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Archaeological Excavation Report

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Radstone Technology Site,

Towcester, Northamptonshire

NGR SP 691 485

ARCHAEOLOGICAL EXCAVATION REPORT

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SUMMARY

Oxford Archaeology carried out an archaeological excavation on land at the Radstone Technology Site, Towcester, Northamptonshire (NGR: SP 691 485). The work was commissioned by David Wilson Homes in advance of development for housing. The excavation revealed a mid- late Roman inhumation cemetery lying to the west of the Alchester Road on the south-western periphery of the Roman town. The cemetery, consisting of 28 graves, was situated in a subrectangular plot defined by ditches originating in the second century. The area had been heavily truncated by groundworks for a car park in 1968, when two skeletons were discovered. As a result many of the skeletons exposed in the present excavations were damaged and incomplete. Twenty-six adults were identified of which 12 were male and 2 were female. Two sub-adults, both probably adolescents, could not be sexed and whilst the grave goods of jet bead necklace and bronze bracelets accompanying one of them may suggest the individual was probably female, similar items have been found elsewhere on occasion to be associated with young men. Two decapitation burials and six prone burials were found and possibly eight individuals had been buried within coffins. Grave goods or associated artefacts were found in six graves and though dating evidence was limited, this suggests burials may have commenced as early as the mid-2nd century and continued through to the 4th century AD.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 Between the 3rd – 24th August 2004, Oxford Archaeology (OA) carried out an excavation on land at the Radstone Technology Site, Towcester, Northamptonshire (NGR: SP 691 485) immediately following on from an evaluation (Sims and Bashford 2004) in respect of a planning application for residential and B1 office development (Planning Application No. S/2003/0800/PO) submitted by David Wilson Homes. The site of the excavation was focused on the area of evaluation trench 1 (NGR: SP 6904 4854) and covered an area of 1350 sq m (Fig.1).

1.1.2 A brief was set by Northamptonshire County Council, Historic Environment Team and a Written Scheme of Investigation (WSI) was produced by John Samuels Archaeological Consultants (JSAC 2004), providing the framework for OA to undertake the evaluation.

1.1.3 The evaluation was divided into two areas Blocks A and B located to the west and east of Water Lane respectively (Fig.2). A total of 33 geotechnical test pits were monitored and eight evaluation trenches were excavated: trenches 1, 2, 7, 8 and 9 in Block A and trenches 4, 5 and 6 in Block B. As a result of burials being found in trench 1 the trench was extended to find their extent. The WSI was subsequently amended as a result of the human remains found in Block A and the area excavation, which is the subject of this report, followed on immediately from the evaluation..

1.2 Geology and topography

1.2.1 The excavation site lies to the west of Water Lane within the northern sector of Block A following the discovery of burials within evaluation trench 1 (Sims and Bashford 2004) (Fig. 2). The overall development area covered approximately 2 hectares and is bounded to the south-west, north-west and north-east by residential and commercial properties and to the south-east by the Silverstone Brook, a tributary of the River Tove. The site lies between 89 and 91m aOD. The underlying geology is upper Lias clays though to the south of the excavation site, this is overlain by 1st river terrace gravels.

1.3 Archaeological and historical background

1.3.1 The archaeological background of the development area was produced by JSAC in their specification (JSAC 2004). The following is largely reproduced from the specification.

1.3.2 Probable Pleistocene deposits were exposed in 1997, during the evaluation in advance of the construction of Safeways, to the south of Block B. Stray prehistoric finds have been recovered in Park Street, Bury Mount and Buckingham Way. The earliest evidence for prehistoric occupation in Towcester is the Iron Age cemetery, found close to the Bury Mount, *c* 300m north-east of the study site.

1.3.3 In 1732 Horsley recognised Towcester as the Roman town of *Lactodorum,* first mentioned in the 5th century AD Antonine Itinerary and Ravenna List (Rivet and Smith 1979, 382). The discovery of early finds from the town suggests that it may have had a fort. The town is situated on the River Tove at an important junction of Watling Street and the road from Winchester to Lincoln. The accepted alignment of the Roman Alchester road crosses the south-eastern corner of Block A and extends slightly off the centre of Block B (Figs 2 and 5). The route of the Alchester Road has been established to the south of its junction with Watling Street (Lambrick 1980), evidence of roadside settlement was also revealed. This settlement appears to have continued along the road, outside the Roman defences, as evidence for settlement running along both sides of the Alchester Road to the south-west of the town has also been revealed (Brown and Woodfield 1983). As there is evidence of roadside settlement to the north and south of the site, it was considered possible that settlement evidence may be encountered in one or more of the trenches, particularly those in Block B.

1.3.4 A substantial linear feature exposed in an evaluation at 17 Richmond Road, to the north-east of Block B may be the Roman defensive town ditch. Late 1st and early 2nd century AD buildings have been found *c* 200 m north of the study site and a possible temple is recorded *c* 75 m south of Block A. Evaluation and excavation of the Safeway site revealed a range of suburban Roman features and deposits. A cemetery was also exposed and is known to extend westwards towards Water Lane. The evidence for burials both within the development area and nearby and for Roman

ribbon development along the Alchester road suggested the potential was high for the survival of archaeological deposits within the site.

1.3.5 The Anglo-Saxon Chronicle (c. 925 AD) mentions the *'burh'* at Towcester. The available evidence suggests that the re-establishment of occupation and an estate centre at Towcester may have taken place under Edward the Elder in response to Danish incursions in 917. Boundary ditches in the Allen's Yard area of the town provide some evidence for late Saxon activity in the town.

1.3.6 A motte-and-bailey castle was constructed in the south-eastern part of the defended area of Towcester in the late 11th or earlier 12th century AD. The core of the medieval town appears to have developed around Bury Mount and St Lawrence church on the eastern side of Watling Street, *c* 400 m north-east of the development area. The town lay at the important road junction, where the Oxford to Northampton road crossed Watling Street. The town's market is thought to have been established shortly after 1086 (it is first recorded in 1220) and the town grew and survived the 14th century recession to become a successful small town in the post-medieval period.

1.3.7 During the Civil War, Towcester was refortified. The evaluation at 17 Richmond Road discovered a substantial post-medieval ditch, which was interpreted as a later re-cutting of the original Roman defences.

1.3.8 Towcester benefited from the expansion of travel in the post-medieval period and flourished in the 18th and 19th centuries as a staging post on the coaching route from London to Holyhead.

1.3.9 Two undated burials were found within the northern part of Block A during the construction of a car park in 1968 and can now be attributed to the remains of a 3rd to 4th century cemetery.

1.4 Summary of Evaluation Results

1.4.1 In July and October 2004 Oxford Archaeology (OA) carried out a two phased field evaluation at the Radstone Technology Site, Water Lane, Towcester, Northamptonshire (NGR: SP 691 485) on behalf of John Samuels Archaeological Consultants. The site was divided into two areas by Water Lane; Block A to the west and Block B to the east.

1.4.2 Block B was situated over the projected course of the Roman road from Towcester to Alchester and revealed extensive evidence of 1st-2nd century boundary ditches, pits and a limestone wall footing, although there was no conclusive evidence of the Alchester road. Evidence of 3rd-4th century ditches and gullies was also recovered.

1.4.3 Evaluation to the north of Block A revealed evidence of 1st-2nd century plot boundaries and gullies and a possible limestone wall footing. Three 3rd-4th century inhumations were also excavated and the western extent of the burials appeared to be

defined by a re-cut of a section of one of the earlier plot boundaries. As a result of the preliminary results of the evaluation in this area, the excavation that is the subject of this report was undertaken.

1.4.4 The trenches excavated to the south of Block A were subject to flooding and features observed were therefore not fully characterised. However, a sequence of alluvial deposits overlying the natural geology was recorded, together with a number of features of Roman date.

1.5 Acknowledgements

1.5.1 The project was funded by David Wilson Homes and Simon Mortimer of JSAC acted as consultant for the project on behalf of the client. Myk Flitcroft, Northamptonshire County Archaeological Officer monitored the project.

1.5.2 We would like to thank Graham Churchill Plant Ltd of Towcester, who supplied the plant, for their excellent work in clearing the modern deposits.

1.5.3 The field work was managed by Andy Holmes and supervised by Robin Bashford and Mike Sims, who were assisted in the excavation by Will Bedford, Lucy Lawrence (née Norman), Hefyn Meara, Becky Peacock, Jane Phimster, Diane Swales (née Mahoney) and Chris Swales.

1.5.4 We are very grateful to Paul Booth for reading and commenting on the text, but all errors are entirely the responsibility of the authors.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

2.1.1 Northamptonshire County Council Historic Environment Team provided a list of specific detailed research aims for the evaluation which may be found in the evaluation report (Sims and Bashford 2004).

2.1.2 General aims included:

- To identify and record the presence/absence, extent, condition, quality and date of archaeological remains in the areas affected by the development.
- To make available the results of the archaeological investigation.

2.1.3 Site specific aims for the excavation included

- To establish the degree to which previous development of the site has damaged or removed earlier archaeological remains, and the degree to which buried remains survive within the footprints of the buildings in Block A.
- To establish the depth, nature, state of preservation of burials, and the extent of the cemetery.

- To interpret the remains within the context of the archaeology of Towcester.

2.2 Methodology

2.2.1 The 20th century and underlying deposits were mechanically excavated under archaeological supervision to the first archaeological horizon or the surface of the underlying natural geology composed of clay or gravels, depending upon which was encountered first. During machine excavation care was taken to ensure any archaeological deposits above the natural geology could be identified. In the event none were encountered as the site had been heavily truncated by construction work for a carpark in 1968 and machine excavation proceeded to the surface of the underlying geological deposits.

2.2.2 Burials were found immediately below the tarmac and make-up deposits for the car park often disturbed by the earlier groundworks and truncated by 20th century service trenches or post-medieval field drains. All graves were fully excavated by hand and the grave cuts planned where visible. The burials were photographed for geo-rectification and small finds were located on the relevant plan. Other features were sectioned and the sections drawn.

2.2.3 Very few deposits were identified as suitable for sampling for carbonised plant remains. No waterlogged deposits were present. A number of samples for sieving were taken from selected burials.

2.2.4 Archaeological excavation was carried out according to OA's standard fieldwork methodologies outlined in the OAU Fieldwork Manual (ed. D Wilkinson, 1992). Environmental samples were taken in accordance with OA Environmental Guidelines (OA 2012). A more detailed exposition of the methodology may be found in the evaluation report (Sims and Bashford 2004).

3 EXCAVATION RESULTS

3.1.1 The excavation revealed a late Roman cemetery situated within a trapezoidal area bounded by four ditches (Fig. 3). These did not appear to form a deliberately defined ditched enclosure of a single phase of construction, though it is possible that the latest phase was recut as a boundary for the cemetery. Apart from two intercutting pits at the north end of the site and another shallow pit or hollow at the southern end, no other features were encountered. The heavy truncation across the whole area may have removed all evidence of shallower features such as postholes and gullies and possibly some graves.

3.2 The boundary ditches

3.2.1 The western ditch (1099, 1100) appears to have formed a major land division throughout much, if not all, of the Roman period. It was aligned NNW-SSE and extended beyond the limits of excavation to north and south, being exposed for a

distance of 45m. It is possible the ditches seen in evaluation trenches 2 and 9 are the continuation of this boundary. This ditch converges with the projected line of the Roman road to Alchester suggesting this ditch may have been laid out prior to the construction of the road in relation to an earlier pattern of land division.

3.2.2 Two phases were identified in excavation. In its earliest form (1099) dating to the 1st-2nd century the ditch was V-shaped in profile with steeply sloping sides splaying out to the top and a flat or concave base (Fig. 4: section 1001). It measured 1.0m in width splaying out to 3.0m where eroded at the top and 0.75-0.9m in depth. The ditch was filled with a primary silting lens of silty clay or silty sand on the base overlain by brown or greyish brown clay sediment representing erosion from the ditch sides or adjacent subsoil. Towards the north end the fill was more reddish brown in colour and also contained sparse small stones and charcoal flecks. The northernmost intervention contained frequent pottery in its upper fill, but the density of pottery rapidly decreased southwards along the ditch.

3.2.3 The later phase (1100) representing a major recutting of the ditch during the 3rd century was of similar form with a V-shaped profile with sloping sides and rounded or flat base (Fig. 4: section 1001). It measured 1.25-1.54m wide and *c* 0.6m deep. The fills showed little variation being composed predominantly of clay with occasional charcoal and sparse stone noted in the more northerly intervention. Artefacts were sparse and decreased in density southwards in common with the earlier ditch.

3.2.4 At the southern end of ditch 1099/1100 a recut ditch (1143/1147) (Fig. 4: section 1007, Plate 2) ran from it in an ESE direction. The relationship of the two ditches could not be determined, but it is possible they are contemporary. This southern boundary ditch had at least two phases and a narrow slot in the base of 1147 may represent the truncated base of a further recut. The similarity of fill in the ditches precluded their phasing being determined with certainty though it was thought that 1143 possibly cut 1147.

3.2.5 The earlier ditch 1147 had a wide flat base and a steep near vertical side surviving on the north. It measured *c*.1.2m wide and 0.6m deep. It had a primary fill of orange brown sandy clay (1148) overlain by a brownish grey clayey silt, both representing naturally accumulated sediment derived from the adjacent natural or contemporary soils. The uppermost layer (1149) produced a slightly greater density of pottery and animal bone that other fills in this ditch and 1143. The pottery from both layers was of 2nd century date.

3.2.6 The later ditch 1143 had a U-shaped profile splaying out at the top. It measured *c* 1.0m wide and 0.9m deep. It had a primary natural deposit of brown silty sand (1144) washed into the base overlain by brownish grey clayey silt (1145, 1146) with some sand in the lower horizon. The two lower fills produced a small quantity of pottery and animal bone. The lowest fill contained pottery of early 2nd century date, whilst that in the overlying layer 1145 dated to the mid-3rd century or later.

3.2.7 On the north side of the excavation a single phase ditch (1162) was exposed running east from ditch 1099/1100 on a WSW – ENE alignment (Fig. 4: section 1002). It had been cut by ditch 1099, though the relationship was not absolutely clear cut. The ditch measured 1.4-1.6m wide, 0.23-0.45m deep and was exposed for a length of 18m continuing eastwards beyond the limit of excavation. The ditch had a flat base and sloping sides and was filled with layers of light grey or brown clay containing a scatter of stone and pebbles in variable density and occasional flecks of charcoal. The ditch produced modest quantities of pottery and animal bone with the greatest density occurring in the more easterly intervention (1069). The pottery predominantly dated to the mid-late 2nd century, but some 4th century pottery was recovered from its upper fill.

3.2.8 On the east side of the site was a shallow ditch or gully 1050 of a single phase aligned north-south (Fig. 4: section 1000). It measured 0.75-0.8m wide but only 0.14m deep and had been exposed for a length of 18m continuing both north and south beyond the excavated area. It had a concave flattish base and sloping sides and was filled with orange or greyish brown clay containing occasional stones. A small quantity of animal bone and a single sherd of Dressel 20 amphora was found in the more southerly intervention. The amphora has a broad date range of 1st to 3rd century suggesting the feature was broadly contemporary with other features.

3.2.9 A small number of pits were the only features identified and excavated in addition to the burials and ditches. One pit (1140) (Fig. 4: section 1007) was partly excavated south of ditches 1143 and 1147, cutting ditch 1143. It produced a single sherd of 2nd-century pottery, an indeterminate tile fragment, a stone palette and small quantity of animal bone in its lower fill (1142).

3.2.10 Two intercutting pits, 1070 and 1073 (Fig. 4: section 1003) were found to the north of ditch 1162. The earlier pit 1073 measured 1.2m in diameter and 0.8m deep and had a flat base and sloping sides. It contained a primary silt of brownish grey silty clay (1074) overlain by orange brown slightly sandy clay (1075) and a thin brownish grey clayey silt (1076) across the top. The pit contained a modest quantity of finds mainly concentrated in the top layer, which included pottery, a little animal bone, an iron nail and a stone roof slab with an arc of burning. The pottery dated from late 1st to late 2nd century and included a stamped sherd of samian ware.

3.2.11 The later pit 1070 was subcircular with a rounded bowl-shaped form and measured 2.4m diameter by 0.52m deep. Across the base was a thin accumulation of greyish brown silty clay (1071) overlain by a thick layer of grey clayey silt with occasional gravel (1072), similar in character to the surrounding natural. The pit contained frequent pottery and animal bone, together with an iron nail, a copper alloy hair pin (Plate 12: Cat No. 9) and a glass bead. The pottery dated to the mid-late 2nd century and included a notable concentration of beakers.

3.3 **The late Roman cemetery**

3.3.1 The burials were confined to an area of 40 x 10m forming a ragged line running from SW to NE (Fig. 3). All the burials are heavily truncated and it is known that two were found during the construction of the car park in 1968 suggesting that the surviving burials represent only a proportion of the original cemetery. A selection of the burials is illustrated in Plates 3-11 showing the range of inhumations and their level of survival. The majority of the burials lay within the area bounded by the four ditches described above, but one of the latest graves (1001) occurred to the north of ditch 1162. The photographs of this grave (Plate 3) show a dark halo of soil around the west end of the grave suggesting that it may have cut through an earlier pit and that the cemetery was starting to impinge on the periphery of an occupation area.

3.3.2 The graves at the southern end of the cemetery had a more orderly arrangement in short lines or rows either aligned with (NNW-SSE) or at right angles (WSW-ENE) to the ditch 1099/1100. Beyond this group of eleven burials to north and east the graves were more dispersed and layout less coherent. Most of these burials were aligned roughly NNW-SSE to north-south with only a small number WSW-ENE, mainly close to and roughly aligned with ditch 1162.

3.3.3 One of the graves (1053) contained burnt material in the backfill, which was interpreted on site as a disturbed cremation burial, which had been backfilled over the head and shoulders of the body. However subsequent analysis of the sample produced no evidence of burnt bone, but the higher incidence of charcoal together with pottery of late 1st – 2nd century date may indicate that an earlier isolated hearth or burnt feature was disturbed by the grave.

3.3.4 Artefacts were found in nineteen graves but only twelve graves contained dateable material. Pottery was found in ten graves, but only two or possibly three of these represent actual grave goods. Other finds included nails indicative of coffins and grave goods of copper alloy and jet occurred in three (1011, 1089, 1154) (Plates 6, 11, 12 and 13).

4 THE BURIALS

4.1 Burial ground population

4.1.1 Twenty-eight skeletons, all inhumation burials, were recovered from the Radstone Technology site. Three skeletons (100, 101 and 121) were recovered during the archaeological evaluation (13th -30th July) and a further 25 were recovered during the subsequent excavation (3rd-24th August).

4.1.2 The skeletons were interred in individual earth-cut graves, with at least four, possibly seven, having been buried within coffins. The adults within the skeletal assemblage comprised twelve males, two females and twelve individuals of undetermined sex. Two subadults, for whom sex was not estimated, were also present within the assemblage.

4.2 Burial practices

Body position, orientation and decapitation

4.2.1 Burial position of the body could be determined for 25 of the 28 skeletons based on their *in situ* location within the graves. Seventeen (68%, 17/25) were extended and supine (lying on their backs) and six were extended and prone (24%, 6/25), or buried on their fronts. A further two may have been buried on their sides (8%, 2/25), although inadequate preservation of these remains means that this observation is not conclusive. Of the seventeen supine burials, ten had the hands placed over the pelvis (58.8%, 10/17), three had one arm straight and another crossed over the body (17.6%, 3/17) and one had both arms placed across the chest (5.9%, 1/17). The position of the hands/arms could not be ascertained for three individuals for whom this information had not survived.

Table 1: Body position and orientation

Orientation group	Orientation	Total	Supine	Prone	?On side	Unknown
north-south	NNW-SSE	8	4	1	1	2
	north-south	5	1	3		1
	S-N	2	2			
NW-SE	NW-SE	5	2	2	1	
W-E	WNW-ESE	1	1			
	W-E	1	1			
	east-west	2	2			
	ENE-WSW	2	2			
	WSW-ENE	2	2			
		28	17	6	2	3

4.2.2 The majority of burials (53.5%, 15/28) were buried along a broad north-south orientation, but eight (28.5%, 8/28) were buried on a broadly east-west orientation, and five on a NW-SE orientation (17.85%, 5/28) (see Table 1). Both decapitation burials were aligned south-north.

4.2.3 The direction that the heads were facing was only recorded for three of the supine burials, primarily due to extreme fragmentation or complete truncation of the skulls, by modern drainage courses and the previous car park construction. The skull of Skeleton 1014 (orientated east-west) was facing forward, that of Skeleton 1055 (Plate 8) (orientated east-west) was facing to the south, and Skeleton 1155 (orientated north-south) had the head turned to the west. A large block of stone lay to the side of the skull of Skeleton 1121 (Plate 9) and had possibly used to prop up the head or as a 'pillow stone'. Of the six prone burials, the direction that the head was facing could only be established for one skeleton (1009), which was face down. The skulls of the other five prone burials were either not present due to truncation, or were too fragmentary to determine their facing direction. The two skeletons that had probably been buried on their side (1028 and 1121), were both orientated north-south and facing east.

4.2.4 Two skeletons may have been decapitated, as indicated by the location of their skulls. Skeleton 1031, a prime adult (25-35 years) female, had had her head placed over her feet. It was lying on its left side, looking south. Skeleton 1047, a subadult (12-17

years), had the head placed face downwards in the grave, to the right of the right knee (Plate 7). There was, however, no osteological evidence for decapitation in either of these individuals, in the form of cut-marks on the cervical vertebrae, base of skull mandible, or ribs (Roberts and Cox 2003, 153).

Coffins

4.2.5 A total of 45 iron nails were recovered from eight graves (associated with Skeletons 100, 1002, 1088, 1114, 1121, 1126, 1134, and 1155), in addition to two iron fittings - a possible handle attachment and an L-shaped slide key - within one of these graves (Skeleton 1121) (Table 10). Two of the nails from grave 1122 (skeleton 1121) had mineralised wood attached. The presence of these iron remains indicates that at least four and possibly eight of the individuals were buried within coffins.

