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Old Headington
Oxford

Archaeological Evaluation Report

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Ruskin College, Old Headington
Oxford

ARCHAEOLOGICAL EVALUATION

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SUMMARY

Oxford Archaeology undertook a two-stage field evaluation within the Headington grounds of Ruskin College on behalf of the College prior to determination of an application for redevelopment. This took the form of a magnetometer survey followed by the excavation of 12 trial trenches to investigate the impact areas of the proposed development. The geophysical survey produced limited results although the trenches identified remains of early Iron Age, Roman and medieval/post-medieval date. The Roman remains were restricted to Trench 9 although these are consistent with previous discoveries along the western fringe of the College grounds suggesting occupation along a raised finger of land. The Roman pottery assemblages also imply the close proximity of a mortarium production site. Significant domestic charred cereal remains were recorded from the excavated Roman feature.

Medieval remains were more limited although a 12th or early 13th century cow burial was encountered by Stoke House within the eastern portion of the site. No significant remains were encountered within the listed crinkle-crankle walled garden.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 Between 10th and 19th March 2008 Oxford Archaeology (OA) undertook a field evaluation within the Headington grounds of Ruskin College (Fig. 1). This was commissioned by the College to fulfil a Brief set by Brian Durham, formerly the Archaeologist at Oxford City Council (OCC) designed to inform determination of a planning application for redevelopment within the grounds of the college. Prior to commencing the site investigation a Written Scheme of Investigation (WSI) was produced by OA and agreed with Brian Durham detailing how the requirements of the brief would be met (OA 2008).

1.1.2 The College is located within Old Headington focused on the 17th century house, The Rookery, to the north of the junction between Dunstan Road and Stoke Place (centring on NGR SP 543 078). Additional grounds are located around Stoke House to the immediate east of Stoke Place with the A40 North Way bypass bordering the fields to the rear (north) of the College. The Headington grounds cover approximately 3.8 hectares in area.

1.2 Geology and topography

1.2.1 Headington is drained on the north by the Bayswater Brook that rises on the eastern slopes of Shotover Hill and flows west to join the Cherwell near New Marston. The valley floor is based on Oxford clay with land rising fairly sharply up to the top of the plateau formed by the Corallian beds, generally *c* 90 m a OD.

1.2.2 The detailed local geology shown on the published British Geological Survey map, Sheet 237, shows the site on an area of mixed geology. The college buildings are

located on the Corallian beds at the top of the slope on part of the formation known as the Beckley Sand Member which is made up of sand and calcareous sandstone. To the north, progressing down the valley side, are thin bands of Temple Cowley Member - fine grained sandstones, sands and siltstones and West Walton Formation - a dark grey mudstone, running east to west parallel with the Brook. The fields to the north of the bypass are located on Upper Oxford Clay and the footpath known as Stoke Place to the east of the site is over an area of head drift geology. The Bayswater Brook has a valley bottom of alluvial deposits (BGS 1994). There are a number of springs in the area draining into the Brook and presumably located along the junctions of differing geology.

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background to the evaluation has been the subject of a separate desk study by OA (2006). The most relevant parts have been summarised below by period although the original report should be consulted for greater detail. The original study has not been referenced although other sources have.

Prehistoric

1.3.2 Evidence for prehistoric activity in the surrounding area is fairly limited although archaeological excavations at the nearby former football stadium, Manor Ground, did yield a struck flint assemblage from which the earliest material dates to the Mesolithic or early Neolithic period (JMHS 2003). The bulk of the flint assemblage comprised artefacts from the later Neolithic and Bronze Age accompanied by pottery of a similar date. Also at this site the quantity of middle-late Iron Age pottery present suggests that a contemporary settlement may be located within the immediate vicinity.

Romano-British Period (AD 50-450)

1.3.3 There is extensive evidence for Romano-British activity within the Headington area and it is clear that a major pottery industry was flourishing in the wider area during this period. Numerous kilns sites have been found in the vicinity of the north-south Roman Road which ran just to the east of Headington between Alchester and Dorchester.

1.3.4 There has been speculation regarding the presence of a kiln site at Ruskin Hall following artefactual discoveries during the construction of a block of residential accommodation completed between 1976-8. Landscaping work left exposed a quantity of Romano British pottery, mortaria, parchment ware, grey-ware, colour-coated and some coarse wares, mostly familiar Oxford types (SMR 3669). Prior to this 'Romano-British coarse pottery….was reported….from foundation trenches at the Rookery, Old Headington.' (Sturdy and Sutermeister 1966, 191).

1.3.5 In 1935 during house building on Cemetery Lane (now Dunstan Road) many potsherds, mostly mortaria of pinkish-white and buff clay and other kitchen vessels of coarse ware of the late 3rd and 4th centuries, were found (VCH 1939, 338). The suggested location of these finds is along the southern side of Dunstan Road opposite Ruskin College although the exact location was not recorded.

Medieval and Post-medieval Period (450-present)

1.3.6 Headington derives its name from a Saxon personal name 'Hedena' and 'dun' or hill and it is from the late Saxon period that the settlement derives its historical importance. Documentary evidence in the form of a charter of 1004 records King Ethelred confirming the details of a land endowment here at a royal manor. The manor is documented again within the Domesday records of 1086 when it was held by the King and it remained in the hands of the crown until after the death of Henry I (1135), after which the importance of Headington diminished in favour of Woodstock. The possible association of the area around Ethelred Court, just to the south of Ruskin College, with the location of a Royal Manor has been suggested since the 19th century although this remains unconfirmed despite previous archaeological investigations prior to new developments in 1988 and 1992 (OAU 1993).

1.3.7 Later medieval remains have been encountered at various locations in Old Headington and the medieval church of St Andrews attests to the continued existence of a settlement here throughout the period. The layout of the property boundaries also implies that buildings probably fronted the street arrangements with strip fields extending behind. Within this arrangement developed the 17th century hall-and-crosswing house, The Rookery. It is described as originating from a 16th century 'peasant dwelling' which may have ancillary domestic or agricultural activities around it within the grounds. A surviving walled kitchen garden with its 'crinkle-crankle' wall also dates from the 18th century.

1.3.8 The Rookery, its associated walled kitchen garden and Stoke House are Grade II listed buildings. Stoke House was built in 1883 as a preparatory school for boys by the Reverend John Williams Augustus Taylor, although this may have been modelled around an earlier 17th century cottage.

2 EVALUATION AIMS

2.1.1 The aims of the evaluation are specified in the WSI (OA 2008) and are repeated below.

2.2 General

2.2.1 To establish the presence/absence of archaeological remains within the proposal area.

2.2.2 To determine and confirm the character of any remains present, without compromising any deposits that may merit detailed investigation under full area excavation.

2.2.3 To determine or estimate the date range of any remains from artefacts or otherwise.

2.2.4 To investigate the extent of any significant remains outside the initial trenched sample through agreement with the client and City Archaeologist.

2.2.5 To characterise any underlying archaeological strata down to undisturbed geology without significantly impacting upon significant younger (overlying) deposits where possible.

2.2.6 To determine the palaeo-environmental potential of archaeological deposits.

2.2.7 To make available the results of the investigation to inform the planning application and the potential for any further mitigation strategy.

2.3 Site specific aims

2.3.1 To establish the presence or absence of potential pottery kilns.

2.3.2 To establish the presence or absence of any medieval and post-medieval domestic and/or horticultural land use within the site area.

2.3.3 To investigate the degree of terracing and made ground within the walled garden resulting from the construction of the tennis court.

3 EVALUATION METHODOLOGY

3.1 Scope of fieldwork

3.1.1 The evaluation utilised both non intrusive and intrusive methods. In the first instance a geophysical survey was undertaken of each impact area where access and ground conditions allowed (see Appendix 5 Fig. 1).

3.1.2 Immediately following the production of the geophysical survey results 12 evaluation trenches measuring between 5.0 m and 10.0 m in length and each 1.6 m wide were positioned within the impact areas (Fig. 2 and see Appendix 1 for exact trench dimensions). Originally 13 trenches were to be excavated although, during the course of the geophysical survey, OA was informed by the college that future development will not be undertaken within the impact area 7. Therefore this area was not subject to intrusive evaluation although the geophysical survey had already been completed.

3.1.3 Four trenches representing a 4% sample by area were excavated within the walled garden that includes the Grade II listed crinkle-crankle wall. The remaining 8 trenches, with the exception of Trenches 3 and 11, were excavated as set out in the WSI representing a 3% sample by area of the impact areas. During the excavation of Trench 3 an electrical service was identified running diagonally across the western part of the trench at which point excavation ceased. Similarly, numerous electrical services were detected prior to excavation of Trench 11. These were investigated by careful hand excavation to establish the depth of services after which it was decided

not to excavate at this location. Within the limited space available it was not possible to relocate this trench safely and this was not excavated in another location.

3.2 Fieldwork methods and recording

3.2.1 The trenches were located as indicated in the WSI with small adjustments made with consideration to standing mature trees, tree stumps and live services. Exact locations were subsequently survey located following excavation (Fig. 2).

3.2.2 Each trench was initially machine excavated under close archaeological supervision to remove all non-archaeologically significant levels of overburden with a 2.5 tonne 360° tracked mechanical excavator fitted with a toothless bucket. Machine excavation ceased at the uppermost archaeological horizon or natural geology depending upon which was encountered first.

3.2.3 Following machine excavation and where deemed necessary, each trench was cleaned by hand and the revealed features were sampled to determine their extent and nature, and to retrieve finds and environmental samples. All archaeological features were planned and where excavated their sections drawn at scales of 1:20. All features were photographed using colour slide, black and white print film and digital photography. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed D Wilkinson 1992).

3.3 Finds

3.3.1 Finds were recovered by hand during the course of the excavation and generally bagged by context. Finds of special interest were given a unique small find number.

3.4 Palaeo-environmental evidence

3.4.1 A single deposit from a feature within Trench 9 was sampled for charred and waterlogged plant remains.

3.5 Presentation of results

3.5.1 This report presents summary results from the geophysical survey followed by the detailed findings from each trench. The full geophysical survey report is included as Appendix 5. Where appropriate, the trenches have been described in associated groups and are accompanied by the relevant illustrated plans and sections where archaeological deposits and features were encountered. An inventory of all finds and contexts is provided in Appendix 1.

4 RESULTS

4.1 Geophysical survey

4.1.1 As much of the unobstructed ground as possible coinciding with the approximate extent of the impact areas was subject to a magnetometer survey. Impact Areas 2 and

3 were unsuitable for survey as the hard tennis court within the walled garden (Area 2) gave wild readings, and Area 3 was obstructed and overgrown. There was also much recent rubbish in the only accessible open part of this area where the evaluation trench was positioned. The recent rubbish would have given misleading and otherwise useless results.

4.1.2 Although the grey scale plots (see Appendix 5 Fig. 2) do not appear to be dominated by underground services, they are all still very disturbed. The difficult question is whether any of the very strong magnetic disturbances (which are seen everywhere, but particularly in areas 1, 7 and 8) could be archaeologically significant. A Roman industrial site (including pottery production) could produce magnetic anomalies of comparable strength, but in this context it is much more likely that the disturbances relate to recent landscaping and development. There are no clearly apparent strong symmetrical magnetic anomalies of the kind to be expected from intact ancient kilns. Scattered waster heaps could produce a random magnetic effect of the kind seen, but so could modern rubble and debris. Area 1 appears to be on relatively open ground away from the buildings, but still shows very strong magnetic interference. The interpretation of this is not readily apparent and it could be either of archaeological significance or a result of the modern landscaping and debris.

4.2 Evaluation trenches

General soils and ground conditions

4.2.1 The grounds of Ruskin College include many mature trees and shrubs set within a landscaped garden. The trenches were positioned so as to avoid the significant tree obstacles including their root spreads. However, the landscaping that has taken place over the years meant that Trenches 1 and 7 could not be machined to a confidently identifiable horizon of either archaeological significance or natural geology due to the limitations on the depth to which the machine could excavate.

