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Rover Group Ltd

Rover VQ Building, Garsington Way, Oxford

SP 5600 0400

Archaeological Evaluation Report

Site code OXROVQ

Oxford Archaeological Unit 10 November 1995

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by Graham D Keevill BA MIFA and Mick Parsons

LIST OF CO	NTENTS	PAGE
SUMMARY	·	1
INTRODUCT	TION	1
GEOLOGY A	ND TOPOGRAPHY	1
METHODS		2
ARCHAEOLO	OGICAL AND HISTORICAL BACKGROUND	3
RESULTS		3
Summa	ary stratigraphic description	3
	General sequence of deposits	3
]	Natural features	3
r	The late Bronze Age/early Iron Age ditch	4
	Modern features	4
The po	ttery, by A Barclay	4
	Summary of the pottery	5
DISCUSSION	1	5
The topography of the site		
Archae		6
Later l	anduse	6
RECOMMEN	IDATIONS	7
CONCLUSIO	NS .	8
POTENTIAL	DESK-TOP APPRAISAL OF THE ARCHAEOLOGICAL OF THE PROPOSED VEHICLE QUALITY CONSTRUCTS GROUP, COWLEY, OXFORD (including maps)	9 ION
	2 ARCHAEOLOGICAL COMMENTARY ON GEOTECHNI UPPLIED BY ROVER GROUP	CAL 12
APPENDIX 3	B TABLE OF CONTEXTS	15
Figure 1	Trench location	
0	Plan of Trenches 1 and 2	
-	Plan of Trenches 3 and 4	
_	Plan of Trenches 5 and 6	
	Plan of Trenches 9 and 16 with detail of ditch 9/7	
0	Section of ditch 9/7	
<u> </u>	Selected trench sections	
	Area of ploughsoil	
Figure 9	Suggested area of excavation	

SUMMARY

The Oxford Archaeological Unit (OAU) evaluated the archaeological potential of land on the east side of Roman Way within the Rover Group car works at Cowley, Oxford. The evaluation was requested by Oxford City Council on the advice of Oxford Archaeological Advisory Service; the development site lies in an area of very high potential for Roman remains. The site is currently a car park, but the Rover Group wishes to construct a Vehicle Quality building on the site. The work took place from 16 to 25 October 1995.

Sixteen trenches were excavated over the car park area, to the east of Roman Way. Most of the trenches in the eastern side of the site showed evidence of ground clearance down on to the natural limestone geology prior to the construction of the car park, probably during the 1970s. The trenches closer to the course of the Roman road also revealed some modern disturbance due to the construction of several buildings (now demolished) and the associated insertion of mains services. Medieval and/or post-medieval ploughsoils were found in trenches in the middle and west end of the car park. Only one feature of archaeological significance was located: a late Bronze Age/early Iron Age ditch in Trench 9.

INTRODUCTION

The Oxford Archaeological Unit (OAU) evaluated the archaeological potential of land on the east side of Roman Way within the Rover Group car works at Cowley, Oxford. The evaluation was requested by Oxford City Council on the advice of Oxford Archaeological Advisory Service; the development site lies in an area of very high potential for Roman remains. Roman Way, as its name suggests, was an important thoroughfare between the towns at Alchester and Dorchester-on-Thames throughout the Roman period. Supposedly Roman burials have been found close to the car park, including seven immediately opposite the site on the west side of Roman Way.

The site is currently a car park, but the Rover Group wishes to construct a Vehicle Quality building on the site. The building has a very large footprint occupying virtually all of the central area of the car park and extending close to each end. Associated ground works are likely to be extensive as well. Rover Group asked SDC Ltd, their principal building contractor on the proposed Vehicle Quality building, to commission the evaluation from OAU. Sixteen trenches were excavated over the car park area, to the east of Roman Way. The work took place from 16 to 25 October 1995.

GEOLOGY AND TOPOGRAPHY

The natural geology across the site is corallian limestone. This is overlain in places by a thin layer of compact and cohesive clay which does not appear to have been altered by human activity (eg cultivation). The car park surface slopes from east to west and from north to south. Ordnance Datum values of 77.3 m (north-east corner), 76.2 n (south-east corner), 75 m (north-west corner) and 73.75 m (south-west corner) demonstrate this very clearly, but it is also noticeable that the main break of slope from east to west only occurs more than half-way into the car park from the east. This makes the eastern half appear relatively flat and accentuates the slope thence down to Roman Way. The geotechnical logs suggested that this broadly reflected the underlying geological topography.

METHODS (see Fig 1 for trench layout)

A desktop assessment of the archaeological background to the site was undertaken, as required by the OAAS brief for the project. Sources consulted comprised the Oxfordshire County Sites and Monuments Record (OSMR), cartographic sources held at the Bodleian library (including tithe and enclosure maps and all available Ordnance Survey editions), published references to archaeological discoveries (especially in *Oxoniensia*, the county's main journal of archaeological and historical record), and secondary sources such as the Victoria County Histories for Oxfordshire.

Geotechnical records of test pits and boreholes were supplied to OAU by Rover Group. The geotechnical work had been undertaken in September 1995, and a full interpretative report was not available.

The original desktop and geotechnical reports are reprinted in full at Appendices 1 and 2 respectively. No attempt has been made to alter the studies in the light of the evaluation; consideration is given to the fieldwork results set against expectations based on the desktop and geotechnical studies in the discussion section of this report.

An evaluation plan was then devised comprising thirteen 30 m-long trenches and two 15 to 20 m-long trenches spread evenly across the site but especially concentrated within the outline of the proposed building itself and at the west end of the site closest to Roman Way. The trench plan represented slightly more than a 2 % sample of the total site area of just over 3.5 ha (much less than this was actually available for evaluation because of spoil heaps and service runs). The plan was drawn up in consultation with OAAS and Rover Group. The latter supplied information on the location of mains services, which acted as a substantial constraint in the western third of the car park, while also pointing out the operational restrictions of operating within a very busy car park (it is used by virtually all shift workers at the Cowley plant). Only two trenches could be excavated at a time to minimise disruption within the car park, and as far as possible trenches were excavated along the lines of car-parking (ie roughly north-south) rather than across them (ie east-west). The precise layout had to be modified in some cases (especially at the north-east corner of the site where a very large spoil heap restricted access). An additional small trench (16) was also excavated in the middle of the south side of the car park to obtain further information regarding a ditch revealed in Trench 9.

Work on site took place from 16 to 25 October 1995 and was undertaken in close cooperation with SDC Ltd, who supplied plant, fencing and other materials and also liaised with Rover Group security. A JCB 3X was used to break out tarmac and concrete as appropriate, and then to remove rubble and overburden layers to archaeological levels or the natural geology (whichever was the closest to the surface). The latter work was undertaken with a 1.6 m toothless ditching bucket under detailed archaeological supervision. Trenches were then cleaned manually in plan and section as appropriate. The operational limitations meant that excavation and recording had to be undertaken as rapidly as possible. Nevertheless recording methods followed standard OAU practice (D Wilkinson (ed) 1992, OAU Field Manual), and every trench was recorded to an appropriately full level whether archaeology was present or not. Each trench was numbered from 1-16 (Fig 1). All features, soil layers etc (contexts) were numbered in sequence per trench. The trench number is usually cited first followed by the context in this report; thus 7/2 and 12/6 would represent context 2 in trench 7 and context 6 in trench 12. Post-excavation analysis of the results has comprised a detailed study of all site records and the ceramic finds. A small assemblage of animal bone has been retained

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The OSMR study showed that the site was in an area of densely-clustered Roman activity, with burials and settlement evidence known from the north, west and south. The find spots were noticeably concentrated along the Roman road (Roman Way). There was relatively little evidence for earlier activity, and later landuse seems to have been confined to agriculture. This was confirmed by study of the map evidence, which clearly showed that the car park had survived as agricultural land into modern times, though affected by the establishment of the Oxford-Wheatley railway across the area in 1866. The major development on the site comprised the construction of a series of buildings at its west end, some time between 1939 and 1956. The buildings were demolished in recent times (after 1972-3), but their outlines are visible as concrete slabs, brickwork and scars in the surface of the car park surface.

