64035	66	2	12	12	38	2		21	
64043	1	1							
64045	4		4					4	
64049	2		2					2	

Table C2.2. Bone preservation and number of bones with traces of burning and gnawing. 0=good and 5=very poorly-preserved



APPENDIX D. BIBLIOGRAPHY AND REFERENCES

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Appendix E. Summary of Site Details

Site name: Bicester MOD, Graven Hill, Bicester, Oxfordshire

Site code: AMOD 16

Grid reference: Watching Brief centred on SP 5888 2127

Evaluation approximately centred on SP 5885 2084

Type: Watching Brief and Evaluation

Date and duration: Watching Brief 2 days, 24th and 25th February 2016

Evaluation 2 weeks between 6-17th June 2016

Summary of results:

Oxford Archaeology (OA) was commissioned by Graven Hill Village Development Company Ltd to undertake a watching brief and evaluation on separate occasions in 2016 at Graven Hill, Bicester, Oxfordshire. The watching brief was undertaken during the removal of the ground slab following the demolition of Rodney House during February. Subsequently, five additional targeted evaluation trenches were excavated in June to supplement the results of a primary evaluation stage undertaken by OA in September and November 2015.

No archaeological horizons were revealed during the removal of the ground slab with the demolition disturbance being limited to the underlying hardcore rubble layer.

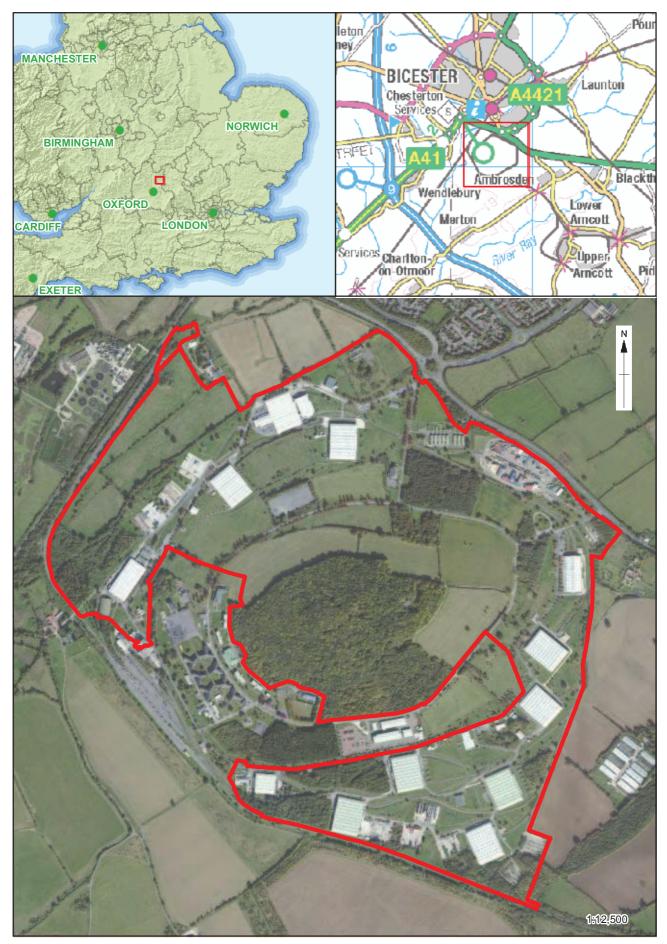
From the evaluation phase, Trenches 60 and 61 produced inconclusive evidence for the extent of the archaeological features previously recorded in Trenches 32 and 35 during the 2015 investigation. Three shallow linear features were recorded in Trench 60, one of which produced a single sherd of Roman pottery. However, the remains did not provide more conclusive evidence for the extent or character of activity within this field.

The evaluation confirmed the presence of remains of Roman Akeman Street within Trenches 62 and 63. The sequence recorded within these was comparable to those of Trenches 49, 58 and 59 from the 2015 evaluation with a surface constructed of limestone pieces set within a shallow terrace into the slope of Graven Hill. A single sherd of Roman pottery was recovered from the surface in Trench 63.