4.2.6 There did not appear to be any preference for a particular burial position for individuals buried within coffins, as the positions of the skeletons in graves with evidence for coffins included supine (Skeletons 1002, 1088, 1114, 1134 and 1155), prone (Skeleton 1121) and lying on their side (Skeleton 1121). One female (Skeleton 1155) and two males (Skeletons 1002 and 1114) were buried within coffins, the rest were of indeterminate sex, and the ages of those buried in coffins ranged from young adult (18-25 years) to mature adult (35-45 years).

Grave goods

4.2.7 Grave goods were recovered from within five of the 28 burials (Table 2). Grave goods were recovered from both a subadult and adult burials, and were associated with both males and females. These included three ceramic vessels, personal jewellery worn by the deceased (Plate 6), a copper alloy spoon (Plate 11) and a number of small tacks which may indicate the presence of a wooden or other organic item.

Table 2: Distribution of grave goods

Skeleton	Sex	Age (years)	Grave goods recovered
121	Undetermined	18-25	Pottery vessel placed beside head to SW
1009	Undetermined	12-17	2 bracelets (worn by the individual), bead necklace (worn by the individual), one finger ring and one finger key ring (1 worn by the individual, the other possibly held)
1014	Male?	25-35	1 hobnail under right ear
1022	Male	35-45	Pottery vessel above (to the north) of the skull
1055	Undetermined	45+	Pottery vessel by left leg
1155	Female	25-35	5 small tacks by right hand, 1 small tack from left hand, copper alloy spoon near right elbow

Male? = probable male; Undetermined = sex could not be estimated

5 HUMAN SKELETAL REMAINS: INTRODUCTION AND METHODOLOGY

5.1 Introduction

5.1.1 The skeletal assemblage comprised twelve males, two females and twelve of undetermined sex as well as two subadults (both 12-17 years) for which sex was not estimated. Adults ranged in age from young adult (18-25 years) to older adult (45+ years).

5.1.2 Standard anthropological and palaeopathological examination was undertaken to evaluate the mortality and morbidity of the population with the following objectives:

- To reconstruct the demographic and physical profile of the sample by analysing biological indicators of sex, age and stature, and skeletal anomalies.
- To explore the range and extent of pathological conditions in the sample.
- To compare these parameters with those estimated for the skeletal remains of other populations that are similar in date and type.

5.2 Methodology

5.2.1 Standard anthropological and palaeopathological examination was undertaken in accordance with published guidelines (Brickley and McKinley 2004). Each skeleton was laid out individually in anatomical position and an inventory was completed of all of the elements that had survived. Completeness was estimated as a percentage of 100. Condition was scored as excellent, good, poor or destroyed, depending on the level of fragmentation and surface preservation of the bones. It was also graded in accordance with the criteria set out by McKinley (2004).

5.2.2 The biological sex of the skeletons was estimated by employing characteristics of the skull and pelvis (Buikstra and Ubelaker 1994), as well as metrical data (Giles 1970; Bass 1995). Ages were estimated by employing a combination of methods, relating to the morphology of the auricular surface (Lovejoy *et al*. 1985), cranial suture closure (Meindl and Lovejoy 1985) and epiphyseal fusion (Scheuer and Black 2000), as well as dental development (ibid.) and dental attrition (Miles 1962).

5.2.3 Adult stature is calculated by taking the maximum length of any available complete long bone and applying it to the appropriate regression formula as set out by Trotter and Gleser (1952; 1958, cited in Brothwell 1981, 101) and revised by Trotter (1970). The overall fragmentary nature of the assemblage precluded the estimation of stature for all but one skeleton (Skeleton 1080). The right femur was employed but it should be noted that although complete, it was broken into three pieces. However, the breaks were clean and could be re-united for measurement.

5.2.4 Non-metrical traits - minor anomalies of skeletal anatomy that may be genetically or environmentally induced (Mays 1998) - were scored as present or absent, and any pathology, abnormalities of bone shape and surface texture were fully described and recorded, and differential diagnoses explored, with reference to standard texts (for example, Aufderheide and Rodriguez-Martin 1998; Ortner and Putschar 1985).

6 HUMAN SKELETAL REMAINS: RESULTS

6.1 Condition and completeness

6.1.1 None of the skeletons had survived completely and all were very fragmentary, primarily as a result of disturbance and truncation by modern drainage cuts and the building of the overlying car park. The majority of skeletons were between 50% and 75% complete (Table 3), and most were in a poor condition. No skeletons were recorded as being in an excellent condition (Table 4). Around 64% of the skeletons were assigned a score of 4 for their condition (Table 5), as defined by McKinley (2004). This means that bone surfaces were affected by erosive action, but their general profiles were maintained and the depth of modifications were not uniform across whole surfaces (McKinley 2004, 16).

Table 3: Completeness of the skeletons

Completeness (%)	**Number of individuals**
0-25	5
>25-50	6
>50-75	10
75-100	7

Table 4: Condition of the skeletons

Preservation	**Number of individuals**
Destroyed	3
Poor	14
Good	11
Excellent	0

Table 5: Condition scores after McKinley (2004)

Grade	**Number of individuals**
0 (no erosion)	0
1	0
2	2
3	8
4	18
5	0
5+ (extensive erosion)	0

6.2 **Biological age and sex**

6.2.1 The assemblage comprised 26 adults and two subadults. Of the adults, twelve were male, two were female and for the other twelve, sex could not be estimated owing to missing elements or ambiguous morphological traits. Eight skeletons could not be aged more precisely than adult. This is not surprising given the fragmentary nature and frequent poor preservation of the remains. Of the twenty individuals who could be more precisely aged, most were assigned to the young or prime adult age categories (see Table 6). The oldest individual was of undetermined sex, and was

over the age of 45 years. Both subadults were estimated to have been within the adolescent age bracket (12-17 years) when they died.

Table 6: Age and sex distribution of the adults within the assemblage

Sex	**Age Category**				
	18-25 yrs (young adult)	**25-35 yrs (prime adult)**	**35-45 yrs (mature adult)**	**45+ yrs (older adult)**	**18+ (adult)**
Male	3		2		1
Male?	2	1	1		2
Male??					
Female		1			
Female?		1			
Female??					
Undetermined	3	3		1	5

Key: Male? = probable male; Male?? = possible male; Female? = probable female; Female?? = possible female; Undetermined = sex not estimated

6.3 Stature

6.3.1 It was possible to estimate the living stature of only one of the skeletons (Skeleton 1080), a young adult male. The femur is considered to be the most accurate long bone for stature estimation and it was the right femur, the only available long bone, that was employed in the estimation. The stature estimated was 1.69m (5 ft. 6½ in.), and indeed, the mean stature calculated for Romano-British males was 1.69m (Roberts and Cox 2003, 396), therefore this particular individual was of average height for the period.

6.4 Non-metric traits

6.4.1 Non-metric traits are minor anomalies in the morphology of the skeleton and are of no pathological significance. They may be present as localised deficiencies of bone (for example, as extra blood vessel opening or foramen), or as extra bone (for example, as wormian bones in the cranial sutures). Non-metric traits have been used to indicate genetic relationships between individuals, however, their value has been questioned as many traits may be environmentally produced. Gruneberg (cited in Tyrell 2000, 290) postulates that the expression of a genetically inherent trait requires certain environmental factors to coalesce and overcome a certain threshold before the trait may be expressed. These factors do cast doubt on the value of non-metric traits as indicators of familial relationships, however, Sjovold's 1984 study of a European post-medieval sample with known familial relationships indicated that overall, cranial non-metric traits are more inheritable than post-cranial traits (cited in Start and Kirk 1998, 171).

6.4.2 In the present sample, six cranial and ten post-cranial traits were observed (see Table 7). The most frequent non-metric trait observed was the supra-orbital notch (100 %, 5/5), but it is also worth noting that the double facet on the atlas was also a fairly common trait (71.4 %, 5/7). Non-metric traits found on facets and joint surfaces are,

however, thought to be highly susceptible to environmental influence (White 1991, 334).

Table 7: Frequency of non-metric traits

Non-metric trait	**Number observed**		**Number of elements available for observation**	
	L (%)	**R (%)**	**L**	**R**
Zygomatic facial foramina	2 (50)	1 (33.3)	4	3
Supra-orbital notch	5 (100)	5 (100)	5	5
Parietal foramen	1 (100)	2 (100)	1	2
Mandibular torus	3 (60)	2 (50)	5	4
Mastoid foramen	0 (0)	1 (100)	1	1
Metopism	1 (11.1)		9	
Atlas - double facet	5 (71.4)	5 (55.6)	7	9
Femur - hypotrochanteric fossa	7 (50)	7 (58.3)	14	12
Femur - exostosis in hypotrochanteric fossa	2 (100)	0 (0)	2	1
Femur - third trochanter	2 (28.6)	3 (42.9)	7	7
Femur - Polirier's facet	1 (33.3)	1 (20)	3	5
Femoral plaque	1 (50)	1 (20)	2	5
Patella - vastus notch	1 (33.3)	1 (25)	3	4
Patella - vastus fossa	0 (0)	1 (25)	3	4
Tibia - lateral facet	1 (100)	1 (100)	1	1
Calcaneus - double facet	1 (100)	1 (100)	1	1

6.5 **Dentition**

6.5.1 Assessing the status of dentitions recovered from archaeological sites may indicate the quality of diet, nutrition, health and oral hygiene in the past.

6.5.2 Of the 28 individuals, twenty had dentitions available for study and therefore, the total number of expected teeth was 640 (20x32). This includes the dentitions of the two subadult individuals (Skeletons 1009 and 1047), both of which had their permanent, adult dentition. The actual number of teeth present was 343. Eight teeth had been lost ante-mortem, 43 had been lost post-mortem and five third molars (wisdom teeth) were absent, either un-erupted or not present. This leaves 241 teeth that could not be accounted for owing to missing jaws and teeth.

Dental caries

6.5.3 Dental caries, perhaps the most common of the dental diseases, is an infectious disease resulting from the fermentation of food sugars, especially sucrose, in the diet by bacteria that occur on teeth (Roberts and Manchester 1997, 45-46). Powell (1985, 317, cited in Roberts and Manchester 2005, 65) highlights that environmental factors (e.g. trace elements in food and water), pathogenic agents (the bacteria causing the disease), exogenous factors (e.g. diet, oral hygiene) and endogenous factors (e.g. the shape and structure of the teeth) are all causes of caries. Severe caries can cause large cavities which can lead to dental abscesses.

6.5.4 Caries was common within the Towcester sample, involving ten of the twenty dentitions (50%), or 33 of the 343 teeth (9.6%) that were available for examination.

Dental calculus

6.5.5 Calculus is formed by the mineralisation of organic material and bacteria and, as such, reflects the lack of importance (or perhaps inability owing to illness) given to maintaining healthy teeth. Calculus was observed on all of the dentitions (100 %), or 219 of the 343 teeth (63.85 %). In most cases the severity of the calculus deposits was graded as slight to medium (after Brothwell 1981), although a few had considerably heavier deposits. Calculus can obscure other dental conditions, thereby biasing observations. It may also prevent caries from occurring (Waldron 2001, 127).

Periapical cavities

6.5.6 These are identified as openings or holes in the periapical bone of the mandible or maxilla at the apex of the tooth root. They arise as a result of inflammation of the dental pulp that can occur as a result of trauma, caries or attrition. Depending on severity, these cavities may contain granulation tissue (a 'granuloma'), a fluid filled sac (a 'periapical cyst') or a pus filled sac (an 'abscess'). Granulomas and periapical cysts are usually asymptomatic, but abscesses may result in a persistent fever, a general feeling of being unwell and, when they burst and discharge their contents, halitosis. Acute abscesses may lead to osteomyelitis (bone infection) which in turn may be fatal, causing, for example, septicaemia (Clough and Loe 2007, 10).

6.5.7 One individual (Skeleton 1055) was affected by a dental abscess, an older adult (45+ years) of indeterminate sex. The abscess was visible as a large oval cavity (7mm x 4mm) on the buccal surface of the maxilla, at the apex of the roots of the right first and second premolars. It was probably associated with severe dental attrition and pulp exposure that involved the second premolar and first molar.

Periodontal disease and ante-mortem tooth loss

6.5.8 Inflammation of the soft tissues of the jaw (gingivitis, or gum disease) can subsequently transfer to the bone (periodontitis). This can result in resorption of the bone and exposure of the tooth roots, eventually leading to tooth loss (ante-mortem tooth loss) (Roberts and Manchester 1997, 56).

6.5.9 Ante-mortem tooth loss may also result from abscess development secondary to caries, periodontal disease secondary to calculus formation, pulp exposure and abscess formation secondary to severe attrition, deliberate extraction, accidental trauma or fighting (Waldron 2007, 117).

6.5.10 Out of the 150 tooth sockets that had survived for examination, 37 (24.7 %) exhibited the vertical bone loss and porosity that are associated with periodontal disease. This involved six of the 28 skeletons (21.4 %). Those affected included two males, two females and two individuals of indeterminate sex. They were aged between young adult (18-25 years) and older adult (45+ years) categories.

6.5.11 Eight of the 150 tooth sockets (5.3 %) displayed remodelled new bone, indicative of ante-mortem tooth loss. This involved five of the 28 skeletons (17.9 %) - three males in the mature adult age category (35-45 years), a prime adult female (25-35 years) and an older adult (45+ years) of indeterminate sex.

Dental enamel hypoplasia

6.5.12 Dental enamel hypoplasia (DEH), identified as lines, pits or grooves on the surfaces of the teeth, occurs as the result of disruption to the growth of the dental enamel, which occurs during childhood (between about one and seven years of age). Their cause is multifactorial, malnutrition and childhood illness being examples. As such, they are regarded as non-specific indicators of childhood stress (Roberts and Manchester 1997, 58). DEH was observed on ten of the twenty (50 %) individuals with dentition available for examination. It involved 62 out of 343 teeth (18.1%) and was visible as lines (the majority) and/or pits.

Dental anomalies

6.5.13 Dental anomalies may be inherited or they may relate to cultural modifications. Five individuals displayed dental anomalies.

6.5.14 Skeleton 1022 had deformation of the upper lateral incisors. The lingual surfaces of the crowns displayed clefting (although this was slightly blurred by the chipped enamel on the left crown). In addition, the left crown had an extra ridge of dentine which continued from the cleft line on the crown upwards along the distal surface of the root. This sort of deformation is similar to the non-metric trait known as shovelling, as described by Hillson (1996, 86), whereby "in incisors, and sometimes canines, the marginal ridges may be especially prominent and enclose a deep fossa in the lingual surface."

6.5.15 Skeleton 1028, a young adult male (18-25 years), had a fully formed but unerupted upper left canine. This tooth was severely misaligned within the maxilla, with the root apex pointing distally and the crown pointing mesially towards (and behind) the maxillary incisors. In addition, this individual also had a small, peg-shaped tooth which was fairly cylindrical in shape. It is possible that this tooth was in place of one of the right mandibular premolars, neither of which was present for examination.

6.5.16 An extra or supernumerary tooth was present in the dentition of Skeleton 1047, a 12-17 year old. Five mandibular incisors were present, and whilst the extra one could have been intrusive, it did appear to fit into a tooth socket.

6.5.17 A number of the teeth from Skeleton 1102, including the right maxillary first premolar and the left maxillary central incisor, displayed chipping and small breaks. Whilst some could be due to post-mortem damage, some of them certainly showed signs of wear indicating that they had happened before death. Such chipping can occur as the result of a rough diet or trauma incurred whilst using teeth as tools. Hillson (1996, 252) states that anterior teeth may be used in various ways that cause anomalous patterns of wear, for example, Larsen (1985, cited in Hillson 1996, 253)

described grooves visible on heavily worn anterior teeth, perhaps caused by holding sinews or plant fibres clamped in the teeth during processing.

6.5.18 The maxillary lateral incisors from Skeleton 1121 were also slightly malformed. The buccal-lateral surface of both crowns appeared to be slightly 'pinched' and more laterally prominent than normally seen. In addition, the crowns of the right lateral maxillary incisor and right maxillary canine displayed some greyish green staining on the buccal surface. It is unclear whether this was the result of post-mortem, taphonomic factors, or whether this staining occurred during life.

6.6 **Palaeopathology**

6.6.1 The palaeopathological conditions that were identified fall into the following broad categories: congenital and developmental abnormalities, trauma, metabolic conditions, infection and inflammatory change, neoplastic disease and joint disease.

Congenital and developmental abnormalities

6.6.2 Only one case of possible congenital abnormality was noted within the assemblage. The shape of the femoral heads of Skeleton 101, an adult (>18 years) male, appeared to be abnormal in that they were slightly flattened, rather than rounded. The right fovea capitis, a non-articular depression near the centre of the femoral head that receives the ligamentum teres, also appeared slightly abnormal in shape, thinner and more oval than would be expected, and the left fovea capitis appeared to be absent.

6.6.3 Deformation of the femoral head is seen in Perthes disease, whereby obstruction to the blood supply of the growing femoral head results in avascular necrosis and subsequent deformity, flattening and widening of the femoral head, and shortening and widening of the femoral neck (Aufderheide and Rodriguez-Martin 1998, 84). The affected femoral head is often described as 'mushroom' shaped (ibid.), but in the case of Skeleton 101, this could not be confidently stated. In Perthes disease, the acetabulum is also deformed, demonstrating flattening, elongation and an irregular articular surface (ibid.), but the acetabula examined appeared to be normal, perhaps just *slightly* flatter than normal.

6.6.4 Perhaps a more likely diagnosis is dysplasia, or congenital dislocation of the hip joint. In such a condition, the femoral head is not appropriately positioned in the acetabulum and undergoes complete or partial displacement out of the acetabulum (ibid. 69). According to Aufderheide and Rodriguez-Martin (1998, 70) bony changes associated with this condition include a flattened femoral head and a small, flat, triangular acetabulum. Whilst the acetabula belonging to the present specimen may have been slightly flatter than normal, they did not appear to be smaller or triangular (although it should be noted that they were fragmentary and incomplete) than normal. In addition, dysplasia results in a neo-acetabulum on the lateral cortex of the ilium, but there was no evidence for this on the fragmentary remains of the pelvis. Not enough evidence has survived to confirm this diagnosis.

Trauma

6.6.5 One of the rib fragments of Skeleton 1084, a mature adult (35-45 years) male, showed evidence of a healed fracture. This was represented by callus formation which is indicative of a fracture that was probably sustained a long time before death.

6.6.6 The right talus bone of the ankle of Skeleton 1044, an adult (>18 years) of indeterminate sex, displayed some bony abnormality, probably related to trauma. What should appear as a smooth, concave, calcaneal articular facet, in fact had a large fragment of bone fused to it. It is unclear whether this was part of the calcaneus bone that had fused to the talus bone (the calcaneus was not present for examination), or whether it represented new bone growth on the talus bone without involvement of the calcaneus bone. X-radiography analysis would be required to explore this further.

Metabolic conditions

6.6.7 Cribra orbitalia (pitting in the orbits) is the result of iron deficiency anaemia and was observed in five individuals - one male (Skeleton 1130), two females (Skeletons 1031 and 1155) and two of indeterminate sex (Skeletons 1047 and 1055). Those affected ranged in age from subadult (12-17 years) to older adult (45+ years). It should be noted however, that most adult lesions probably reflect childhood episodes of anaemia. It was observed in five out of seven left orbits (71.4%) that were available for examination.

6.6.8 Iron deficiency anaemia may be genetic or acquired; however, the genetic form is rare in Britain (Livingstone 1967, cited in Stuart-Macadam 1992, 104). The acquired form may be due to an iron deficient diet or possibly excessive blood loss, for example, through injury or chronic disease such as cancer (Roberts and Manchester 1997, 166). Stuart-Macadam (1992, 102-104) discusses the evidence for infectious disease and parasitism, as well as lead poisoning, as a major aetiological factor in the development of iron deficiency anaemia.

Infection and inflammatory change

Periostitis

6.6.9 Periostitis is bone inflammation arising from inflammation of the thin, membranous sheath that covers bone, the periosteum. It manifests as fine pitting, longitudinal striation and layered, plaque-like new bone formation on the original cortical surface (Roberts and Manchester 1997, 129-130). In archaeological populations it is seen most frequently on the tibia as the shin bone lies close to the skin surface and is subject to recurrent minor injury, even today (ibid. 130).

6.6.10 Four skeletons (1014, 1035, 1055 and 1080) from the Radstone sample displayed periostitis, only one of these (1014) involving a (right) tibia (healed). Skeleton 1055 displayed healed periostitis on the right fibula and on the shafts of two right metatarsals, and the other two skeletons (1035 and 1080) displayed periostitis on the

ribs. That seen on Skeleton 1035 was confined to one rib shaft fragment and appeared to have healed before death.

6.6.11 The periostitis seen on the ribs of Skeleton 1080, a young adult (18-25 years) male, is perhaps more intriguing. Five right rib shaft fragments (accounting for a minimum of two ribs out of nine identified right ribs) revealed periostitis on the visceral surfaces of the shafts. Whilst one had smooth, healed lamellar bone, the other four still displayed very woven bone, indicating that the periostitis was still active at the time of death. Eighteen left rib shaft fragments (accounting for a minimum of two ribs out of seven identified left ribs) showed periostitis. On seventeen of these the periostitis was still active. In addition, two of these rib shafts appeared to be swollen. For one, the swelling may have been caused by a fracture, but the other looked to be the result of bone inflammation - possibly osteitis - inflammation that affects the compact bone, alone.

6.6.12 The fact that a number of ribs were affected, both left and right, and the fact that the visceral surfaces of the ribs were affected, may suggest that some kind of respiratory or pulmonary infection, such as tuberculosis, was the cause. Aufderheide and Rodriguez-Martin (1998, 137) state that involvement of ribs in tuberculosis is not rare, and that diffuse periostitis, restricted to the internal (visceral) surface of the ribs and more commonly involving the left hemithorax, are all manifestations of this disease. However, other lesions associated with tuberculosis, which Roberts *et al*. (1998) state are required (in addition to rib lesions) to diagnose the disease, were not observed on the present skeleton. Other possible diagnoses include acute lobar pneumonia or bronchiectasis (for example, emphysaema) (Boston *et al*. 2008, 47).