OAU's assessment of the geotechnical logs (records) suggested that parts of the site had been truncated by modern development (the ?1950s buildings and car park works). There was possible evidence for the survival of archaeological remains on the south and east sides of the car park characterised by much greater depths of soil overlying the natural geology, but otherwise little could be said positively on the basis of the logs.

RESULTS

Summary stratigraphic description (selected trench plans on Figs 2-5 and selected trench sections on Figs 6 and 7; see Appendix 3 for detailed context information)

General sequence of deposits (Fig 7)

The natural limestone was exposed in all trenches, but the depth at which it was encountered varied significantly. There was very little soil cover between the modern tarmac and its make-up and the limestone at the east end of the car park, but other soils became more common in the middle of the site. A thin clay subsoil was noted in trenches 14 and 15, for instance, while ploughsoils of medieval or later date were noted in most trenches from the centre of the site westwards (1/3, 2/4, 3/4, 4/4, 5/4, 6/4 and 6/5, 7/3 and 7/4, 8/4, 9/3, 10/3 and 16/4). These were generally mid- or dark brown silty clays or reddish or yellowish brown clay sand. The layers were well-sorted and contained low levels of inclusions (usually less than 10 % limestone or other material such as sand). These were overlain by modern dumped layers in virtually all trenches in the eastern third of the car park, where the ground appears to have been built up slightly during the construction of buildings here before 1956. The sequence of deposits generally culminated in a coarse limestone gravel (hoggin) representing the bedding or make-up (context 2 in every trench) for the tarmac surface of the car park (context 1 in every trench where the tarmac was present). Trench 1 at the east end, however, was wholly cut through the concrete slab of a former building.

Natural features (Fig 4)

Natural features were found in trenches 5 (feature 7) and 6 (feature 6). In both cases the

features were filled by clean sandy fills with no finds or charcoal and few natural inclusions (ie gravel, limestone fragments). Feature 5/7 was fairly regular in plan, while feature 6/6 was irregular. Feature 5/7 probably represents natural disturbance (?animal burrow) and feature 6/6 is interpreted as a tree-throw hole. Neither is archaeologically significant.

The late Bronze Age/early Iron Age ditch (Figs 5 and 6)

An approximately east-west ditch (9/7) in Trench 9 was the only archaeologically-significant feature encountered on the site. The ditch was 2 m wide and 0.46 m deep, with sides sloping fairly evenly to an irregular base. The ditch cut through a layer of orange-brown silty clay subsoil (9/5) with 5 % limestone, which only survived in the northern part of the trench. Virtually identical layers were found in Trenches 3 (layer 5), 5 (layer 5), possibly 14 (layer 4), and 15 (layer 4). The primary fill (9/10) of the ditch contained approximately 50 % limestone, probably representing erosion of the natural geology. The remaining fills (9/8, /9 and /11) were all clay loams. It is possible that layers 8 and 9 form part of a recut (a second ditch on the same line; see Fig 6), but this was not recognised on site.

The upper fill (9/8) of the ditch was sealed by a layer (9/4) of mixed grey silt with 60 % limestone. It is possible that this represented a plough-damaged bank, as the soil was different from the ploughsoils found in other trenches. Layer 4 was sealed by a dark grey clay loam ploughsoil (9/3). This layer was found throughout the trench.

The ditch was not seen in Trenches 7 and 8 to the west and 10, 11 or 12 to the east, suggesting that it could have a limited extent. A small additional trench (16) was excavated adjacent to and 5 m west of Trench 9 in order to determine whether the ditch continued in this direction. In fact the ditch was not found in Trench 16, but extension of Trench 9 to the west of ditch 7 showed that it expanded to a presumed terminal. The lack of features in Trench 16 makes it very unlikely that the ditch split into two rather than terminating at this point.

Pottery was recovered from the upper two fills (9/8 and 9/9) of the ditch. The sherds form a small but consistent assemblage of late Bronze Age or early Iron Age date. Some animal bone was also recovered from the ditch fills.

Modern features (Figs 2-4)

Traces of former buildings were found in trenches 1 and 4 at the east end of the site. Two east-west walls were found in trench 1, while an east-west wall in trench 4 defined the north side of a cellar. This had been filled with rubble (layer 4/2). Modern services were also found in trenches 2 (feature 6) and 3. The electricity feeds for the lamp posts in the central and western parts of the car park constricted several of the trenches there (8, 9, 11 and 14).

The pottery, by A Barclay

The evaluation produced a total of 49 sherds. The assemblage includes small quantities of late Bronze Age-early Iron Age, medieval and post-medieval material. Contexts 9/8-9

produced an important group of late Bronze Age-early Iron Age pottery. A full breakdown of the pottery by context is given in the table below.

Context	Late Bronze Age/early Iron Age	Medieval/post-medieval	Total
1/3		5	5
2/4		3	3
3/4		9	9
6/4		3	3
9/8	23		23
9/9	6		6
Total	29	20	49

The prehistoric sherds are manufactured from a wide range of fabrics which have been tempered either with grog, shell, grog and shell, coarse sand, flint and coarse sand and quartz/quartzite. Those fabrics which include flint, grog or quartz as fillers are most likely to be late Bronze Age in date. Fabrics tempered with shell or sand are likely to be early and early to middle Iron Age, respectively. The occurrence of coarse sand with flint could indicate a late Bronze Age date for this fabric as well as the coarse sand fabric. A broad late Bronze Age-early Iron Age date range for all of these sherds seems possible, although with the near absence of featured sherds from a relatively small assemblage, the scale of redeposition is impossible to judge.

The assemblage includes two simple rim sherds. A rim from 9/8 is likely to come from a fine tripartite vessel of late Bronze Age or early Iron Age date. Other plain sherds from this context may derive from similar fine vessels. The pointed rim from 9/9 is likely to have come from a coarse ware vessel of bucket or simple jar form. This form in a shell and grog fabric would strongly indicate a late Bronze Age/early Iron Age date.

A total of 20 sherds was recovered from ploughsoil contexts 1/3, 2/4, 3/4 and 6/4 (see table above). Most of this material was of post-medieval date and included a number of pieces of modern china.

Summary of the pottery

The evaluation has produced a small but significant group of late Bronze Age/early Iron Age material concentrated in Trench 9. This assemblage is important as very little pottery of a comparable date has been found to the east of Oxford. However, it can be noted that recent and ongoing work by the OAU at Blackbird Leys is producing assemblages of both later Bronze Age and Iron Age pottery. The remaining medieval and post-medieval material is of little importance, apart from perhaps indicating both medieval and post-medieval manuring.

DISCUSSION

The topography of the site

The establishment of the car park in modern times would appear to have affected the

natural topography of the site. The eastern third seems to have been stripped down to (and most probably into) the natural bedrock, removing all traces of the topsoil which was found over the central and western areas (Fig 8). Some of the material removed from the east end may have been dumped at the west end, as layers of disturbed soils were found in trenches 3 and 4. The natural topography otherwise comprised limestone, sometimes overlain by a clay subsoil, with ploughsoils over all.

Natural features were found in trenches 5 and 6. These probably relate to land clearance for agriculture, but there is no direct evidence from the site for when this occurred. A later prehistoric date would seem plausible, especially in the light of the ditch in Trench 9.

Archaeology

Only one archaeologically significant feature was found: the ditch in Trench 9 which contained late Bronze Age/early Iron Age pottery in its upper fills. The ditch would appear to have a restricted extent, and it probably terminated immediately to the west of the trench. Presumably a further ditch carried on the alignment westwards. The assemblage of pottery is very important in the local/regional archaeological context because settlement evidence of this date is relatively rare in and around Oxford. The assemblage is reasonably substantial given the small section of the ditch which was excavated. The dating implications are not absolutely clear, however, because all of the pottery was derived from the upper two fills; these could represent a secondary recut of the feature, in which case the original ditch might be middle Bronze Age or even earlier. In the absence of more positive evidence one can only say that the ditch was in use during the late Bronze Age/early Iron Age but that it may have an earlier origin.

It is difficult to assess the function of the ditch. It was certainly substantial enough to be an enclosure ditch, and there was some circumstantial evidence for the former presence of a bank on the south side. This would imply that settlement activity also occurred to the south of the ditch, and the total absence of archaeological features in all the trenches to the west, north and east of Trench 9 perhaps supports this hypothesis. The evidence is not especially strong at this stage, however, and it is possible that the ditch was simply a boundary rather than a settlement feature.