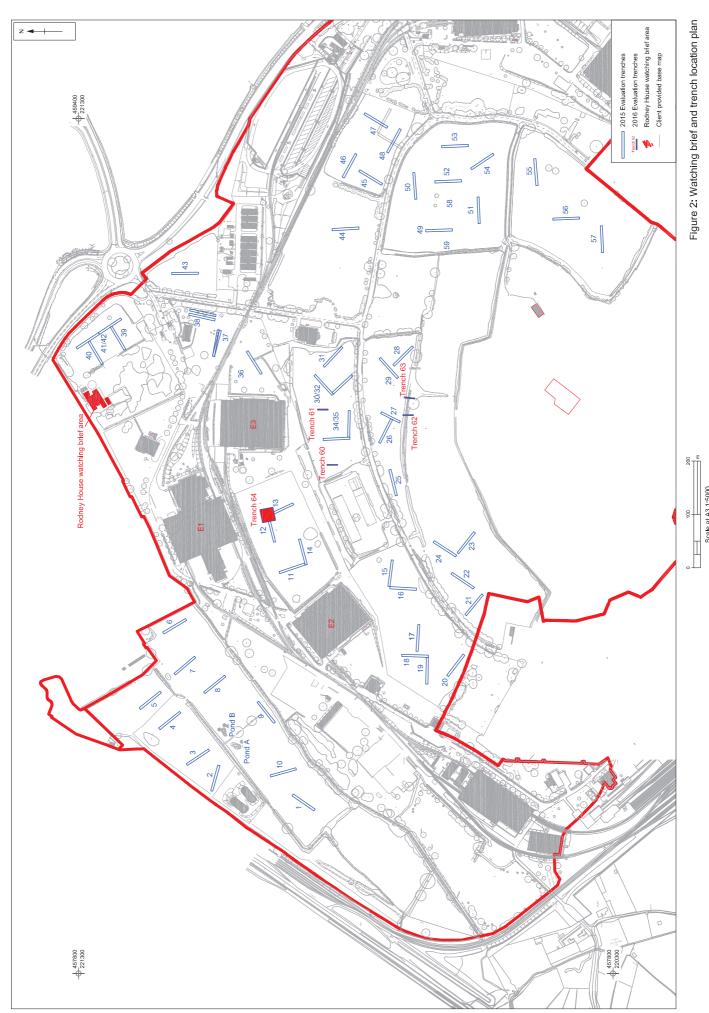
Trench 64 was targeted on the shallow linear features of probable Iron Age date recorded within Trenches 12 and 13 from the 2015 evaluation. Excavation of an area measuring 25m by 25m revealed a more extensive arrangement of shallow curvilinear ditches and larger linear ditches dating from the late Iron Age.

Location of archive:

The archive is currently held at Oxford Archaeology's Office at Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the Oxfordshire County Museum in due course under the accession number OXCMS 2015.173

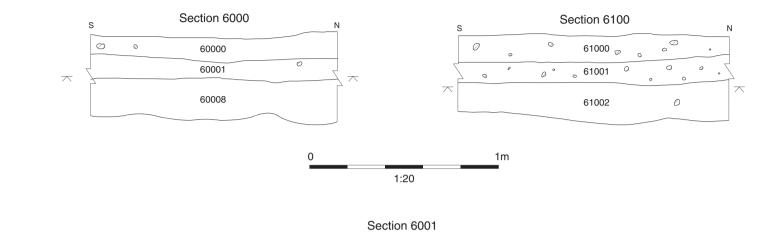






Scale at A4 1:1000

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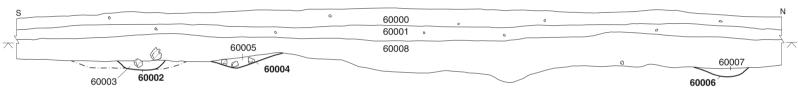