4.2.2 The most significant problem encountered was the presence of springs across the majority of the site, combined with the poorly draining geology. This affected, most significantly, Trenches 1, 2, 8, and 9 and was compounded by heavy rain throughout the first day of work, creating severe water logging. Within these trenches only limited hand excavation and recording was possible.

Trench 1

4.2.3 Located to the east of the walled garden, Trench 1 was excavated to an average depth of 2 m (Fig. 3) revealing a light blue-grey clay deposit (103). Due to the depth of this excavation it was not possible to establish if this was the uppermost level of the geology although the presence of charcoal and limestone fragments within it suggest at the very least that it was a reworked or redeposited clay layer.

4.2.4 Crossing the northern part of the trench and directly overlying deposit (103) was a layer of crushed limestone and mortar with bricks set into it creating a shallow gully (105). This possibly formed part of a drain arrangement.

4.2.5 The drain was overlain by a dark grey clay deposit (102) over which an area of cobbling (104) had been laid that extended beyond the northern limits of the trench.

4.2.6 Overlying the cobbled surface and extending across the full extent of the trench was a deep sequence of modern debris layers (101, 100 and 106). The topography, deposits and debris visible prior to machine excavation within this area clearly indicated that it had been used to discard waste material until relatively recently resulting in a significantly raised surface level in comparison to the surrounding areas. Although no finds were retained from these deposits, numerous modern items of rubbish including old mattresses and building rubble were noted from each of these deposits.

Trench 2

4.2.7 The natural blue grey clay (209) was only encountered within a small sondage section excavated at the eastern end of the trench (Fig. 4). This was 1 m below the current ground surface. Directly overlying the natural clay was a 0.30 m thick layer of a buried garden soil comprising a dark brown silty clay (208), from which a sherd of 19th/20th century pottery was recovered. This was overlain by a crushed mortar deposit (204) which was underlying a further garden soil layer (203). The surface of deposit 204 represents the earliest level revealed within the trench other than natural exposed within the small sondage.

4.2.8 Set in a shallow cut (201) into soil layer 203 was a curving arrangement of roughly shaped limestone fragments (202). These were only set as a single course and were poorly bonded with loose, degraded mortar. These also define the southern limit of a spread of crushed mortar and degraded limestone (207) which extended northwards beyond the limit of the trench. The purpose of this structure is unclear but it would appear to date to the 19th or 20th century and is most likely to have been intended as part of the landscaped garden.

4.2.9 A linear feature (205) 0.50 m wide cut the limestone and mortar deposits on a NW-SE alignment and was infilled with a dark grey brown, sandy silt (206). This feature was not excavated due to the poor ground conditions but its stratigraphic location indicates that it is relatively recent in date and may be a service trench. The modern topsoil and turf completed the sequence.

Trench 3

4.2.10 At the eastern end of Trench 3, a machine dug sondage was excavated to test the natural deposits and identified a dark blue grey clay (310), identical to deposit (209) in Trench 2, 0.90 m from the surface. Overlying this was a dark brown-yellow sandy clay (302) 0.18 m in thickness likely to represent the weathered upper horizon of the natural clay.

4.2.11 A service trench for a drain (308) and two later circular features (304 and 305) that probably reflect planting within the garden were cut into the surface of layer 302.

Trenches 4, 5, 6 and 7

4.2.12 Trenches 4, 5, 6 and 7 were positioned to investigate the area within the walled garden and the impact of terracing relating to the construction of a tennis court (Fig. 5).

4.2.13 Within Trench 4 natural clay (405) was encountered at a depth of 0.15 m directly below the court surface and hardcore bedding (400). A drain (402) cut into the clay and was constructed of small limestone pieces aligned NNE-SSW along the line of the trench (Fig. 6 section 2). The lack of any intervening deposits and the surrounding topography suggests that the level of truncation is significant at this point with the court surface clearly at a level below that of the surrounding planted areas.

4.2.14 Trench 6 was positioned on soft ground to the south of the tennis court with the ground level sloping downwards from south to north. On the northern side of this trench natural clay (604) was recorded at a depth of 0.30 m directly below garden soils (600 and 601). The southern side was approximately 0.70 m in depth and may well represent the southern extent of the terracing activity. The corner of a possible pit (602) was exposed within the eastern corner of the trench. This was 0.40 m deep with a flat base and steep sides and infilled with a sterile blue clay deposit (603) (Fig. 6 section 6). The function of this feature is unclear although the type of infill does suggest it could be of modern origin.

4.2.15 Within Trench 5 the yellow sandy clay natural (502) sloped down gradually from a depth of 0.30 m below the court surface from the west to a depth of 1.30 m at the eastern end reflecting the degree of levelling undertaken to create the tennis court (Fig. 6 section 4). Cut into the natural was a shallow ditch-like feature (506) aligned ESE-WNW down the centre of the trench, the ends of which were met by similar features on perpendicular alignments thus forming an H-shape in plan. This was clearly a single arrangement with a homogenous light blue-grey clay (507) infilling throughout. Located roughly central to the alignment of ditch 506 was a square pit (504) infilled with a dark blue-grey silty clay (505). This was cut to the same depth as 506 and is most likely to have been part of the same arrangement. No obvious function for these features was evident and no finds were encountered although the location within the walled garden and the formal layout does suggest that they are related to this use.

4.2.16 The cut features within Trench 5 were overlain by a sequence of garden soils (508 and 503), the surface of which had been levelled across the eastern extent of the trench by a compacted clay layer (509) immediately prior to the laying of the tennis court hardcore bedding and surface (501 and 500). The presence of the compacted levelling layer (509) marks the point where the garden interior changes from

truncating terracing to the west to made ground levelling to the east for the construction of the tennis court.

4.2.17 Because of the limitations of the machine reach and the thickness of the soils encountered, Trench 7 was excavated to a maximum depth of 1.60 m without revealing natural deposits (Fig. 6 section 9). However, due to the close proximity of Trench 5, it was possible to relate these soils to those recorded within Trench 5.

4.2.18 The earliest deposit (706) exposed within Trench 7 was the same lower soil horizon as recorded in Trench 5 (508). Cut into this was a linear feature (707), tentatively interpreted as a stone lined drain constructed with limestone fragments. The upper fill of the drain was distinguished by a thin layer of degraded limestone (705). The drain was only partially observed running along the eastern edge of the trench.

4.2.19 The drain was sealed by a dark grey-brown clay, sandy-silt deposit (704) which equates to the buried garden soil (503) recorded in Trench 5. A series of clayey levelling deposits (703) and (702) sealed the former garden soils and raised the ground level to create the level surface for the tennis court construction (701and 700).

Trench 8

4.2.20 A sandy clay natural (808) was encountered at a depth of 1.00 m throughout Trench 8. Towards the western end of the trench two circular pits (820 and 821) were cut into the natural (Fig. 7). The pits measured 1.1 m and 0.8 m in diameter and both were 0.30 m deep (Fig. 7 section 15). There was no clear difference between the grey silty sand fill (822) of these features, suggesting that they were infilled in a single event. Five sherds (87 g) from a single early Iron Age carinated vessel were recovered from this deposit.

4.2.21 A third shallow pit (819) was recorded in the north facing section cut into the natural near the eastern end of the trench (Fig. 7 section 11). This was only identified in the section after machine excavation in difficult waterlogged conditions had removed the shallow remains of the feature in plan. The pit was 0.25 m deep, flat-based and approximately 2.00 m across. It was infilled with two distinct deposits (807 and 806). No finds were encountered although a similar date to the adjacent pits (820 and 821) may be possible given the proximity and similarity in appearance of the features.

4.2.22 A thin clayey horizon (815/816) sealed the fill of pits 820 and 821 and was in turn overlain by a 0.60 m thick colluvial soil (805/813/814) that extended throughout the trench. Three sherds of late Roman pottery were recovered from this deposit during the machine excavation of the trench, along with a single fragment of post-medieval tile.

4.2.23 At the eastern end of the trench this colluvial subsoil had obviously been truncated by modern landscaping. This was indicated by a patch of tarmac (804) overlain by a sequence of deposits largely consiting of building rubble, (803 and 802) and

(801/817). At the western end of the trench the colluvial horizon had been cut by a likely service trench (810) which included a modern shovel handle in its backfill.

4.2.24 The existing topsoil and turf (818) and a partly overgrown path (800) complete the sequence.

Trench 9

4.2.25 Trench 9 was machine excavated to an average depth of 0.90 m below the ground level exposing two very large features (903 and 907) cut into the natural sandy clay (906) (Fig. 8). Only a very small area of the natural geology was exposed in the trench due to the size of the features, with both extending beyond the limits of the excavated area and measuring at least 5.00 m and 4.50 m in diameter respectively. Due to the extremely wet ground conditions it was not possible to excavate pit (907) although the grey silty clay upper fill (908) was of a near identical appearance to that within pit 903.

4.2.26 A small slot was excavated into pit 903 (Fig. 8 section 21) although, due to the extremely wet conditions and the depth of the feature in relation to the adjacent trench section, it was not possible to investigate or establish its full depth feature. The earliest fill excavated was a grey sandy-silt clay deposit (904). This was overlain by a mottled mid grey-brown sandy clay (905) which formed the upper fill of the pit. Sherds of late Roman pottery were recovered from each of these fills. A single environmental sample taken from fill 904 was rich in charred cereal grain with abundant quantities of hulled barley and spelt wheat both present.

4.2.27 Overlying the pit fills was a 0.30 m thick layer of dark grey brown sandy silt (902). This produced 21 sherds of late Roman pottery recovered during machine excavation and it seems most likely that this horizon represents the colluvial soil layer noted in Trench 8. Additional late Roman, medieval and post-medieval pottery was recovered from the overlying soil layer (901) which was sealed by the current topsoil and turf (900).

Trench 10

4.2.28 Trench 10 was positioned to investigate the area towards the boundary with Dunstan Road. The ground slopes down to the north from the street and the college boundary wall. A yellowish sandy clay natural geology was encountered 0.40 m below the modern ground level at the north-eastern and south-western ends of the trench.

4.2.29 At the north-eastern end of the trench was a single circular posthole (1010), 0.40 m across and 0.35 m deep (Fig. 9). No finds were encountered within the excavated fill (1011).

4.2.30 Two parallel ditch-like linear features (1007 and 1013) were aligned north to south across the centre of the trench and to the immediate west of the posthole. Both of these had vertical sides and flat bases 1.30 m deep and 1.65 m wide at the surface. They were cut into the natural clayey geology. Both had primary silting fills of

similar depths of *c* 0.20 m in their bases (1006 and 1014). Ditch 1007 was largely infilled with a homogenous compacted clay silt to its surface level. The main fill within ditch 10013 consisted of a similar soil but with limestone fragments incorporated into it (1015) suggesting that this was a deliberate backfill deposit. The upper profile of ditch 1013 was levelled with a further stony backfill within a distinctive yellowish silty deposit (1003). It appears as though ditch 1007 was the earlier of the two although the relationship between the edge of deposit 1015 and ditch cut 1007 was not clear and some degree of contemporaneity is possible. The upper part of both infilled ditches was further levelled with layer 1002 which also had a high limestone rubble content amongst a dark brown silty soil.

4.2.31 Two more recent redeposited and/or mixed soil deposits and rubble (1008) and (1001) sealed the ditch sequence and overlay the natural geology to the west of the ditches. A 0.20 m thick homogenous topsoil and turf sealed the rubble deposits completing the sequence and forming part of the current lawn area.