The complete lack of a Roman component on the site is perhaps surprising, but not even a single sherd of pottery of that date was found. This cannot be readily explained by modern activity, because medieval and/or post-medieval ploughsoils survived intact over geology and under modern levels in the central area and especially at the west end (ie closest to Roman Way) where one might expect to locate Roman remains. The six trenches at the west end of the car park represent a substantial sample of the area, while Trenches 1 and 3 form a discontinuous but long transect parallel and adjacent to the Roman road. The record of burials from the other side of Roman Way has not been borne out by this evaluation, although trial trenches can only offer a partial glimpse of a site and relatively small features such as graves could still be found within the development area.

Later landuse

The evidence of ploughsoils from most trenches (except where such soils had been

removed at the east end of the site; see Fig 8) suggests that the car park had previously been agricultural land for a very substantial period. The historical evidence (Appendix 1) certainly shows that this was an area of open fields in the late post-medieval and Victorian periods. The pottery evidence would suggest that this use goes back to the medieval period at least.

All other evidence for landuse relates to the modern development of the site. Traces were found of the buildings known to have existed at the west end of the area, as well as the mains services which supplied them. These results, however, are of minimal archaeological significance.

RECOMMENDATIONS

The proposed development has been shown to contain one apparently discrete area of archaeological potential. This seems to be restricted to Trench 9/16 and perhaps an area to the south. No archaeology was found in the nearby Trenches 7, 8 and 10. Although the area lies just outside the building footprint, associated groundworks would probably have a significant impact on the archaeology. It is therefore recommended that an area around the south end of Trench 9 should be stripped under archaeological control and then archaeologically excavated prior to the development taking place so that the archaeology can be dealt with in advance. A suggested area for stripping is provided in Figure 9, but it must be stressed that the archaeology may extend beyond this area in any direction. It is possible that a larger area will have to be examined, although this seems unlikely on the available evidence.

The remainder of the site appears to have very little archaeological potential, although low-level monitoring of the works might be advisable. This would probably involve occasional visits related to a schedule of the overall construction programme. Visits would only be necessary during groundwork operations such as soil stripping and foundation digging.

OAU wishes to emphasize that there is still a slight possibility that Roman burials could be discovered on the site. The proposed watching brief should cover this possibility, but a contact mechanism should be established in case any remains are found by building contractors when archaeologists are not on site. The excavation of human remains is strictly governed by various Acts of Parliament, most notably the Burial Act 1857. A Home Office licence is required for the removal of ancient burials under Section 52 of this Act. Such licences can be applied for in advance or can be obtained by telephone if remains are disturbed accidentally and/or unexpectedly. "It is a criminal offence under Section 25 of the Burial Act 1857 to remove any human remains from any place of burial without a licence ... or to do so in breach of any condition attached to any licence. The offence is committed by the person who actually removes the remains." Each and every offence (ie every body removed) is punishable by a £200 fine, but adverse publicity could be an equally serious problem. It is therefore recommended that the principal building contractor makes all employees and sub-contractors aware of the position in law, and that they inform OAU immediately if any remains are found.

S Garrett-Frost 1992, The Law and Burial Archaeology, Institute of Field Archaeologists Technical Paper 11

CONCLUSIONS

The evaluation established that there is a limited amount of archaeological interest within the development site, comprising evidence for late Bronze Age/early Iron Age activity. It is recommended that the relevant area should be excavated before building works commence. Otherwise the evidence from the evaluation was largely negative.

Graham D Keevill and Mick Parsons Oxford Archaeological Unit 10 November 1995

APPENDIX 1 DESK-TOP APPRAISAL OF THE ARCHAEOLOGICAL POTENTIAL OF THE PROPOSED VEHICLE QUALITY CONSTRUCTION SITE, ROVER GROUP, COWLEY, OXFORD

Archaeology

A study area of approximately 1 square mile (comprising grid squares SP 5503-4 and 5603-4) around the development site was examined to attempt to establish the possible archaeological implications of the development. The archaeological database used was the Oxfordshire Sites and Monuments Record held by Oxfordshire County Council; the National Archaeological Record held by the RCHME at Swindon was also consulted, but it contained no additional sites. As marked on the Oxfordshire SMR the principal archaeology of the surrounding area is Roman. The principal sign of Roman activity within the study area is the line of the road from Alchester to Dorchester (OSMR 8923) which, as Roman Way, forms the western boundary of the development site. Its line is traceable to the north as Roman Way and to the south as Blackberry Lane, although the section of it immediately south of the railway has been lost to development. In 1959 a watching brief during the construction of a gas main across the line of the Roman road 250 m south of the proposed development area revealed two adjacent metalled road surfaces (OSMR 8033) constructed of limestone gravel and rubble.

The study area has produced a number of possibly Roman inhumation burials (OSMR nos 6158, 1819 & 1852) over the last 100 years: these are all concentrated to the north and west of the proposed development area and may be associated with the line of the Roman Road. None of the burials are well documented or securely located although their general location is fairly clear. The area to the north of the development area has produced four recorded inhumations: in 1895 it is recorded that two inhumations (OSMR 1819) were discovered in a stone pit 'to the east of the Roman Road at the point where it crosses the modern road from Horspath to Temple Cowley'. This would place them approximately 400 m north of the proposed development site. These burials were unaccompanied and orientated east-west. In 1959 a further two burials, also unaccompanied and orientated east-west were located 150 m to the east of this site during the digging of a drainage trench for a car park at the Pressed Steel plant.

At least seven burials (OSMR 1852) were discovered to the west of the proposed development site in the 1940s. These burials are very poorly documented and the exact location of the cemetery is unclear. One burial was excavated by Captain C Musgrave in 1940. In a letter to Oxoniensia he reported that he had excavated the body of 'an aged supine extended male' located 'about 20 yards NW of the point where the Roman Road from Alchester to Dorchester crosses the railway'. Workmen on the site reported that about 6 graves had already been 'demolished'. There is no report that any of these burials were accompanied. Their identification as Roman comes from Musgrave who describes the Romano-British shape of the skull of his skeleton. The Oxfordshire Sites and Monuments Record does not contain any further material relating to this site. comparison of the 1939 and 1956 25" maps indicates that a number of additional buildings were constructed between the main Pressed Steel plant and the Roman road between these dates and it would therefore appear likely that this is the site of the cemetery. This would place the cemetery approximately 100 m to the west of the development site. If, as with the site to the north, the cemetery spanned the road this may increase the possibility that the development site contains burials.

The study area also contains evidence of Roman settlement. Roman coins and pottery (OSMR 1822 & 2694) were found at Northfield Farm in the 19th century and Roman ditches, possible wall foundations and a kiln (OSMR 1865) were seen during the construction of an electricity sub-station at the point where the Roman Road crosses Watlington Road in 1956.

The study area also contains one undated archaeological site (OSMR 8033). Turf clearance in advance of stone quarrying just to the east of the Roman Road in 1903 revealed up to 20 holes 'about the diameter of a bucket' cut down through the soils to the natural stone and full of burnt earth, ashes, charcoal and bones. No dating evidence was recovered.

Development History of the site

The development site lies in the north-western corner of the parish of Garsington, a Domesday village. The underlying geology of the site is Wheatley Limestone although the Roman Road to the west forms the boundary with the Beckley Sands. The history of the site was traced on a variety of maps spanning the years 1797 to 1973. As shown on these maps the proposed development site remained undeveloped until after the Second World War. A map produced by the VCH (Vol V 1957) and based upon the medieval charters and 17th century terriers and leases argues that the development site was in arable cultivation in the 17th and 18th centuries. The earliest map consulted (Davis's 1797 map of Oxfordshire) shows the development site as an area of open land lying between the villages of Garsington and Horspath. This pattern is repeated on the 1811 Ordnance Surveyors Drawing and 1831 1st edition OS 1". The common fields of Garsington were inclosed in 1823; the award has survived but not the map. The first map sufficiently detailed to show the field pattern is therefore the 1841 Garsington Tithe map which shows the development area as occupying three fields in the extreme north-western corner of the parish, all owned by different landowners, all called North Field and all in arable use. The multiple ownership may suggest that the field pattern pre-dates inclosure. None of the 1841 field boundaries now survives. The Oxford-Wheatley Railway was constructed across the bottom of the development site in 1866: this is reflected on an amended tithe map and award of this year.

