

Belvedere Nurseries Fenny Stratford Nr Milton Keynes Buckinghamshire



Archaeological Watching Brief and Features Mapping Report



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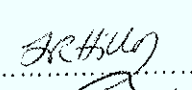
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ARCHAEOLOGICAL WATCHING BRIEF AND FEATURES MAPPING REPORT

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SUMMARY

In July and August 2003 Oxford Archaeology (OA) carried out an archaeological watching brief and features mapping exercise at Belvedere Nurseries, Fenny Stratford, near Milton Keynes, Buckinghamshire (NGR SP 8874 3395). The work was commissioned by Conserve-a-Tree Ltd in advance of a new garden centre building with adjacent car-parking and planting areas (Planning Ref: MK/0035/94). The watching brief followed on from an archaeological evaluation of the site by OA in 2001 and comprised the monitoring of topsoil stripping to the natural and mapping of the exposed features.

The finds included part of an extra-mural Roman cemetery lying outside the Roman settlement of Magiovinium, revealing a minimum of 23 burials, enclosure ditches, pit features and pottery, all of Roman date. At least two phases of burials are suggested here, though the limited strip and record strategy has thus far precluded detail interpretation about the nature and extent of the site. Ridge and furrow agriculture had truncated the Roman levels, though survival of skeletal remains was good where investigated.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 In July and August 2003 Oxford Archaeology (OA, formerly Oxford Archaeological Unit, OAU) carried out an archaeological watching brief and features mapping exercise at Belvedere Nurseries, Fenny Stratford, near Milton Keynes, Buckinghamshire (Fig. 1).
- 1.1.2 The work was commissioned by Conserve-A-Tree Ltd in respect of a planning application for a new building with adjacent car-parking and planting areas (Planning Application No. MK/0035/94). It followed an evaluation of the site by OA in 2001 which was reported (OA 2001).
- 1.1.3 An archaeological brief for the site was discussed with Brian Giggins, Archaeologist for the Planning Department of Milton Keynes Council, after consultation with the developer. OA prepared a Written Scheme of Investigation (WSI) detailing how it would undertake a limited watching brief during topsoil stripping for a new building and car park which was extended to a features mapping exercise upon the discovery of features including human burials (OA 2002). In the event, final watching brief work during construction was not carried out by OA owing to changes in site circumstances - see below.

1.2 Geology and topography

- 1.2.1 The site is on land due south-east of Belvedere Nurseries, Fenny Stratford, near Milton Keynes, Buckinghamshire (NGR SP 8874 3395). It is situated between the line of the Roman Road of Watling Street and the new A5(T).

1.2.2 The underlying geology of the area is Oxford Clay capped with river terrace gravel, and alluvium is also present in the valley of the River Ouzel, which lies some 80 m to the west of the development area. The site lies at *c* 70 m OD.

1.3 Historical background

Including additional notes and research by Paul Booth, OA

1.3.1 The archaeological background to the watching brief was prepared for the WSI for the project (OA 2002) and is here supplemented by a history of the archaeological works and results to date.

1.3.2 The site lies on the north side of Watling Street and immediately adjoining the site of the small defended Roman settlement of *Magiovinium*. Excavations in similarly located fields to the south-east of the Roman town in advance of the construction of the A5 bypass had shown the presence of the extensive remains of roadside settlement and industry.

1.3.3 Similar findings came from another site excavated on the new road line of the A5 to the north of the Roman town (Excavations at *Magiovinium*, Buckinghamshire, Records of Bucks 29, 1989 p (124.) A magnetometer survey by the Department of the Environment Ancient Monuments Laboratory (now English Heritage) approximately 100m to the east of this development site also produced evidence of significant archaeological activity.

1.4 Archaeological Background

1.4.1 In addition to work carried out during the A5 project, geophysical (magnetometer and magnetic susceptibility) survey of (main) part of area had been carried out in 1994 by Bartlett-Clark Consultancy (Bartlett 1994; Bartlett 1999b Area 1) on behalf of Conserve-A-Tree Ltd and Buckinghamshire County Archaeology Service.

1.4.2 Further geophysical (magnetometer and magnetic susceptibility) survey of part of area was carried out in April 1999 by Bartlett-Clark Consultancy (Bartlett 1999a; Bartlett 1999b Areas 2-4) on behalf of OAU and Belvedere Nurseries. Area 2 is the northern part of the site, while Area 3 and 4 lie just outside it to the west.

1.4.3 Further geophysical (magnetometer and magnetic susceptibility) survey of part of area carried out in October 1999 by Bartlett-Clark Consultancy (Bartlett 1999b Area 5) on behalf of OAU and Taylor New Homes. The work covered included land to the east of the site proposed for development by Conserve-a-Tree, an) and the exercise revealed a mass of linear features and enclosures mostly aligned roughly north-south and east-west and therefore at an angle to the line of Watling Street. The density of these features appeared to decrease to the north (away from Watling Street). A major roughly east-west aligned boundary occurred in the southern part of Area 2 and no linear features could be seen to the north of this.

1.4.4 In 2001 OA prepared a revised Written Scheme of Investigation (WSI) for evaluation (Fig. 2 - location of evaluation trenches over site of proposed new building) of part of the proposed Nursery development, concentrating on the main building. This was

accepted by Brian Giggins, Archaeological Officer for Milton Keynes Council. The evaluation was undertaken and the report submitted in December 2001 (OA 2001).