Trench 12

4.2.32 Trench 12 was sited within the grounds of Stoke House to the east of Ruskin Hall and Stoke Place. The geology at this location comprised a yellow/orange soft silty sand (1204) unlike that encountered within the trenches to the west. This was encountered at 0.65 m below the modern ground level throughout the trench but had a diffuse contact horizon with the overlying soil layers due to the presence of numerous brown soil marks from root disturbance within the sand (Fig. 10 section 25). This made distinction of cut features relatively difficult.

4.2.33 Two features were identified cut into the mottled surface of the geology (Fig. 10). A shallow oval pit (1202), measuring 0.90 m by 0.50 m with a maximum depth of 0.20 m, was infilled with a single brown sand silt deposit (1203) of similar appearance to the modern topsoil (Fig. 10 section 24). No finds were present within the excavated portion of the feature.

4.2.34 Within the southern end of the trench was a rectangular pit (1205), 1.8 m in length, 0.8 m wide and 0.45 m deep. The pit contained the remains of an articulated cow and six sherds of late 12th-13th century pottery that were recovered from its silty sand infill (1206).

4.3 Finds

4.3.1 Full details of the major assemblages recovered are detailed in the appendices. Summary descriptions are presented below.

Pottery

4.3.2 The evaluation produced seventy five sherds (1950 g) of pottery, the majority of which date from the late Roman period. However, small groups of early Iron Age, late 12th-13th century and 19th-20th century pottery were also recorded. The material was in variable condition, though relatively few sherds were abraded as a

result of repeated redeposition. The relative dominance of mortaria within the Roman assemblage indicates that production of these took place in the very near vicinity of the site.

Animal Bone

4.3.3 The animal bone assemblage was small (280 fragments) but well preserved with items recovered from both Roman and medieval contexts. The majority of the assemblage was represented by a single cow burial (accounting for 80% of the identifiable fragments) dated to late 12th-13th century. The remains recovered from the excavated Roman features were varied with some meat and non meat bearing elements from cattle/large mammal present attesting to domestic activity in the area. The micro-fauna recovered includes shrews, rodents, and amphibians also suggest the close proximity of fields and wet habititats typical of the contemporary surroundings.

4.4 Palaeo-environmental remains

Waterlogged and carbonised plant remains

4.4.1 A single sample from pit 903 (dated late 3rd to 4th century AD) was processed for the recovery of charred and waterlogged plant remains. The sample produced well preserved charred remains and was grain rich, with abundant hulled barley (*Hordeum* sp.) and spelt (*Triticum spelta* L.) grain observed. A few weed/ wild taxa were observed including goosefoot (*Chenopodium* spp.) and spurge (*Euphorbia* spp.) seeds, as well as a wild radish (*Raphanus raphanistrum* L.) capsule segment.

5 DISCUSSION AND INTERPRETATION

5.1 Reliability of field investigation

5.1.1 The results obtained through the combination of geophysical survey and intrusive trench evaluation, covering 3% to 4% of the development areas, can be viewed as a reliable representation of the archaeological potential for the site. Positive results were encountered within each area, albeit rather limited by modern activity with relation to the geophysical survey. Although the limiting factors of poor ground water conditions and relatively dense underground services were encountered, these did not adversely affect the recovery of archaeological evidence. This is represented by the remains within Trenches 8 and 9 where very wet conditions and the depth of overburden made excavation difficult to the point of abandonment within Trench 9. However, this was not before it was possible to attain positive results that fulfil or contribute to the aims of the investigation.

5.1.2 Two areas that were not conclusively investigated by the evaluation were those centred upon Trenches 1 and 2. Due to the depth of modern made ground in Trench 1 and the presence of later deposits at which excavation ceased within Trench 2, it is not possible to conclude if earlier features were present within these areas.

5.2 Overall interpretation

5.2.1 A range of archaeological features and associated periods were recorded across the site. These are discussed by period below.

Prehistoric

5.2.2 The earliest features encountered were the pits within Trench 8 that produced fragments from an early Iron Age carinated vessel. These indicate a presence within the landscape although it is not clear if these represent a 'one off' deposit or form part of an associated settlement. Ongoing excavations by OA at Ardley Quarry 19 km to the north of Ruskin College have recently recorded an almost identical feature/assemblage occurrence within a landscape apparently barren of associated settlement.

5.2.3 Within Oxford itself scant evidence of early Iron Age activity has been recorded although small-scale excavations to the south of the University Science Area have located some features of this date (Dodd 2003, 11). The higher ground surrounding Oxford has produced more evidence of contemporary settlement and activity. Two sites are worthy of particular note with regard to the remains encountered at Ruskin College. The closest is 1 km to the east at the former Bernwood First School, North Way, Barton and is sited in a very similar topographical location overlooking the Bayswater Brook (Moore 2005). Slightly further afield a substantial concentration of early Iron Age material also identifies an unexcavated site approximately 4.7 km to the north of Headington on the south slope of Temple Hill, Woodeaton (OAU 1991). These, possibly including the Ruskin College remains, may be comparable to the hill slope sites identified to the west of the city (Dodd 2003, 10) adding valuable evidence to the settlement patterns of this period.

Roman

5.2.4 Roman activity within the site is well attested within Trench 9. The 'pits' encountered within this trench were large and deeply buried by subsequent soil accumulation. Consequently, as a result of this and the underlying clay geology and wet conditions, it was not possible to sufficiently excavate these features to get a detailed understanding of their purpose. However, the excavated deposits have produced a range of evidence that adds to existing evidence for the significance of Roman remains with the grounds of Ruskin College.

5.2.5 The pottery assemblage is particularly noteworthy with the dominance of mortarium sherds being characteristic of material derived from production waste. This is consistent with the previous findings from the Headington area and within the site boundaries as outlined above (sections 1.3.3 to 1.3.5) and by Young (1977, 252). Whilst it is still uncertain if a kiln is present within the College grounds, it is reasonable to suggest that activities associated with one are being undertaken here.

Indeed, it is possible that the large pits encountered within Trench 9 may represent clay quarries or waterholes.

5.2.6 It is also worth considering the geophysical survey within the area of Trench 9 (Appendix 5 Figs.1 and 2, Area 1). Whilst it was not possible to survey the development impact area specifically, the adjacent ground that was investigated produced strong magnetic disturbances. These have been interpreted as modern disturbance based upon the strength of the readings, although an archaeological origin is also possible. Whilst this is not to conclusively suggest the definite location of a kiln or associated debris, it is a viable option. This also suggests the presence of pits to the north of those recorded within Trench 9.

5.2.7 The record of 'Romano-British coarse pottery….reported….from foundation trenches at the Rookery, Old Headington.' (Sturdy and Sutermeister 1966, 191) is extremely helpful in defining the extent of the Roman activity that may be impacted upon by the current development and the degree of impact previously experienced. Firstly, this reference is clearly to the accommodation block (Bowen House) to the immediate south of Trench 8; a fact established by a small dedication plaque dated 1965 above the entrance. This also quite clearly refers to 'foundation trenches' establishing the likelihood that these had been cut into and disturbed Roman features. However, it is also very likely that the areas immediately outside of the foundation trenches have not been significantly disturbed, given the depth of overburden recorded in Trenches 8 and 9. Therefore it is reasonable to expect some degree of preservation under the slab for the existing building. The similar reference to discoveries made in the 1970s similarly relate to the construction of Biko House immediately south-west of Bowen House; again confirmed by an obliging date plaque of 1976.

5.2.8 The combined evidence of the present evaluation and the past discoveries suggests the preservation of relatively dense features along the western boundary of the site. This also corresponds to the position of a raised finger of land that extends into the valley towards Bayswater Brook providing a suitable location from which spring water would have naturally drained away. In addition, the presence of domestic faunal remains and significant quantities of charred cereals confirms a reasonable household presence rather than the potential for this to be purely a specialised pottery production site.

Medieval and post-medieval

5.2.9 The only certain medieval feature recorded within the site boundaries was the cow burial encountered within Trench 12 to the east of Stoke Place. This was of 12th or early 13th century date and had been rather unceremoniously buried in a cramped grave on its back with its feet and legs upwards. The age of the cow indicates that it would primarily have been for milk production and stock raising and, upon death, it had been skinned for leather. This could imply that a contemporary settlement is located nearby, although it offers little other firm evidence as such activities may also have taken place within fields away from settlement. Rather tantalisingly a single

abraded sherd of late Saxon St Neots pottery was also recovered from this feature As highlighted in the background section above, the medieval settlement of Headington may have been focused upon a 11th century manor house/royal villa, possibly to the south of the Ruskin College grounds. However, the presence of a single abraded sherd does little to shed any light upon activities of this period or, indeed, if there are any significant remains or activities of this period within the site boundaries.

5.2.10 Other remains that did not produce artefactual dating evidence may reasonably be considered to date from the medieval or post-medieval periods. The steep-sided ditches and posthole within Trench 10 are the most obvious examples. The trench-like ditches are aligned broadly NNE-SSW, perpendicular to the line of Dunstan Road, and may represent a boundary between land strips fronting the road. The posthole within this trench was also a very clear example but, due to the constraints of the trench limits, it is not possible to comment if this relates to a structure or a free-standing feature. Of course, without clear dating evidence it is not possible to be conclusive as to the origin of these features, although comparison of the fill deposits to those of the earlier features found at the site would suggest that these are of more recent origin. Indeed, the stone and rubble fills sealing these ditches are, perhaps, most likely to have derived from the construction of The Rookery, or landscaping associated with it.

5.2.11 The features from two areas most clearly related to the listed building are those from within the crinkle-crankle walled garden and the deposits within Trench 2. Unsurprisingly, the features in Trenches 4-7 appear to be garden-related, representing drainage or planting beds/holes. The stone and mortar feature within Trench 2 is less clear in purpose but its stratigraphic position above a garden soil that yielded 19th-20th century pottery leaves little doubt that it is of recent origin. Its position adjacent to the current tarmac access is perhaps consistent with this being an earlier surface to the rear of The Rookery and the crinkle-crankle walled garden. The surface and drain identified within Trench 1 are also consistent with this period.

5.2.12 The trenches within the walled garden also clearly demonstrated the degree of made ground and truncation caused by the construction of the tennis court. Significant made ground deposits were present across the northern and eastern parts of the court whereas the southern and south-western part of the court had been terraced into the clay geology to a maximum depth of *c* 0.5 m.

Summary discussion

5.2.13 The grounds of Ruskin College (Headington) clearly have significant potential to contain archaeological remains of several periods. The particular significance of the early Iron Age remains is not easily understood. As noted above, this type of feature can occur either as part of settlement or as an isolated occurrence. However, with regard to the Roman remains, it is clear that the western portion of the site has high potential for well preserved remains to survive across a larger area. Both the current evaluation and previous construction works have encountered significant remains

across this part of the site with the associated pottery strongly suggesting that mortarium production was situated close by. Whilst it remains inconclusive if the structural remains of a kiln (or kilns) are located within the boundaries of the College, it is certain that occupation-style activity does exist along a raised finger of land that projects slightly into the valley.

5.2.14 The medieval and later remains are, perhaps, less significant than those of the Roman period. Certainly very little of interest was discovered within the crinkle-crankle walled garden and the other possible garden related features encountered appear to be of more recent date rather than related to the 17th and 18th century. However, the probable 12th or early 13th century cow burial and features within Trench 10 do highlight the potential for some medieval remains to exists within the site boundaries. Of course, the features within Trench 10 may be earlier or later, although this only serves to highlight the need to understand the function and origin of these in greater detail.