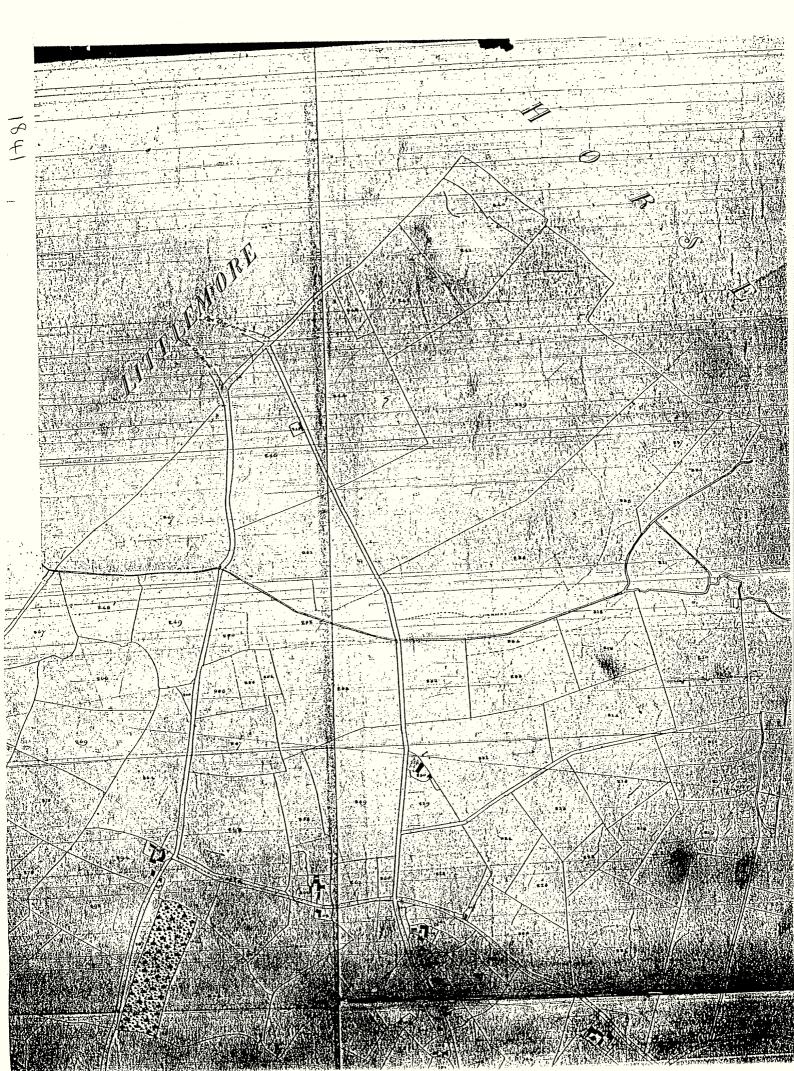
All editions of the Ordnance Survey 25" and 1:2500 maps were examined. These indicated that the field boundaries marked on the 1841 tithe map, if they ever existed in any material sense, had disappeared by 1881, the date of the 1st edition 25". No development of the site is marked upon the 1899, 1921 or 1939 editions of this map although by 1939 the Pressed Steel Factory buildings had been constructed to the west of the Roman Road. The only change within the development area within these years is the appearance of the drain, still extant on the development plans, which runs between the Horspath Road and the Railway: this feature is not marked on the 1st or 2nd edition but does appear on the 1921 edition of the map.

The first post-war 1:2500 Ordnance Survey map showing the development site dates from 1956. This shows the western side of the development site as occupied by a number of small buildings, marked 'Stores depot' (see enclosed map) and crossed by a small branch of the railway, running on partial embankment from the main railway line, across Roman Way and into the main plant. The area to the east of the branch railway is marked as car park on all post-war maps consulted. Histories of Morris Motors and Pressed Steel, as held by the Centre for Oxfordshire studies, were consulted to attempt to trace the exact date of the construction of these buildings. No exact dating was established. No change

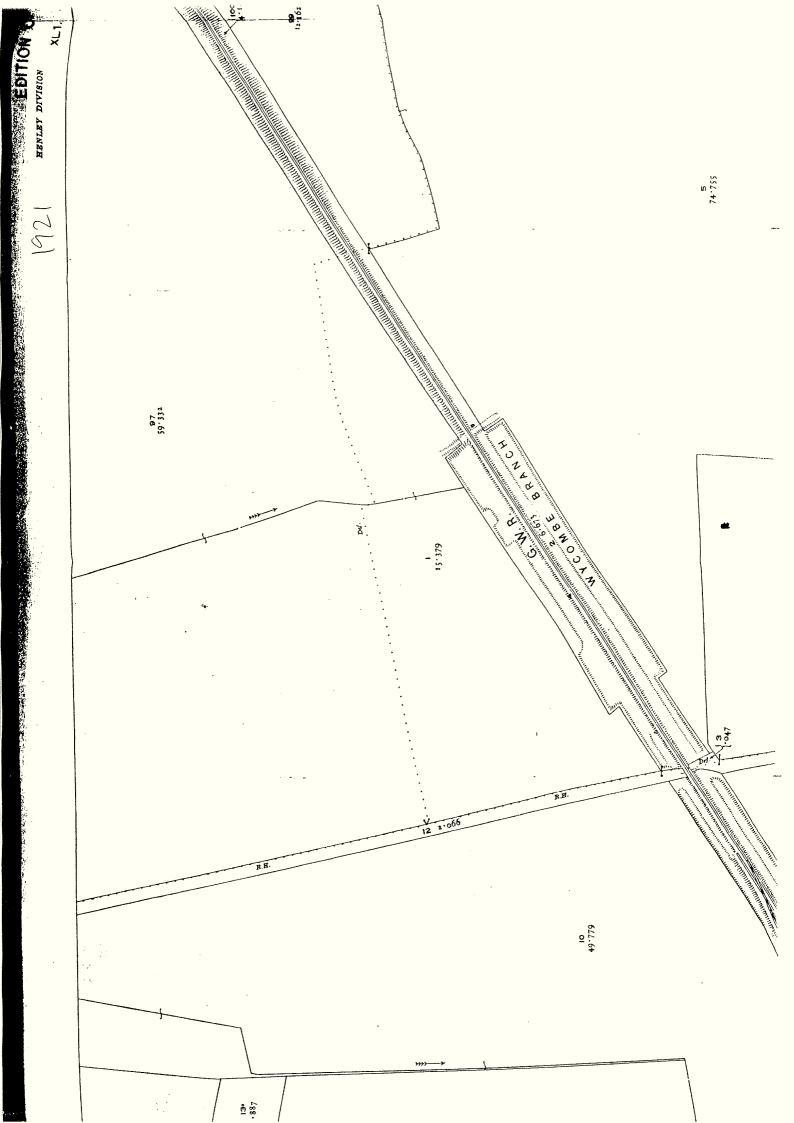
in site layout was apparent on the 1962 or 1972 1:2500 or 1:1250 maps consulted. Due to the mixture of 1:2500 and 1:1250 maps produced during these years the conglomerate map here produced has constituent parts dating from 1956, 1962 and 1972. The date of demolition of the buildings and removal of the railway line is unclear: the latest maps held by the Bodleian Library date from 1972-3 and show the building complex and railway still extant.