- 1.4.5 Very high groundwater levels precluded much excavation and recording during the evaluation. Roman deposits and features were present in all trenches, however, particularly in Trench 3, on the north-east side of the limited area examined. The majority of the finds recovered from the evaluation were Roman, with a general date range of later 1st to 2nd century, though some of the fabric types continued into the later Roman period (OA 2001).
- 1.4.6 No condition requiring further archaeological work on the site was forthcoming, but after consultation with OA, Conserve-A-Tree agreed to fund an archaeological watching brief during topsoil stripping, which extended into a features mapping exercise when it became apparent that there features (specifically human burials) on the site. OA prepared a generic WSI for this work, which was accepted by Brian Giggins in October 2002.

2 WATCHING BRIEF PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 To identify and record the presence/absence, extent, condition, quality and date of archaeological remains in the areas affected by the development, by means of watching brief. This was augmented by features mapping and limited recording when it became clear that there were numerous features on the site of the stripped area.
- 2.1.2 To make available the results of the archaeological investigation in the form of a summary report and location plan of the nature of the underlying site.

2.2 Methodology

- 2.2.1 The topsoil and grass on the site was removed with a 360⁰ machine and stockpiled along the south side of the site (Plates 1 & 2). Then up to 0.3 m of medieval/post-medieval ploughsoil was removed to the depths required for the formation of the new building site, prior to making up the ground level for the new car park and buildings. Archaeological observation was carried out during these phases of groundwork. A large number of Roman features were exposed and these were planned using an EDM and recorded, with finds recovered from the surface of the features.
- 2.2.2 All archaeological features were planned at a scale of 1:100. All excavated features were photographed using colour slide and black and white print film. A general photographic record of the work was made. Recording followed procedures detailed in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).

3 RESULTS

3.1 Summary description of deposits

- 3.1.1 The underlying natural (1002) comprised a mixture of flinty gravel, stony gravel and silt loam soil, with a marked incline away to the line of the river Ousel, where the

- gravel terrace began to slope to the north-west (see Fig. 3). Features were observed cutting this natural including a number of ditches. Also noted were probable pit features, and, upon cleaning and examination, a number of human burials.
- 3.1.2 Two skeletons (1004, 1007) were excavated and retained by OA for analysis, following discussions with Brian Giggins (see Finds and Appendix, below).
- 3.1.3 Skeleton 1004 was revealed in a sub-rectangular cut (1004) that was 1.78 m long, 0.52 m wide and which survived to a depth of just 0.08 m (Plate 3 - note that the edge of the graves merges imperceptibly with the natural gravel). This shallow depth is probably due to overlying plough damage. Pottery and loose human bone was retained from the fill of the grave (1005).
- 3.1.4 Skeleton 1007 (Plate 4) was contained within grave cut 1006 which was 1.63 m in length, 0.47 m wide and 0.1 m deep - again truncated by overlying plough activity. The grave fill (1008) was notably sandy with gravel inclusions. Of the remainder, some burials were seen to be cut into the fills of some of the ditch and probable pit fills, implying more than one phase of burial activity. Partially exposed bones in the graves gave the clearest indication as to the extent and numbers of graves on the site.
- 3.1.5 A number of linear features, presumably ditches, were identified and planned. Ditch 1027 at the south-west of the site appeared to be an 'L'-shaped feature, presumably set at approximate right angles to the side of Watling Street. Further north was probable ditch 1009, with further rectangular ditches and part ditches (1021, 1023, 1017) extending away from 1009. A gully (1025) appeared to be cut by a short 'L'-shaped ditch 1020. A grave containing a burial cut the fill of ditch 1020, which was also cut by ditch 1023.
- 3.1.6 A large soil mark (1011) up to 4 m in length could represent a number of pit features or inter-cutting graves, while the upper fill of pit 1013 contained iron slag, indicative of industrial activity in the vicinity.
- 3.1.7 Pottery was recovered from the surfaces of features giving a broad date range for the latest exposed activity on the site before plough activity (see Fig.3 and Pottery Assessment, Appendix 1).
- 3.1.8 Some evidence was noted for the presence of medieval/post-medieval ridge and furrow across the site, forming a 0.2 m thick ploughsoil (1001) sealed beneath the present topsoil (1000) - see Fig. 3. The furrows inter-cut in places, suggesting phases of agricultural activity.

3.2 Finds

- 3.2.1 A number of finds were recovered from the site as well as two human skeletons - these were rapidly analysed and the results are summarised below:

Pottery by Edward Biddulph, OA

- 3.2.2 The Roman pottery assemblage was rapidly scanned in order to determine its typological and chronological range. There were a number of relatively large sherds,

suggesting that the source of use and initial discard was reasonably close to the location of final deposition.

- 3.2.3 The assemblage spans the mid-1st to 3rd centuries AD, with the emphasis on the later 1st and early 2nd centuries. The range of fabrics is typical for a settlement with well-established trade links. Details about the pottery are retained in the archive for the project, and full analysis of this limited assemblage is presented in Appendix 3 of this report.

Human Skeletons - by Annesophie-Witkin, OA

- 3.2.4 Limited resources meant that of the 23 or so exposed skeletons, only two could be usefully investigated. All of the skeletons were revealed just below the level of the ploughsoil - it remains uncertain how many there are within the area of the cemetery.
- 3.2.5 Two skeletons (1004 and 1007) were excavated, forming part of a Roman cemetery that was demarcated by a rectangular ditch (1027). The inhumations were of two adults, one female and one male. Both were aged over 40.
- 3.2.6 The male, skeleton 1007, was supine in a grave (1003) orientated west-east and the female was buried prone and orientated south-west-north-east. Both inhumations were in a good condition (see Appendix 3 for details of these burials).