Figure 5: Trenches 60 and 61, sections

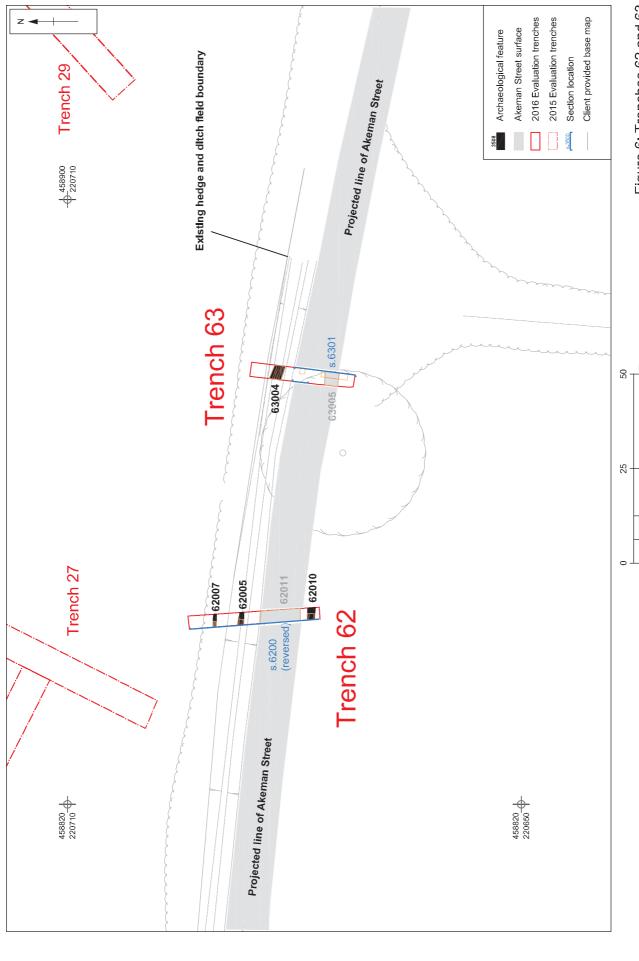
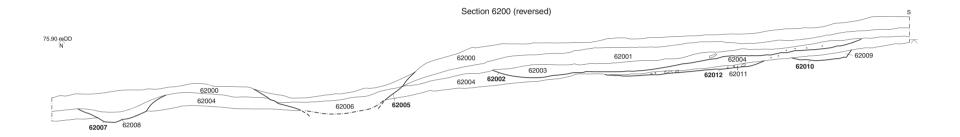
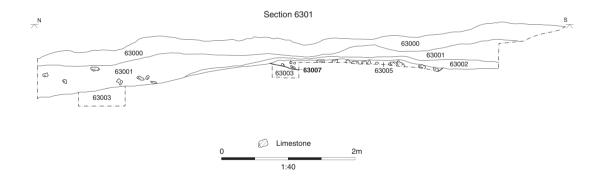