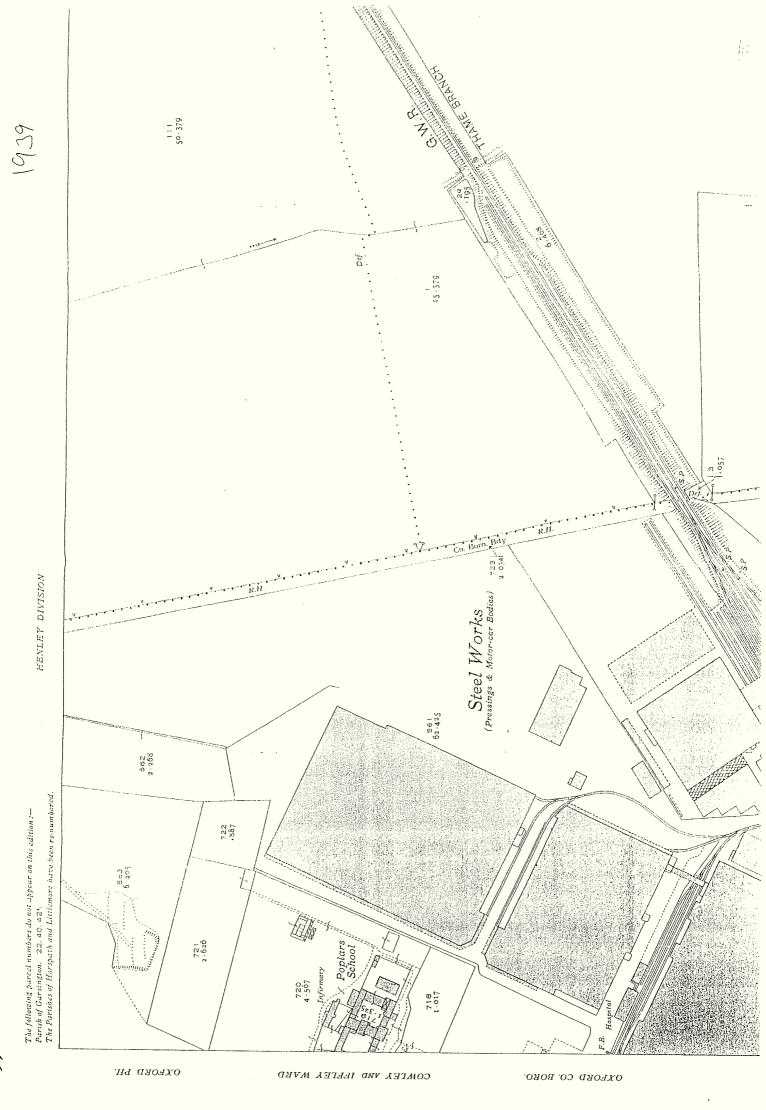
One point possibly worth noting is that none of the maps show any quarrying activity within the area of the proposed development. As evidenced by the number of sites located during late 19th and early 20th century sand, clay or stone quarrying there appears to have been considerable small scale quarrying in the area in these years, which may have removed much of the archaeology prior to the construction of the car plant. No such activity can be located for the development site: this may increase the possibility of undisturbed remains.

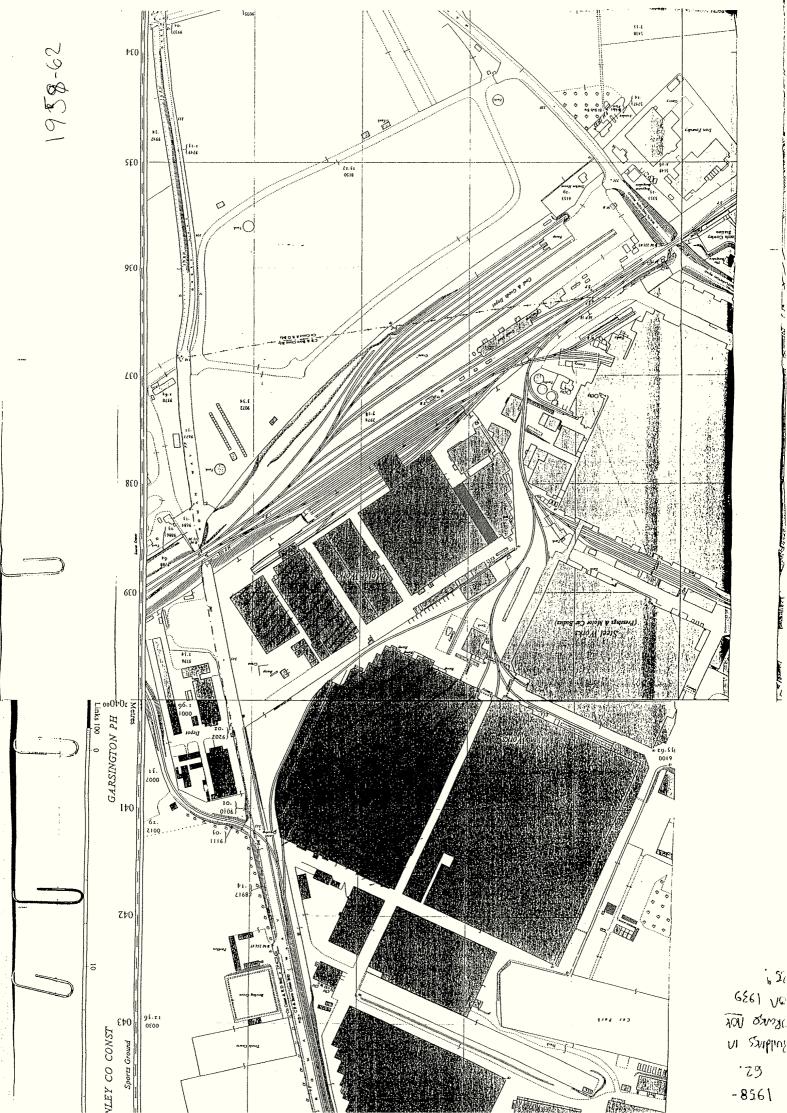




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APPENDIX 2 ARCHAEOLOGICAL COMMENTARY ON GEOTECHNICAL RECORDS SUPPLIED BY ROVER GROUP

1 Introduction

- 1.1 The Oxford Archaeological Unit has been commissioned to evaluate a proposed new development within the Rover car works at Cowley, Oxford. The site, which is currently used for car parking, lies alongside the Roman road from Alchester to Dorchester-on-Thames. Roman burials were reported from the other side of the road to this site in 1940.
- 1.2 The first stage of the evaluation consists of a desk-based study of the evidence for landuse on the site, mostly using cartographic and historical sources as well as Oxfordshire's database of archaeological sites (the County Sites and Monuments Record, or SMR). A parallel element of this study has been a brief analysis of geotechnical data from a recent survey of the site. The survey was carried out for engineering purposes, but the records contain much potentially useful data for the archaeologist, such as current surface conditions, extent of made ground, water levels, natural type and depth, and the presence of modern building foundations. Geotechnical surveyors use subtly different soil terminologies to the archaeologist and this has been borne in mind when assessing the geotechnical information.

2 The geotechnical project

- 2.1 The geotechnical survey was undertaken by Exploration Associates on behalf of WSP Consultant Engineers, acting for Rover Ltd. Three different types of geotechnical exploration were essayed: boreholes (nine; the preliminary logs do not state what type of boreholing was used), trial pits, and shallow pits. In practical terms there seems to have been no difference between trial pits and shallow pits. In some circumstances trial pits are excavated to considerable depth (4 m and more), but solid geology (limestone) was found at depths of between 0.5 m and 2 m on this site, making deeper excavation unnecessary. The pits were all dug with a JCB 3CX mechanical excavator. All pit and borehole logs were completed by the same individual (initials TA). Nine boreholes were sunk in the car park, with a further two on the railway embankment to the south. The logs for this work are undated. Copies of five logs (all in the car park) have been provided by Rover Ltd. Four shallow pits and 26 trial pits were excavated (copies of 23 logs have been supplied to OAU). The logs are dated 26, 27 or 28 September 1995. The pattern and timing of the excavations had to take account of operational requirements in the car park.
- 3 Purpose of the archaeological commentary
- 3.1 Geotechnical surveys are undertaken for engineering purposes such as assessment of ground conditions, water levels, depth of bedrock, soil structure and load-bearing potential. The recorded data can be very useful to archaeologists, however, in that the depth to natural deposits is provided, information on soil types and characteristic inclusions is recorded, and features/structures may be exposed. The survey may indicate areas of high or low archaeological potential; in the former

case features and artefacts might be found, while in the latter case there may be direct or indirect evidence for past interventions on the site (eg construction work, mineral extraction, landscaping). At the very least geotechnical data can provide a useful prediction of soil conditions and the necessary depth of excavation before archaeological work commences.