3.3 Palaeo-environmental remains

- 3.3.1 No deposits suitable for environmental sampling were identified during the watching brief.

4 DISCUSSION AND CONCLUSIONS

4.1 The immediate site

- 4.1.1 The watching brief work, principally related to observation of topsoil stripping in proposed car parking areas, has revealed part of a series of enclosures and other linear features, as had been suggested by the geophysical survey. In addition, at least 23 inhumation burials of Roman date were revealed. These were on two broad alignments, roughly south-north and roughly west-east, related fairly closely to the alignment of the Roman boundary/enclosure features. The alignments suggest burial in two separate phases in the late Roman period.
- 4.1.2 Financial and time resources did not permit full excavation and recording of these burials (two were planned and excavated in order to provide a sample). A digital plan was made of the extant features and a photographic record made of the discoveries.
- 4.1.3 In view of the sensitivity of the site, and lack of resources available to both developer and archaeologists, it was proposed that the car park area should be raised (thus preserving the burials) above a geotextile layer with graded material on it. OA believes that this was undertaken after OA left the site, having notified Milton Keynes' Archaeologist of its work here and the suggested plans to preserve the archaeology.

4.2 The site in its historic and geographic context

by Paul Booth and Jon Hiller

- 4.2.1 The Scheduled Ancient Monument, covering part of the site of the Roman roadside settlement of *Magiovinium* lies just south-east of the site investigated here. The Roman settlement has a defended nucleus straddling the line of Roman Watling Street, with characteristic ribbon development to north-west and south-east along the line of the Roman road. Such ribbon development is often extensive and can include complex archaeological deposits and features including structures. At the time of the archaeological investigations reported here, the Scheduled area encompassed the defended enclosure and part of the settlement area south-east of this, but none of the corresponding area north-west of the defences.
- 4.2.2 It should be noted that background information is summarised by Smith (1987, 218-220). Significant defined components within the settlement include an early Roman fort, south-east of the settlement nucleus - and the later defensive circuit. As noted in the introduction, previous work in areas of the Roman settlement has included geophysical survey (David 1979; Bartlett 1999c) and excavation. The latter has been principally related to the construction of the new line of the A5 (e.g. Neal 1989) and has examined extra-mural settlement areas, comparable to the present site in terms of their relationship to the late Roman defended enclosure.
- 4.2.3 Cemeteries are characteristically located in such areas in Roman roadside settlements. They can vary considerably in character and include dense areas of formally laid out burials as well as areas of less-intensive use. The sample recorded in outline on the present site looks very similar to that seen south-east of the settlement (Neal 1989, 23 Fig. 18) and has more characteristics in common with 'backland' burials (Esmonde Cleary 2000, 129), but such burials could still be numerous in relatively small areas, and in some settlements might still comprise the principal related cemeteries.
- 4.2.4 As a rule, understanding of such settlements is best achieved through extensive examination - limited sampling is of little value for understanding their morphology and functional variation and the archaeological value of these sites is increasingly widely recognised at national level (see e.g. Millett 2001).
- 4.2.5 OA's work here, undertaken with the willing co-operation of the developer, is nonetheless no more than a summary of a significant find(s) on this site, and the report presented is not intended as a comprehensive analysis of the nature of the site thus exposed by the archaeological monitoring. Further work here would be needed in order to clarify the extent and importance of the cemetery and to ascertain whether there was activity on the site prior to its use as a burial ground.

APPENDICES

APPENDIX I ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Ctx</i>	<i>Type</i>	<i>Depth</i>	<i>Width</i>	<i>Length</i>	<i>Comments</i>	<i> Finds</i>
1000	Layer	0.2 m			Topsoil	
1001	Layer	0.08 - 0.2 m			Subsoil	
1002	Natural					
1003	Cut	0.08 m	0.52 m	1.78 m	Grave Cut	
1004	Skeleton				Human skeleton	
1005	Fill				Fill of grave	Pottery
1006	Cut	0.10 m	0.47 m	1.63 m	Grave Cut	
1007	Skeleton				Human skeleton	
1008	Fill				Fill of grave	Pottery
1009	Cut		2 m	60 m	Boundary ditch	
1010	Fill				Fill of ditch	Pottery
1011	Cut		1.75 m	4 m	Inter cutting Pits	
1012	Fill				Fill of pits	Pottery
1013	Cut		1 m	1.5 m	Pit	
1014	Fill				Fill of pits	
1015	Cut		0.6 m	1 m	Pit	
1016	Fill				Fill of pits	
1017	Cut		1 m	55 m	Boundary ditch	
1018	Fill				Fill of ditch	Pottery
1019	Cut		1 m	27.5 m	Boundary ditch	
1020	Fill				Fill of ditch	Pottery
1021	Cut		3 m	45 m	Boundary ditch	
1022	Fill				Fill of ditch	Pottery
1023	Cut		3 m	65.5 m	Boundary ditch	
1024	Fill				Fill of ditch	Pottery
1025	Cut		0.60 m	10 m	Boundary ditch	
1026	Fill				Fill of ditch	Pottery
1027	Cut		3 m	80 m	Boundary ditch	
1028	Fill				Fill of ditch	Pottery
1029	Skeleton				Human skeleton	

APPENDIX 2 POTTERY ASSESSMENT

The Roman pottery by Edward Biddulph, OA

The Roman pottery assemblage was rapidly scanned in order to determine its typological and chronological range. Fabrics were assigned codes from OA's standard Iron Age and Roman pottery recording system (Booth, nd). Reference was also made to Marney's corpus of Roman pottery from Milton Keynes (Marney 1989).