Sinusitis

6.6.13 Sinusitis is believed to result from inflammation of the mucous membrane (in the nasal bone) and in dry bone, the condition is recognised as irregular pitting and new bone formation on the interior surfaces of the sinuses (Roberts and Manchester 1997, 131). Upper respiratory tract infections, poor living conditions, smoke and environmental pollution and specific infectious diseases such as tuberculosis and leprosy are among the aetiological factors associated with sinusitis (ibid.; Lewis 2002, 21; Roberts and Cox 2003, 112). One skeleton (1055), an older adult (45+ years) of indeterminate sex, had changes in the maxillary bone that were consistent with sinusitis.

Neoplastic disease

6.6.14 Skeleton 1134, an adult (>18 years) of indeterminate sex, displayed a small (4 x 2.5mm) oval area of raised (0.9mm), dense, slightly polished looking bone, on the lateral aspect of the midshaft of the right femur. Skeleton 1055, an older adult (45+ years) of indeterminate sex, also had a similar bony abnormality, approximately 16mm x 13mm x 2mm (raised) and located on a cranial fragment - probably occipital - near the lambdoid suture.

6.6.15 It is probable that both of these lesions are small benign tumours such as a solitary exostosis or osteoma (Aufderheide and Rodriguez-Martin 1998, 375). Osteomas are most commonly found on the outer table of the skull ('button' osteoma), but other bones including the clavicle, humerus, femur and tibia are occasionally affected (ibid.).

Joint disease

Osteoarthritis

6.6.16 Osteoarthritis (O-a) is the most commonly occurring joint disease seen in archaeological and modern populations and is most often associated with age-related deterioration. It is non-inflammatory and affects the synovial joints (Roberts and Manchester 1997, 105). Manifestations of the disease are osteophytes (new bone formation on the joint surface and/or margin), eburnation (polished bone resulting from the loss of cartilage), joint surface porosity and alteration to the joint contour. Eburnation on the joint surface is a definite sign of O-a, and Waldron and Rogers (1991, cited in Roberts and Manchester 1997, 105) recommend that if eburnation is not present, then at least two other features of O-a must be present to diagnose the disease, as the other changes can also occur as a part of different disease processes.

6.6.17 O-a (not including spinal O-a) was identified in four skeletons (1084, 1031, 1134 and 1151). Skeleton 1084, a mature adult male (35-45 years), had O-a of the left and right glenoid fossa of the scapulae (shoulder joints) as well as the acromial end of the left clavicle, and also in at least one of the hip joints (identified from an unsided acetabulum fragment). O-a of the hip joints was also present in Skeletons 1134 and 1151 (both adults (>18 years) of indeterminate sex). Skeleton 1031 (a prime adult (25-35 years) female) had O-a of a rib-vertebrae joint (evident on the neck of a right rib).

6.6.18 Osteophytes (new bone on a joint surface and/or around the margin of a joint) alone, were recorded for another four skeletons (1055, 1102, 1151 and 1155), and affected the shoulder joint (glenoid fossa) (Skeletons 1055 and 1155), hip joint (acetabulum/fovea capitis) (also Skeletons 1055 and 1155), rib-vertebrae articulation (neck of rib) (Skeleton 1102) and the left elbow (distal humerus, olecranon process of the ulna and the proximal radius) and left wrist joints (distal radius) (Skeleton 1151).

Conditions of the spine: Schmorl's nodes, osteophytosis and osteoarthritis

6.6.19 Osteoarthritis was the most frequent condition of the spine and involved nine skeletons (32.1% 9/28), all male or of indeterminate sex. It was identified on the lumbar vertebrae (7.1%, 4/56 LV), but was much more common on the cervical vertebra (21.8% 19/87 CV).

6.6.20 Spinal osteophytosis was observed in three skeletons, two of which (1055 and 1134) also had spinal O-a. The other affected individual (Skeleton 1155) was a prime adult

female (25-35 years), with osteophyte growth on just one (TV) of her twenty vertebrae available for examination. Osteophytosis is very common occurrence in skeletal and modern populations. It may accompany diseases and it may occur as part of the general ageing process (Roberts and Manchester 1997, 107).

6.6.21 Intervertebral disc herniation was visible (in the form of Schmorl's nodes) in just two thoracic vertebrae, belonging to Skeleton 1080, a young adult (18-25 years) male. Schmorl's nodes occur as the result of herniation of the intervertebral disc into trabecular bone of the vertebral body, and can be found in most individuals over 45 years of age (Aufderheide and Rodriguez-Martin 1998, 97). Although associated with degenerative disease, Schmorl's nodes have also been linked to activity and trauma, especially in adolescence, or metabolic disorders (Hilton *et al*. 1976; Kelley 1982, cited in Loe 2003, 118).

Table 8: Frequency of conditions involving the spine

Sex	**No. vertebrae present**			**No. with Schmorl's nodes (%)**	**No. with osteophytosis (%)**			**No. with spinal osteoarthritis (%)**	
	CV	**TV**	**LV**	**TV**	**CV**	**TV**	**LV**	**CV**	**LV**
Male (inc.??/?)	51	22	21	2 (9.1)				13 (25.5)	2 (9.5)
Female (inc. ??/?)	11	11	6			1 (9.1)			
Undetermined	25	15	29		1 (4)		2 (6.9)	6 (24)	2 (6.9)
Total	87	48	56	2 (9.1)	1 (4)	1 (9.1)	2 (6.9)	19 (21.8)	4 (7.1)

Key: ??/? = possible/probable; Undetermined = sex not estimated; CV = cervical vertebrae; TV = thoracic vertebrae; LV = lumbar vertebrae

Miscellaneous conditions

Hyperostosis frontalis interna

6.6.22 Hyperostosis frontalis interna (HFI) is defined by Aufderheide and Rodriguez-Martin (1998, 419) as "a peculiar thickening of the frontal bone composed of an expansion of the diploic trabecular mass but bulging only inwardly into the cranial cavity". They also state that endocranially, it presents an "irregular, nodular, cerebriform surface" (ibid.). Three skeletons (100, 1121 and 1155) presented pathological change concurrent with this condition, one of the two females within the assemblage and two of indeterminate sex, and all within the 25-35 years age bracket. Aufderheide and Rodriguez-Martin (ibid.) highlight that this condition is found almost exclusively in women, only about 10% of whom are under the age of 30. It is assumed that some type of pituitary gland disorder causes the changes seen although, in general, little is known about the condition.

Enthesophytes

6.6.23 Enthesophytes are areas of new bone formation at tendinous and ligament insertions as a result of muscular exertion and subsequent increase in size of associated muscles (Roberts and Manchester 1997, 110). They may also accompany other diseases, for example, diffuse idiopathic skeletal hyperostosis (a disease involving fusion of the spine and associated with obesity and diabetes) (Aufderheide and Rodriguez-Martin 1998, 97).

6.6.24 Two skeletons (1114 and 1134) had enthesophytes on their bones. Both involved the knee (patella) and back of the thigh (the linea aspera of the femur). Skeleton 1114 also had enthesophyte on the elbow (on the olecranon of the ulna). These sites are typically affected by these changes.

Occipital pitting

6.6.25 The ectocranial surface of many of the occipital fragments of Skeleton 1130 (a young adult male, 18-25 years) was very pitted. Whilst pitting on the ectocranial surface may be indicative of porotic hyperostosis, an indicator of iron deficiency anaemia, that seen on the present skeleton did not appear to have the expanded diploic layer and 'hair on end' appearance that would be expected with porotic hyperostosis. It is more likely that the pitting seen represents bone inflammation, possibly the result of a minor scalp irritation.

7 DISCUSSION OF THE BURIALS

7.1 Burial practices

7.1.1 The Radstone assemblage presented the remains of 28 individuals from 2nd to 4th century inhumation burials. Inhumation was the most common form of burial during the later Roman period, having supplanted cremation throughout the Roman provinces by the mid 3rd century (Toynbee 1971, 40, cited in Philpott 1991, 53).

7.1.2 The majority of the Radstone skeletons were buried supine (Plates 3, 7-8, 11), although a few were also buried prone (Plates 4-5, 10) or lying on their side (Plate 9). According to Philpott (1991, 53), extended supine burial is characteristic of the Roman period, although it is not entirely unusual to find individuals lying prone or on their side. A number of suggestions have been put forward to explain the prone burial rite. For example, McWhirr *et al.* (1982, 78-81) and Philpott (1991, 72) have suggested that it reflects undertaker error when burying a corpse either in a coffin or a shroud. Preventing the dead from wandering (either in body or spirit) is another explanation and may have applied to individuals for whom this was a particular concern because of the nature of their death, or their being outcasts in life (Simmonds *et al*. 2008).

7.1.3 A variety of arm, hand and head positions were recorded (Plates 3, 4, 7, 8), which is not unusual, but it is not known whether these hold any significance (Philpott 1991, 53.). Barber and Bowsher (2000, 87) suggest that arm positions may have been determined by the type of clothing that the corpse was wearing and that asymmetric

arm positions (Plate 11) may mimic the 'toga position' (one arm folded across the waist, the other free) of many Roman statues.

7.1.4 Decapitation (Plate 7) appear for the first time during the Roman period (Roberts and Cox 2003, 153), and this is seen in a small minority of burials, often of 4th-century date (Philpott 1991, 53). Indeed, two of the Radstone individuals (7.1%, 2/28) had been decapitated, identified not by osteological evidence (as none was present), but by the displacement of the skulls within the grave. This frequency lies within the range observed for other Roman sites documented by Roberts and Cox (2003, 158), the highest being at Cassington, where 19.7% (14/71) of the burials were decapitated. The lowest proportions occur in urban cemeteries such as Lankhills where twelve out of 801 burials (1.5%) were decapitated. In urban cemeteries such burials are generally on the periphery of the cemetery. There is no clear evidence why certain individuals were single out for decapitation though it has been suggested that the individual was in some way different or the death was unusual or unexplained (Tsaliki 2008). Decapitation has been discussed at length in relation to decapitation burials at Kempston, Bedfordshire (Boylston *et al*. 2000), and though no single cause could be shown the general conclusion was that such burials should be seen in the context of more widespread Iron Age customs in relation to the veneration of the head. Alternatively decapitation may have been performed for similar reasons as prone burial relating to a fear of the dead rising (Taylor 2008) to prevent a reanimation of the corpse or, alternatively, it may have been performed to release the soul and enable it to pass into the afterlife (Simmonds *et al*. 2008). Of the Radstone decapitation burials, one had the skull placed over the feet, and the other by the right knee, and such positioning - with the head placed adjacent to or on the lower part of the body - is the most common among decapitation burials (Philpott 1991, 78).

7.1.5 Eight of the individuals were buried within coffins, identified by the presence of iron nails and coffin fittings. This does not mean to say that graves that did not yield coffin nails were necessarily without coffins. Rather, they may have contained coffins that were constructed entirely of wood, long perished, and which were secured by jointing or wooden pegs. The absence of stone and lead-lined coffins, which seem to have been the preserve of the wealthy (Philpott 1991, 53) and the use of only wooden coffins at Radstone is perhaps indicative of a lower status population. Arguably burials with no coffins at all are likely to represent the lowest status.

7.1.6 A number of the skeletons were found to have been buried with grave goods. Aside from pottery vessels, jewellery, a copper alloy spoon/spatula and small tacks were also recovered. The small tacks were all found in grave 1154, five close to the right hand of skeleton 1155 and one beside the left hand. They possibly indicate the presence of an organic item such a small wooden casket. A single hobnail was found in grave 1013 located by the right ear: it may be residual or a casual loss from the footwear of the burial party.

7.1.7 Inhumations with hobnails are common in the 3rd and particularly 4th centuries and have been recorded in over 120 locations in Roman Britain (Philpott 1991, 167). Ashton and Wakerley are two examples of Northamptonshire sites (ibid. 458).

7.1.8 The absence of the hobnails within the graves does not necessarily indicate the absence of shoes on the individuals, as shoes/sandals constructed without nails may have been worn by the dead in the graves at Radstone. At New Fresh Wharf MacConnoran 1986, 218) and Billingsgate Buildings (Rhodes 1980, 103) in London where preservation was better 33% and 46% respectively of shoes had no metal component. According to Philpott (1991,167) hobnailed shoes are more commonly found on rural sites, perhaps because a more robustly constructed type of footwear was a requirement of the rigorous lifestyle that rural populations engaged in (Simmonds *et al*. 2008). However there is no clear rule on the presence or absence of nailed shoes and at Lankhills, Winchester there was a high representation (43%) of nailed shoes within an urban cemetery (Booth *et al*. 2010, 498).

7.1.9 The jewellery recovered includes a jet bead necklace, two rings and two bracelets (all worn, except one ring and all copper alloy), all with the burial of a subadult (12-17 years) (Plates 5-6, 12-13). Graves with personal ornaments have been recorded from a great number of sites (Philpott 1991, 136), but they usually form only a small proportion of the total burials in any one cemetery, usually below 10% (ibid.). Whether the jewellery items from Radstone were intended specifically as goods to accompany the individual in burial, or whether they were habitually worn during life cannot be known. An extensive survey showed that bracelets, and occasionally rings, were frequently worn in female burials over a wide area of southern and central England (ibid. 143). Gowland (2001,162) observed that the wearing of bracelets was predominantly associated with younger girls among the inhumations from Lankhills School, Winchester. Although from the grave goods it might be tempting to regard the burial as female, some caution must be exercised as a number of male burials have been identified accompanied by such grave goods including a cremation at Westhawk Farm, Kent (Booth *et al*. 2008, 309-10) and a burial at the East Cemetery at London (Barber and Bowsher 2000, 226-7). It is not possible to say, from the osteological evidence, whether the subadult from Radstone was in fact female or male.

7.2 The human skeletal remains

7.2.1 The skeletal remains represented twelve adult males, two adult females and twelve adults of indeterminate sex, as well as two subadults (both 12-17 years) for which sex was not estimated. The adult ages ranged from 18-25 years to 45+ years. This small sample of 28 individuals is probably not representative of the true demographic profile of the original population that was buried in the cemetery at Radstone. The low number of identifiable females and juveniles is probably due to the small sample size and limited extent of the cemetery than was defined during excavation. In addition the generally fragmentary nature of the material prevented many estimations of age and sex being made.

7.2.2 Both cranial and post-cranial non-metric traits were examined within the assemblage, and six cranial traits - thought to be more genetically controlled than post-cranial traits - were recorded. The supra-orbital notch was present in all five (left and right) observable elements, which may indicate that familial relationships were present in the burial population, but it should be highlighted that the overall sample size was very small, which may put doubt on the significance of these results. The most frequent post-cranial trait was the double facet on the atlas (62.5% of total number observable atlas). Their spatial arrangement suggested no distinct groupings indicative of family plots though two burials (Graves 1005, 1116) with the supra orbital notch lay adjacent to each other, and three burials (Graves 1030, 1021, 1124) with the double facet on the atlas formed a rough line end to end.

7.2.3 The dental conditions observed include dental caries, calculus, periapical cavities, periodontal disease, ante-mortem tooth loss and enamel hypoplasia. The frequencies of these different dental conditions are within the ranges observed for other Romano-British populations (Roberts and Cox 2003) with the exception of dental calculus which affected 63.85% of the total number of teeth present, 5.35% higher than the highest frequency recorded by Roberts and Cox (2003, 132), which was for a site at 41 Piccadilly, York (58.5%).

7.2.4 Dental caries was also fairly prevalent within the Radstone sample, at a frequency of 9.62%, also similar to 41 Piccadilly, York (9.9%) and Baldock 2, Hertfordshire (10%), but again, higher than the average frequency calculated for Romano-British sites (7.5%) (ibid., 131). Generally these conditions are prevalent in the Romano-British period, indicating that people were not caring for their teeth and were also consuming more sucrose in their diet via *sapa*, wine and other foods and drinks (ibid.). In contrast, several classical texts refer to cleaning the oral cavity, frequently referring to toothpicks, possibly made from feather quills or wood splinters (ibid., 130), and early forms of toothpaste, made from ground eggshell and oyster, are also thought to have been in existence (Bennion 1986, cited in Roberts and Cox 2003, 130). Perhaps the particularly high frequency of calculus (tartar) in the Radstone sample indicates that these people were even less particular about their dental hygiene, possibly indicative of their lower status.

7.2.5 Enamel hypoplasia provides a valuable insight into the quality of lives that the individuals had during childhood, as it is a condition that reflects growth arrest during the formation of the enamel, which may be due to, for example, malnutrition or childhood illness (Roberts and Manchester 1997, 58). Half of the individuals with dentitions available for examination (10/20) had enamel hypoplasia, a frequency of 18.1% (62/343 teeth observed). This frequency is far higher than the average frequency for other Romano-British sites (9.1%) (Roberts and Cox 2003, 140), although the range of frequencies is wide, varying from 5.1% at Baldock 3, Hertfordshire to 29% at Gambier-Parry Lodge, Gloucester (ibid.). The frequent presence of enamel hypoplasia at Radstone perhaps indicates high levels of health stress during childhood.

7.2.6 Joint disease, in the form of osteoarthritis, is not a surprising find within the sample, as it is the most common pathological condition to be seen in skeletal populations (Rogers and Waldron 1995). Many factors, including age, sex, ancestry and genetic predisposition, as well as activity and occupation, play a part in the manifestation and course of the disease, but it is difficult, if not impossible, to determine which of these factors was responsible for this disease (Waldron and Cox 1989, cited in Clough and Loe 2007, 23). The distribution of the O-a and osteophytosis (new bone formation on the joint surfaces and/or margins) in the present sample, notably in the spine, shoulder and hip joints, would not seem to be directly associated with a specific activity or occupation. The disease would have resulted in intermittent backache and general stiffness in the past, just as it does today (Roberts and Manchester 1997, 107). The overall frequency of individuals affected by spinal O-a within the Romano-British sites studied by Roberts and Cox (2003, 145) was 7.1%, much lower than the frequency seen in the Radstone sample, which was 32.1% (9/28 individuals). This perhaps indicates that the Radstone population were inflicting more wear and tear on their bodies than at many other contemporary sites; perhaps they were subject to more physical stress. St. Stephens at St. Albans, Hertfordshire (33.3%) and Stanton Harcourt, Oxfordshire (30.5%) showed similar frequencies of spinal O-a amongst their skeletal populations.

7.2.7 Another spinal condition observed in the population was Schmorl's nodes, visible as depressions on the inferior or superior surfaces of the vertebral bodies. One might have expected to have seen more of these in the sample, given that they are often associated with degenerative disease, but in fact they were only noted in one individual, a young adult male. This indicates that the cause is likely to be linked to activity or trauma, which are also associated with Schmorl's nodes. The relative paucity of Schmorl's nodes in the sample overall is most likely due to the fragmentary nature/complete absence of a large proportion of the vertebral bodies.

7.2.8 Only one case of possible congenital abnormality was noted, and this was a possible congenital hip dislocation. The evidence for this was somewhat inadequate to allow for firm diagnosis however. This condition was not common in Roman Britain, with only three individuals (0.05%) affected, out of the total number of Roman burials in Roberts and Cox's study (2003, 115).

7.2.9 Two individuals in the sample were noted to have trauma, one had a rib fracture and the other a fracture of the talus bone with possible involvement of the calcaneus. The injury to the talus would almost certainly have impaired the individual's ability to walk at least whilst it was healing. Fractures to the ankle bones are not frequently recorded for the Romano-British period, having only been noted at one site, Cirencester (south), by Roberts and Cox (2003, 157). Rib fractures are much more common (ibid., 151), which is not surprising given their prevalence and location within the body.

7.2.10 Evidence for iron deficiency anaemia, in the form of cribra orbitalia (pitting in the orbits), was observed in five individuals (17.9% 5/28), a much higher than average

frequency for this period (8.05%) (Roberts and Cox 2003, 140-141). Only four of the 29 sites with recorded cribra orbitalia had higher frequencies than the Radstone sample (ibid., 141). Iron deficiency anaemia may be the result of an iron deficient diet, excessive blood loss, for example, through injury or cancer, or possibly infectious disease, parasitism or lead poisoning (Roberts and Manchester 1997, 166; Stuart-Macadam 1992, 102-104). Roberts and Cox (2003, 140) state that iron deficiency anaemia during this period is unlikely to represent low iron intake, as meat played a significant part of the diet for most at this time, though such an assertion is highly debateable, and that instead, high pathogen loads or lead ingestion were responsible.

7.2.11 Two individuals within the assemblage displayed small, benign osteomas, one on the occipital bone and one on the femur. These are the most common of the neoplasms seen within the Romano-British period, accounting for 74.4% of all of the neoplasms recorded from the sites in Roberts and Cox's study (2003, 112). These small, bony protuberances would have been of no consequence to overall health during life, and it is unlikely that the individuals would even have been aware of their existence.

7.2.12 Periostitis and sinusitis were also recorded in the assemblage. Most of the periosteal lesions were focal and they involved a tibia, fibula, metatarsals and ribs. They probably relate to relatively mild, solitary conditions such as trauma or ulcers, with the exception of one individual (Skeleton 1080) who had periostitis on the visceral surfaces of at least four ribs (two left, two right). This individual may have been suffering from a respiratory or pulmonary infection, such as acute lobar pneumonia or bronchiectasis (for example, emphysaema). Periostitis on the visceral surfaces of ribs is also associated with tuberculosis, although no other lesions associated with tuberculosis were noted in this individual, therefore a firm diagnosis for tuberculosis cannot be made. Sinusitis, recognised as irregular pitting and new bone formation on the interior surfaces of the sinuses, was also present in one individual (Skeleton 1055). Respiratory problems and sinusitis were not uncommon in Roman Britain, and suggest that perhaps the living environments may have been polluted by smoke, particularly if houses were not well ventilated, and that people were living in close contact with one another and transmitting respiratory infections such as pneumonia. (Roberts and Cox 2003, 112; Roberts and Manchester 1997, 131). Capasso (2000, cited in Roberts and Cox 2003, 112) also suggests that cooking techniques and burning fuel may have predisposed these people to respiratory problems.

7.2.13 Enthesophytes - areas of new bone formation at tendinous and ligament insertions as a result of muscular exertion - were noted in two individuals. It has already been suggested that the population from Radstone may have been subject to physical labour, given the extremely high frequency of osteoarthritis, so the fact that enthesophytes were also recorded is perhaps not surprising.

7.2.14 Three skeletons displayed changes consistent with hyperostosis frontalis interna. As stated above, it is assumed to be the result of some kind of pituitary disorder, found

almost exclusively in women, usually over the age of 30, but other than this, very little is known about the condition, therefore little more can be said about it here.