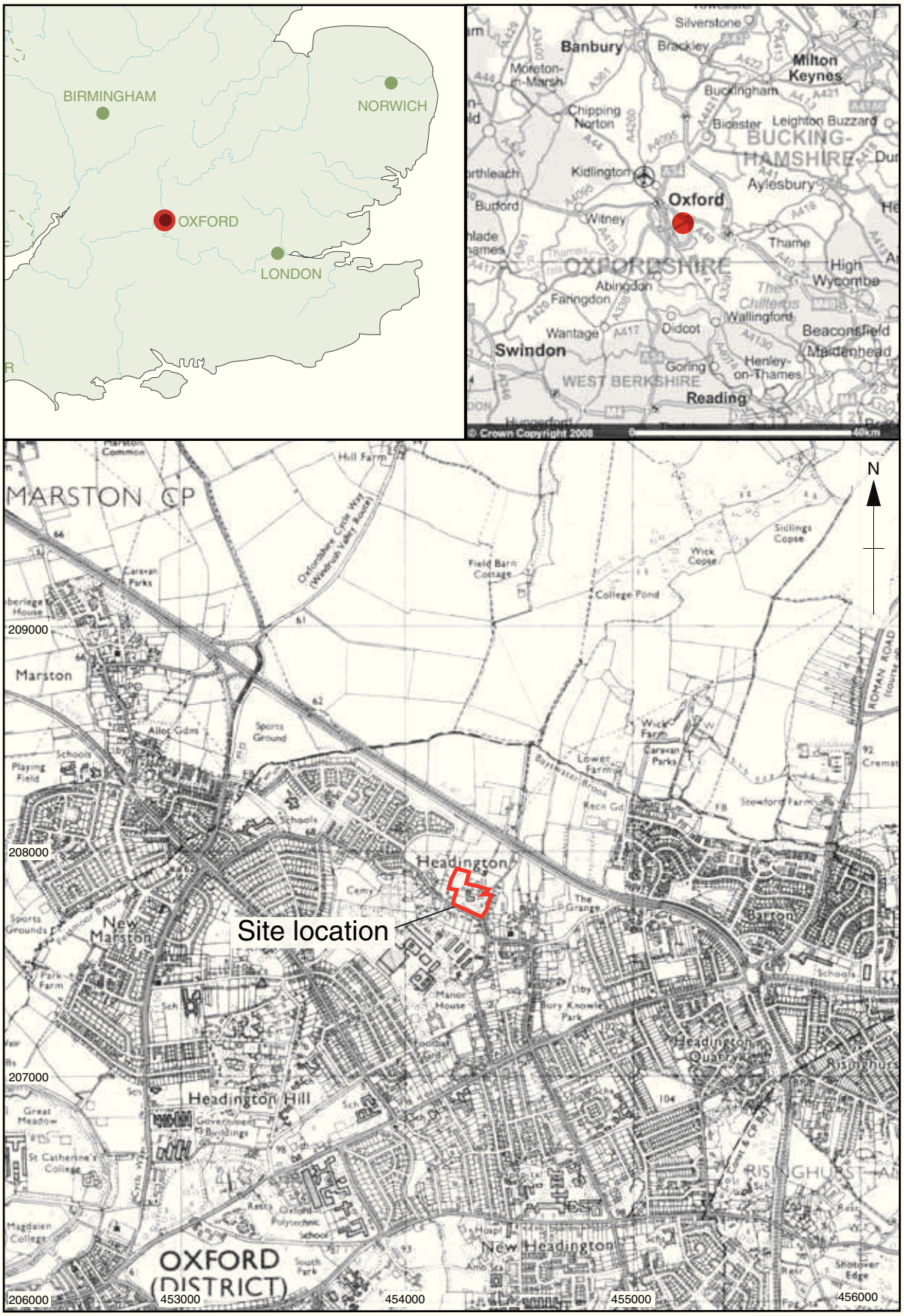


Figure 1: Site location

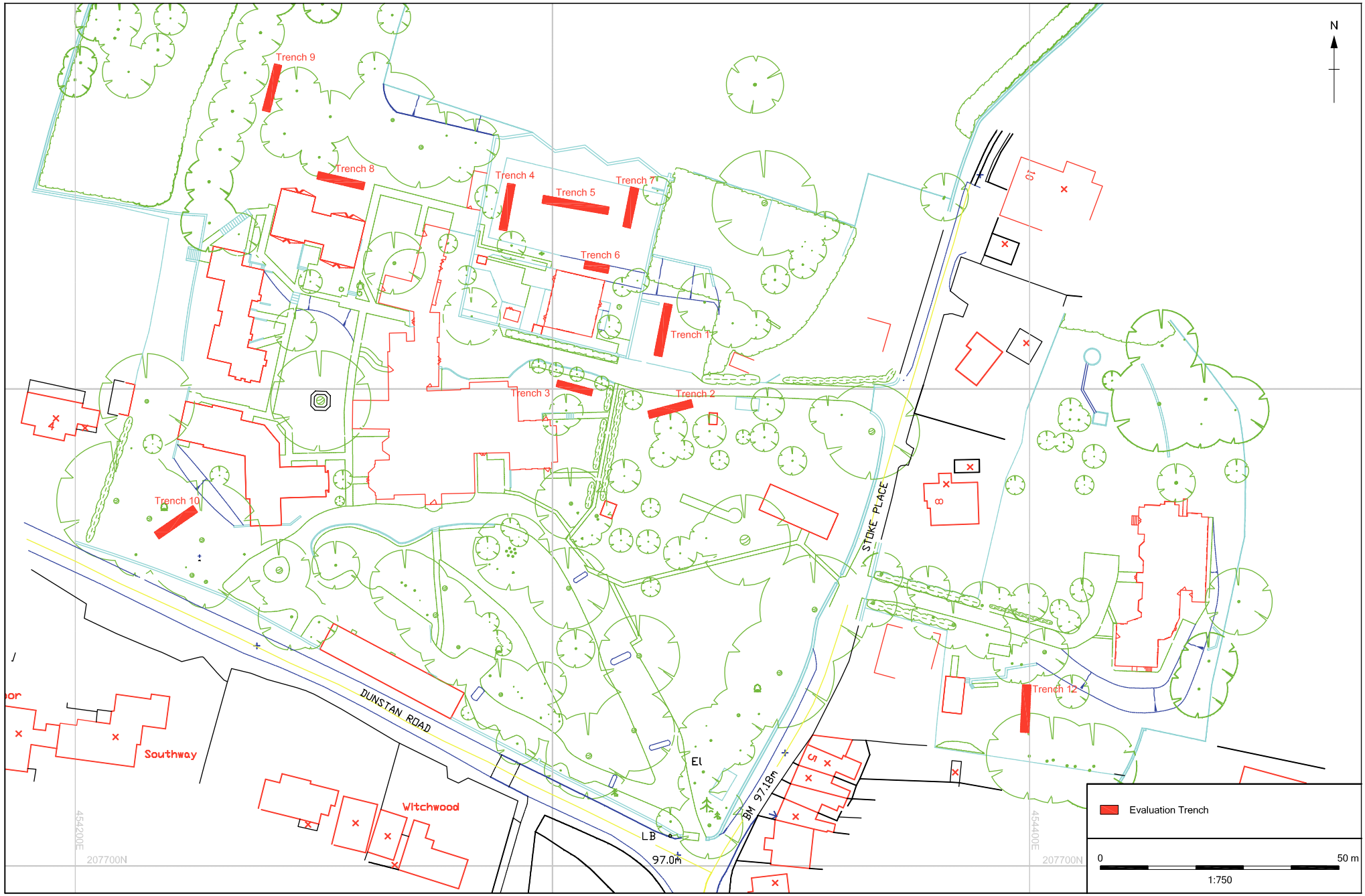


Figure 2 Trench location plan

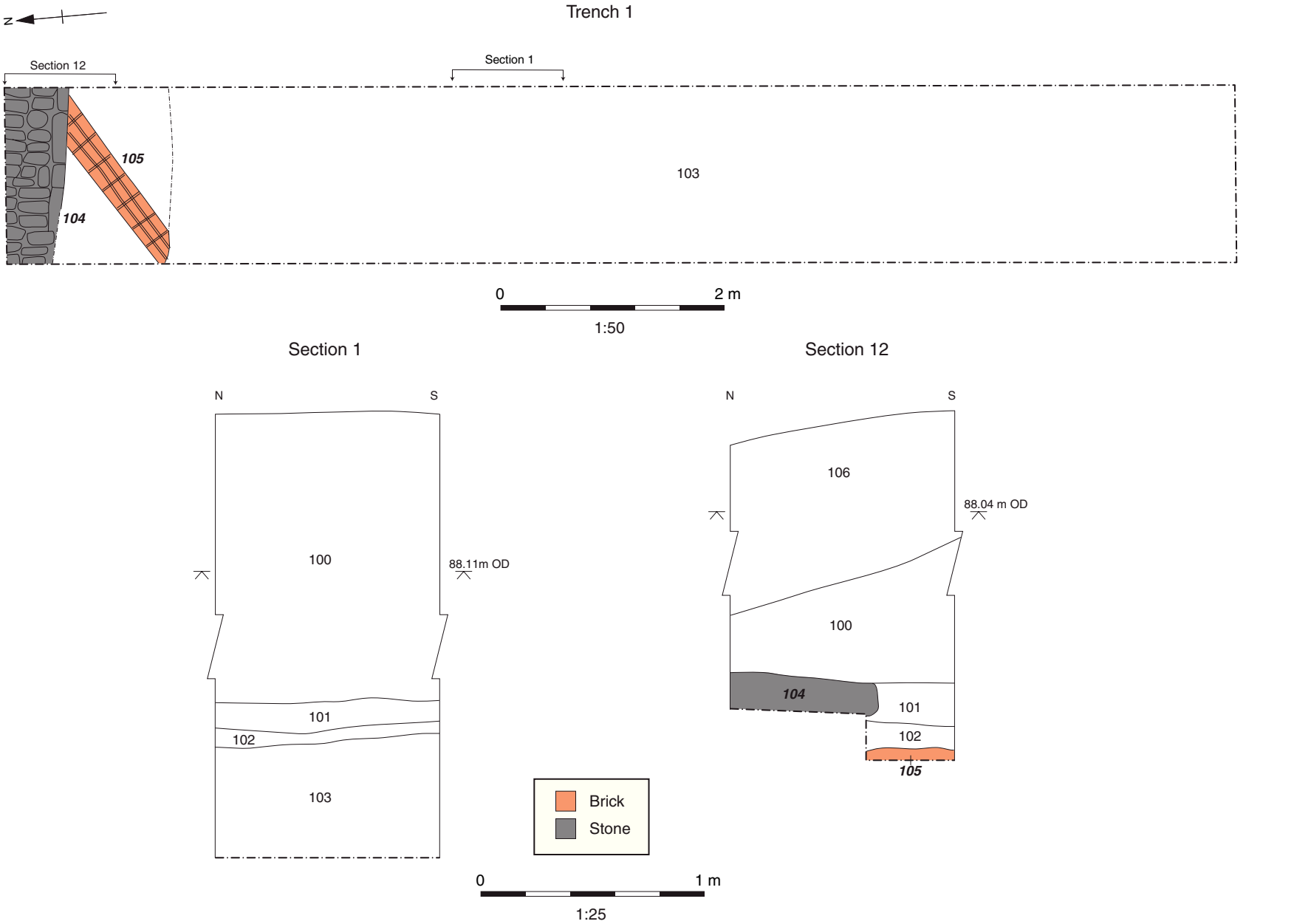


Figure 3: Trench 1 plan and sections 1 and 12

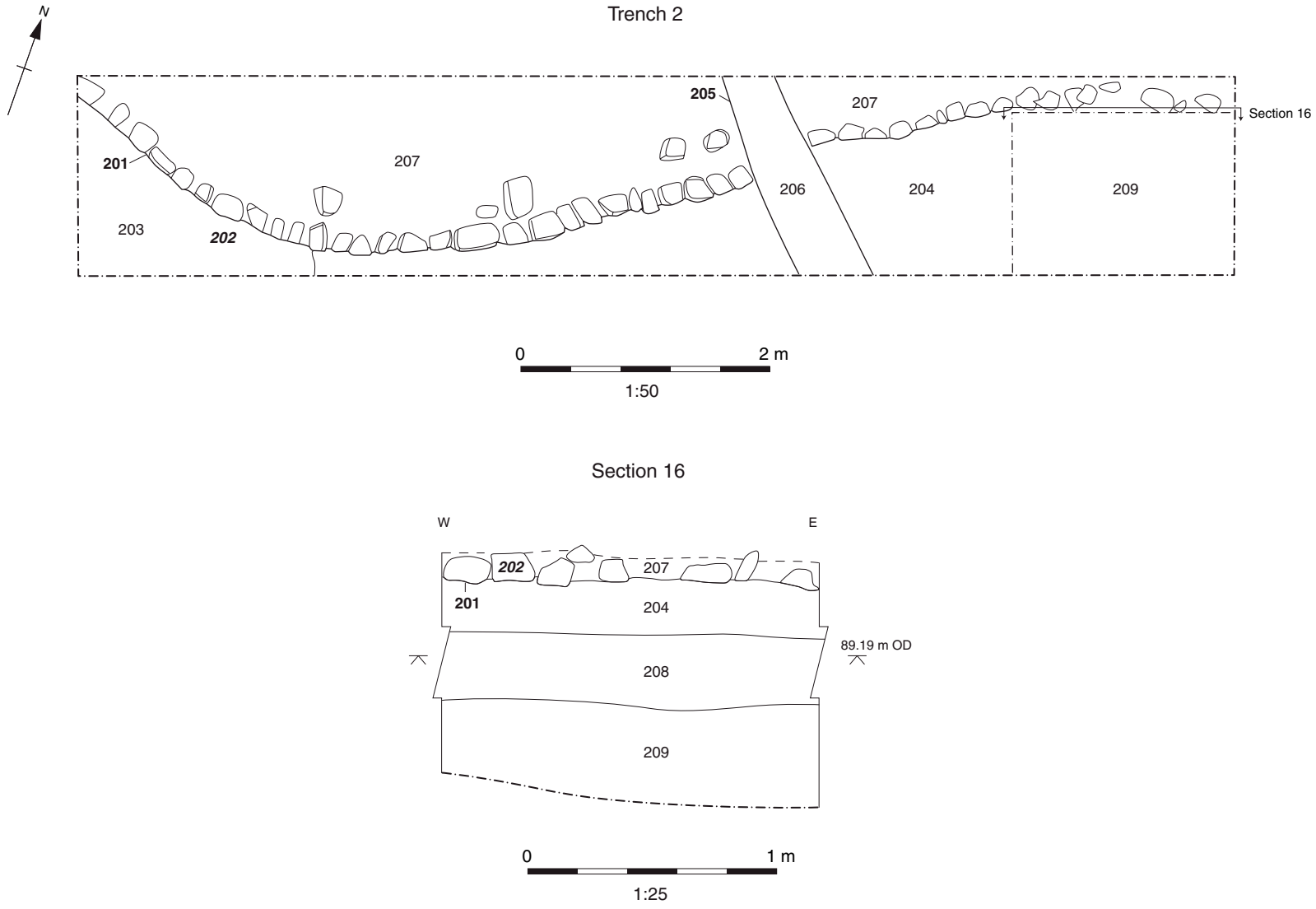


Figure 4: Trench 2 plan and section 16

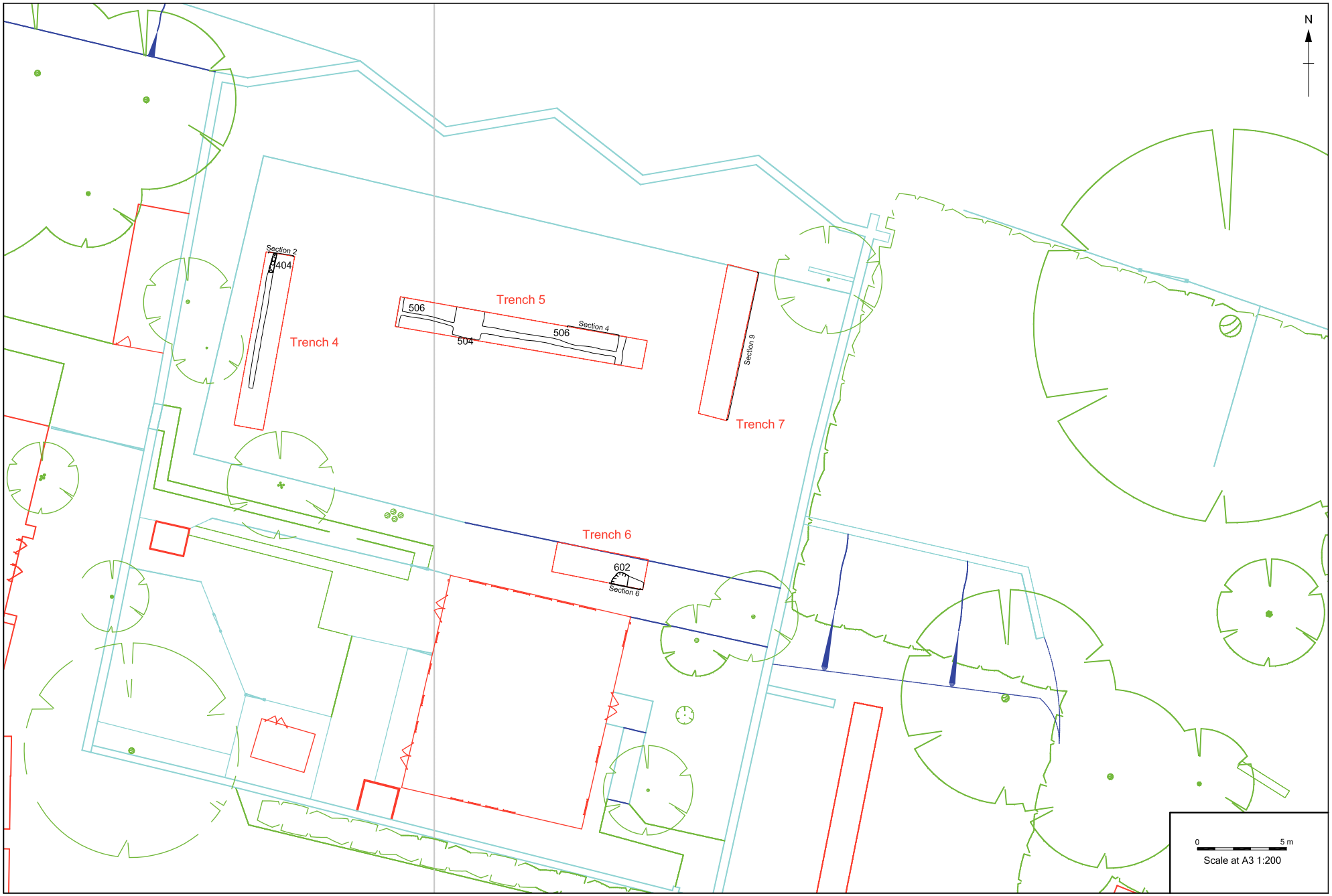


Figure 5 Trenches 4, 5, 6 and 7 within the crinkle-crankle

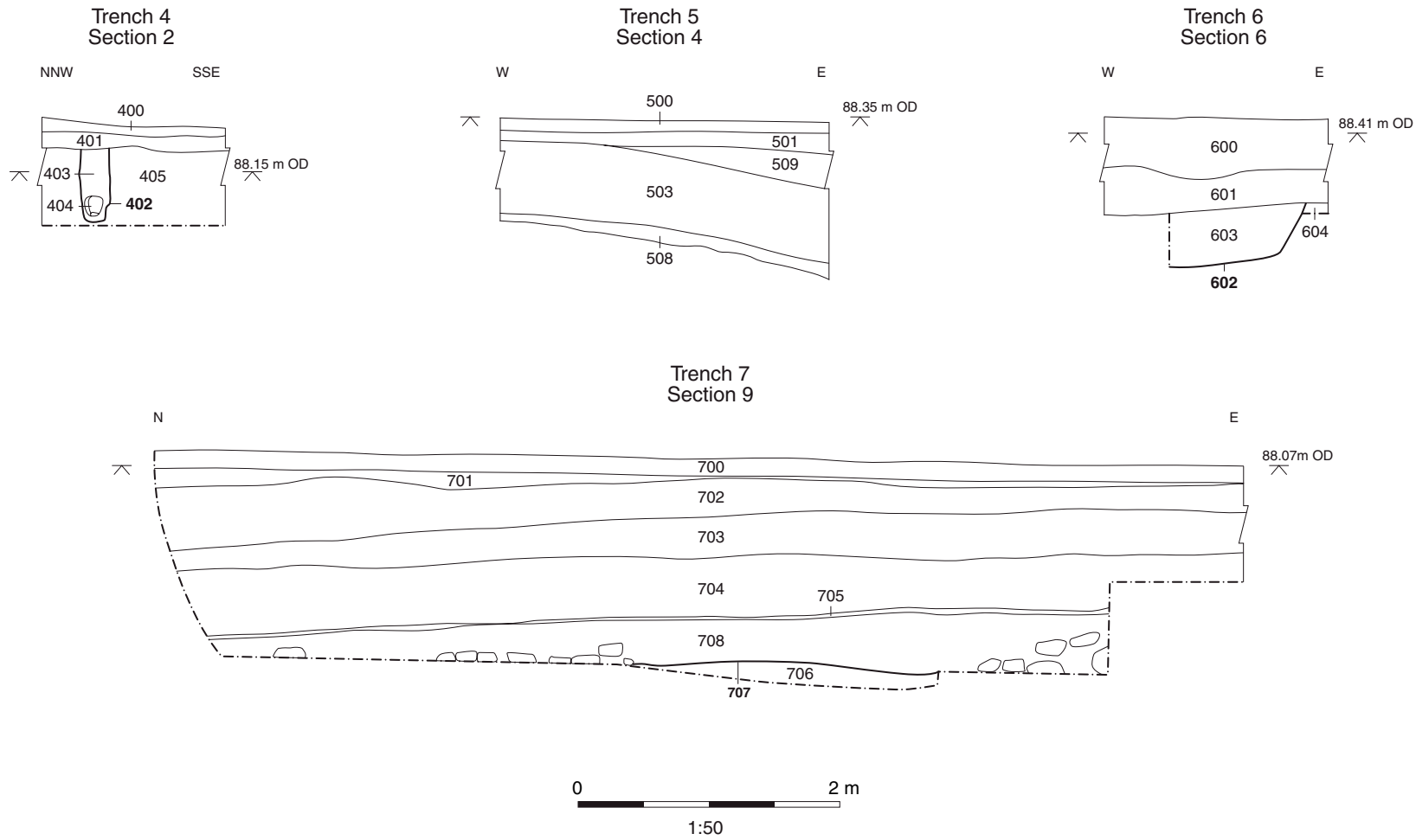


Figure 6: Sections 2, 4, 6 and 9

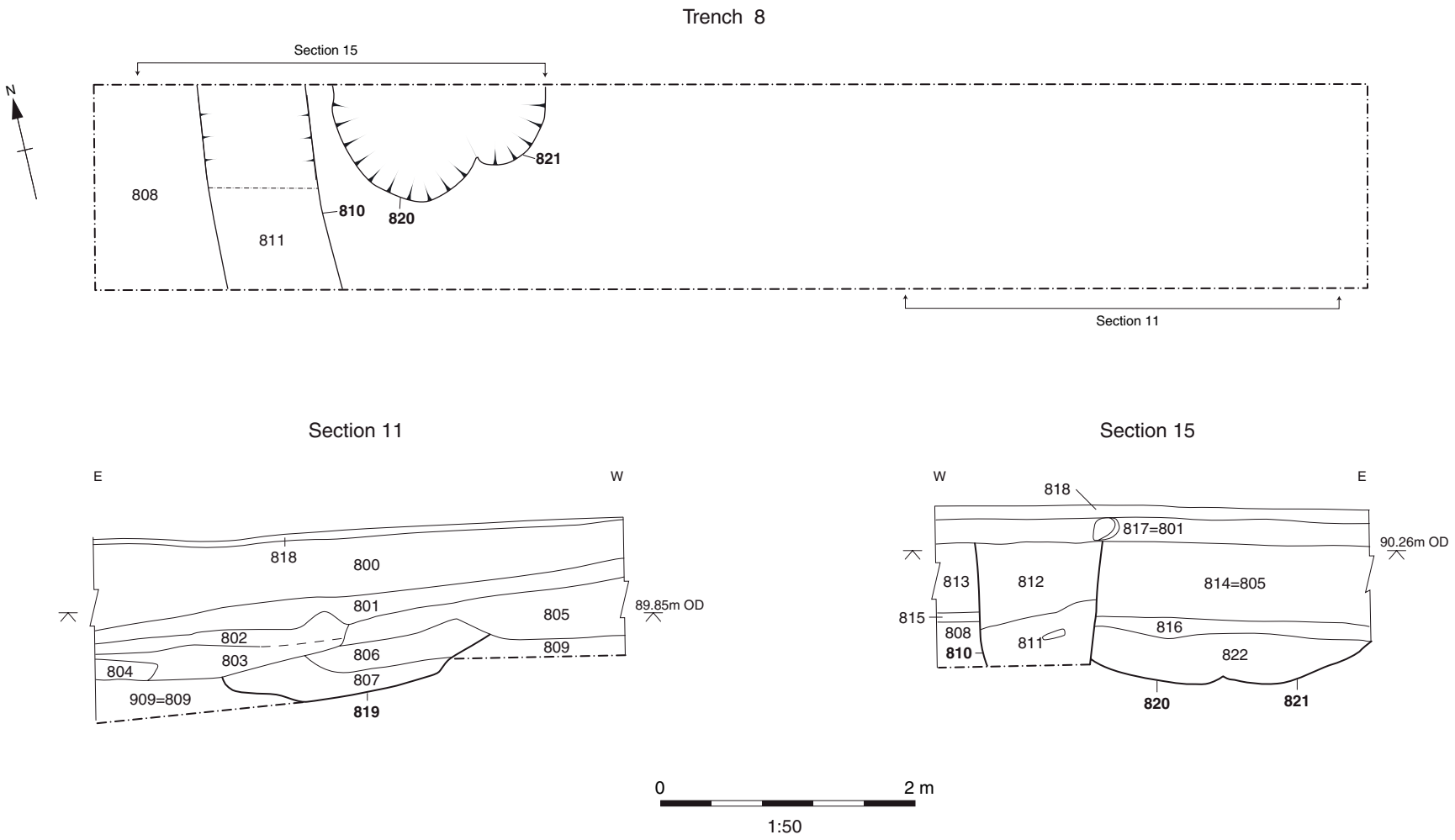


Figure 7: Trench 8 plan and sections 11 and 15

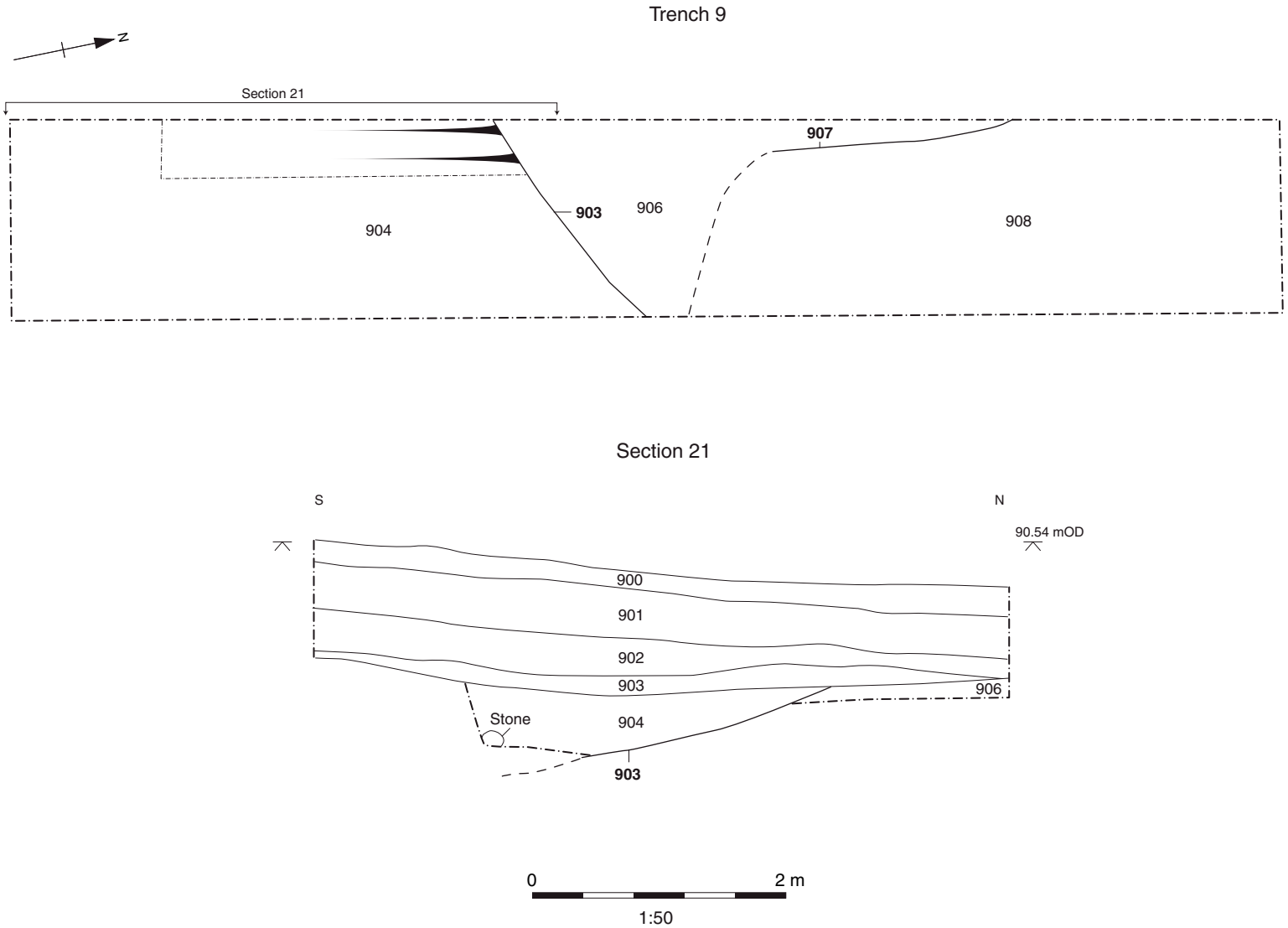


Figure 8: Trench 9 plan and section 21

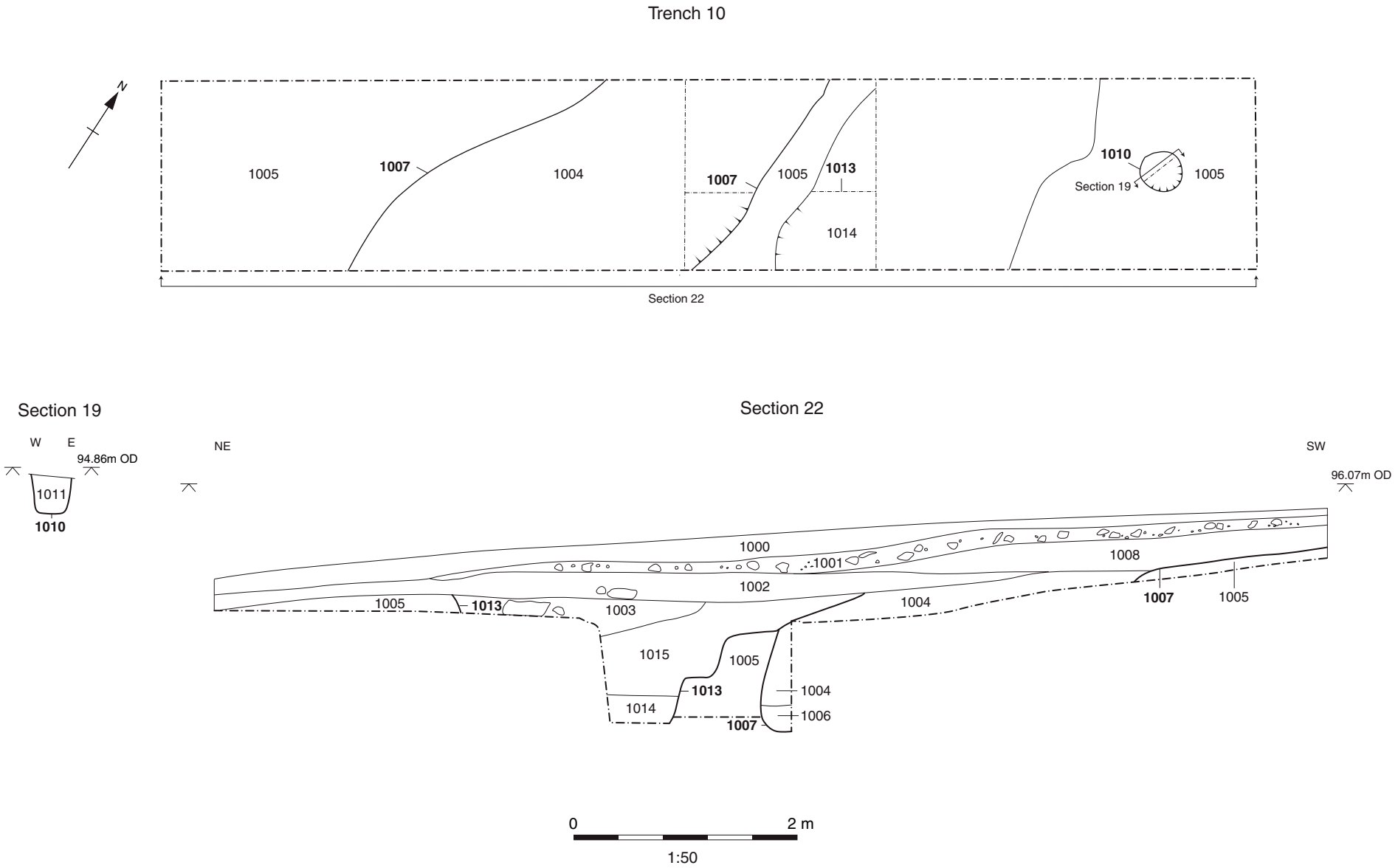


Figure 9: Trench 10 plan and sections 19 and 22

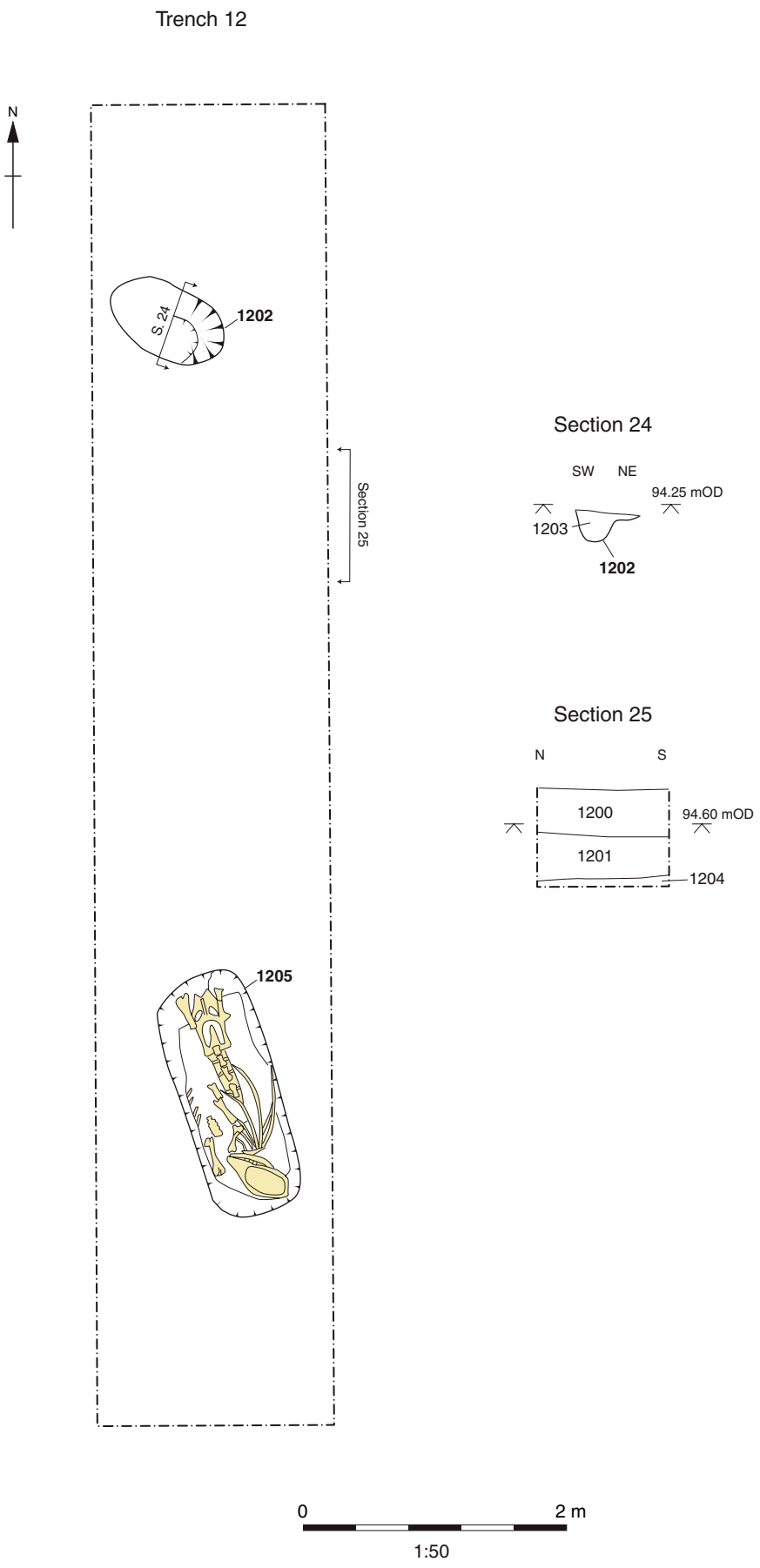


Figure 10: Trench 12 plan and sections 24 and 25

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Context No.	*Type*	*Width (m)*	*Thick. (m)*	*Comment*	*Finds*	*No./wt.*	*Date*
Trench 1 11.0 m x 1.6 m							
100	Layer		0.7	Made ground			
101	Layer		0.12	Made ground			
102	Layer		0.1	Dark grey clay			
103	Layer			Natural			
104	Structure		0.15	Stone cobbling/floor			
105	Structure			Brick drainage gully			
106	Layer		0.75	Modern Disturbance			
Trench 2 9.3 m x 1.6 m							
200	Layer		0.38	Topsoil			
201	Cut	1.4		Construction cut	pottery	1/4 g	19-20th C
202	Structure			Wall			
203	Layer		0.1	Subsoil			
204	Layer		0.3	Demolition/construction deposit			
205	Cut	0.5		Service trench			
206	Fill	0.5		Fill of 205			
207	Fill			Fill of 201			
208	Layer		0.3	Modern Disturbance			
209	Layer			Natural			
Trench 3 7.6 m x 1.4 m							
300	Layer		0.2	Topsoil			
301	Layer		0.4	Subsoil			
302	Layer		0.18	Natural			
303	Void			Void			
304	Cut	0.5	0.3	Treehole			
305	Cut	0.9	0.3	Treehole			
306	Fill		0.3	Fill of 305			
307	Fill		0.3	Fill of 304	animal bone	1/86 g	
308	Cut	0.4	0.2	Drainpipe			
309	Fill		0.2	Fill of 308			
310	Layer			Natural			

Context No.	*Type*	*Width (m)*	*Thick. (m)*	*Comment*	*Finds*	*No./wt.*	*Date*
Trench 4 9.8 m x 1.6 m							
400	Layer		0.2	Tarmac surface			
401	Layer		0.15	Made ground			