A total of 138 sherds (1446 g) of pottery was recovered from the site. The assemblage spans the mid 1st to 3rd centuries AD, with the emphasis on the later 1st and early 2nd centuries.

The early Roman period is characterised by 'Belgic'-type grog-tempered (E80) and sand-tempered (E30) wares. Platters, bowls and beakers were represented. These fabrics were accompanied by shell-tempered ware (C10), sandy grey ware (R30), black-surfaced ware (R50) and a fine oxidised ware (O10). Forms are tabulated by context below.

Table 1. Roman pottery

<i>Cxt</i>	<i>Sherds</i>	<i>Weight (g)</i>	<i>Comments</i>	<i>Date</i>
1005	4	17	Fabrics E80, R50, C10	?M1-E2
1008	3	18	Jar (R30), fabric E80	?M1-E2
1010	15	127	Platter (E80), fabrics S20, O10, R30, R50, C10	M1-E2
1012	13	208	Bead-rimmed jar (C10), curving-sided bowl (R50), bead-rimmed dish (R40), fabrics O81, R30	M-L2
1018	20	233	Girth beakers (E30, ?W21), fabrics S20, S32, O10, E80	E2
1020	24	124	Carinated bowl (E80), fabric C10	M1-E2
1022	21	298	Dish f31 (S30), dish or bowl (?S40), fabrics F52, R30, R50, C11	L2
1024	6	116	Curving-sided dish (R50), fabrics R30, C10	2nd-4th c.
1026	18	116	Curving-sided bowl (E80), plain-rimmed dish (R30), fabric C10	E2
1028	14	189	Fabrics F52, O81, R30, R40, R50	3rd c.
TOTAL	138	1446	-	-

Verulamium region white ware (W21) was also present in the early 2nd century. South Gaulish samian (S20) may have reached the site during the later 1st century; Central Gaulish samian from Les Martre de Veyre (S32) was present up to c AD 120. Locally-produced coarse wares, particularly sandy wares R30, R50 and shell-tempered wares C10/C11, remained important into the second half of the 2nd century and the 3rd century. These were joined by another local ware - pink grogged ware (O81), and pottery from outside the region.

Grey wares (R40) and colour-coated fine ware (F52) arrived from the Nene Valley, which were available as dishes and beakers. Central and East Gaulish samian wares (S30 and S40 respectively) are also represented. With a mean sherd weight of 10 g, assemblage condition was variable, but good overall.

There were a number of relatively large sherds, suggesting that the source of use and initial discard was reasonably close to the location of final deposition. The range of fabrics is typical for a settlement with well-established trade links.

5 APPENDIX 3 HUMAN SKELETON ASSESSMENT

The Human Skeletal Remains by Annsofie Witkin, OA

Two skeletons (1004 and 1007) were situated within a Roman cemetery demarcated by a rectangular ditch (1027). The inhumations consisted of two adults, one female and one male. Both were aged over 40. The male, skeleton 1007, was supine in a grave (1003) orientated west-east and the female was buried prone and orientated south-west-north-east. Both inhumations were in a good condition.

Preservation

The preservation of a skeleton is dependent upon the often complex relationship between the pH value of the soil, precipitation, location of the skeleton, depth of the burial, age of the individual, pathological conditions present on the skeleton and type of burial container. For example, acidic sandy soils have an adverse effect and may degrade the bones to the extent that only soil shadows are present. Deep burials are often better preserved than shallow graves since increased aeration due to worm action accelerates diagenesis. Pathological conditions such as osteoporosis, often associated with elderly females, makes bones light and porous and in adverse soil conditions preservation would be extremely poor. Bones of immature individuals are thinner and often more porous than adult remains which again could account for differential preservation within the same assemblage. Preservation was recorded by the observation of the cortical integrity of the bones. The condition of the bones were scored on a sliding scale from excellent to poor depending on the degree of surface erosion, root impressions, bubbling and flaking of the outer surface of the bones.

Completeness

The completeness of a skeleton is partially dependent upon preservation. In soil conditions where degradation is high, bones with a high proportion of a trabecular inner structure and a thin outer cortex such as vertebrae, and small bones such as phalanges would degrade quicker and the skeleton would therefore receive a low completeness score. Alternatively, in intensively used burial grounds where space is in great demand, intercutting of burials would not only lead to the loss of parts of the skeleton but the increased aeration may also contribute to the general loss of skeletal elements. Later use such as ploughing of fields may also have carried away large portions of skeleton if the grave was shallow. The completeness of each skeleton was scored using a sliding scale from poor to excellent.

Inventory

The skeletal inventory was recorded pictorially. In addition, the skeletal components of the individual were recorded in tabular form as present or absent. Dental inventory was recorded following the Zsigmondy system. Dental notations were recorded by using the universally accepted recording standards and terminology (after Brothwell 1981).

Determination of sex

The sexually morphologically differences between males and females emerge after the onset of puberty. Sex can therefore only be determined with any degree of accuracy in individuals aged over 17. The cranium and the pelvis are used for the determination of sex. The differences between the sexes are most pronounced in the pelvis since the female pelvis is adapted to childbirth. The female pelvis is therefore lower and broader. The male cranium tends to be more robust, with pronounced brow ridges, and larger muscle attachment sites.