- 3.2 Ideally an archaeologist should be available to monitor geotechnical works. If this is impossible, archaeologists can use and interpret the geotechnical records (logs). This is not ideal, and the term 'made ground' used by engineers and others often includes archaeological strata. Nevertheless it is worth examining survey records so that an impression can be gained of the below-ground topography of a site.
- 4 Commentary on the preliminary issue geotechnical records
- 4.1 This commentary presents the results of a rapid analysis by OAU of preliminary records prepared by Exploration Associates. The geotechnical records have been examined in conjunction with a location map. Archaeological interpretation of the data is necessarily limited, but some useful conclusions have been reached concerning ground conditions, modern site history, and archaeological potential.
- The LIMESTONE bedrock manifests at a typical depth of c. 1.2 m across most of 4.2 the site, and this is fairly consistent. The approximately 3 m drop from north-east to south-west therefore appears to reflect the underlying geology. There are, however, some notable variations to the depths recorded in the trial pits and shallow pits. Limestone was found at a depth of only 0.5 m, for instance, in trial pit 7 (close to the centre of the car park) and at 0.8 m - 1 m in pit 4 towards the north-west corner. In contrast depths of 1.5 m, 1.85 m and 2 m were noted in pits 20, 22 and 21 respectively, in the centre of the southern margin. Perhaps more seriously, there is a significant discrepancy between the borehole and excavation data. Depths of 2.6 m, 3 m, 3 m and 3.1 m were noted in boreholes 3, 1, 5 and 2 respectively. Hole 5 was sited in the centre of the car park, while 1, 2 and 3 were in a south-east to north-west line across the east end. Borehole 8, towards the west end of the car park, found limestone at 1.3 m, consistent with the trial pit This suggests that the other borehole records are not erratic or erroneous, but that they reflect genuine discontinuities in the underlying geology. It is impossible to determine whether these are of geological or anthropogenic origin, but it is tempting to see the depths in trial pits 20, 21 and 22, and boreholes 1-3 as evidence for linear features such as ditches. The two lines are at an approximate right-angle, and could even form the corner of an enclosure. This cannot be proved without further excavation, of course. Equally the high level of the limestone in pit 7 could relate to a standing masonry feature, but the isolated nature of the reading in this pit makes this doubtful.
- 4.3 In virtually all pits the limestone was overlain by SANDY CLAY, including the pits and boreholes where the limestone was deeply buried. The clay varied in depth from only 0.25 m to 2.7 m (in pit 7 and borehole 2 see above), but these extremes mask a much more restricted range of between 0.7 m and 1 m which is more typical of the car park. The sandy clay is (in archaeological terms) a natural formation. Variations at the west end can largely be explained by the former presence of buildings here; their foundations have clearly disrupted the natural formations, and there is some evidence for more general soil stripping during the

construction works (see below).

- 4.4 Two test pits (16 and 17) at the east end of the car park contained a thin lens of GREY VERY SHELLY CLAY. The layer was 0.1 m thick from a depth of 0.3 m below the car park surface in pit 16, and 0.05 m thick from 0.25 m in pit 17. The soil description (colour and shell inclusions) suggests that this was a water-lain deposit, perhaps accumulating in a localised and very shallow hollow.
- 4.5 'MADE GROUND' was noted above the natural sandy clay in virtually all pits. At least two distinct types of ground were present. Sandy clay incorporating variable amounts of decayed organic matter was found in pits 1, 7, 13-15, 18-21 and 23-24. In most cases the log records this as possible 'old topsoil'. These deposits are typically 0.2 m 0.3 m thick and lie between 0.2 m and 0.4 m below the current ground surface. Pits 1, 13 and 18 were in the west end of the car park, and the remainder were in the central and eastern parts. At the west end of the car park the made ground was often much thicker than elsewhere, reflecting construction work (and possibly widespread soil stripping during the 1950s construction works). Made ground comprising sub-angular limestone gravel in sandy and ashy matrices were noted below the existing tarmac surface in every pit.
- 4.6 Walls and concrete slabs were noted in shallow pits 1, 3 and 4, and trial pit 5. All of these were located within the western end of the car park where buildings were erected in the 1950s. The positions of these buildings can still be seen quite clearly in the car park surface, and in some cases the stubs of the brick walls show through the tarmac. Service information supplied by Rover Ltd shows that various electric, water and drainage supplies associated with these buildings are still present and live below ground.

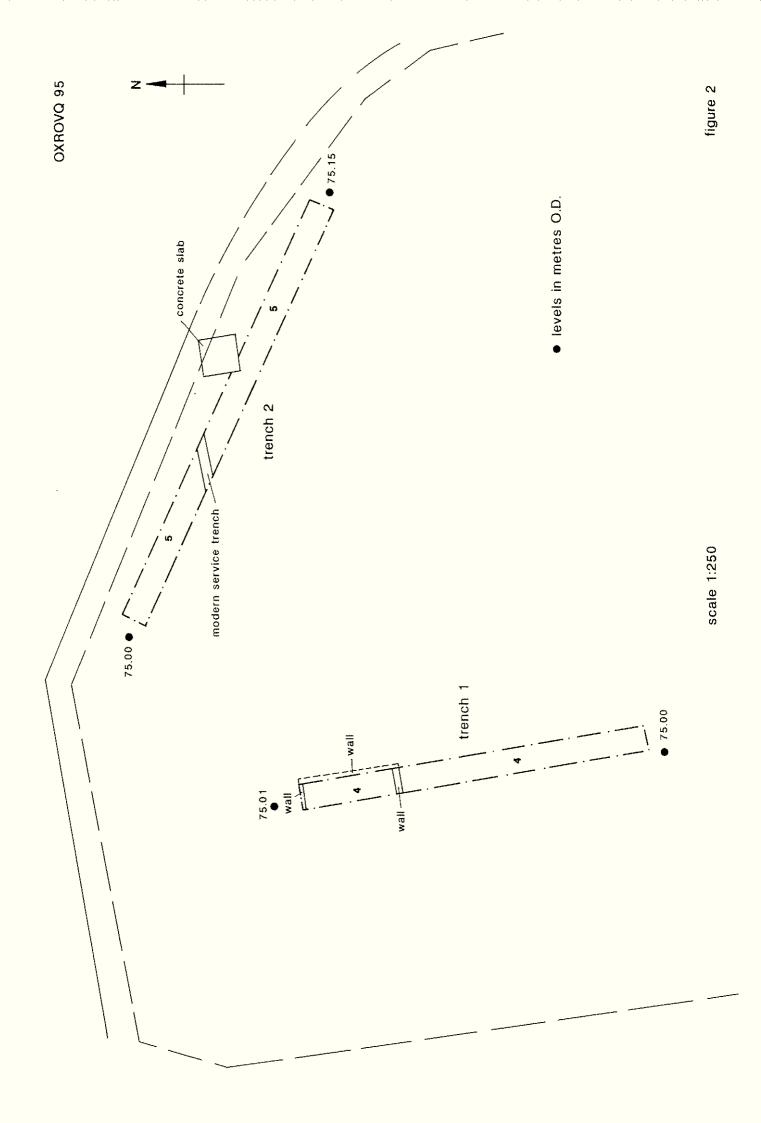
5 Conclusions

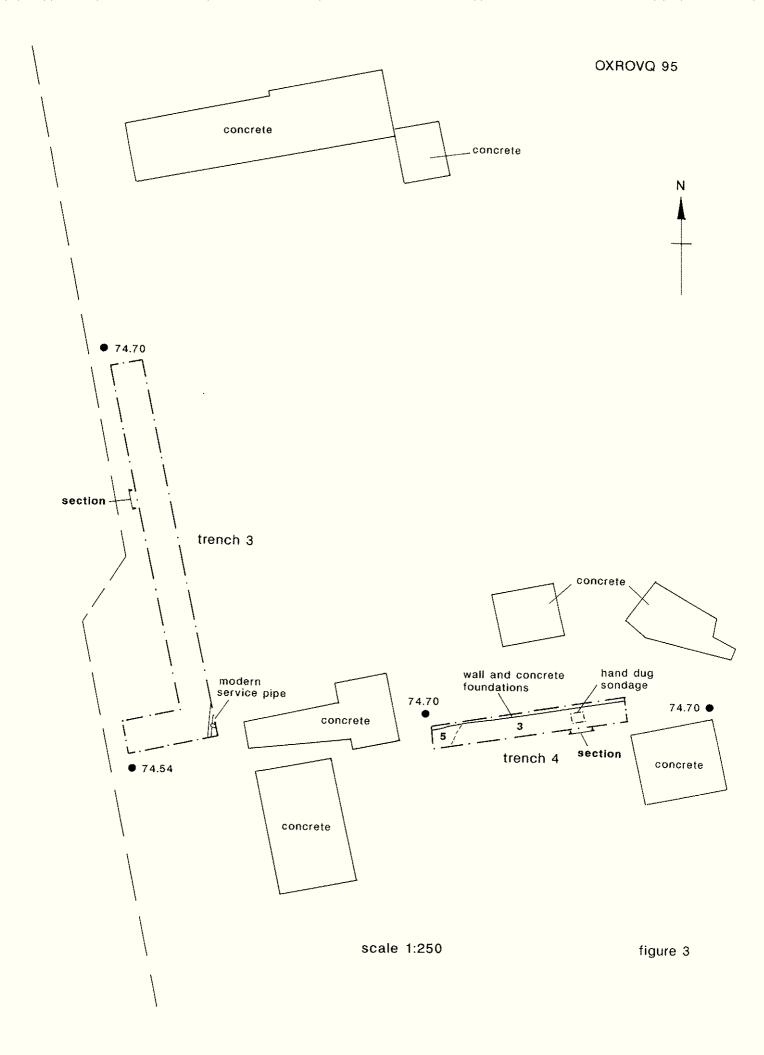
5.1 The natural geology consists of limestone overlain by sandy clay. The geotechnical records suggest that there may be some archaeology on the site. Preservation is variable, however, and the buildings and associated services at the west end have undoubtedly caused significant truncation to natural deposits. This truncation will have severely affected any archaeology that was present in this area, but there is still a possibility of some survival.