7.2.15 A final pathological condition noted, was a probable minor scalp irritation, visible as fine porosity on the occipital surface of a young adult male (Skeleton 1130).

8 THE FINDS

8.1 The pottery by Paul Booth

8.1.1 The excavation produced approximately 533 sherds of pottery weighing 3815 grammes, all of Roman date except for two tiny medieval fragments each of about 1g and almost certainly intrusive (in contexts 1002 and 1023). This material was scanned rapidly for context dating and in particular to provide information on any pottery associated with graves. Fabric and vessel type codes (in summary form) were noted, using the framework of the Oxford Archaeology system for recording later prehistoric and Roman pottery, but no detailed recording was undertaken. The pottery was in variable condition, but much of the material was heavily fragmented.

8.1.2 The fabrics present are summarized in Table 9.

Table 9: Summary of pottery fabrics

OA ware code	National fabric ref collection code*	Summary description	Vessels represented by rim sherds
S20	Incl LGF SA	South Gaulish samian ware	
S30	Incl LEZ SA 2	Central Gaulish samian ware	Cups (form 33 – 2), dish (2)
F50		Red brown colour-coated wares	
F51	OXF RS	Oxford colour-coated ware	
F52	LNV CC	Nene Valley colour-coated ware	
F60		Misc colour-coated ware, uncertain source	
A11	BAT AM 1 & 2	South Spanish amphora	
M22	OXF WH	Oxfordshire white mortaria	
M41	OXF RS	Oxfordshire colour-coated mortaria	Mortarium Young C100
W10		Fine white wares (all sources)	Beaker
E30		'Belgic type' sand-tempered fabrics	
E80	SOB GT etc	'Belgic type' grog-tempered fabrics	
O10		fine oxidised 'coarse' wares	Jar, beaker, dish
O20		Coarse sandy oxidised wares	Carinated bowl?
O30		Medium sandy oxidised wares	Jar, beaker (12), bowl/dish
O80		coarse (usually grog) tempered oxidised wares	Jar
O81	PNK GT	pink grogged ware	Small jar
R10		Fine sandy reduced 'coarse' wares	Jar (2), lid
R20		Coarse sandy reduced wares	Jar
R30		Medium sandy reduced wares	Jar (9)
R90		Coarse (usually grog) tempered reduced wares	Jar
B11	DOR BB 1	black-burnished ware (Dorset BB1)	Handled mug, dish/bowl
C10		shell-tempered wares (all sources)	Jar (4)

*Tomber and Dore 1998

8.1.3 Fine and specialist wares were reasonably well-represented. The Central Gaulish samian ware included an example of a form 42 cup and a body sherd from a form 30 decorated bowl with part of a label stamp of CINNAMUS (AD 135-180; Hartley and Dickinson 2008, 5b). Fine wares were mostly Nene Valley and to a lesser extent Oxford colour-coated wares, while mortaria were all from the latter source. White wares probably also included Oxford products, but other sources may have been represented as well.

8.1.4 The range of coarse wares was dominated by fabrics in the medium sandy oxidised and reduced groups (O30 and R30), most of which are likely to have been of fairly local origin. The number of rim sherds of beakers in fabric O30 (12 out of 14 rims of different vessels in this fabric) was notable, to the extent that very local production might be postulated for this fabric. Amongst other oxidised wares, pink grogged ware (O81), from Stowe, is certainly relatively local to Towcester. A modest amount of Dorset BB1 was present, while shell-tempered pottery was quite well-represented. With one likely exception, all of this material was what Charmian Woodfield termed 'prickly shelly' fabric (cf Brown and Alexander 1982, 36, fabric 44b).

8.1.5 An estimated 46 vessels were represented by rim sherds (some by more than one sherd). Amongst these there was little that was remarkable, with the exception (noted above) of the frequency of beakers, all probably of bag-shaped form, with simple slightly beaded rims and characteristically with rouletted decoration on the shoulder, in fabric O30 (cf eg Brown and Woodfield 1983, 84, no. 34 and (in a different fabric), 85, no. 63). The absence of large jars in fabric O81, a characteristic of later Roman form, is probably significant in chronological terms (see below).

8.1.6 'Belgic type' fabrics occurred in minimal quantities, and it seems likely that there was little if any activity within the site before the late 1st century AD. Pottery was noted from 37 context groups, but of these only 11 contained more than 10 sherds, and the mean sherd weight (7.2g) shows that much of the pottery was heavily fragmented. Both these characteristics made close dating of individual groups difficult if not impossible. Nevertheless, the assemblage overall suggests a concentration of activity in the 2nd century. Only four context groups (1003, 1056, 1067 and 1145) contained material probably or certainly indicative of later (typically mid 3rd-4th century) date, and amongst these the groups from 1056 and 1145 comprised 3 and 2 sherds weighing 7g and 3g respectively. Only context 1067 was certainly of 4th-century date on the basis of the pottery (an Oxford mortarium of Young (1977) type C100). In terms of range of fabrics and chronology the material seen here is consistent with that recorded from the evaluation of this site.

8.1.7 The status of pottery from graves is rather uncertain, at least in part because of their frequently very poor state of preservation. The one fairly certain grave good, in context 1024 (grave 1020) was a poorly-preserved (20 fragments weighing 86g) handled beaker in black-burnished ware, broadly of Gillam (1976) type 24, for which

a date in the mid-late 2nd century is most likely. A further possible grave good (context 1055 in grave 1078) appears not to have survived.

8.2 The small finds by Ian Scott

8.2.1 There are 81 objects (100 fragments), comprising 54 iron objects (67 fragments) (including 48 nails), 18 jet beads (19 fragments), 8 copper alloy objects (13 fragments) and 1 single glass object. All but 7 objects are from graves. They are summarized by function and context in table 10.

Table 10: Summary quantification of small finds by Context and Function (object count)

Contxt	Fill of	Feature type	Function								
			Personal	Hobnails	Household	Security	Structural	Nails	Misc	Query	Totals
1003	1001	Grave						1			1
1010	1011	Grave	22								22
1015	1013	Grave		1							1
1072	1070	Pit	2					1			3
1076	1073	Pit						1			1
1087*	1089	Grave						13			13
1108	1110	Ditch						1			1
1114	1113	Grave						1		1	2
1120	1122	Grave				1	1	13			15
1125 *	1124	Grave						3	1		4
1134$	1133	Grave						1	1		2
1146	1143	Ditch	1								1
1156*	1154	Grave			1			6			7
1158	1159	Ditch								1	1
1160 *	1154	Grave						6			6
103	102	Grave						1			1
		Totals	25	1	1	1	1	48	2	2	81

Notes:
* Coffin
$ Skeleton

Grave 102

8.2.2 The only find was an incomplete nail from context 103 described as being 'found inserted in R cheek Sk 100'.

Grave 1001

8.2.3 Type 1 nail. Not measured. Context 1003, sf 4.

Grave 1011 (Plates 5, 6, 12 and 13)

8.2.4 This grave has a number of grave goods including a pair of copper alloy bracelets, a finger key ring and 18 jet beads. There are small fragments of a possible second simple finger ring.

No.1 Ribbon twist bracelet (Plate 12.1) 5 strands twisted together to form a rigid bracelet. Lacks terminals. Cu alloy. 63mm x 55mm. Context 1010, Sf 2.

No.2 Ribbon twist bracelet (Plate 12.2) 5 strands twisted together to form a rigid bracelet. The terminals, which may originally have ended in hooks, appear to be bound by cu alloy sheet. Cu alloy. 67mm x 58mm;. Context 1010, Sf 3.

8.2.5 This pair of bracelets conforms to Cool Type II ribbon twist bracelets (Cool 1983, 129-30, fig. 5:1, no. 2) and are a variant of the more common cable twist bracelet. They could date as early as the 2nd century but are more likely to date to the 3rd century or later given their association with jet beads.

No. 3 Finger key ring (Plate 12.3) complete although the key is now detached. The stem of the key is hollow. Ring: W: 24mm; Ht overall; L 26; L of key when attached: 21mm. Context 1010, Sf 5.
Examples come from contexts of late 2nd-century and later date.

No. 4 Small collar or plain **finger ring**. The ring or collar is fragmentary, incomplete and plain (4 x fragments). D: c 20mm; W: 3.5mm. Context 1010, Sf 7.

No. 5 Jet Beads (Plate 13) Eighteen jet beads of 4 different broad forms were recovered. They comprise eight cylindrical beads, six lozenge-shaped beads, two segmented beads and two small beads with flattened hexagonal cross sections. All recovered from context 1010.

8.2.6 Cylindrical beads with incised bands

Cylindrical bead. Incised bands forming 9 segments	L: 11mm;	D: 3mm.	Sf 8
Cylindrical bead. 7 perhaps 8 segments	L: 15mm;	D: 5mm.	Sf 9
Cylindrical bead. 9 segments	L: 10mm;	D: 3mm.	Sf 15
Cylindrical bead (2 x refitting fragments). 15 segments.	L: 17.2mm;	D: 3mm.	Sf 14
Cylindrical bead. 8 segments	L: 12mm;	D: 3.2mm.	Sf 17
Cylindrical bead. 10 segments	L: 11mm;	D: 3mm.	Sf 21
Cylindrical bead. 10 segments	L: 14mm;	D: 3mm.	Sf 22
Cylindrical bead. 11 segments	L: 11.5mm;	D: 3.2mm.	Sf 24

8.2.7 Segmented beads

Segmented bead, incomplete. 2 segments	L: 5.5mm	D: 3.5mm.	Sf 10
Segmented bead. 2 segments	L: 5.2mm;	D: 3.3mm.	Sf 20

8.2.8 Lozenge-shaped beads of rectangular cross-section

Lozenge shaped bead, rectangular section. A little damaged	L: 13.5mm;	W: 5.5mm.	Sf 11
Lozenge shaped bead, rectangular section. A little damaged	L: 12mm;	W: 5mm.	Sf 12
Lozenge shaped bead, rectangular section. One end damaged.	L: 13.5mm;	W: 5mm.	Sf 13
Lozenge shaped bead, rectangular section.	L: 12mm;	W: 6mm.	Sf 16
Lozenge shaped bead, irregular rectangular section. One end damaged.	L: 13mm;	W: 4.6mm.	Sf 18
Lozenge shaped bead, rectangular section. Both ends damaged.	L: 12.5mm;	W: 5.5mm.	Sf 19

8.2.9 Beads with flattened hexagonal cross sections.

Bead with flattened hexagonal section, slightly fatter in the middle.	L: 8.5mm; W: 4mm.	Sf 23
Bead with flattened hexagonal section, slightly fatter in the middle.	L: 9.5mm; W: 4.2mm.	Sf 26

8.2.10 Archaeological evidence suggests that jet was particularly popular with the Romans from the 3rd century onwards (Allason-Jones 1996, 9). The cylindrical beads with incised bands are one of the commoner forms (cf. York: Allason-Jones 1996, 27, no. 21; Westhawk Farm Kent: Allason-Jones 2008, 171, fig. 5.8, nos 3-5; Catterick, Site 46. grave 951: Bell and Thompson 2002, 177, fig. 315, no.1, type 1). Segmented beads occur quite widely (eg. Catterick: ibid., 178, fig. 315, no. 4, types 2-3). The lozenge shaped beads cannot be precisely readily paralleled although some beads from Catterick Site 46, grave 951 do have lozenge shaped facets (ibid., 171, fig. 315, no. 1, type 10).

Grave 1013

8.2.11 Hobnail. Not measured. Context 1015, Sf 25.

Grave 1089

8.2.12 The only finds are 13 nails or nail stems. All were recovered from fill 1087.

8.2.13 Nails

Type 1 nail small almost complete.	L: 35mm.	Sf 36
Type 1 nail incomplete		Sf 32
Type 1 nail incomplete		Sf 34
Type 1 nail, small incomplete		Sf 35
Type 1 nail head only		Sf 37
Type 1 nail. Incomplete		Sf 42
Type 1 nail head only		Sf 44
Possible nail head		Sf 39
Nail or spike, laminated		Sf 33
Nail, small or no head, complete	L: 47mm.	Sf 40
Nail, small or no head, incomplete		Sf 41
Nail, stem only		Sf 31
Nail, stem only		Sf 43

Grave 1113

8.2.14 There are just two finds from grave 1113 , both recovered from fill 1114. The finds comprise a fragment of square section bar (Sf 45) pointed at both ends (L: 88mm) and one nail (Sf 46). The latter is incomplete and laminated. The function of the bar fragment is uncertain, but possibly it was part of a tool.

Grave 1122

8.2.15 The finds from this grave include a poorly preserved L-shaped slide key, and split spike loop probably used as a handle attachment, and minimum of 13 nails (24 fragments). None of the nails was complete. All finds were recovered from fill 1120

No. 6 L-shaped slide key, poorly preserved. Fe. L: 84mm. Context 1120, Sf 50.

No. 7 Split spike loop attached to a sub-rectangular washer. Possibly an attachment for a handle. L: 66mm; W: 42mm. Context 1120, Sf 51

8.2.16 Nails

Type 1 head fragment; 2 x nail stem fragments	Sf 52
Type 1 nail incomplete	Sf 53
Type 1 nail, incomplete (2 refitting fragments)	Sf 59
Type 1 nail, incomplete, encrusted head, laminated stem	Sf 60
Type 1 nail, head fragment	Sf 63
Type 1 nail, incomplete and laminated	Sf 64
Type 1 nail head fragment	Sf 72
Type 1 ? Nail, incomplete	Sf 65
Type 1 ? (possibly dome head?) incomplete	Sf 66
Nail head and 2 x small (non-refitting) stem fragments. Mineral preserved wood.	Sf 67
Nail, uncertain form, incomplete	Sf 48
Nail, stem only	Sf 58
Nail, stem only, some mineral preserved wood	Sf 74
Nail stem fragment	Sf 73
nail stem fragment	Sf 47
Nail stem fragment	Sf 49
Nail stem fragment	Sf 61
Nail stem fragments (x 2)	Sf 62

Grave 1124

8.2.17 The only finds are 3 incomplete nails, a nail stem fragment and a fragment of iron bar or nail stem all from context 1125.

8.2.18 Nails and other fragments

Type 1 nail, incomplete. L extant 57mm.	Sf 54
Type 1 nail, incomplete. L extant 55mm.	Sf 55
Type 1 nail, incomplete.	Sf 56
Nail stem fragment	Sf 57
Bar or nail stem fragment	Sf 68

Grave 1133

8.2.19 The finds, all from fill 1134, comprise a Type 1 nail, a nail stem fragment and a bar fragment

8.2.20 Nails and other fragments

Type 1 nail complete but bent	L: 45mm.	Sf 71
Nail stem fragment		Sf 69
Bar fragment, badly laminated.		Sf 70

Grave 1154 (Plates 11 and 12)

8.2.21 The finds comprise a copper alloy spoon (2 refitting fragments), five small tacks, and six nails, four of which are complete.

No. 8 Spoon (Plate 11 and 12.8) with round bowl and rat tail stem with decorative moulding. Cast in copper alloy. Handle between bowl and moulding is rectangular in section. From the moulding to its point the stem is circular in section. Tinned (or silvered). L: 112mm. D of bowl: 24mm. Context 1156, Sfs 75 & 82.

8.2.22 Spoons with round bowls are current Britain in the second half of the 1st century and in the 2nd century.

8.2.23 Tacks and nails

Tacks with flat circular heads (x 5). Small tacks, complete examples *c* 16-18mm long.	Context 1156	L: 16mm - 18mm	Sf 80
1 x tack, incomplete, similar to above	Context 1156		Sf 81
Type 1 nail, complete	Context 1160	L: 55mm	Sf 77
Type 1 nail, complete	Context 1160	L: 55mm	Sf 78
Type 1? nail, almost complete. Part of head missing	Context 1160	L: 52mm	Sf 79
Type 1 nail, complete	Context 1160	L: 72mm	Sf 83
Type 1? nail, head fragment	Context 1160		Sf 76
possible Type 1 nail, fragmentary	Context 1160		Sf 84

Pit 1070 (Plate 12)

8.2.24 Three finds were recovered from fill 1072 of pit 1070. There is a well-preserved copper alloy hairpin (Sf 28) and a fragment of a possible glass bead (Sf 29). The third find is a bent nail of uncertain type.

No. 9 Hairpin (Plate 12.9) with lattice pattern decoration just below the head. The stem of the hairpin is of small diameter. Cu alloy. L: 109mm; D: 1.7mm. Context 1072, Sf 28. This pin probable belongs in Cool's group 5 (simple grooved heads) (Cool 1990, 157, fig. 4, nos 4-11). Pins of this form can date from any time within the Roman period but are most often found in 2nd-century contexts.

No. 10 Possible elongated oval **glass bead**. Only a fragment comprising a ¼ segment with one end missing survives. Blue green metal. L extant: 21mm; W extant: 9mm. Context 1072, Sf 29.

The identification of this fragment is far from certain, but the fragment has a hole of narrow diameter through the centre, which suggests that it is part of a bead.

Pit 1073

8.2.25 The only find from pit 1073 is an incomplete nail probably of Type 1.

8.3 **Ceramic building material**

8.3.1 A small quantity (3 fragments, 321g) of ceramic building material and fired clay (3 fragments, 10g) was recovered from the excavation. The only diagnostic fragment was a corner of thick imbrex, though a small flake with knife trimmed surface is likely to be from the base of a tegula. The tile fabrics included a light orange or brown coarse sandy fabric (Fabric C) and a hard red clay (Fabric D) without inclusions. The ?fired clay consisted of small flat tabular pieces 12mm thick, made in a sandy pink fabric and had one smooth flat surface and bonded back face suggesting these could be fragments of wall render.

Table 11: Catalogue of ceramic building material

Context	Nos	Wt (g)	Type	Fabric	Description	Date
802	1	303	Imbrex	Fabric D: fine marbled red clay	Corner fragment with U profile and flat edges; thickens to side edge. 20-32mm th	RB
802	1	7	Flat/teg?	Fabric D: Fine red clay	Small frag from knife cut base surface of tile, prob tegula.>14mm th.	RB
1072	3	10	Render?	Pink, sandy with limestone grits	Smooth flat moulded surface with flat bonding face on opposite side	
1072	1	11	Tile	Fabric C: Light orange brown coarse sandy clay	Flake of flat tile surface; >7nn th	RB
Total	6	331				

8.4 **The flint by Geraldine Crann**

8.4.1 Four flints were retained of which three were unworked, though one had been heated resulting in a matt grey colour. The fourth was a struck flake, but not dateable.

Table 12: Flint record

Context	Nos	Wt (g)	Type	Description	Date
1002	1	1	Natural		~
1027	1	5	Unworked	Heated	Undated
1097	1	1	Flake	Worked punctiform butt; pronounced hinge termination	Undated
1156	1	6	Natural		~

8.5 **The stone**

8.5.1 A small quantity of stone amounting to 12 fragments weighing 1208g was retained during the excavation. Most of the pieces appear to be natural unworked local stone. However two pieces of flat split limestone slabs, 11 and 15mm thick, may derive from stone roofing. A third lozenge-shaped piece with a worn surface may be a small

palette, possibly for grinding pigments or cosmetics: it was found in pit 1140 of 3rd-century date.

Table 13: Catalogue of stone and stone building material

Context	Nos	Wt (g)	Rock Type	Description
814	4	776	Ironstone	Natural broken blocks; unworked though flat surface on a couple of pieces may indicate some shaping. Possible building stone.
1072	1	37	Sandstone	Frag of split slab; ?roofing; 15mm Th
1072	1	11	Ironstone	Natural stone
1072	2	12	Limestone	Natural stone
1075	1	215	?Purbeck limestone (calcareous fossiliferous)	Fragment of split flat slab with arc of burning to one side; 15mm Th
1076	1	21	Limestone	Fragment of flat slab ?roofing; 11mm Th
1077	1	77	Flint	Sub-cubic block of black flint, possibly deliberately shaped. Size: 30 x 30 x 36mm
1142	1	59	Fine red micaceous sandstone	Flat slab, slightly curved; worn on one side; 15mm Th, 65mm L, 42mm B. Possibly broken at one; originally lozenge shaped palette.
Total	12	1208		

8.6 **The animal bone**

8.6.1 Animal bone amounting to 358 fragments weighing 2.6kg was recovered by hand excavation from 29 contexts. A further 109 fragments weighing 240g were recovered from sieved samples. The majority of the animal bone was recovered from the ditches and pits and only a limited quantity from three grave fills (1003, 1015, 1077). The assemblage has not been recorded, but will be available as part of the archive for future research.

8.7 **Shell**

8.7.1 Two fairly complete oyster shells (32g) were recovered from grave fill 1003 and ditch fill 1149.

8.8 **Assessment of environmental remains by Laila Sikking**

Methodology

8.8.1 Six samples, ranging in size from 28 to 34 litres, were taken during the excavation for recovery of charred plant remains from pits, ditches and a gully. Another sample (27 litres) was taken from a grave backfill that contained charcoal and cremated bone (sample 12, context 1077). These seven samples were processed by flotation using a modified Siraf-type machine, with the flots collected on a 250µm mesh. After air-drying the flots were scanned for material under a binocular microscope at x10 and

x20 magnification. A further six samples were taken from the stomach area of skeletons for the recovery of mineralised plant remains. These samples were wet-sieved and a sample of the finer 2-0.5 mm fractions was scanned under a binocular microscope at x10 and x20 magnification.

Results

8.8.2 The results of the assessment of charred plant remains are presented in Table 14. The flots varied in size. The quantity of identifiable material was often low and the preservation was moderate to poor. All flots contained large quantities of clinker, occasional pieces of slag and modern root material. Recent contamination of paper fibre and plastic occurred in two samples (sample 14, context 1146 and sample 15, context 1142).

8.8.3 The small quantity of wood charcoal in the flots produced a range of taxa, including *Quercus* (oak), *Fraxinus* (ash), *Prunus* (cherry, sloe etc.). Five flots contained cereal grains, including *Triticum* (wheat), *Hordeum* (barley) and *Avena* (oat). Modern weed seeds were present in 4 of the samples, including *Rubus* (blackberry), *Sambucus* (elder) and *Urtica* (nettle). All but one sample contained molluscs, four of which in high quantities (see Table 14).

8.8.4 The six samples that were wet-sieved for mineralised plant remains from stomach context of skeletons did not produce any identifiable material, although sample 1 (context 1003) did contain small pieces of wood that are possibly mineralised.