The inhumation burials at Belvedere nurseries were sexed by using primarily pelvic data and a maximum of six pelvic features were used. The features used were chosen from Standards (Buikstra and Ubelaker 1994) and Workshop (1980). Each observable feature on the pelvis was scored on a five-point scale (probable female, female, probable male, male and unknown). The overall score from the observed features provided the basis for the assigned sex.

Assessment of age

The assessment of age provides the biological age of the skeleton and not the chronological age of the individual. This is because factors such as nutrition and lifestyle have an impact on skeletal growth and subsequent degeneration. Ageing of subadults provides more narrow age ranges since the growth and maturation sequence of children is fairly predictable and uniform. The development and eruption of both deciduous and permanent dentition are also believed to be less affected by environmental influences. The ageing of adults over the age of 25 relies on the degeneration of various sites of the skeleton and to a lesser degree, the fusion pattern of the ectocranial sutures.

The methods applied for the assessment of age were, the degenerative changes observed on the auricular surface (Lovejoy *et al.* 1985), the pubic symphyses (Todd 1921; 1922; Brooks and Suchey 1990) and to a lesser degree the dental attrition (Miles 1962). The following age-at-death categories were used for assessing the age of the articulated skeletons.

Table 2: Age at death categories

Mature Adult	Over 40 years
Aging Adult	Over 50 years

Stature estimation

The stature was calculated using the regression formulae devised by Trotter (1970) for white males and females. Complete long bones were used for the calculation of stature and the bones from the legs were favoured over those of the arm since these carry the least error. In order to limit the standard errors the stature was obtained from the left or right femur measurement

Pathology

The remains were examined for abnormalities of shape and surface texture. When observed, pathological conditions were fully described and recorded following the standards listed in osteological textbooks.

Quantification and context

Two inhumation burials out of 24 identified inhumation burials were excavated on site. The two burials were situated within an enclosure formed by the ditch (1027). The enclosure was part of a larger unexcavated cemetery. The grave fills contained residual pottery from the 1st and 2nd century AD but the pottery from the enclosure ditch is dated to the 3rd century AD. In addition, the funerary context indicates that these burials date to the late Roman period.

Skeleton 1004 was located in a rectangular grave cut (1003) which was 1.78 m long, 0.52 m wide and 0.08 m deep. The skeleton was orientated west-east and in a supine position. The skeleton was centrally placed in the grave with the hands crossed over the pelvis area. The legs were extended and parallel. Due to time constraints the grave fills were not fully excavated, the width of the grave and the position of the skeleton does however strongly suggest that the individual had been buried in a coffin.

Skeleton 1007 was buried in a rectangular cut (1006) orientated south-west-north-east. The cut was 1.63 m long, 0.47 m wide and 0.10 m deep. The skeleton was in a prone position with the arms flexed at the elbow and situated beneath the pelvic area. The legs were extended and parallel with the feet turned inwards. The feet were not up against the side of the grave cut. The orientation of the feet therefore suggests that a wooden coffin had been used. Since the cut was not fully excavated, no nails were recovered to confirm the use of a coffin.

Condition and completeness

The skeletons were in a good condition. Due to the shallow nature of the burials, the bones had suffered substantial root infiltration though these had not damaged the outer surfaces of the bones. Multiple post-mortem fractures were present on the long bones and some elements such as the vertebrae of skeleton 1004 were crushed.

The completeness of the skeletons was fair to good. Skeleton 1004 was missing the skull, the left arm, left foot and most of the lower right arm. The lower left leg was also largely missing including most of the iliac blades. The right humerus was considerably fragmented together with the lumbar. Skeleton 1007 was missing the skull, left radius and the proximal part of the right humerus as well as most of

the right hipbone and feet. The mandible was however present. The lower legs were extremely fragmented.

The poor condition as well as the completeness was caused by a combination of factors. These include shallow grave cuts and post-Roman ploughing, especially with heavy machinery in more recent times. This is likely to have caused the extensive fragmentation seen on the bones as well as the loss of the crania. The stripping of the site for the archaeological excavation also contributed to fragmentation of the elements.

Age and Sex

Skeleton 1004 was definitely a male individual and 1007 a female. The degenerative change of the auricular surface aged the male skeleton to over 50 and is therefore classified as an old adult. Skeleton 1004 was likely to be aged between 40 and 49 and was therefore a mature adult. The ageing was primarily based on the pubic symphyses and the auricular surface. The dental attrition pattern suggested a lower age but since the estimate was based on the third molars only, it not regarded to be accurate.

Stature

The male skeleton was estimated to be 168.03 ± 3.27 cm tall and the female was 158.09 ± 3.72 cm. The average stature for males during the Roman period was 169 cm and for females, 159 cm (Roberts and Cox 2003, 163). These individuals may therefore be seen to be about average height for the time period.

Dental pathology

Only the female, skeleton 1007 had teeth present. Of these, four had been lost post-mortem and 10 were present in their sockets. The right first mandibular molar had an abscess present. An abscess is formed by bacteria entering the pulp cavity through dental caries, excessive attrition or trauma to the crown. The bacteria then accumulate in the pulp cavity and an inflammation starts, which can track to the apex of the root. As the pressure builds up from the continuous accumulation of pus, a hole (sinus) is formed on the surface of the jaw, which allows the pus to escape (Roberts and Manchester 1995, 50). It is at this advanced stage that the abscess is visible and recorded archaeologically.