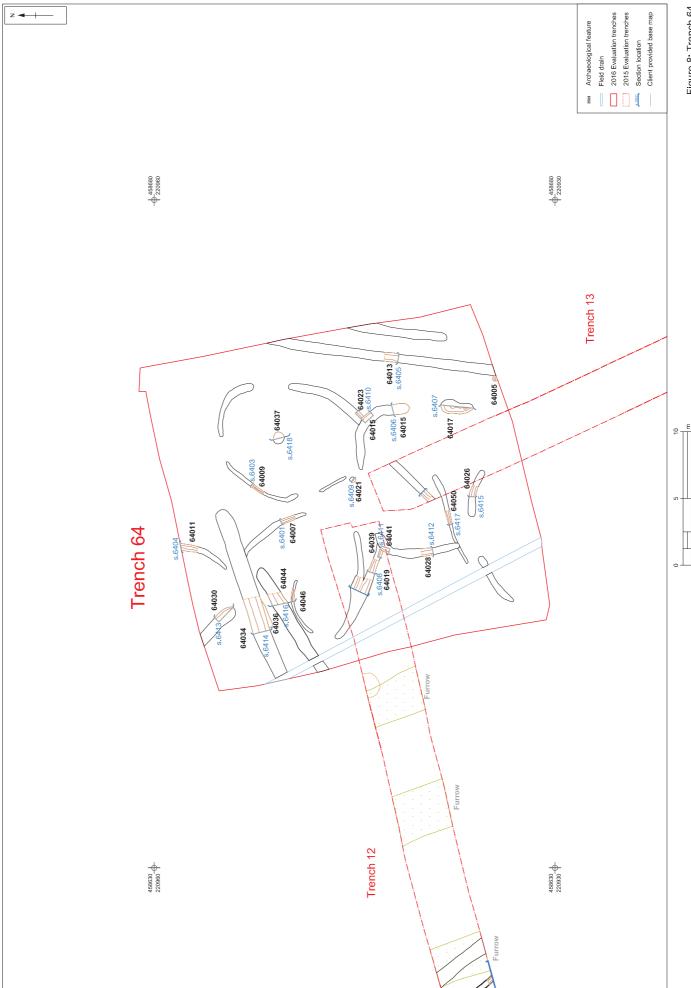
Figure 6: Trenches 62 and 63

Scale at A4 1:500





Scale at A3 1.200



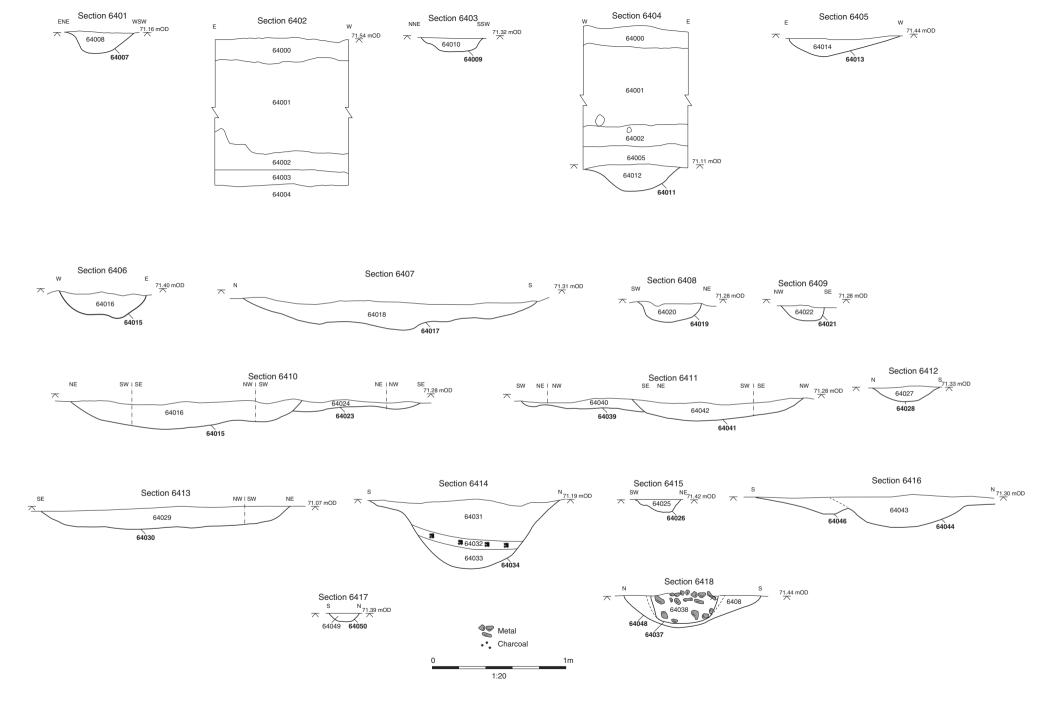


Figure 9: Trench 64, sections



Plate 1: Rodney House concrete slab removal



Plate 2: Rodney House concrete slab removal showing underlying hard core rubble and the limitation of plant to existing hard standing areas. View north



Plate 3: Rodney House view SSW showing exposed hard core rubble layers



Plate 4: Foundation pad removed showing the exposed level of natural clay and the hard core rubble laid directly over this



Plate 5: View south along Trench 62 showing the exposed limestone road surface (62011)in the background with the buried topsoil and turf horizon 62003 visible in the section



Plate 6: Trench 64 section showing the thickness of the redeposited natural clay



Plate 7: Trench 64 general view SE following rain



Plate 8: Trench 64 Ditch 64015 showing a typical profile and fill



Plate 9: Trench 64 cremation deposit and pit 6405 prior to excavation



Plate 10: Trench 64 Ditch 64034



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