Table 14: The results of the assessment of the charred plant remains and charcoal

Charred plant remains						
Sample no.	Context no.	Type of context	Charcoal quantity	Charcoal identification	Grain identification	Molluscs
7	1071	pit	+	*Quercus*, *Fraxinus*, *Prunus* Mixed taxa	*Triticum*	+++
10	1098	ditch	+	*Quercus*		++++
11	1093	ditch	+	*Quercus*		+++
14	1146	ditch	+	*Prunus*	Cereal indet	+
15	1142	pit	+	*Fraxinus*, Mixed taxa	*Hordeum/Avena*	-
16	1158	gully	+	*Alnus/Corylus*	*Triticum*	++++
12	1077	grave backfill	++	*Alnus/Corylus*, *Quercus*	*Hordeum*, *Avena*	+

+ = present (up to 5 items), ++ = frequent (5-25), +++ = common (25-100), ++++ = abundant (>100)

Implications

8.8.5 The results of the assessment indicate that the sampled pits, ditches, gully and grave backfill contained discarded refuse of domestic origin (fuelwood and foodstuff). The presence of clinker and slag may indicate industrial activity but could be intrusive and of modern origin in view of the levels of truncation on site. The only indications

of domestic refuse were the occasional cereal grains in some of the samples. Fuelwood was present in all samples but only represented by a few fragments.

8.8.6 The quantity and preservation of charcoal was generally quite poor which makes the potential for further identification low. The range of food remains, related to diet, was also limited. It is recommended that no further work is merited.

8.8.7 Since molluscs were well preserved in most samples and often present in large quantities, there is a potential for further analysis, if required.

Acknowledgements

8.8.8 Thanks to Dana Challinor and Simon Dobinson for their help in identifying the charred remains and editing the report. Also thanks to Philippa Puzey-Broomhead for undertaking the sample processing.

9 CONCLUSIONS AND DISCUSSION

9.1.1 The cemetery occupies a roughly rectangular area defined by ditches, recut at least once on the west and south, suggesting that the land boundaries were maintained over some time. The ditches do not appear to form an enclosure deliberately laid out for the cemetery, but to represent land boundaries and subdivisions previously laid out probably representing paddocks or fields outside the Roman town of Lactodorum, which subsequently were put to non-agricultural use as the extra-mural settlement expanded. The quantity and condition of pottery from the site has meant most features could not be reliably dated. However the major period of activity appears to be concentrated in the 2nd century based on the ceramic evidence. Only four contexts contained 3rd-4th-century pottery and only one of these, 1067, was certainly 4th- century in date. The boundary ditch 1099/1100 appears to have originated in the late 1st or 2nd century and was maintained and recut finally silting up during the 4th century. The earlier ditch 1099 contained pottery predominantly of 2nd-century date, whilst the later recut ditch 1100 contained 2nd-century pottery in its lower fills and later 3rd-4th-century pottery in the upper fill. A similar pattern of deposition was found during the evaluation (Sims and Bashford 2004).

9.1.2 The lack of dating material in many of the graves means it has not been possible to trace the development of the cemetery in any detail. The most south-westerly graves lay closest to boundary ditch 1099/1100 and were aligned either parallel (roughly north-south) or at right angles (roughly east-west) with the ditch and may have formed the initial core of the cemetery with the graves laid out neatly in short rows. Certainly those graves (1053, 1101, 1154) containing pottery of late 1st – early 2nd-century date (Fig 2: early-middle Roman (EMR) phase) in their fills occur in this area, together with some (1021, 1046, 1079) containing pottery of 2nd-century date (Fig 2: middle Roman (MR) phase). Thereafter the positioning of graves appears to

have been more haphazard with a straggling line running north-eastwards with less attempt at producing a neat arrangement. The dating, such as it is, bears out this pattern of development suggested by the layout of the graves. Three graves (122, 1021 and 1011) contained contemporary grave goods: the most southerly (1021) contained a black burnished ware pot dated to mid-late 2nd century placed as a grave good, whilst the Nene Valley colour-coated beaker placed in grave 122 was of late 3rd - 4th-century date. The jet necklace and bronze bracelets from grave 1011 indicate this grave to be of late 2nd-3rd-century date. One (122) of these lay on the north-eastern periphery and the other (1011) immediately to the north. The northernmost grave (1001) of the cemetery, the only one positioned to the north of ditch 1162, contained pottery of late 3rd-4th-century date.

9.1.3 The dominant orientation of graves was broadly north-south, though there was some variation with a few being NW-SE or NNW-SSE. West-east graves were far fewer but occurred both in the primary core area as well as at the northern extent of the cemetery. None of the graves intercut, suggesting that they may have had some form of markers, though no evidence of this survived. Some graves lay very close together, perhaps indicative of a family relationship. The more scattered pattern of burials that developed beyond the core also occurs in other cemeteries in Towcester suggesting they were not intensively used or there was no pressure on space.

9.1.4 The burials from the cemetery at Radstone Technology site, Towcester, seem to fit in with the overall picture of Romano-British burial practices of the 3rd - 4th centuries, in terms of burial positions, grave goods, coffins and decapitations. In other words, there was nothing striking or unexpected about the Radstone burials. The fact that probably only a very small sample of the burial population from the cemetery was represented within the assemblage, and that a large proportion of burials were of indeterminate sex (mainly due to high fragmentation and missing elements), precludes any conclusions about the demographic profile of the population - the very low number of females and juveniles is almost certainly not true of the overall population of the cemetery.

9.1.5 Despite the fragmentary and often poor preservation of the assemblage, many pathologies were recorded, and again the types seen conform to the expected range for a population of this date and type. Certain pathologies however, such as dental calculus and osteoarthritis, were much more frequent than at many other contemporary populations, and this, coupled with the evidence for coffins (probably wooden, only in eight of the 28 graves), may indicate that the people buried in this cemetery represent a poor community of low socio-economic status.

9.1.6 The primary dating for the cemetery suggests it may have been used from the mid-late 2nd century to the 4th century. Inhumation burials have been generally regarded as the prominent (and sometimes dominant) rite in the later 3rd and 4th centuries replacing the earlier rite of cremation, though in some areas, such as Kent, inhumation was well-established in the early Roman period and both rites are seen alongside each other in the 1st and 2nd centuries in many cemeteries. In the case of

Towcester one might expect burial practice to follow the broad national trend with inhumations dating mainly if not entirely to the period *c* 250-400. As indicated above, the dating evidence for the Towcester Radstone cemetery is poor. When the dating evidence for inhumation burials in Oxfordshire was reviewed (Booth 2001) these were found to be solidly 4th century (all the coin-dated burials, for example, were of this date) and the assumption was that most if not all of the associated undated graves (the great majority in most cemeteries) were of similar date. However, more recently at least occasional inhumations have been found to be earlier with an example of later 2nd century at Gill Mill (South Leigh) and one from Didcot which is coin-dated to the middle of the 3rd century (with coins that are very unlikely to be residual in this context) (pers. comm. Paul Booth). The assumption that Roman inhumations in this region will necessarily be 4th century or even late 3rd-4th cannot be automatically regarded as the default position where evidence is lacking. At Towcester Radstone the spatial pattern of the graves tends to suggest the cemetery was in use over an extended period, rather than being used more intensively for a shorter time-span. The relationship between the 2nd-century ditches and the burials, together with the grave good of a BB1 handled beaker for which a later 2nd century date is preferred (though it is possible this vessel had been curated), suggest the use of the cemetery may have originated during the later 2nd century and on the evidence of the jet beads from grave 1011 and a Nene Valley colour coated beaker from grave 124 continued in use during the later Roman period.

9.1.7 The cemetery was situated in the south-western suburb of the Roman town of Towcester, roughly equidistant between the Alchester Road and Brackley Road, also thought to be a Roman road running west from Towcester (Fig. 5). The ditches surrounding the cemetery do not appear to align with either of these roads and may relate to an earlier layout of land subdivisions. Although it was common practice in the Roman period for burials to be located outside areas of habitation alongside roads, it would seem that this cemetery did not relate directly to either road. However it has been suggested by Brian Giggins (pers.comm.) that in view of "the position of the cemetery in relation to both the Alchester Road and putative Roman Road along Brackely Road, ditch 1050 might relate to a road linking the Alchester Road crossing of the Silverstone Brook and the town's putative West Gate. This may have been required after the town defences were constructed in the late 2nd century and the Alchester Road within the walled town had fallen out of use". Such an arrangement would account for the location of the cemetery and its period of use would fit neatly into such a sequence of events.

9.1.8 Burials have been found elsewhere outside the defended area of Towcester with inhumations to the south and south-east of the town either side of Watling Street and to the north of the Brackley Road. A cremation burial has also been recorded to the north of the Brackley Road in the area of Sponne School (BHO) and a cremation cemetery was found next to the Silverstone Brook during the late 19th century to the east of the Alchester Road. A cemetery was also found to the east of Water Lane during the excavation of the Safeway site.

9.1.9 Occupation and industrial activity has been found extensively (Fig. 5) lining the Alchester road and areas of structures have been found adjacent to the Brackley Road indicating a substantial extra-mural settlement to the west and south-west of the walled area of the town (BHO). A scatter of Roman coins have been found to the east of the Radstone site between it and the Alchester road perhaps indicating activity or occupation continuing into this area. The evaluation (Sims and Bashford 2004) to the south of the site did not produce extensive evidence of structures or occupation, though stone wall footings were found in trench 5 suggesting that development alongside the Alchester road was intermittent or remained close to the road.

9.1.10 The consistent presence of pottery, animal bone and other artefacts within the ditch and pit fills on the site, whilst not dense, suggests domestic occupation or other activity occurred in the vicinity. The source of material is most probably the occupation and the structures identified to the north alongside the Brackley Road as the greatest density of artefacts was found in the northern sector of the site with a distinct decrease in density southwards. It is possible the cemetery served this community and was established on a vacant plot on the periphery of the settlement.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1000	Grave goods	1012	-	-	-	Grave goods accompanying skeleton 1009 including a CuA bracelet on each arm, a finger ring, finger key ring and necklace of jet beads.	CuA Bracelet x2, CuA ring, CuA ring (key); 19 jet beads
1001	Grave cut	1004	0.07 - 0.15	0.48	1.78	Subrectangular grave cut; heavily truncated.	-
1002	Skeleton	1004	-	-	-	Male. Age: *c* 30. Supine; 80% complete; coffin?	1 Fe nail; <1>
1003	Grave backfill	1004	0.07 - 0.15	0.48	1.78	Compact orange brown silty clay containing occasional gravel and small stones.	Pot, bone, metal; <1>
1004	Grave group	1004	0.07 - 0.15	0.48	1.78	Consists of 1001-1003	-
1005	Grave cut	1008	0.1	0.61	1.36	Irregular shape, flat base; heavily truncated by C20 building work.	-
1006	Skeleton	1008	-	-	-	Female? Adult, Aged 45+; 50% complete. Disturbed, truncated.	-
1007	Grave backfill	1008	0.1	0.61	1.36	compact yellowish orange brickearth clay; no inclusions. Contaminated by 20th cent debris during construction of car park.	-
1008	Grave group	1008	-	-	-	Consists of 1005-1007. Grave heavily truncated and damaged by C20 construction work.	-
1009	Skeleton	1012	-	-	-	Sub-adult; age: 12-17yrs; prone; 75% complete. No evidence of a coffin.	see (1000)
1010	Grave backfill	1012	0.1	-	1.55	Firm brown sandy clay containing occasional small-medium rounded flint cobbles, occasional chalk, limestone, grit and moderate charcoal flecks and occasional very small fragments of pottery.	-
1011	Grave cut	1012	0.1	0.6	1.55	Little of the grave cut was visible or definable due to heavy truncation.	-
1012	Grave group	1012	-	-	-	Adolescent burial with rich grave goods. Consists of (1000) (1009) - (1011)	-
1013	Grave	1025	-	-	-	Hypothetical grave cut - not	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
	cut					visible during excavation.	
1014	Skeleton	1025	-	-	-	Male. Age: late 20s-early 30s. Supine; fairly complete; no coffin.	1 hobnail
1015	Grave backfill	1025	0.18	-	-	Very compact sticky orange-brown clay with pea-grit, occasional small stones and dark patches of soil.	<3>
1016	Skeleton	-	-	-	-	Remains of skeleton immediately below hardcore of C20 car park. Male adult, aged 18-25; <5% surviving.	-
1017	Layer	-	-	-	-	Natural	-
1018	Layer	-	-	-	-	Interface	-
1019	Layer	-	-	-	-	Hardcore of C20 car park	-
1020	Grave group	1020	-	-	-	Burial of juvenile. Consists of (1021)-(1024). Possible funerary vessel to N of skull and further pottery sherds to E of R arm. Lower part of body largely destroyed by field drains.	Pottery; <4>
1021	Grave cut	1020	0.08	0.6	1.1	Rectangular? Base only survives. Heavily truncated.	-
1022	Skeleton	1020	-	-	-	Juvenile, aged *c* 9-12 yrs, prone; no coffin.	<4>
1023	Grave backfill	1020	0.08	0.6	1.1	Orange brown clay with grey mottling.	-
1024	Pot	1020	-	-	-	Possible funerary vessel situated N of individuals head. A second vessel may be represented by sherds lying on the E side of the grave.	Pottery
1025	Grave group	1025	-	-	-	Male adult burial. Consists of (1013)- (1015)	-
1026	Grave cut	1029	-	0.4	1.96	Rectangular; vertical sides, flattish base.	-
1027	Grave backfill	1029	-	0.4	1.96	Compact greenish brown silty clay containing low density of gravel and charcoal flecks and occasional pebbles.	Pottery
1028	Skeleton	1029	-	-	-	Adult, male, aged 18+; lying with torso twisted to E and skull facing E. C. 70% complete.	-
1029	Grave group	1029	-	-	-	Consists of (1026)- (1028)	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1030	Grave cut	1033	0.08	0.6	1.65	Subrectangular grave cut; flat base, ?vertical sides; heavily truncated.	<5>
1031	Skeleton	1033	-	-	-	Female, Adult, 95% complete. Extended, supine; arms flexed over torso. Skull and jaw decapitated and placed over feet. No coffin.	-
1032	Grave backfill	1033	0.08	0.6	1.65	Light brown clay	-
1033	Grave group	1033	-	-	-	Inhumation burial; decapitated. Consists of (1030)- (1032)	-
1034	Grave cut	1037	0.04	0.6	1.46	Rectangular; steep near vertical sides, flat base.	-
1035	Skeleton	1037	-	-	-	Adult, aged 17-18+; supine. 20% complete. L arm flexed lying over body.	-
1036	Grave backfill	1037	0.04	0.6	1.46	Dense orange brown clay with dark brownish grey mottles.	Fe
1037	Grave group	1037	0.04	0.6	1.46	Inhumation burial; lower half of body only surviving and that partial - disturbed and truncated. Consists of (1034)- (1036)	-
1038	Grave cut	1041	0.1	0.52	2.02	Rectangular, flat base, steep straight sides.	-
1039	Skeleton	1041	-	-	-	Adult, ?female; supine; 40% complete. Hands resting on abdomen.	-
1040	Grave backfill	1041	0.1	0.52	2.02	Yellowish brown clay containing occasional small stones c.20mm and sparse charcoal.	-
1041	Grave group	1041	0.1	0.52	2.02	Inhumation burial; upper body poorly preserved. Consists of (1038)- (1040)	-
1042	Grave group	1042	-	-	-	Inhumation burial. Heavily truncated by car park and drains. Consists of (1043)- (1045)	-
1043	Grave cut	1042	-	-	-	Base only survives	-
1044	Skeleton	1042	-	-	-	Adult 17+; prone; lower body only survived.	-
1045	Grave backfill	1042	-	-	-	Orange brown clay with grey mottles; indistinguishable from natural	-
1046	Grave	1049	0.15	0.6	1.47	Rectangular, flattish base,	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
	cut					vertical sides.	
1047	Skeleton	1049	-	-	-	Adolescent, aged 12+, supine, decapitated; 80% complete. Skull face down to R of R knee.	<6>
1048	Grave backfill	1049	0.15	0.6	1.47	Compact greenish brown silty clay containing occasional charcoal flecks and small chalk and flint stones.	Pottery; <6>
1049	Grave group	1049	0.15	0.6	1.47	Inhumation burial; decapitated. Consists of (1046)- (1048)	-
1050	Gully group	1050	0.12-0.14m	0.75-0.8m	c.18m	north-south gully comprising interventions 1051 and 1159. ?defining the east side of the cemetery	-
1051	Gully cut	1050	0.14	0.8	-	Linear ditch with continuous concave sloping sides and curved base.	-
1052	Gully fill	1050	0.14	0.8	-	Mid-dark orange brown clay	-
1053	Grave cut	1078	0.1	0.4	1.8	Rectangular, vertical sides	-
1054 s.a. 1077	Grave fill	1078	0.1	0.4	1.8	Compact light brownish orange clay containing occasional chalk flecks and frequent charcoal and pottery sherds located predominantly around head and shoulders of burial [this was interpreted as an earlier cremation and cremation urn disturbed by inhumation on site, but material from the sieved sample does not bear this out].	See 1077
1055	Skeleton	1078	-	-	-	Male, adult aged 45+; supine; 95% complete. Remains of pottery vessel between left leg and grave cut.	Pottery
1056	Ditch fill	1058	0.29	1.25	-	Dark grey clay with occasional charcoal	Pot, bone
1057	Ditch fill	1058	0.28	1.25	-	Light grey clay with reddish brown mottles; occasional charcoal, sparse stones	Pottery
1058	Ditch cut	1058	0.56	1.25	-	north-south linear ?boundary ditch to cemetery; flat base, near vertical sides. Recut of 1062	-
1059	Ditch fill	1062	0.32	-	-	Light brown clay with sparse charcoal and occasional stone	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1060	Ditch fill	1062	0.36	-	-	Light grey clay with reddish brown mottles; sparse charcoal.	Pot, bone
1061	Ditch fill	1062	0.2	-	-	Light reddish brown clay; lower fill of ditch	(bone present)
1062	Ditch cut	1062	0.88	1.5	-	north-south linear ?boundary ditch to cemetery; rounded base, near vertical sides. Cut by 1058	-
1063	Grave cut	1066	0.14	0.8	1.52	Rectangular, flat base, steep straight sides.	-
1064	Skeleton	1066	-	-	-	Adolescent?, aged 15-18?, probably supine, c.5% survives. Truncated by machining.	-
1065	Grave backfill	1066	0.14	0.8	1.52	Fairly compact yellowish brown clay containing occasional stones 10-30mm.	Bone
1066	Grave group	1066	0.14	0.8	1.52	Inhumation burial poorly preserved and heavily truncated by 20th cent groundworks. Consists of (1063)- (1065)	-
1067	Ditch fill	1069	0.22	-	-	Grey clay with sparse charcoal flecks; upper fill of ditch	Pot, bone
1068	Ditch fill	1069	0.2	-	-	Light reddish brown clay containing occasional pebbles.	Pot, bone
1069	Ditch cut	1069	0.45	1.6		east-west aligned linear ditch with flat base and sloping sides	-
1070	Pit cut	1070	0.52	2.4	2.4	Sub-circular pit with sloping sides and rounded concave base. Roman.	-
1071	Pit fill	1070	0.1	1.3	-	Greyish brown silty clay. Primary fill of pit.	Pot, bone; <7>
1072	Pit fill	1070	0.46	-	-	Grey clayey silt containing low density of gravel. Similar in character to the natural; ?natural eroded sediment.	Pot, bone; sf28-30: CuA hairpin, glass bead, Fe nail
1073	Pit cut	1073	0.8	1.2	1.2	Circular pit with flat base and sloping sides. Roman	-
1074	Pit fill	1073	0.15	-	-	Brownish grey silty clay [natural primary sedimentation]	Pottery
1075	Pit fill	1073	0.55	-	-	Orange brown clay containing low density of sand	Pottery
1076	Pit fill	1073	0.1	-	-	Friable brownish grey	Pot, bone,