402	Cut	0.2		Land drain			
403	Fill			Fill of 402			
404	Fill			Fill of 402			
405	Layer			Natural			
Trench 5 14.0 m x 1.6 m							
500	Layer		0.13	Tarmac surface			
501	Layer		0.1	Made ground			
502	Layer			Natural			
503	Layer		0.6	Buried garden soil			
504	Cut	1.6	0.1	Square garden feature			
505	Fill		0.1	Fill of 504			
506	Cut	0.4	0.1	Linear garden feature			
507	Fill		0.1	Fill of 507			
508	Layer		0.1	Buried subsoil			
509	Layer		0.3	Made ground			
Trench 6 5.2 m x 1.7 m							
600	Layer		0.43	Topsoil			
601	Layer		0.4	Subsoil			
602	Cut		0.4	Treehole			
603	Fill		0.4	Fill of 602			
604	Layer			Natural			
Trench 7 8.4 m x 1.6 m							
700	Layer		0.1	Tarmac surface			
701	Layer		0.08	Made ground			
702	Layer		0.45	Made ground			
703	Layer		0.36	Made ground			
704	Layer		0.5	Buried garden soil			
705	Fill		0.05	Fill of 707			
706	Layer			Buried subsoil			
707	Cut		0.4	Stone lined drain			
708	Fill		0.4	Fill of 707			

Context No.	*Type*	*Width (m)*	*Thick. (m)*	*Comment*	*Finds*	*No./wt.*	*Date*
Trench 8 10.0 m x 1.6 m							
800	Layer		0.2-0.65	Path Hardcore			
801	Layer		0.1	Modern disturbance			
802	Layer		0.15	Modern disturbance	indet. iron	1/-	
803	Layer		0.25	Modern disturbance			
804	Layer	0.5	0.18	Tarmac			
805	Layer		0.6	Colluvial subsoil	pottery cbm	3/37 g 1/21 g	l3rd-4th C
806	Fill		0.3	Fill of 819			
807	Fill		0.35	Fill of 819			
808	Layer			Natural			
809	Layer			Same as 808 (natural)			
810	Cut	1.0	1.0	Modern linear			
811	Fill		0.5	Fill of 810			
812	Fill		0.6	Fill of 810			
813	Layer		0.6	Same as 805 and 814			
814	Layer		0.6	Same as 805 and 813			
815	Layer		0.1	Buried soil?			
816	Layer		0.1	Same as 815			
817	Layer		0.1	Same as 801			
818	Layer		0.1	Topsoil			
819	Cut	2.0	0.4	Pit			
820	Cut	1.1	0.3	Pit			
821	Cut	0.8	0.3	Pit			
822	Fill		0.3	Fill of 820 and 821	pottery	5/87 g	Early Iron Age
Trench 9 10.0 m x 1.6 m							
900	Layer		0.2	Topsoil			
901	Layer		0.3	Subsoil	pottery	23/335 g	Mostly Roman but some medieval and 20th
902	Layer		0.3	Made ground/Buried soil	pottery animal bone	21/641 g 4/92 g	l3rd-4th C
903	Cut	5.0	0.4	Pit			