Enamel hypoplasia was also present on three teeth. Hypoplastic lines are caused by the disruption of the mineralisation process during the formation of the tooth. The aetiology for the formation of these lines is multifactorial. However, they are commonly seen to be caused by nutritional deficiency or diseases during childhood.

Skeletal pathology

Skeleton number 1004 had spinal degenerative changes on the vertebral segments from the thoracic and lumbar region. These changes were more severe in the lumbar region. The new bone formation present on the margins of the joint margins and considerable pitting of the joint surfaces are associated with the ageing process (Roberts and Manchester 1995, 107). The condition would have caused intermittent backache and stiffness. Degenerative changes were also present on the lateral ends of the clavicles, the medial end of the right clavicle, the sacro-iliac joints, both knees and the phalanges from the right hand. The changes were rated as moderate. A proximal inter-phalangeal joint of the right hand and two of the carpal bones from the left wrist were also eburnated indicating that these joints were affected by osteoarthritis. The female, skeleton 1007 had very slight degenerative changes to the vertebral segments of the lower back. The lateral end of the left clavicle also had moderate degenerative changes.

Tables 3 & 4: Catalogue of the inhumations

Key to dental notations:

A = Abscess, H = Enamel hypoplasia, - = jaw not present, / = tooth lost post-mortem.

Skeleton number 1004
Completeness: Fair
Preservation: Good
Age: Over 50

Sex: Male

Stature: 169 cm

Pathology: Moderate spinal degenerative joint disease. Moderate joint disease on the clavicles, sacro-iliac joint and both hands. Osteoarthritis present on both hands.

Skeleton number 1007

Completeness: Good

Preservation: Good

Age: 40-49

Sex: Female

Stature: 158 cm

Dental inventory:

<i>R</i>														<i>L</i>			
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		
	/	A	H	/		/	/				H	H		-	-		

Dental Pathology: Dental abscess present on the right first molar and enamel hypoplasia present on the right first premolar and both second premolars.

Pathology: Slight spinal degenerative changes, moderate degenerative changes on the left clavicle.

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APPENDIX 5 SUMMARY OF SITE DETAILS

Site name: Belvedere Nurseries, Fenny Stratford, near Milton Keynes, Buckinghamshire

Site code: FESTBN 03

Grid reference: NGR SP 8874 3395

Type of watching brief: Ground reduction prior to new construction.

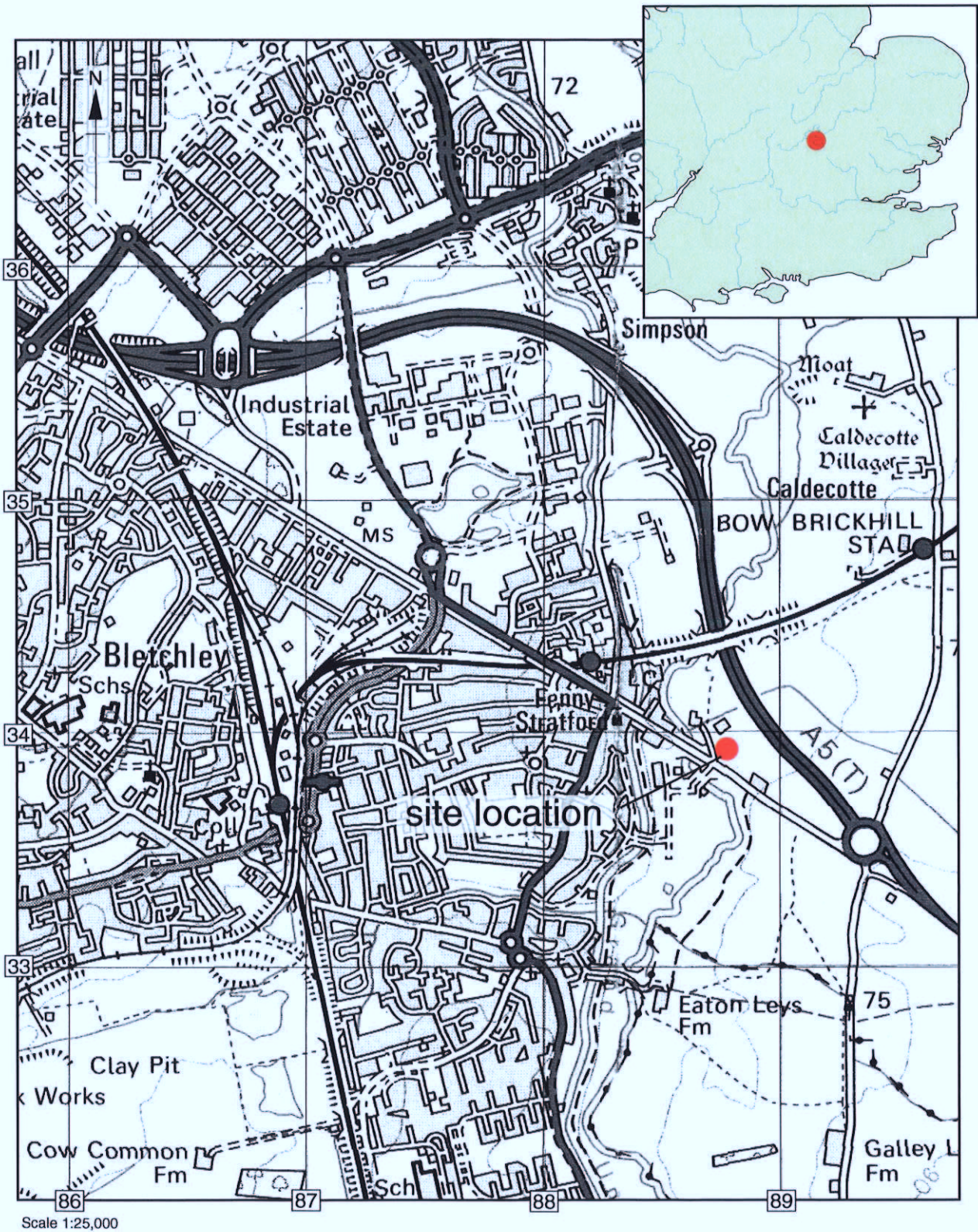
Date and duration of project: c. 8 days, July and August 2003