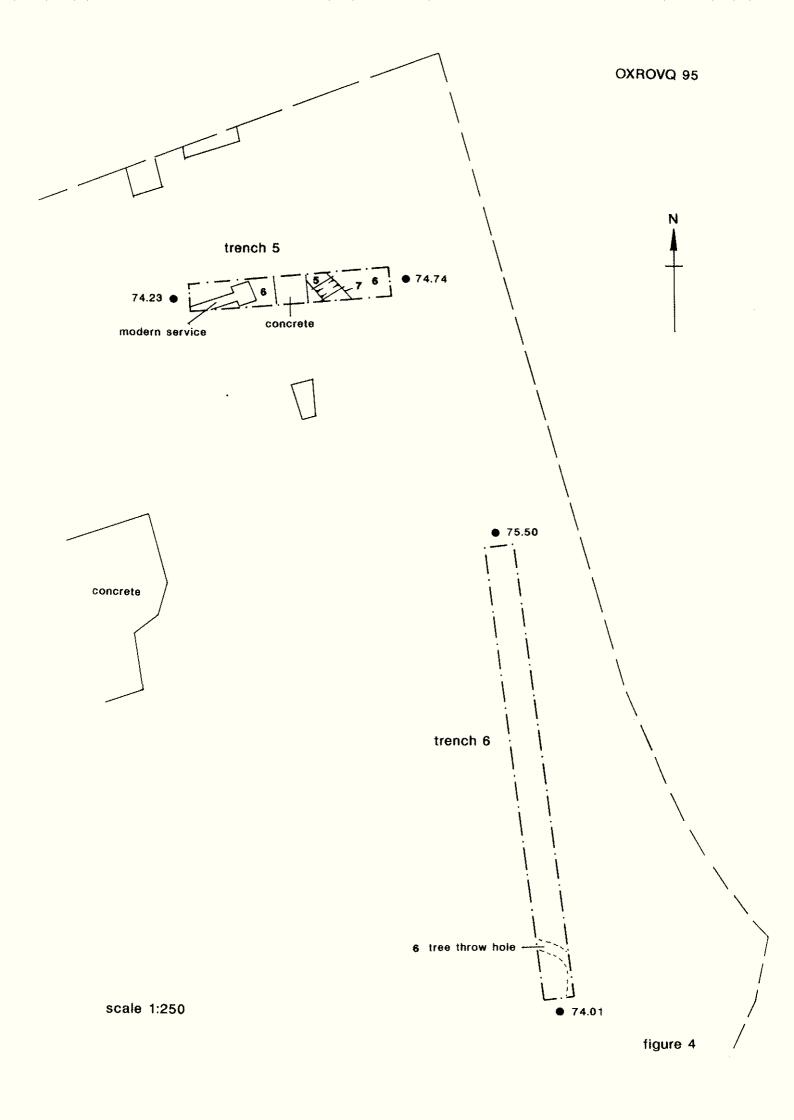
APPENDIX 3 TABLE OF CONTEXTS

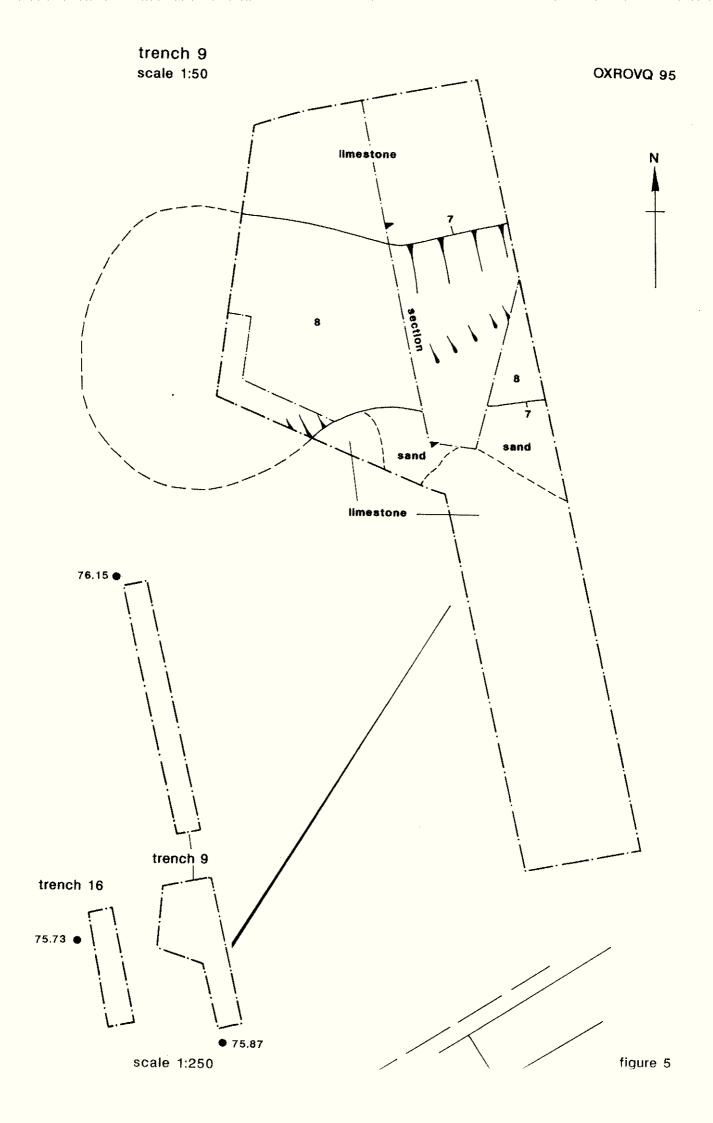
CTX	TYPE	DEPTH	WIDTH	COMMENTS	DATE
1/1	layer	0.15		concrete	modern
1/2	layer	0.46		rubble	11
1/3	layer	0.20		ploughsoil	medieval/post-medieval
1/4	layer			natural	geology
2/1	layer	0.06		tarmac	modern
2/2	layer	0.22		makeup	"
2/3	layer	0.15		rubble	91
2/4	layer	0.20		ploughsoil	medieval/post-medieval
2/5	later			natural	geology
2/6	cut	0.40	0.60	service	modern
2/7	fill			fill of 2/6	"
3/1	layer	.0.06		tarmac	modern
3/2	layer	0.60		rubble	e!
3/3	layer	0.20		disturbance	11
3/4	layer	0.20		ploughsoil	medieval/post-medieval
3/5	layer	0.20		subsoil	unknown
3/6	layer			natural	geology
4/1	layer	0.02		tarmac	modern
4/2	layer	1.10		rubble	a a
4/3	layer	0.32		disturbance	"
4/4	layer	0.10		ploughsoil	medieval/post-medieval
4/5	layer			natural	geology
5/1	layer	0.06		tarmac	modern
5/2	layer	0.18		rubble	"
5/3	layer	0.10		disturbance	
5/4	layer	0.18		ploughsoil	medieval/post-medieval
5/5	layer	0.20		subsoil	unknown
5/6	layer			natural	geology
5/7	cut	1.40	0.80	natural feature	unknown
6/1	layer	0.12		tarmac	modern
6/2	layer	0.25		makeup	11
6/3	layer	0.28		rubble	**
6/4	layer	0.20		ploughsoil	medieval/post-medieval
6/5	layer	0.16		ploughsoil	1)
6/6	cut	0.17	0.46	tree-throw hole	unknown
6/7	layer			natural	geology
7/1	layer	0.08		tarmac	modern
7/2	layer	0.30		rubble	"
7/3	layer	0.20		ploughsoil	medieval/post-medieval
7/4	layer	0.16		ploughsoil	11
7/5	layer			natural	geology
8/1	layer	0.06		tarmac	modern
8/2	layer	0.20	***************************************	rubble	11