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
						clayey silt. Top fill of pit.	Fe nail
1077	Grave backfill	1078	-	-	-	No context sheet - apparently renumbering of 1054 – see this context for description.	Human bone; pottery, bone; <12>
1078	Grave group	1078	0.1	0.4	1.8	Inhumation burial. Consists of (1053)-(1053) (1077)	-
1079	Grave cut	1082	0.1	0.5	1.96	Rectangular, flat base, steep straight sides.	-
1080	Skeleton	1082	-	-	-	Adult, male, aged late 20s-early 30s; supine with hands crossed over pelvis. 85% complete.	<8>
1081	Grave backfill	1082	0.1	0.5	1.96	Compact greeny greyish brown silty clay containing low density of charcoal flecks and moderate density of chalk and occasional flint.	Pottery; <8>
1082	Grave group	1082	0.1	0.5	1.96	Inhumation burial. Consists of (1079)- (1081). No coffin.	-
1083	Grave cut	1086	0.09	0.68	1.58	Rectangular, flat base, steep straight sides.	-
1084	Skeleton	1086	-	-	-	Adolescent/yound adult ?<20yrs; prone. Only head and upper torso survive: 25% complete.	-
1085	Grave backfill	1086	0.09	0.68	1.58	Compact yellowish brown clay containing low density of small gravel *c* 20mm and sparse charcoal.	Bone
1086	Grave group	1086	0.09	0.68	1.58	Inhumation burial. Lower body truncated by machining for car park. Consists of (1083)- (1085)	-
1087	Grave backfill	1090	0.1	0.7	1.9	Sticky greyish brown clay.	Fe nails x13; fossil ?bead; <9>
1088	Skeleton	1090	-	-	-	Female, Adult, 50% complete. Extended, supine; arms straight, R hand over pelvis.	<9>
1089	Grave cut	1090	0.1	0.7	1.9	Subrectangular, vertical sides, flat base.	Fe nails x13; fossil ?bead; <9>
1090	Grave group	1090	0.1	0.7	1.9	Inhumation burial in possible coffin: adult female. Coffin nails present. Consists of (1087)- (1089)	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1091	Ditch cut	1091	0.75	3.0		Linear ditch aligned north-south, concave base, sloping sides splayed to top where eroded. Possibly western boundary of cemetery.	-
1092	Ditch fill	1091	0.2	0.44		Greyish brown silty clay [Primary silting – eroded natural]	-
1093	Ditch fill	1091	0.3	0.9		Greyish brown sandy clay with orange brown mottles. [Natural erosion/ sedimentation]	Pot, bone; <11>
1094	Ditch cut	1091	0.1	0.9		Pale yellowish brown clay [Natural erosion / silting]	-
1095	Ditch fill	1091	0.2	1.2		Orange brown clay with greyish brown mottling [Natural sedimentation in top of ditch]	-
1096	Ditch cut	1096	0.62	1.54		Recut linear ditch; sloping sides and concave base. [W boundary of cemetery]	-
1097	Ditch fill	1096	0.44	1.4		Greyish brown sandy clay with orange brown mottles. [Natural sedimentation of recut ditch]	Pot, bone
1098	Ditch fill	1096	0.2			Grey silty clay with orange brown mottles [Upper fill, natural sedimentation]	Pot, bone; <10>
1099	Ditch group	1099	-	-	43m	north-south aligned ditch, cut by 1100, forming western boundary of cemetery. Comprises interventions 1062, 1091, 1110, 1137. C1-C2	-
1100	Ditch group	1100			45m	Recut of north-south aligned ditch, forming western boundary of cemetery. Comprises interventions 1058, 1096. C3-C4	-
1101	Grave cut	1104	0.10	0.55	1.60	Rectangular, roughly vertical sides and flattish base. Very shallow, heavily truncated by car park.	-
1102	Skeleton	1104	-	-	-	Adult male inhumation, supine, arms originally folded across pelvis. 60% complete. Feet missing.	-
1103	Grave backfill	1104	0.10	0.55	1.60	Compact greenish orange brown silty clay containing occasional charcoal flecks and low density of gravel and flints.	-
1104	Grave group	1104	0.10	0.55	1.60	Inhumation burial, aligned east-west. Consists of	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
						(1101)- (1103)	
1105	Ditch fill	1106	0.30	-	-	Greyish brown clay containing sparse charcoal and occasional stone.	-
1106	Ditch cut	1106	-	-	-	north-south linear with sloping sides	-
1107	Ditch fill	1110; 1099	0.29	-	-	Light greyish brown clay with reddish brown mottles, containing frequent pot, sparse charcoal and occasional stone.	Pottery
1108	Ditch fill	1110; 1099	0.50	-	-	Light greyish brown clay with reddish brown mottles, containing occasional stone.	Pot, bone, Fe nail
1109	Ditch fill	1110; 1099	0.06	-	-	Dark greyish brown clay [Primary natural fill]	-
1110	Ditch cut	1099	0.90	1.00	-	north-south linear ditch with near vertical sides and flat base.	-
1111	Ditch fill	1112	0.35	1.40	-	Light brown clay containing occasional stones. (Finds from top of fill)	Pot, bone
1112	Ditch cut	1112	0.3.5	1.40	-	east-west linear ditch with sloping sides and flat base.	-
1113	Grave cut	1116	0.10	0.70	1.99	Rectangular with steep sides and flat base; heavily truncated.	-
1114	Skeleton	1116	-	-	-	Extended inhumation, supine; L arm parallel to body, R arm folded across body and hand placed on L ulna/radius. Very poorly preserved; hands, feet, ribs largely only survived as smears in soil. Top of skull damaged by machine.	sf45-46 Fe nail and bar
1115	Grave backfill	1116	0.10	0.70	1.99	Moderately compact yellowish brown clay containing low density of small gravel *c* 20mm and rare charcoal. Redeposited clay natural	-
1116	Grave group	1116	0.10	0.70	1.99	Inhumation burial aligned NNW-SSE. Consists of (1113)- (1115), probably in coffin	-
1117	Ditch fill	1119	0.10	-	-	Greyish brown clay containing sparse charcoal and occasional stone.	Pot, bone

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1118	Ditch fill	1119	0.20	-	-	Light brown clay containing frequent stone. [Natural fill]	-
1119	Ditch cut	1119	0.23	1.40	-	east-west linear ditch with sloping sides and flat base	-
1120	Grave backfill	1123	0.14	0.60	1.95	Tenacious brown clay with occasional stones.	Pot; sf47-53, 59-67, 72-74: 2x Fe coffin fittings; 13x coffin nails
1121	Skeleton	1123	-	-	-	Extended inhumation, supine, but torso twisted onto L side and arms and knees close together, possibly tightly wrapped in shroud or squeezed tightly into coffin. Most of feet truncated, but a couple of hobnails suggest the body was wearing shoes.	-
1122	Grave cut	1123	0.14	0.60	1.95	Subrectangular, flat base, vertical sides	-
1123	Grave group	1123	0.14	0.60	1.95	Inhumation burial in coffin. Comprises 1120-22	-
1124	Grave cut	1128	0-0.09	0.53	1.70	Rectangular, flat base, steep straight sides. Almost completely truncated at N end.	-
1125	Coffin	1128	-	-	-	Presence of coffin indicated by 5 nails - 4 recovered from less truncated W side of grave aligned east-west and sloping down at an angle. The fifth was loose in spoil.	sf54-57, 68: 5x Fe nails
1126	Skeleton	1128	-	-	-	Extended inhumation, prone, virtually nothing survives above the pelvis.	-
1127	Grave backfill	1128	0.09	0.53	1.70	Compact greenish brown silty clay containing occasional flints, ironstone, chalk and small gravel.	Pot (1 sherd),
1128	Grave group	1128	0.09	0.53	1.70	Inhumation burial. Consists of (1124)- (1127) almost totally truncated at N end.	-
1129	Grave cut	1132	0.05	0.59	1.80	Sub-rectangular. Vertical sides, flat base. Truncated by 20th C car park and service trenches.	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1130	Skeleton	1132	-	-	-	Extended adult inhumation, female, supine, 90% complete.	-
1131	Grave backfill	1132	-	-	-	Compact light brownish orange clay containing occasional chalk flecks.	-
1132	Grave group	1132	0.05	0.59	1.80	Inhumation burial. Consists of (1129)- (1131)	-
1133	Grave cut	1136	0.13	0.68	2.16	Rectangular, flat base, steep sides. Truncated by 20thC service trenches and car park.	-
1134	Skeleton	1136	-	-	-	Extended adult inhumation, supine, cc. 60% survives (head and lower legs truncated). Lower arms flexed and hands crossed resting on lower pelvis.	sf69-71: Fe nails & bar
1135	Grave backfill	1136	0.13	0.68	2.16	Compact greyish yellow clay with a low density of small stones *c* 20mm and rare charcoal. [Redeposited natural clay]	-
1136	Grave group	1136	0.13	0.68	2.16	Inhumation burial. Consists of (1133)- (1135). Presence of a few nails suggests possible coffin.	-
1137	Ditch cut	1137	>0.44	>0.6	-	Linear boundary ditch aligned north-south, sloping sides. Not bottomed.	-
1138	Ditch fill	1137	0.10	-	-	Brown friable silty sand: primary fill of eroded natural	-
1139	Ditch fill	1137	0.30	-	-	Brownish grey friable clayey silt [natural sedimentation]	-
1140	Pit cut	1140	0.40	3.60	-	Sub-circular pit with sloping sides and flat base. Roman. Cuts ditches 1143 and 1137.	-
1141	Pit fill	1140	0.20	-	-	Friable brown silty sand with patches of reddish brown gravelly sand [Primary fill]	-
1142	Pit fill	1140	0.24	-	-	Brownish grey friable clayey silt [natural sedimentation]	Pot, bone; <15>
1143	Ditch cut	1143	0.90	1.00	-	Linear ditch aligned east-west, with U-shaped profile: concave base, steeply sloping sides.	-
1144	Ditch fill	1143	0.10	-	-	Friable brown silty sand [Primary fill - natural	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
						erosion]	
1145	Ditch fill	1143	0.30	0.80	-	Friable brownish grey clayey silt mixed with low density of sand. [Natural silting]	-
1146	Ditch fill	1143	0.45	-	-	Friable brownish grey clayey silt . [Upper fill of ditch. Natural silting]	Bone; <14>
1147	Ditch cut	1147	0.60	1.20	-	Linear ditch, with steeply sloping side surviving on N, flat sloping base with deeper rounded V-shaped cut representing a recut phase of the ditch. [Possibly southern boundary of Roman cemetery.]	-
1148	Ditch fill	1147	0.30	1.05	-	Orange brown sandy clay [Primary fill - natural erosion]	-
1149	Ditch fill	1147	0.45	-	-	Friable brownish grey clayey silt [Natural silting]	Pot, bone; <13>
1150	Grave backfill	1153	0.05	0.50	>0.6	Tenacious mid grey clay.	-
1151	Skeleton	1153	-	-	-	Extended inhumation, prone; only lower abdomen and upper legs survive - upper torso and head and most of legs truncated.	-
1152	Grave cut	1153	0.05	0.50	>0.6	Subrectangular, flat base, vertical sides; heavily truncated.	-
1153	Grave group	1153	0.05	0.50	>0.6	Inhumation burial, aligned north-south. Consists of (1150)- (1152)	-
1154	Grave cut	1157	0.16	0.55	1.76	Rectangular	-
1155	Skeleton	1157	-	-	-	Adult female inhumation, supine, head turned to W; R arm straight, L arm flexed across body. 5 hobnails recovered close to R hand and one from LH. CuA spoon close to R elbow	Sf75, 82: CuA spoon; Sf80, 81: Fe tacks x6
1156	Grave backfill	1157	0.16	0.55	1.76	Compact greenish brown silty clay containing moderate density of small chalk, occasional flints and charcoal flecks.	See contexts 1155 and 1160
1157	Grave group	1157	0.16	0.55	1.76	Inhumation burial aligned north-south with evidence of coffin. Consists of (1154)- (1156)	-

Context	*Type*	*Group*	*Depth*	*Width*	*Length*	*Description and Comments*	*Finds & samples*
1158	Ditch fill	1159	0.12	0.75	-	Greyish brown clay containing occasional stone.	Bone; <16>
1159	Ditch cut	1050	0.12	0.75	-	Linear ditch with continuous concave sloping sides and curved base.	-
1160	Coffin	1157	-	0.45	-	Presence of coffin indicated by 7 nails recovered from less truncated N end of grave 1154	sf76-79, 83-84: Iron nails x6
1161	Charnel deposit	?1157	-	-	-	human bone recovered to south of skeleton 1151 - possibly represent legs of 1151 disturbed by 20thC groundworks.	animal bone
1162	Ditch group	1162	0.23-0.45m	1.4-1.6m	18m	Northern ditch, aligned WSW-ENE	-

APPENDIX 2 GRAVE AND SKELETAL CATALOGUE

Key for dentition

/ - lost PM	U - Unerupted
X - Lost AM	E – Erupting
B – Broken	PE - Partial eruption
C – Caries	PU - Pulp exposed
A – Abcess	Pr – Tooth present in jaw (but no pathology)
H - Hypoplasia	NP- Tooth not present
Ca - Calculus	R- Root only
P - Periodontal disease	- = Jaw not present
G – Granuloma	Ag - Agenesis

Inhumation skeleton: 100 Grave cut: 102 Evaluation Fig. 3a Date: Roman

Orientation: NNW-SSE	Burial: extended supine; head facing east; lower arms crossed over torso.		Shape: Subrectangular	Coffin:	Possibly
Length:	*c*.1.55m	Width:	*c*.0.42m	Depth:	0.2m

Fill: 103
Very compact orange brown clay with grey lenses containing small quantity of ironstone grit.
Grave goods: None
Other finds: Sf 1: 1 nail by right cheek
Comments:

Skeleton Number 100

Preservation	Good (Grade 3)	**Dentition**															
Completeness	50-75%	**R**															**L**
Sex	Indeterminate	- C Ca	- C Ca	- C Ca	- NP	- Ca H	- Ca H	- Ca H	-	-	- Ca	- Ca	-	-	- Ca	- Ca	- Ca
Age	25-35 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	- C Ca	- Ca	- Ca	- Ca	- Ca	- NP	/	- Ca	- NP	/	- Ca	- Ca	- Ca	- Ca	- Ca	- C Ca

Pathology – Dental caries, dental calculus, enamel hypoplasia, hyperostosis frontalis interna, spinal osteoarthritis (cervical vertebrae),
Non-metric traits – None observed

Inhumation skeleton: 101 Grave cut: 104 Evaluation Fig. 3a Date: Roman

Orientation: NW-SE	Burial: Supine, extended with arms flexed and both hands resting on pelvis		Shape: Subrectangular	Coffin:	No
Length:	*c*.1.5m	Width:	*c*.0.48m	Depth:	0.1m

Fill: 105
Very compact orange brown clay with grey lenses containing small quantity of ironstone grit.
Grave goods: None
Other finds: Pottery
Comments:

Skeleton Number 101

Preservation	Good (Grade 3)	**Dentition**															
Completeness	50-75%	**R**															**L**
Sex	Male?	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -
Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -

Pathology – Abnormal femoral heads – possibly congenital hip dislocation
Non-metric traits – None observed

Inhumation skeleton: 121 Grave cut: 122 Evaluation Fig 3a Date: Roman 4th century

Orientation: NNW-SSE	Extended burial with hands placed in lap; lower legs/ankles possibly crossed.		Shape: Subrectangular	Coffin:	No
Length:	*c*.1.5m	Width:	*c*.0.65m	Depth:	0.1-0.15m
Fill: 123	Firm greyish brown sandy clay containing frequent small sub-angular flint pebbles and rounded cobbles, occasional grit and charcoal flecks.				
Grave goods: 124	Pot, placed beside head to SW				
Other finds:	None				
Comments:					

Skeleton Number 121

Preservation	Good (Grade 4)						**Dentition**											
Completeness	50-75%	**R**																**L**
Sex	Indeterminate	NP -	NP -	NP -	NP -	NP -	NP -	H	Pr	Pr	H	H	H	H	C Ca	C Ca	NP -	
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	NP -	NP -	NP -	NP -	Pr	NP -	NP -	NP -	NP -	NP -	NP -	Pr	NP -	Ca	Ca H	H	

Pathology – Dental caries, dental calculus, enamel hypoplasia
Non-metric traits – None observed

Inhumation grave group: 1004 Grave cut: 1001 (Plate 3) Date: Roman 3rd-4th century

Orientation: W-E	Burial: supine		Shape: Sub-rectangular	Coffin:	Possible
Length:	1.78m	Width:	0.48m	Depth:	0.07-0.15m
Fill:	Compact orange brown silty clay containing occasional gravel and small stones				
Grave goods:	None				
Other finds:	Pottery, flint, bone, shell, Fe nail				
Comments:					

Skeleton Number 1002

Preservation	Good							**Dentition**										
Completeness	>75%	**R**																**L**
Sex	Male	Ca P	P	/	- NP	- NP	- NP	- NP	- NP	- NP	- NP	- C	- C	- Ca	- NP	Ca P	Ca P	
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	Ca P	Ca P	C P	- C	-	-	- Ca	/	-	- Ca	Ca	Ca	Ca P	Ca P	Ca P	Ca	

Pathology – Dental caries, dental calculus, periodontal disease
Non-metric traits – Zygomatic facial foramina, hypotrochanteric fossa

Inhumation grave group: 1008 Grave cut: 1005 (Not illustrated) Date: Roman

Orientation: north-south	Burial: disturbed		Shape: truncated	Coffin:	None
Length:	1.36m	Width:	0.61m	Depth:	0.1m
Fill:	Compact yellowish orange brickearth clay; no inclusions. Contaminated by 20th cent debris during construction of car park.				
Grave goods:	None				
Other finds:	None				
Comments:	Heavily truncated.				

Skeleton Number 1006

Preservation	Poor (Grade 4)							**Dentition**										
Completeness	<25%	**R**																**L**
Sex	Male?	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	Ca -	Ca -	NP -	NP -	NP -	Ca -	

Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	Ca	NP	NP	NP	NP	NP	Ca	NP	NP	NP	Ca	NP	NP	NP	NP	Ca
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathology – Dental calculus, spinal osteoarthritis (cervical vertebrae)
Non-metric traits – Supra-orbital notch

Inhumation grave group: 1012 Grave cut: 1011 (Plates 5-6) Date: Roman 3rd-4th century

Orientation: NW-SE	Burial: prone		Shape: truncated	Coffin:	None
Length:	1.55m	Width:	0.6m	Depth:	0.1m

Fill: Firm brown sandy clay containing occasional small-medium rounded flint cobbles, occasional chalk, limestone, grit and moderate charcoal flecks and occasional very small fragments of pottery.
Grave goods: SFs2-26: CuA Bracelet x2, CuA ring, CuA ring with key; 19 jet beads; bone object
Other finds: None
Comments: Heavily truncated. The grave goods indicate this burial was female.

Skeleton Number 1009

Preservation	Destroyed (Grade 3)	**Dentition**															
Completeness	25-50%	**R**															**L**
Sex	Indeterminate (subadult)	NP	NP	NP	NP	NP	NP	Ca	Ca	NP	Ca	Ca	Ca	NP	NP	NP	NP
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Age	12-17 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	NP	NP	NP	NP	NP	NP	NP	NP	Ca	Ca	NP	NP	NP	Ca	NP	NP
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathology – None observed
Non-metric traits – None observed

Inhumation grave group: 1025 Grave cut: 1013 (Not illustrated) Date: Roman

Orientation: east-west	Burial: supine		Shape: truncated	Coffin:	None
Length:	-	Width:	-	Depth:	0.18m

Fill: Very compact tenacious orange-brown clay with pea-grit, occasional small stones and dark patches of soil.
Grave goods: None
Other finds: Animal bone; 1 hobnail
Comments: truncated

Skeleton Number 1014

Preservation	Good (Grade 3)	**Dentition**															
Completeness	>75%	**R**															**L**
Sex	Male?	NP	NP	NP	NP	Ca	Ca	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Age	25-35 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	Ca	Ca	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	C
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathology – Dental caries, dental calculus, spinal osteoarthritis (atlas and axis), periostitis on right tibia
Non-metric traits – Double facets on atlas, hypotrochanteric fossa

Inhumation grave group: 1016 Grave cut: - Not illustrated Date: Roman

Orientation:	NNW-SSE	Shape:	-	Coffin:	
Length:	-	Width:	-	Depth:	-

Fill: Remains of skeleton immediately below hardcore of C20 car park.
Grave goods: None
Other finds: None
Comments: No grave cut etc. surviving

Skeleton Number 1016

Preservation	Good (Grade 3)	**Dentition**															
Completeness	<25%	**R**															**L**
Sex	Male	Ca	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP

		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	NP -	NP -	Ca -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -

Pathology – Dental calculus
Non-metric traits – Parietal foramen, supra-orbital notch

Inhumation grave group: 1020 Grave cut: 1021 (Plate 4) Date: Roman mid-late 2nd century

Orientation: NW-SE	Burial: prone		Shape: Rectangular?	Coffin:	None
Length:	1.1m	Width:	0.6m	Depth:	0.08m
Fill:	Orange brown clay with grey mottling.				
Grave goods:	Possible funerary vessel situated N of individuals head. A second vessel may be represented by sherds lying on the E side of the grave.				
Other finds:	None				
Comments:	Heavily truncated. Lower part of body largely destroyed by field drains.				