Area of site: 190 m x 150 m

Summary of results: The finds included part of an extra-mural Roman cemetery lying outside the Roman settlement of *Magiovinium*, revealing a minimum of 23 burials, enclosure ditches, pit features and pottery, all of Roman date. At least two phases of burials are suggested here, though the limited strip and record strategy has thus far precluded detail interpretation about the nature and extent of the site.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Buckinghamshire County Museum, Technical Centre, Tring Rd, Halton, Aylesbury, Bucks HP22 5PJ in due course, under the following accession number: AYBCM 2000.24

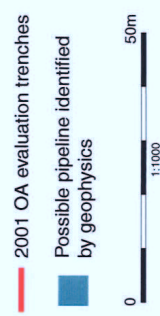
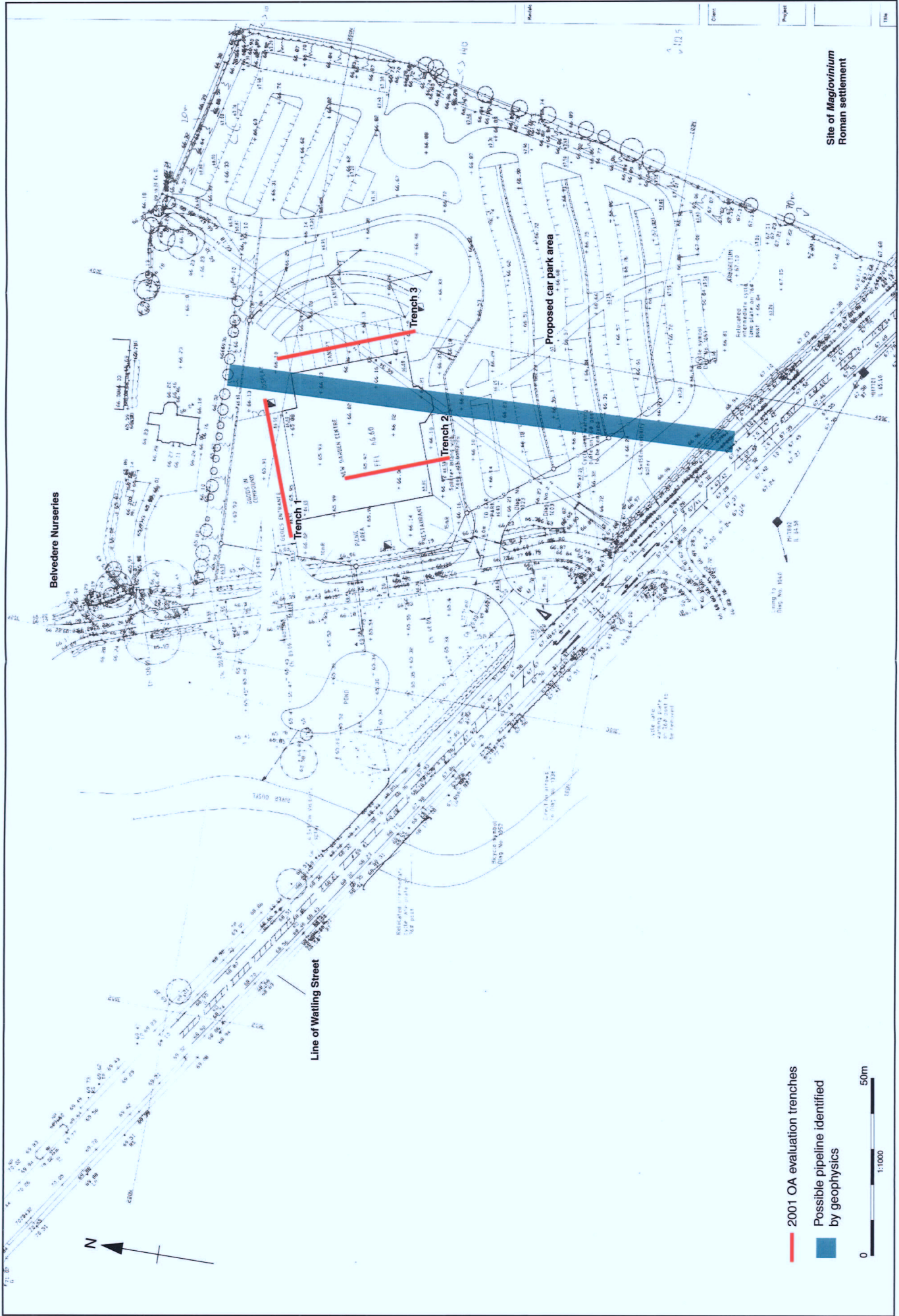
Server:4(W);:caupubs:1/All drawings*FESTBNEX*Belvedere_Nurses_Fenny_Stratford_NR_Milton_Keynes*LK*07.07.04