Context No.	*Type*	*Width (m)*	*Thick. (m)*	*Comment*	*Finds*	*No./wt.*	*Date*
904	Fill		0.4	Fill of 903	pottery animal bone mortar cbm slag	11/432 g 56/223 g 3/360 g 1/1 g 1/1 g	l3rd-4th C
905	Fill		0.15	Fill of 903	pottery animal bone	5/322 g 4/403 g	l3rd-4th C
906	Layer			Natural			
907	Cut	4.5		Pit			
908	Fill	4.5		Fill of 907			
Trench 10 9.8 m x 1.7 m							
1000	Layer		0.2	Topsoil			
1001	Layer		0.2	Stone rubble			
1002	Layer		0.25	Subsoil			
1003	Fill		0.35	Fill of 1013			
1004	Fill		0.65	Fill of 1007			
1005	Layer			Natural			
1006	Fill		0.4	Fill of 1007			
1007	Cut	2.0	1.2	Linear			
1008	Layer		0.3	Brick rubble			
1009	Void			Void			
1010	Cut	0.4	0.35	Post hole			
1011	Fill		0.35	Fill of 1010			
1012	Void			Void			
1013	Cut	1.8	1.1	Linear			
1014	Fill		0.2	Fill of 1013			
1015	Fill		0.6	Fill of 1013 and 1017			
Trench 12 10.0 m x 1.8 m							
1200	Layer		0.35	Topsoil			
1201	Layer		0.35	Subsoil			
1202	Cut	0.5	0.2	Post hole			
1203	Fill		0.2	Fill of 1202			
1204	Layer			Natural			
1205	Cut	0.8	0.45	Animal burial			
1206	Fill		0.45	Fill of 1205	pottery animal bone	6/92 g 214/7111 g	12-13th C

APPENDIX 2 POTTERY

by Paul Booth

Excavation of the features encountered produced seventy five sherds (1950 g) of pottery. The majority of this assemblage is of late Roman date but it also includes small groups assigned to the early Iron Age and the late 12th-13th century. Two small sherds of 19th-20th century date are not considered further. The pottery was recorded rapidly using codes in the OA standard systems for Roman and post-Roman pottery. The material was in variable condition, though relatively few sherds were abraded as a result of repeated redeposition.

Table 1: Quantities (no. sherds/weight) of pottery by context and broad period

Context	Iron Age	Roman	Medieval	Post-medieval	Date/Comment
208				1/4	19-20C
805		3/37			240-400, but 1 post-medieval CBM fragment (20 g)
822	5/87				Early Iron Age carinated jar
901		20/314	2/9	1/12	19-20C
902		21/641			240-400, probably 4C
904		11/432			270-400
905		5/322			240-400
1206			6/92		late 12-13C
TOTAL	5/87	60/1746	8/101	2/16	

Iron Age