Skeleton Number 1022
Preservation Destroyed (Grade 4) **Dentition**
Completeness <25%

		R															**L**
Sex	Male	NP -	NP -	NP -	NP -	NP -	Ca -	Ca -	Ca -	Ca	Ca H	Ca	X	X	NP -	C Ca -	C -
Age	35-45 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	NP -	NP -	C Ca -	C Ca -	Ca H -	NP -	NP -	Ca -	Ca -	NP -	NP -	NP -	NP -	NP -	NP -	C -

Pathology – Dental caries, dental calculus, enamel hypoplasia, periodontal disease, spinal osteoarthritis (cervical vertebrae)
Non-metric traits – Double facets on atlas

Inhumation grave group: 1029 Grave cut: 1026 (Not illustrated) Date: Roman AD120

Orientation:NW-SE	Burial: lying with torso twisted to E and skull facing E		Shape: Rectangular	Coffin:	None
Length:	1.96m	Width:	0.4m	Depth:	-
Fill:	Compact greenish brown silty clay containing low density of gravel and charcoal flecks and occasional pebbles.				
Grave goods:	None				
Other finds:	Pottery, flint				
Comments:	-				

Skeleton Number 1028
Preservation Good (Grade 2) **Dentition**
Completeness 50-75%

		R															**L**
Sex	Male?	NP -	NP -	NP -	NP -	NP -	NP -	NP -	/	-	/	U	H -	H -	Ca -	Ca -	H -
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	Ca -	Ca -	NP -	NP -	NP -	Ca -	Ca -	Ca -	NP -	NP -	Ca H -	Ca H -	Ca H -	Ca -	NP -	NP -

Pathology – Dental calculus, unerupted and malaligned upper canine, peg-shaped tooth, enamel hypoplasia
Non-metric traits –None observed

Inhumation grave group: 1033		Grave cut: 1030	(Not illustrated)	Date: Roman	
Orientation: S-N	Burial: extended, supine, arms flexed over torso; Decapitated: skull and jaw placed over feet.		Shape: subrectangular	Coffin:	None
Length:	1.65m	Width:	0.6m	Depth:	0.08m
Fill:	Light brown clay				
Grave goods:	None				
Other finds:	None				
Comments:	-				

Skeleton Number 1031

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	>75%	**R**																**L**
Sex	Female?	H Ca -	Ca -	C	/	C	Ca -	Ca -	/	Ca -	Ca -	Ca	/	X	X	C Ca -	Ca -	
Age	25-35 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	NP -	C Ca -	Ca -	Ca -	Ca -	Ca -	Ca -	/	/	Ca -	Ca -	Ca -	NP -	C Ca -	C Ca	/	

Pathology – Dental caries, dental calculus, enamel hypoplasia, osteophytosis on rib, cribra orbitalia
Non-metric traits – Zygomatic facial foramina, Double facets on atlas, hypotrochanteric fossa

Inhumation grave group: 1037		Grave cut: 1034	(Not illustrated)	Date: Roman	
Orientation: NW-SE	Burial: supine; L arm flexed over body		Shape: Rectangular	Coffin:	None
Length:	1.46m	Width:	0.6m	Depth:	0.04m
Fill:	Dense orange brown clay with dark brownish grey mottles.				
Grave goods:	None				
Other finds:	Fe object				
Comments:	Upper half of body truncated				

Skeleton Number 1035

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	<25%	**R**																**L**
Sex	Indeterminate	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	
Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	

Pathology – Periostitis on rib shaft
Non-metric traits – None observed

Inhumation grave group: 1041		Grave cut: 1038	(/Not illustrated)	Date: Roman	
Orientation: NNW-SSE	Burial: supine, hands resting on abdomen		Shape: Rectangular	Coffin:	None
Length:	2.02m	Width:	0.52m	Depth:	0.1m
Fill:	Yellowish brown clay containing occasional small stones c.20mm and sparse charcoal.				
Grave goods:	None				
Other finds:	None				
Comments:	Upper body poorly preserved				

Skeleton Number 1039

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	50-75%	**R**																**L**
Sex	Indeterminate	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	
Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	

Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -

Pathology – None observed
Non-metric traits – Vastus notch and vastus fossa (patella), third trochanter

Inhumation grave group: 1042 Grave cut: 1043 (Not illustrated) Date: Roman

Orientation: Extended, prone north-south Shape: truncated Coffin: None
Length: - Width: - Depth: -
Fill: Orange brown clay with grey mottles; indistinguishable from natural
Grave goods: None
Other finds: None
Comments: Lower body only survived

Skeleton Number 1044

Preservation Destroyed

Completeness 25-50%

Sex Indeterminate

Age >18 years

Stature Could not be determined

Dentition

	R															**L**
	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -

Pathology – Anomaly on right talus, ?traumatic in origin, possibly fused with part of calcaneus
Non-metric traits – None observed

Inhumation grave group: 1049 Grave cut: 1046 (Plate 7) Date: Roman 2nd century or later

Orientation: S-N Burial: extended, supine; decapitated, skull placed face down to R of R knee Shape: Rectangular Coffin: None
Length: 1.47m Width: 0.6m Depth: 0.15m
Fill: Compact greenish brown silty clay containing occasional charcoal flecks and small chalkand flint stones.
Grave goods: None
Other finds: Pottery
Comments:

Skeleton Number 1047

Preservation Poor (Grade 4)

Completeness 50-75%

Sex Indeterminate (subadult)

Age 12-17 years

Stature Could not be determined

Dentition

	R															**L**
Sex	U	Ca -	-	Ca -	Ca -	H -	Ca H -	H -	H -	H -	H -	-	-	-	-	U
Age	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	U	-	-	-	-	Ca H -	Ca H -	Ca -	Ca -	Ca -	Ca H -	Ca -	-	Ca -	Ca -	U

Pathology – Dental calculus, enamel hypoplasia, supernumerary dentition (extra lower incisor), cribra orbitalia
Non-metric traits – None observed

Inhumation grave group: 1078 Grave cut: 1053 (Plate 8) Date: Roman late 1st – 2nd century

Orientation: WSW-ENE Burial: extended, supine Shape: Rectangular Coffin: None
Length: 1.8m Width: 0.4m Depth: 0.1m
Fill: Compact light brownish orange clay containing occasional chalk flecks
Grave goods: Remains of pottery vessel between left leg and grave cut.
Other finds: Cremated human bone?, pottery; animal bone, stone, animal bone.
Comments: A high density of burnt debris located predominantly around head and shoulders of burial were recorded on site as possibly being an earlier cremation and cremation urn disturbed by inhumation. However no burnt bone or burnt pottery was recorded by specialists, so this debris may have derived from an earlier pit or hearth disturbed by the burial..

Skeleton Number 1055

Preservation	Good (Grade 3)	**Dentition**																
Completeness	>75%	**R**																**L**
Sex	Indeterminate	NP -	-	Pr	A	A	/	NP -	NP -	/	/	-	-	Pr	X	Ca P	Ca -	
Age	45+ years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	Ca P	Ca P	Ca P	Ca P	Ca P	Ca P	-	-	NP -	-	NP -	Ca P	Ca P	Ca P	Ca P	Ca -	

Pathology – Dental calculus, periodontal disease, periapical cavity, osteoarthritis of the spine, osteophytosis of glenoid cavity and acetabulum, button osteoma on occipital, cribra orbitalia, maxillary sinusitis, periostitis on right fibula and two right metatarsals
Non-metric traits – Parietal foramen, mandibular torus, supra-orbital notch, mastoid foramen

Inhumation grave group: 1066 Grave cut: 1063 (Not illustrated) Date: Roman

Orientation: NNW-SSE	Burial: extended, ?supine		Shape: Rectangular	Coffin:	None
Length:	1.52m	Width:	0.8m	Depth:	0.14m
Fill:	Fairly compact yellowish brown clay containing occasional stones 10-30mm.				
Grave goods:	None				
Other finds:	Bone				
Comments:	Burial poorly preserved and heavily truncated.				

Skeleton Number 1064

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	<25%	**R**																**L**
Sex	Indeterminate	NP -	NP -	NP -	NP -	NP -	NP -	NP -	**NP** -	**NP** -	**NP** -	**NP** -	**NP** -	NP -	NP -	NP -	NP -	
Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	**NP** -	**NP** -	**NP** -	**NP** -	**NP** -	NP -	NP -	NP -	NP -	

Pathology – None recorded
Non-metric traits – None recorded

Inhumation grave group: 1082 Grave cut: 1079 (Not illustrated) Date: Roman 2nd century or later

Orientation: ENE-WSW	Burial: extended, supine with hands crossed over pelvis.		Shape: Rectangular	Coffin:	None
Length:	1.96m	Width:	0.5m	Depth:	0.1m
Fill:	Compact greeny greyish brown silty clay containing low density of charcoal flecks and moderate density of chalk and occasional flint.				
Grave goods:	None				
Other finds:	Pottery				
Comments:	-				

Skeleton Number 1080

Preservation	Good (Grade 3)	**Dentition**																
Completeness	>75%	**R**																**L**
Sex	Male	Ca -	Ca -	Ca -	NP -	Ca -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	168.7cm	Ca -	Ca -	Ca -	Ca -	/	/	NP -	NP -	NP -	NP -	NP -	NP -	NP -	/	Ca -	Ca -	

Pathology – Dental calculus, Schmorl's nodes, rib periostitis (visceral surfaces) – respiratory infection?
Non-metric traits – Double facet on atlas, Poirier's facet, third trochanter, hypotrochanteric fossa, exostosis in trochanteric fossa

Inhumation grave group: 1086	Grave cut: 1083	(Not illustrated)	Date: Roman
Orientation: north-south	Burial: extended, prone	Shape: Rectangular	Coffin: None
Length:	1.58m Width:	0.68m	Depth: 0.09m
Fill:	Compact yellowish brown clay containing low density of small gravel *c* 20mm and sparse charcoal.		
Grave goods:	None		
Other finds:	Bone		
Comments:	Only head and upper torso survive. Lower body truncated by machining for car park (C20).		

Skeleton Number 1084

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	25-50%	**R**																**L**
Sex	Male	NP -	NP -	NP -	/	/	/	/	/	/	-	-	/	NP -	X	NP -	NP -	
Age	35-45 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	-	C -	C -	/	C Ca -	/	NP -	NP -	/	/	/	/	/	X	/	NP -	

Pathology – Dental caries, dental calculus, OA of acromial end of clavicle, glenoid fossa and acetabulum, healed trauma to rib shaft, osteoarthritis (cervical vertebrae)
Non-metric traits – Mandibular torus, supra-orbital foramen, double facets on atlas

Inhumation grave group: 1090	Grave cut: 1089	(Not illustrated)	Date: Roman
Orientation: east-west	Burial: Extended, supine; arms straight, R hand over pelvis.	Shape: Subrectangular	Coffin: nails present
Length:	1.9m Width:	0.7m	Depth: 0.1m
Fill:	Tenacious greyish brown clay.		
Grave goods:	None		
Other finds:	Fe nails x13; fossil (recorded on site as bone bead)		
Comments:	-		

Skeleton Number 1088

Preservation	Good (Grade 2)	**Dentition**																
Completeness	50-75%	**R**																**L**
Sex	Indeterminate	NP -	-	-	-	-	H -	H -	NP -	NP -	H -	-	-	-	-	-	U -	
Age	18-25 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Stature	Could not be determined	U -	Ca -	Ca -	NP -	-	NP -	NP -	NP -	NP -	NP -	NP -	-	NP -	Ca -	Ca -	U -	

Pathology – Dental calculus, enamel hypoplasia
Non-metric traits – None observed

Inhumation grave group: 1104		Grave cut: 1101	(Not illustrated)	Date: Roman: late 1st-2nd century	
Orientation: ENE-WSW	Burial: Extended, supine, arms folded across pelvis.		Shape: Rectangular	Coffin: None	
Length:	1.6m	Width:	0.55m	Depth:	0.1m
Fill:	Compact greenish orange brown silty clay containing occasional charcoal flecks and low density of gravel and flints.				
Grave goods:	None				
Other finds:	Pottery				
Comments:					

Skeleton Number 1102

Preservation	Poor (Grade 4)	**Dentition**																
Completeness	50-75%	**R**																**L**
Sex	Indeterminate	NP -	Ca	Ca	Ca	Ca H	H	H	H	H	Pr	H	Ca	Pr	Ca	Ca P	Ag	
Age	25-35 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	

Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	/	Ca H	Ca	Ca	C Ca	Pr	Ca -

Pathology – Dental caries, dental calculus, enamel hypoplasia, agenesis of third molar, osteophytosis of rib facet
Non-metric traits – Mandibular torus, hypotrochanteric fossa

Inhumation grave group: 1116 Grave cut: 1113 (Not illustrated) Date: Roman

Orientation: north-south	Burial: Extended, supine, R arm folded across body with hand lying on Lulna/radius.	Shape: Rectangular	Coffin: 2 nails present	
Length:	1.99m	Width:	0.7m	Depth: 0.1m
Fill: 1115	Moderately compact yellowish brown clay containing low density of small gravel *c* 20mm and rare charcoal. [Redeposited clay natural]			
Grave goods:	None			
Other finds:	Sf45-46 Fe nail and bar			
Comments:	-			

Skeleton Number 1114
Preservation Poor (Grade 4)
Completeness 50-75%
Sex Male?
Age 35-45 years
Stature Could not be determined

Dentition

	R																**L**
	NP -	NP -	NP -	NP -	NP -	-	Ca -	Ca -	-	Ca -	-	NP -	NP -	NP -	NP -	NP -	
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
	NP -	X	NP -	/	/	Ca -	C Ca -	NP -	NP -	C -	Ca -	-	Ca -	C Ca -	-	NP -	

Pathology – Dental caries, dental calculus, antemortem tooth loss, spinal osteoarthritis, enthesophytes on left ulna, both femora and left patella
Non-metric traits – None observed

Inhumation grave group: 1123 Grave cut: 1122 (Plate 9) Date: Roman AD120+

Orientation: NNW-SSE	Burial: extended, supine, but torso twisted onto L side; arms and knees close together.	Shape: subrectangular	Coffin: yes, coffin fittings and nails present	
Length:	1.95m	Width:	0.6m	Depth: 0.14m
Fill: 1120	Tenacious brown clay with occasional stones.			
Grave goods:	None			
Other finds:	Pottery; iron coffin nails and fittings			
Comments:	-			

Skeleton Number 1121
Preservation Poor (Grade 4)
Completeness 25-50%
Sex Indeterminate
Age 25-35 years
Stature Could not be determined

Dentition

	R																**L**
	NP -	-	Ca -	NP -	-	Ca H -	Ca H -	-	Ca -	Ca H -	-	NP -	Ca H -	NP -	-	NP -	
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
	NP -	NP -	NP -	Ca H -	-	Ca -	Ca -	-	Ca -	Ca -	Ca H -	H -	Ca H -	Ca -	NP -	NP -	

Pathology – Dental calculus, enamel hypopplasia, hyperostosis frontalis interna
Non-metric traits – Supra-orbital notch

Inhumation grave group: 1128 Grave cut: 1124 (Not illustrated) Date: Roman AD120+

Orientation: north-south	Burial: extended, prone	Shape: Rectangular	Coffin: yes	
Length:	1.7m	Width:	0.53m	Depth: 0-0.09m
Fill: 1127	Compact greenish brown silty clay containing occasional flints, ironstone, chalk and small gravel.			
Grave goods:	None			

Other finds: Sf54-8, 68 iron nails and bar; pottery
Comments: Virtually nothing survives above pelvis

Skeleton Number 1126
Preservation Poor (Grade 4)
Completeness 25-50%
Sex Indeterminate
Age 18-25 years
Stature Could not be determined

Dentition

	R															L
	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathology – None observed
Non-metric traits – Hypotrochanteric fossa

Inhumation grave group: 1132 Grave cut: 1129 (Not illustrated) Date: Roman
Orientation: WNW-ESE Burial: extended, supine Shape: Sub-rectangular Coffin: None
Length: 1.8m Width: 0.59m Depth: 0.05m
Fill: 1131 Compact light brownish orange clay containing occasional chalk flecks.
Grave goods: None
Other finds: None
Comments: -

Skeleton Number 1130
Preservation Poor (Grade 4)
Completeness >75%
Sex Male?
Age 18-25 years
Stature Could not be determined

Dentition

	R															L
	NP	Ca	-	-	-	-	/	Ca	/	/	-	-	-	/	-	NP
	-	-						-								-
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	Pr	Pr	Pr	Pr	Pr	Pr	-	/	Ca	Ca	Ca	Ca	Pr	Pr	Pr	-
									-							

Pathology – Dental calculus, cribra orbitalia
Non-metric traits – Zygomatic facial foramina, supra-orbital foramen, double facet on atlas, hypotrochanteric fossa, exostosis in trochanteric fossa

Inhumation grave group: 1136 Grave cut: 1133 (Not illustrated) Date: Roman
Orientation: WSW-ENE Burial: Extended, supine, lower arms flexed and hands crossed resting on lower pelvis. Shape: Rectangular Coffin: Possible – 3 nails present
Length: 2.16m Width: 0.68m Depth: 0.13m
Fill: 1135 Compact greyish yellow clay with a low density of small stones *c* 20mm and rare charcoal. [Redeposited natural clay]
Grave goods: None
Other finds: SFs 69-71 Fe nails
Comments: -

Skeleton Number 1134
Preservation Poor (Grade 4)
Completeness 50-75%
Sex Indeterminate
Age >18 years
Stature Could not be determined

Dentition

	R															L
	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathology – Osteoarthritis on acetabulum and lumbar vertebrae, neoplasm (?osteoma) on right femur, enthesophytes on patella and femora
Non-metric traits – None observed

Inhumation grave group: 1153 Grave cut: 1152 (Plate 10) Date: Roman
Orientation: NNW-SSE Burial: Extended inhumation, prone Shape: subrectangular Coffin: None
Length: >0.6m Width: 0.5m Depth: 0.05m
Fill: 1150 Tenacious mid grey clay.
Grave goods: None
Other finds: None
Comments: Heavily truncated at both ends – full extent of grave did not survive. Lower abdomen and upper legs only survived. Disturbed human bone (1161) to S of grave may be legs of this body.

Skeleton Number
1151

Preservation	Good (Grade 4)	**Dentition**															
Completeness	25-50%	**R**															**L**
Sex	Male	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -
Age	>18 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -	NP -

Pathology – Osteoarthritis (lumbar vertebrae), osteophytosis of both femoral heads (fovea capitis) and acetabulum, left distal humerus, proximal ulna and proximal and distal radius
Non-metric traits – Femoral plaque, hypotrochanteric fossa

Inhumation grave group: 1157 Grave cut: 1154 (Plate 11) Date: Roman mid-late 1st – 2nd century
Orientation: NNW-SSE Burial: inhumation, supine, head turned to W; R arm straight, L arm flexed across body; L hand by R elbow. 5 tacks recovered close to R hand and one from LH. CuA spoon close to R elbow. Shape: Rectangular Coffin: (1160) 7 coffin nails at N end
Length: 1.76m Width: 0.55m Depth: 0.16m
Fill: 1156 Compact greenish brown silty clay containing moderate density of small chalk, occasional flints and charcoal flecks.
Grave goods: sf 75, 80-82: Pot, CuA pin; CuA spoon; Fe object and nails;
Other finds: flint
Comments: -

Skeleton Number
1155

Preservation	Poor (Grade 4)	**Dentition**															
Completeness	>75%	**R**															**L**
Sex	Female	Ca	CaP	CaP	CaP	/	CaHP	HP	H	CaH-	CaHP	CaHP	CaH-	CaH-	/	CCa-	Ca
Age	25-35 years	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
		8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Stature	Could not be determined	C-	NP-	CCa-	Ca-	Ca	CaH	CaH	Ca H	CaH	CaH-	CaH-	Ca-	Ca-	Ca-	Ca-	Ca-

Pathology – Dental caries, dental calculus, periodontal disease, enamel hypoplasia, cribra orbitalia, hyperostosis frontalis interna, osteophytosis of glenoid cavities and a thoracic vertebra
Non-metric traits – Metopism, supra-orbital notch, vastus notch (patella), double facet on calcaneus

APPENDIX 3 BIBLIOGRAPHY AND REFERENCES

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APPENDIX 4 SUMMARY OF SITE DETAILS

Site name: Radstone Technology Park, Towcester, Northamptonshire
Site code: TORAD 04
Grid reference: SP 691 485
Type of excavation: excavation
Date and duration of project: 8-24 August 2004
Area of site: 1350 sq m
Summary of results: Oxford Archaeology carried out an archaeological excavation on land at the Radstone Technology Site, Towcester, Northamptonshire (NGR: SP 691 485). The work was commissioned by David Wilson Homes in advance of development for housing. The excavation revealed a mid- late Roman inhumation cemetery lying to the west of the Alchester Road on the south-western periphery of the Roman town. The cemetery, consisting of 28 graves, was situated in a subrectangular plot defined by ditches originating in the second century. The area had been heavily truncated by groundworks for a car park in 1968, when two skeletons were discovered. As a result many of the skeletons exposed in the present excavations were damaged and incomplete. Twenty-six adults were identified of which 12 were male and 2 were female. Two sub-adults, both probably adolescents, could not be sexed and whilst the grave goods of jet bead necklace and bronze bracelets accompanying one of them may suggest the individual was probably female, similar items have been found elsewhere on occasion to be associated with young men. Two decapitation burials and six prone burials were found and possibly eight individuals had been buried within coffins. Grave goods or associated artefacts were found in six graves and though dating evidence was limited, this suggests burials may have commenced as early as the mid-2nd century and continued through to the 4th century AD.

Location of archive: As no receiving museum is currently available, the archive is held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, until alternative arrangements are made by the relevant responsible curatorial body. The report and written records will be made available in due course at http://library.thehumanjourney.net/.