Scale 1:25,000

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Figure 1: Site Location



Site of Magjovinium Roman settlement

Figure 2: Evaluation Trench Location

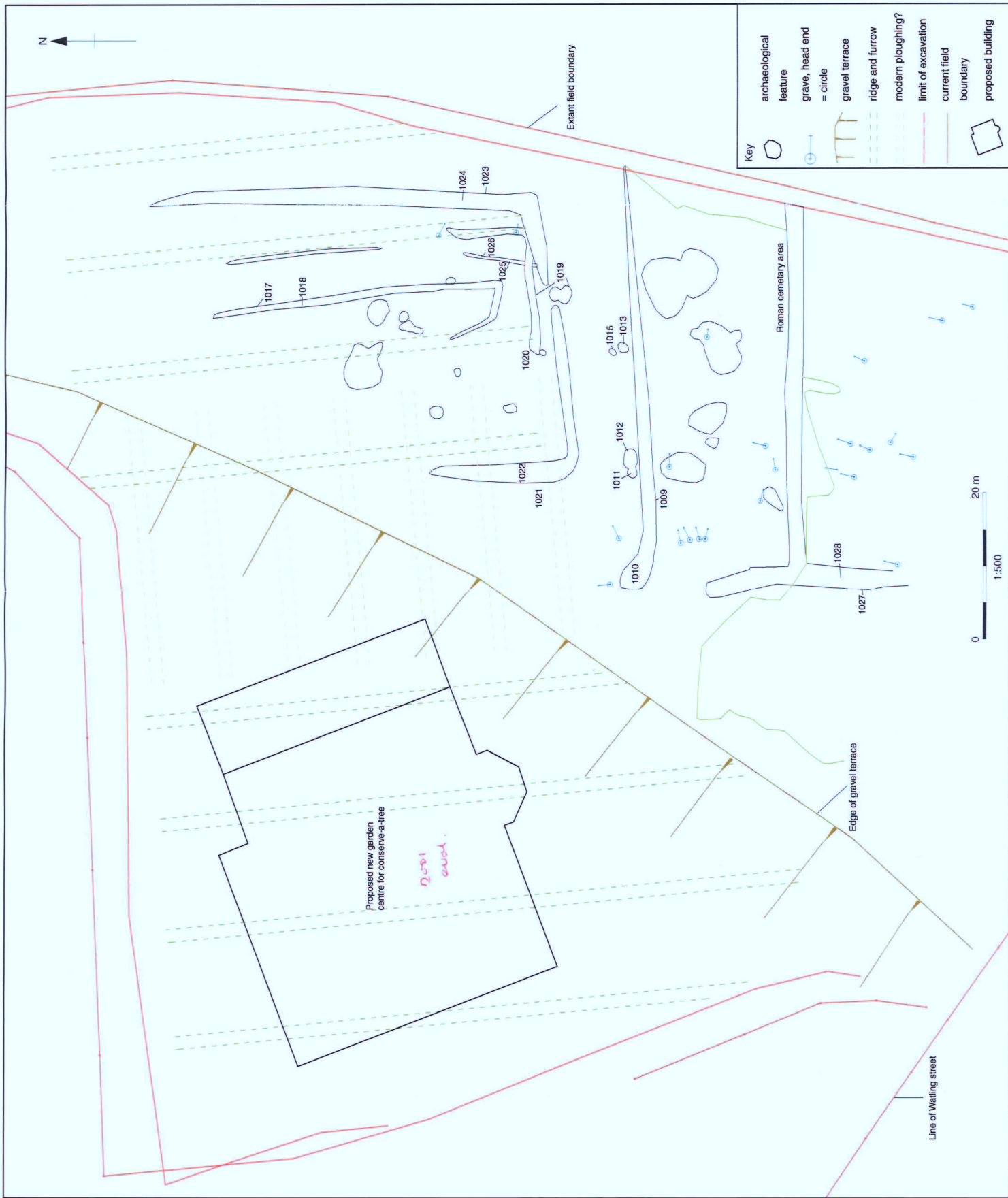


Figure 3: Plan of cemetery area



Plate 1: Stripping of site



Plate 2: Stripped site

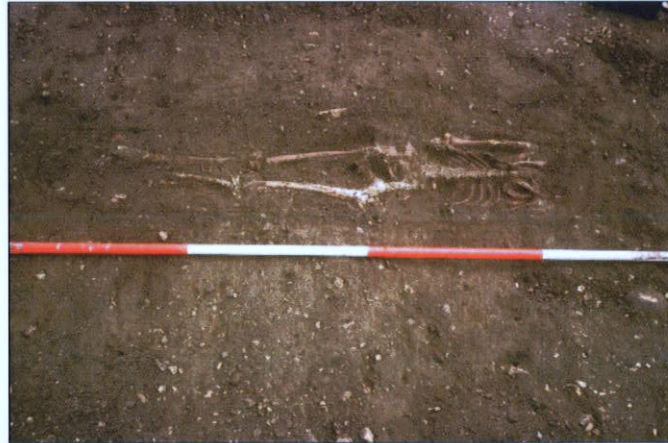


Plate 3: Skeleton 1004



Plate 4: Skeleton 1007



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