The Iron Age sherds, in a sand and clay-pellet-tempered fabric, were all from a single vessel, a carinated bowl of early Iron Age type. The form is not sharply tripartite, but is broadly comparable to vessels such as Harding (1972), Plate 57, G, from Chinnor and is also paralleled by unpublished examples from Yarnton.

Roman

The Roman pottery consisted almost entirely of products of the Oxford industry. The fabrics present were:

F51 Oxford red-brown colour-coated ware, 7 sherds
M22 Oxford white ware mortarium fabric, 24 sherds
M31 Oxford white slipped oxidised mortarium fabric, 1 sherd
M41 Oxford red-brown colour-coated mortarium fabric, 1 sherd
W10 Oxford white ware, 9 sherds
W11 Oxford parchment ware, 2 sherds
O10 Oxford fine oxidised ware, 5 sherds
O81 Pink grogged ware, 2 sherds
R10 Oxford fine reduced ware, 3 sherds
R30 Oxford medium sandy reduced ware, 5 sherds
B30 Wheelmade imitation black-burnished ware, 1 sherd

The only certain non-Oxford product was fabric O81, produced at Stowe in Buckinghamshire, though in addition it is quite likely that fabric B30 was not a local product, but its source is unknown. Amongst the Oxford material the dominance of mortarium sherds is noteworthy. This is characteristic of material derived from production waste, the

proportion of mortaria being completely unrepresentative of domestic assemblages. Nine of the 16 vessels represented by rim sherds were mortaria, with single examples of Young (1977) white ware (fabric M22) types M18 and M20 and six examples of type M22. These vessels, together with an example of type WC7 in fabric M31, all indicate a date range of AD 240 or later. This range is supported by all the other rim sherds, which included examples of Oxfordshire types C18 and C47 (and a body sherd of C51) in the colour-coated fabric F51, a type P24 bowl in parchment ware fabric W11 and jars, a bowl and a dish in fabrics R10, O81, B30 and R30 respectively. A fragmentary mortarium rim sherd, missing the end of the flange but probably of the M10 family, was the only sherd that is almost certain to have predated the middle of the 3rd century AD.