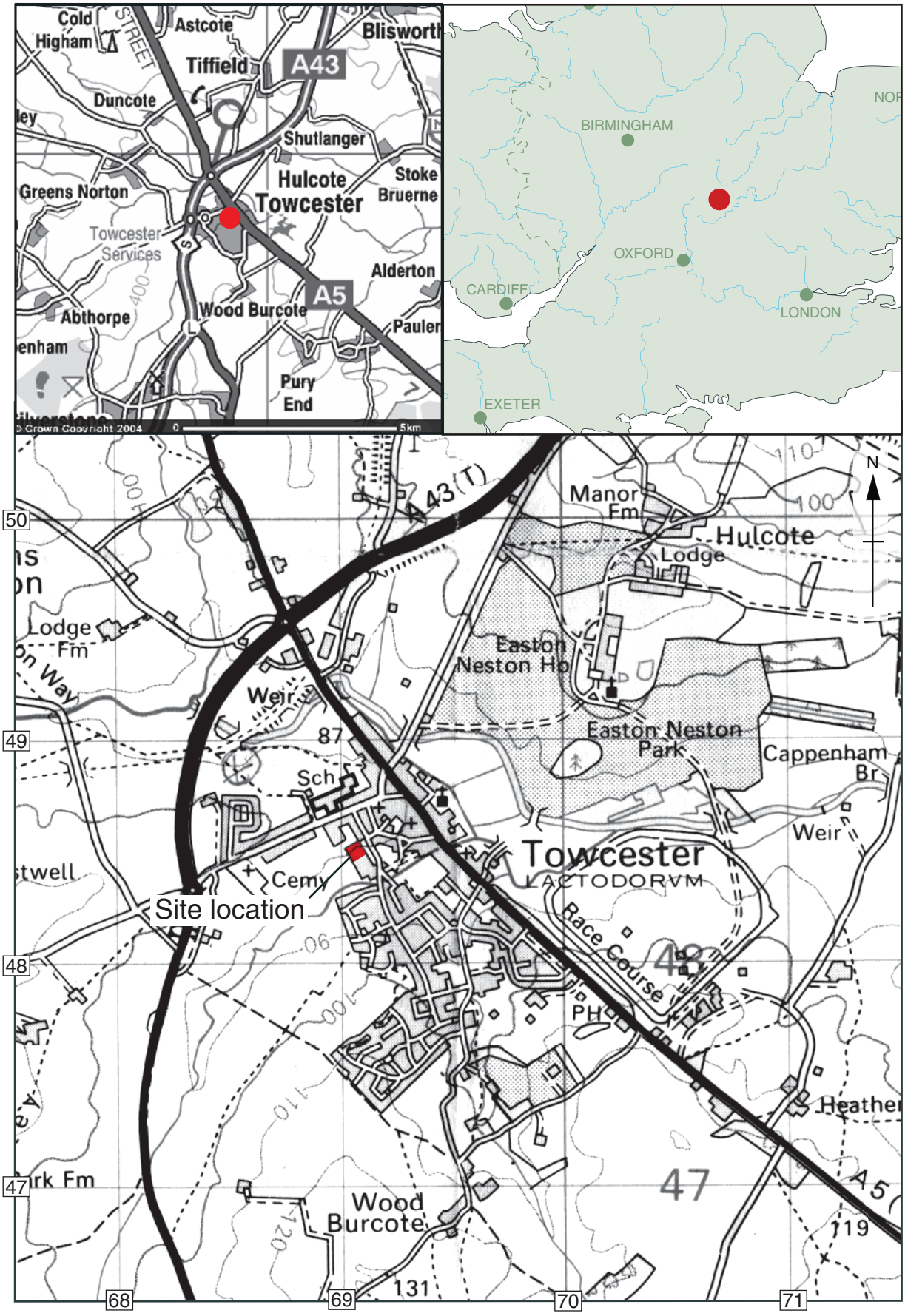

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Figure 1: Site location

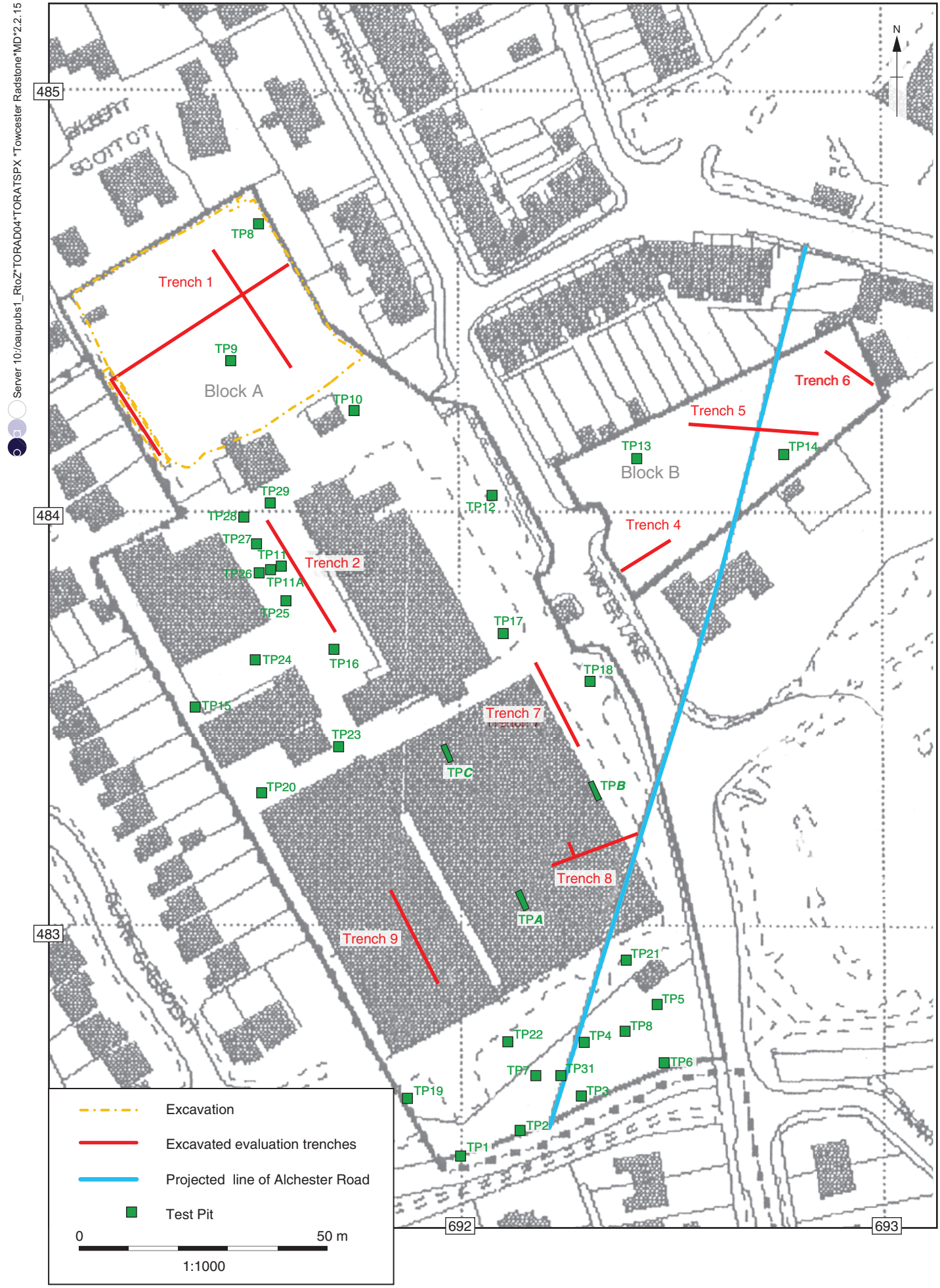

Figure 2: Plan of the evaluation area and location of the excavation

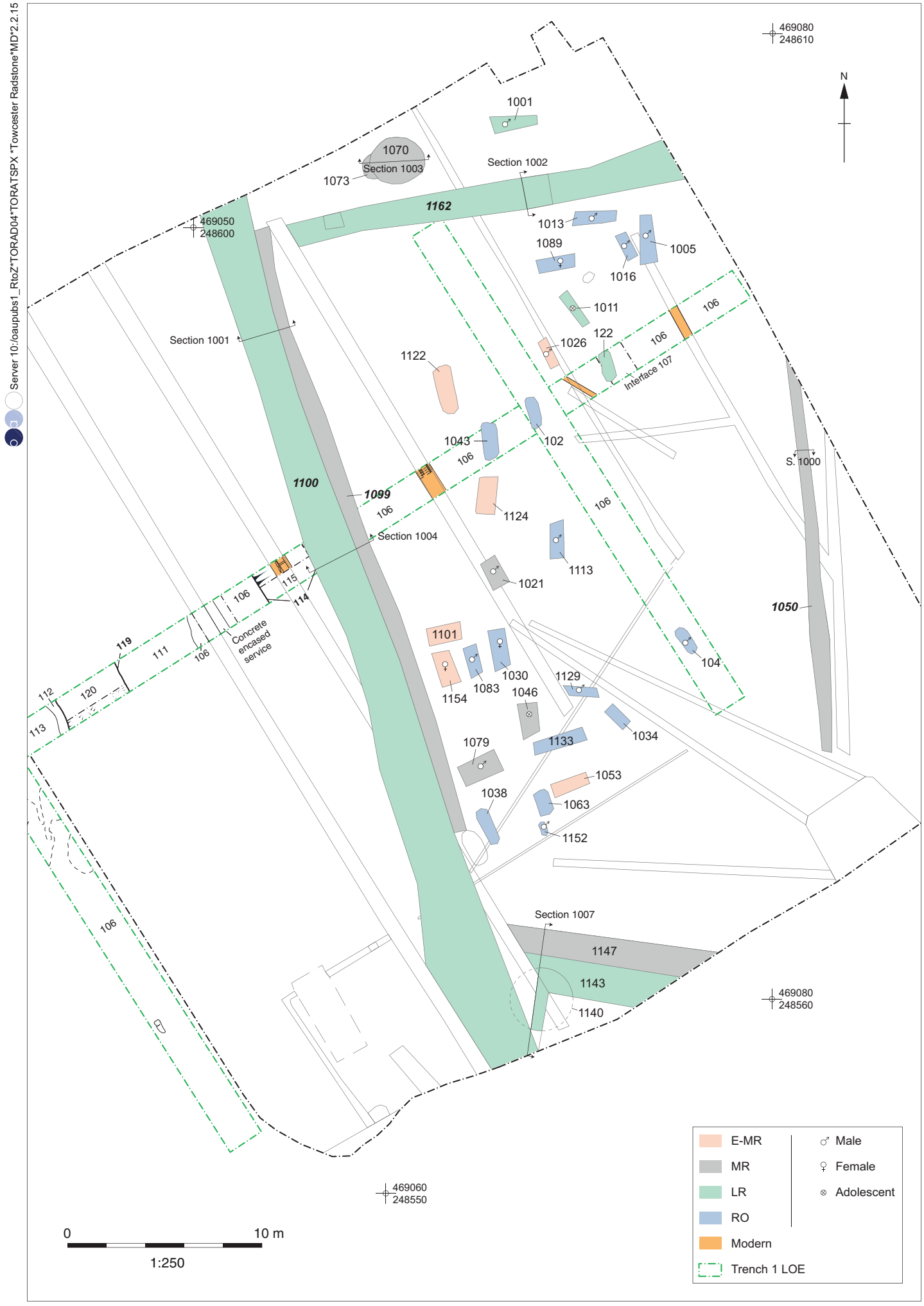

Figure 3: Plan of excavation site

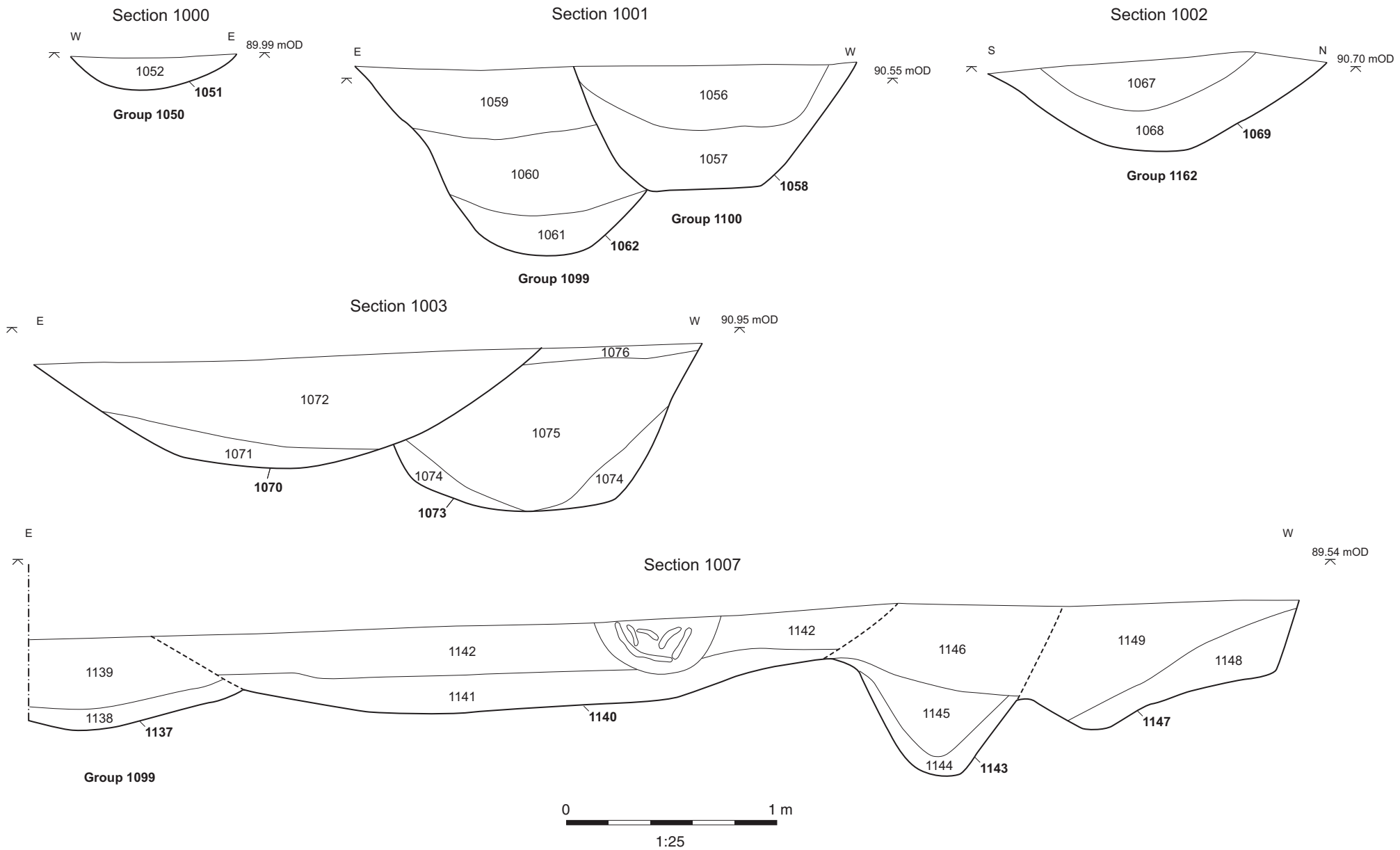

Figure 4: Sections of ditches and pits: sections 1001, 1002, 1003, 1004, 1008, 1009

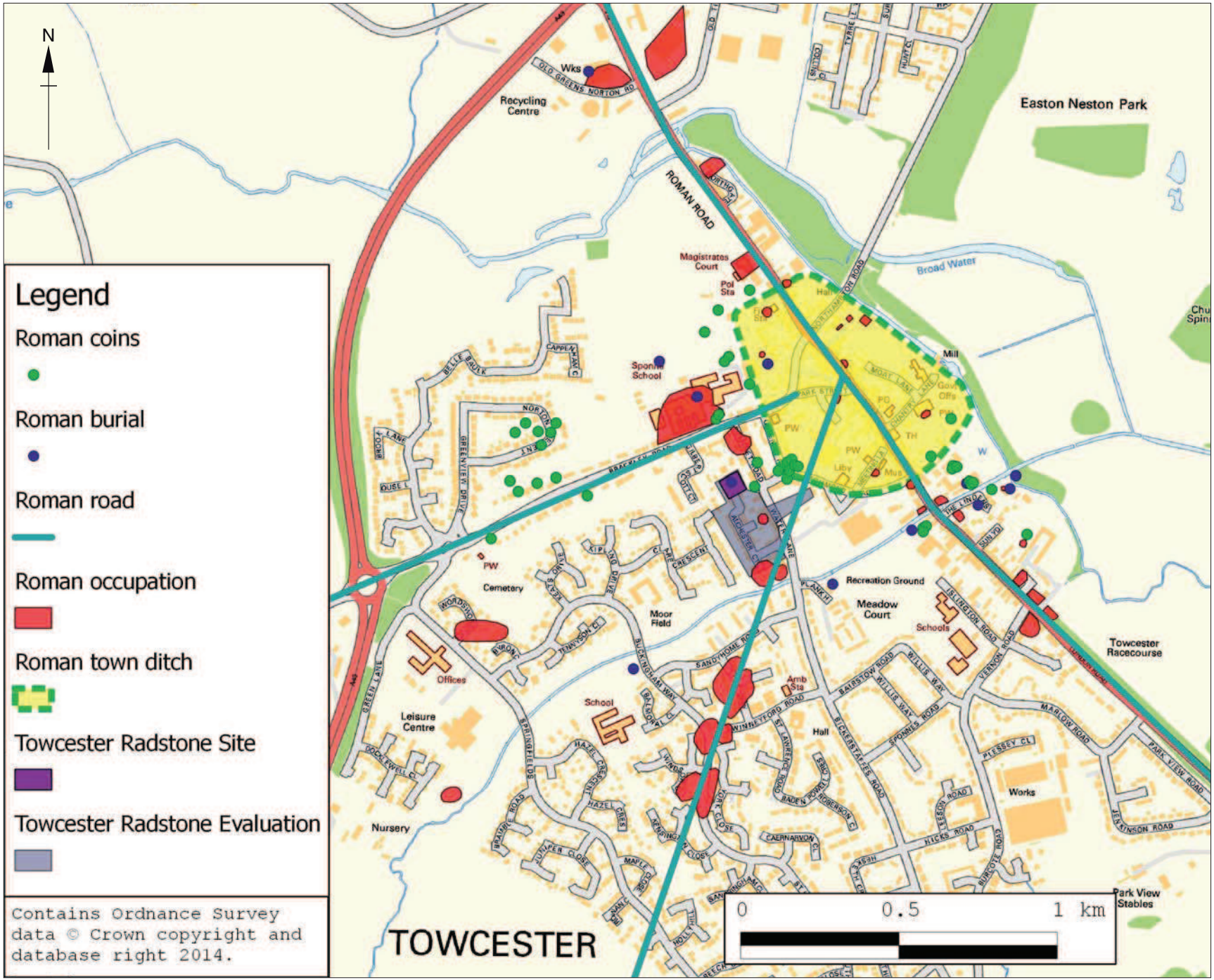

Figure 5: Map of Towcester with location of Roman remains

Plate 1: General view of the excavation

Plate 2: General view of ditch 1143/1147 under excavation

Plate 3: Grave group 1004: grave 1001 and skeleton 1002

Plate 4: Grave group 1020: grave 1021 and skeleton 1022

Plate 5: Grave group 1012: grave 1011 and skeleton 1009

Plate 6: Grave group 1012: detail of skeleton 1009 and grave goods

Plate 7: Grave group 1049: grave 1046 and skeleton 1047

Plate 8: Grave group 1078: grave 1053 and skeleton 1055

Plate 9: Grave group 1123: grave 1122 and skeleton 1121

Plate 10: Grave group 1153: grave 1152 and skeleton 1151

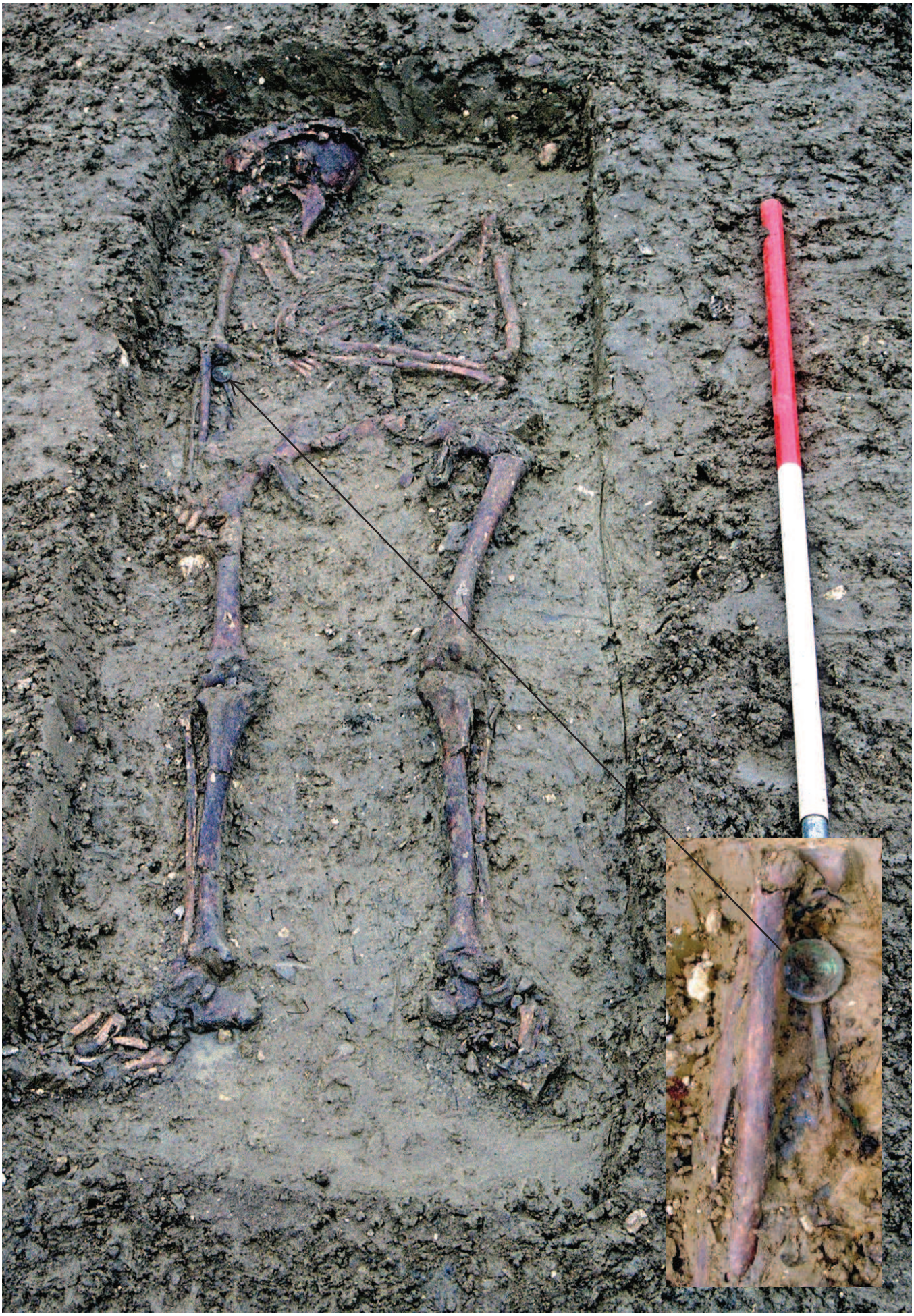

Plate 11: Grave group 1157: grave 1154 and skeleton 1155, with detail of spoon inset

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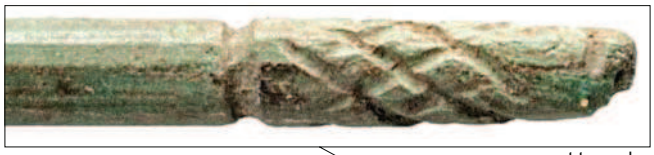

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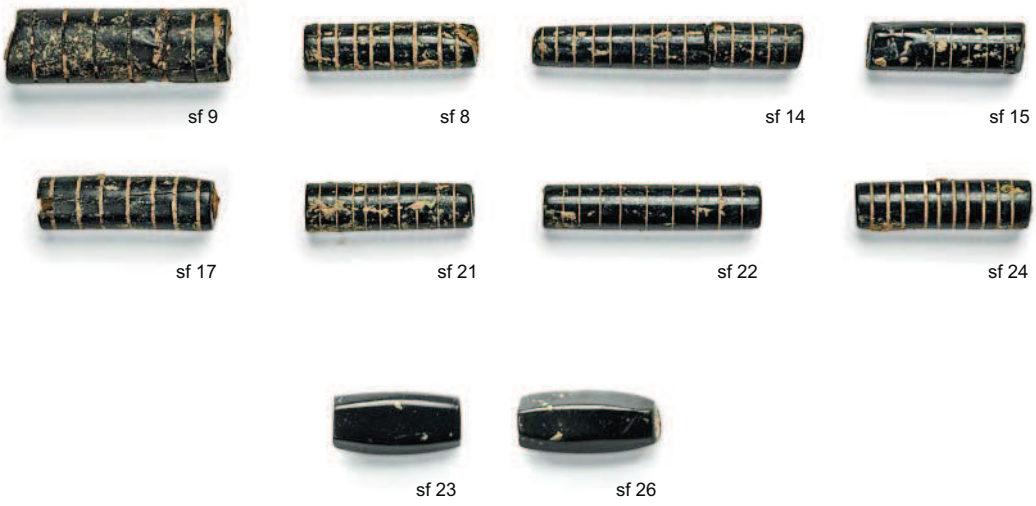
Plate 12



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