8/3	layer	0.20		disturbance	17	
8/4	layer	0.30		ploughsoil	medieval/post-medieval	
8/5	layer			natural	geology	
9/1	layer	0.06		tarmac	modern	
9/2	layer	0.14		rubble	13	
9/3	layer	0.14		ploughsoil	medieval/post-medieval	
9/4	layer			disturbed natural	unknown	
9/5	layer	0.20		subsoil	It.	
9/6	layer			natural	geology	
9/7	cut	0.46	2.00	ditch	see fills	
9/8	fill	0.10		fill of 9/7	late Bronze Age/early Iron Age	
9/9	fill	0.36		fill of 9/7	"	
9/10	fill	0.11		fill of 9/7	earlier than 9/9	
9/11	fill	0.20		fill of 9/7	71	
10/1	layer	0.06		tarmac	modern	
10/2	layer	0.20		rubble	11	
10/3	layer	0.18		ploughsoil	medieval/post-medieval	
10/4	layer			natural	geology	
11/1	layer	0.08		tarmac	modern	
11/2	layer	0.25		rubble	*1	
11/3	layer	0.15	*************	disturbance	n .	
11/4	layer			natural	geology	
12/1	layer	0.06		tarmac	modern	
12/2	layer	0.24		rubble	. "	
12/3	layer	0.10		disturbance	11	
12/4	layer			natural	geology	
13/1	layer	0.06		tarmac	modern	
13/2	layer	0.04		makeup	I t	
13/3	layer	0.18		rubble	11	
13/4	layer	0.10		disturbance	*1	
13/5	layer			natural	geology	
14/1	layer	0.06		tarmac	modern	
14/2	layer	0.26		rubble	11	
14/3	layer	0.14		disturbance	''	
14/4	layer	0.08		subsoil	unknown	
14/5	layer			natural	geology	
15/1	layer	0.08		tarmac	modern	
15/2	layer	0.14		rubble	l'	
15/3	layer	0.12		disturbance	"	
15/4	layer	0.04		subsoil	unknown	
15/5	layer			natural	natural	
16/1	layer	0.06		tarmac	modern	
16/2	layer	0.18		rubble	. "	
16/3	layer	0.18		disturbance	n n	
16/4	layer	0.12		ploughsoil	medieval/post-medieval	
16/5	layer			natural	geology	

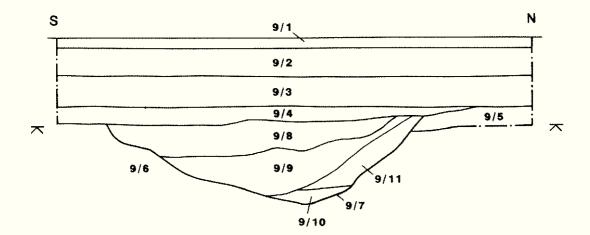








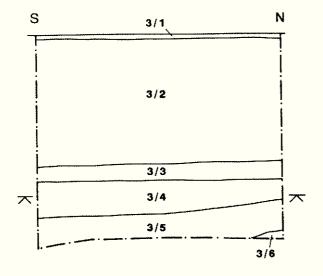
Trench 9 section



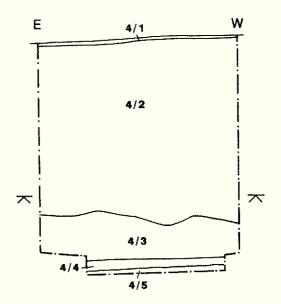
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figure 6

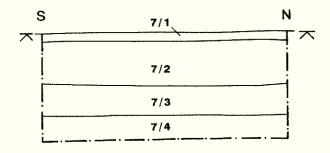
Trench 3 section



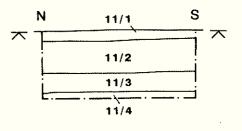
Trench 4 section



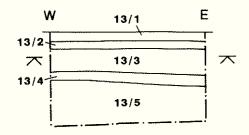
Trench 7 section



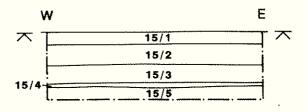
Trench 11 section



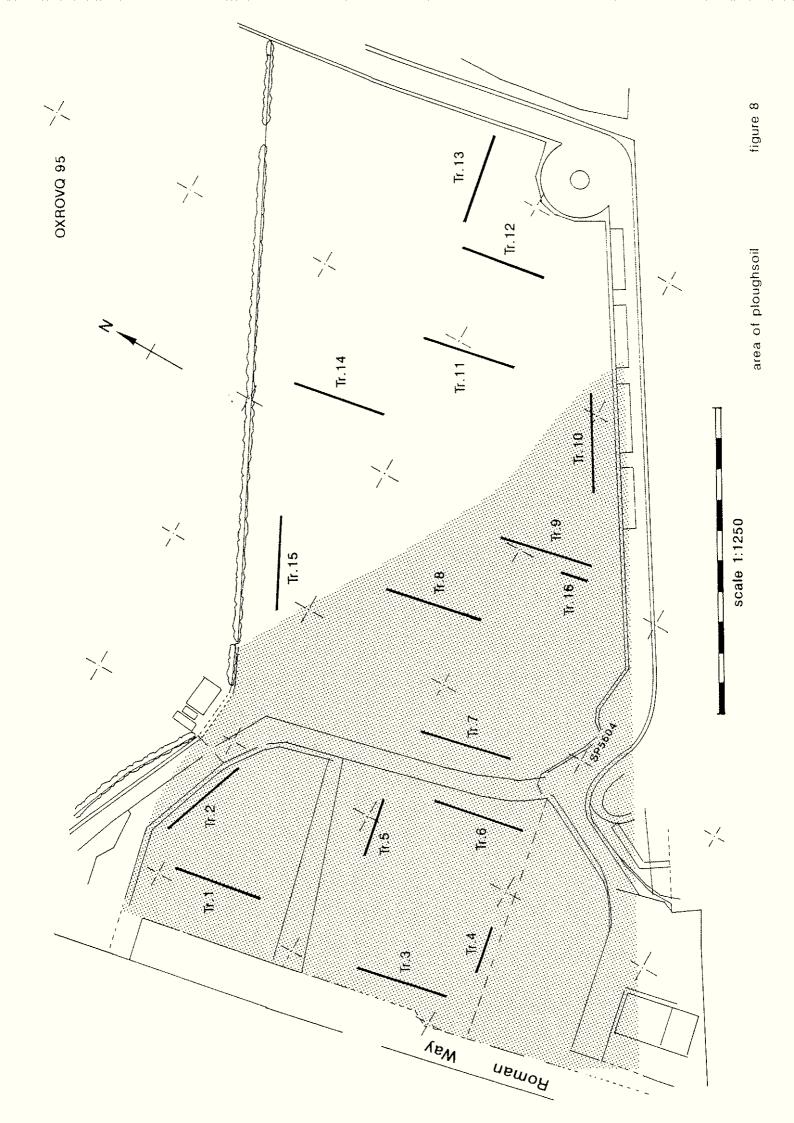
Trench 13 section



Trench 15 section



scale 1:25





List of Figure Captions

- Fig. 1 Site locaction and position of evaluation trenches on the Vehicle Quality site.
- Fig. 2 Excavated area of Vehicle Quality site.
- Fig. 3 Feature 110.
- Fig. 4 Sections.
- Fig. 5 Prehistoric pottery.



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