Medieval

A single context (1206) was dated to the medieval period by a small group of sherds, and two further medieval sherds came from topsoil in Trench 9. The fabrics present (after Mellor 1994) were:

OXR St Neots type ware (shell), 1 sherd
OXAC Early medieval Oxford ware (sand and oolitic limestone), 1 sherd
OXY Late Saxon-medieval Oxford ware (sand), 3 sherds
OXBF 'South-west Oxon' ware (sand and flint), 1 sherd
OXAQ East Wiltshire ware (flint), 2 sherds

Only a single rim sherd was present, from a cooking pot of late 12th-13th century type in fabric OXY. The fabrics are unremarkable and suggest activity from the late Saxon period to the 13th century, or just possibly a little later. The single sherd of St Neots type ware was noticeably abraded compared to the other sherds, which is consistent with its potentially earlier date range.

Discussion

The pottery indicates the presence of isolated features of early Iron Age and late 12th-13th century date. The majority of the material, however, demonstrates Roman activity in the vicinity, principally from the middle of the 3rd century onwards. This appears to have included a domestic component, indicated by vessels in non-local fabrics O81 and (probably) B30, but the bulk of the pottery was locally produced and the balance of fabrics and forms, in particular the dominance of mortaria, indicates that some of this production took place in the very near vicinity of the site. There is an absence of obvious wasters, but this is commonly the case with mortarium production (though the example of type M20 is fairly clearly overfired). The discoloration of a number of the mortarium and other white ware sherds is also reminiscent of production site debris, as for example at Blackbird Leys and Lower Farm, Nuneham Courtenay. Comparable material has been noted from the vicinity previously, with the same observation that 'the heavy preponderance of mortaria …. suggests a kiln site.' (Young 1977, 252). The precise location of such a kiln or kilns remains uncertain, however.

APPENDIX 3 ANIMAL BONE

by Rachel Scales

Methods

The animal bone was recorded following Serjeantson (1996). Where possible fragments were identified to species using the OA reference collection. Fragments that could not be identified to species were put into categories: large mammal sized (e.g. cattle, horse or large deer) and micro-mammal sized (e.g. shrew, vole, amphibian).

Results

A total of 279 bones were recovered from the site, of which 236 were identifiable to species level; of the 279 bones, 48 (17 %) were recovered from one sieved environmental bulk sample. Cattle (*Bos taurus*) was the most frequent species present making up 80% of the identifiable fragments in the assemblage (Table 1) although it should be noted that this is strongly biased by the presence of a single articulated cow burial. Other species recorded in small numbers were shrew, rodent, amphibian and small fish. The features associated with the animal bone assemblage relate to two distinct periods; late Roman (AD 240-400) and medieval (12th -13th century).

Table 1. Number and percentage of identifiable bones.

Taxon	**NISP (countable only)**	**%**
Cattle	223	80
Shrew	3	1
Rodent	4	1
Amphibian	5	2
Fish	1	0
Total	*236*	84

Roman Bone

A total of 65 bone fragments (804 g) were recovered from four different Roman contexts (Table 2). Of these 30 were identifiable to species level. Table 2 shows the contexts, species and elements of the bones recovered from the Ruskin College Roman features. Cattle was the only domestic mammal recorded.

The condition of the bones varied from good to poor, with the highest number of small bones and unidentifiable fragments being recovered from the sieved environmental sample (904). No burnt or carnivore gnawed bones were recorded. Two large mammal ribs showed signs of butchery with the cut marks indicative of the dismembering process. The presence of both meat bearing and non meat bearing cattle elements and the butchery marks recorded appear to reflect domestic activity.

The site lies close to the Bayswater Brook, which had a number of springs running into it. The presence of micro-fauna such as shrews, rodents, and amphibians in the assemblage suggests a close proximity to field and wetland habitats and probably reflects the immediate hinterland at the time. The Bayswater Brook and stream systems would probably have provided a rich grassland environment for domestic animals, such as cattle, to graze. Excavations at Manor Ground also found evidence to support the case for the agricultural use of the site during this period (JMHS 2003).

Table 2. The number of mammal bones recorded in each Roman context from Ruskin College, Oxford.

CONTEXT	ELEMENT	SPECIES							
		Cattle	Large Mammal	Shrew	Rodent	Amphibian	Micro-mammal	Fish	Indeterminate
307 treehole	Radius	1							
902 buried soil	Femur		1						
	Vertebra		1						
	Rib		2						
904 pit fill	Horncore	1							
	Mandible	1		2					
	Tooth	1			1				
	Humerus			1					
	Long bone				2	3	2		
	Vertebra				1	1	1		
	Indet.						3	1	35
905 pit fill	Metacarpal	1							
	Metatarsal	1							
	Tibia	2							
	Total	8	4	3	4	4	6	1	35

Medieval Bone

An articulated cattle skeleton represented by 214 bone fragments (7111 g) from deposit 1206 (pit 1205) dating to the 12th or 13th century was the only animal bone recovered from the medieval period. The skeleton was very well preserved with only a small amount of fragmentation occurring (mostly caused during its excavation and lifting).

Analysis of the tooth wear revealed that this was an elderly cow. A number of small bone pathologies indicative of old age were also noted on the skeleton. Given the sex and age of this animal, it is likely that it was used for milk and breeding purposes.

The fact that the skeleton was articulated indicates that this animal was not consumed for meat. Several cut marks on one of its metacarpals, however, do suggest that the animal was skinned before burial. Furthermore, the only bones to be noticeably missing from the recovered skeleton were some of the phalanges, carpals and tarsals. It is quite possible that these were removed with the skin during the skinning process.

This skeleton therefore, gives some evidence for an economy where a cow was most likely kept for milk and livestock breeding purposes until it died of old age or illness. The burial of the animal probably represents the disposal of a carcass that was not deemed fit for consumption. Its skin was removed before burial as a by-product, indicating the utilisation of an animal (even after its death) and disposal of its subsequent remains rather than a burial with sentimental purpose or meaning.

APPENDIX 4 PLANT REMAINS

by Wendy Smith

One sample was collected from deposit 904 within pit 903 and was processed for the recovery of charred and waterlogged plant remains. The deposit is dated to the late 3rd to 4th century AD.

Method

The charred plant remains were rapidly scanned and assessed from the flots using a low-power binocular microscope at magnifications between x12.5 and x40. Since the sample was obviously rich, only a small sub-sample was scanned for the purposes of this report. Comparative material was not consulted and quantification is a subjective approximation.

Results

The results for charred and possible waterlogged plant remains from sample 1 (context 904) are presented in Table 1. This table also includes a semi-quantitative record of any other environmental remains (bones, molluscs or charcoal) observed during the assessment of this material. Nomenclature for economic plants follows Zohary and Hopf (2000) and nomenclature for indigenous taxa follows Stace (1997). The traditional binomial system for the cereals has been used here, following Zohary and Hopf (2000).

This sample was clearly well-preserved and grain-rich, with abundant hulled barley (*Hordeum* sp.) and spelt (*Triticum spelta* L.) grain observed. Indeterminate wheat (*Triticum* sp.) grains and one emmer (*Triticum dicoccum* Schübl.) grain was also identified. Small quantities of spelt glume bases, as well as indeterminate wheat glume bases and highly fragmented rachis nodes were noted. A few weed/ wild taxa were observed including goosefoot (*Chenopodium* spp.) and spurge (*Euphorbia* spp.) seeds, as well as a wild radish (*Raphanus raphanistrum* L.) capsule segment.

Discussion

Roman period charred plant remains are poorly represented in Oxford. Published late Roman charred plant remains are reported from the Chemistry Research Laboratory (2-4 South Parks Road, Challinor 2005) and Mansfield College (Pelling 2000) in Oxford. The Chemistry Research Laboratory at 2-4 South Parks Road, Oxford produced 2nd and 3rd/4th century AD charred plant assemblages that were particularly chaff-rich (spelt glume bases and indeterminate emmer/ spelt glume bases). Mansfield College produced four grain-rich samples from a 3rd/ 4th century AD gully surrounding a building. Unlike Ruskin College, however, Pelling (2000, 324) has established that emmer (*Triticum dicoccum* Schübl.) grain was the dominant wheat in use. The grain-rich assemblage from Ruskin College contains abundant hulled barley grains and hulled wheat grains, which appear to be primarily spelt (*Triticum spelta* L.). In addition, spelt glume bases have also been observed. Although only one sample, this provides a different result to both the Mansfield College and Chemistry Research Laboratory data.

Table 1: Assessment of charred plant remains from Ruskin College, Oxford

Sample No	1	1
Context No	904	904
Feature Type	pit	pit
Date/ Phase	Roman late 3rd/ early 4th century AD	Roman late 3rd/ early 4th century AD
SampleVolume (L.)	1 L	40 L (includes 1L WPR flot)
Flot vol (ml)	for wpr	150 ml
Grain	++	++++
chaff		++
weeds		++
other CPR	+++	-
?WPR/ MPR		+++
Animal Bone		-
Charcoal		+
Molluscs		-
Comments on WPR/ CPR	100% of flot scanned. Sample processed for waterlogged plant remains produced a very small, sandy flot with only rootlets and uncharred elder (*Sambucus nigra* L.) seeds present. Charred grain was also present. Potentially these could be ancient; however, it also is possible that they are sub-fossil. Since only elder seeds were present, the sample was treated as charred.	15% of flot scanned. Abundant cereal grain present: both hulled barley (*Hordeum* sp.) and spelt (*Triticum spelta* L.) frequently observed. One emmer (*Triticum dicoccum* Schübl.) and indeterminate emmer/ spelt grain also present. A spelt glume base and several indeterminate wheat (*Triticum* sp.) glume bases/ highly fragmented rachis nodes observed. Goosefoot (Chenopodium spp.) and spurge (*Euphorbia* sp.) seeds observed, as well as a wild radish (*Raphanus raphanistrum* L.) capsule segment. CPR assessed as RICH. Recommend that the sample is riffled to 1/4 before analysis. ?ancient/ ?sub-fossil elder (Sambucus nigra L.) seeds frequently observed. One possible cherry (Prunus cereasus L./ avium L.) (?dried out waterlogged/ ?sub-fossil) stone fragment recovered from 10-2mm heavy residue fraction. All fractions (10-4, 4-2 and 2-0.5mm) have been retained. Finer fractions are extremely sandy - (white sand, with occasional dark grey mud-stone (<2mm)). Not obviously rich in CPR, but these will need to be scanned for CPR as part of the full analysis.
Key: + = < 10 items, ++ = 10 – 50 items, +++ = 50 – 100 items, ++++ > 100 items. CPR Potential scores: A** = extremely rich sample with > 1000 identifications, A* = rich sample with > 500 identifications, A = rich sample with 300 – 500 items, B = sample with between 100 to 300 identifiable items, usually closer to 100 and C = sample with < 50 items. Y = yes, N = No and ? = doubt.		

APPENDIX 5 GEOPHYSICAL SURVEY

by P.M.Cottrell with A. Bartlett of Bartlett-Clark Consultancy

Introduction

The geophysical survey as described forms part of the archaeological evaluation carried out in the grounds of the Old Headington campus of Ruskin College. The evaluation was undertaken in connection with a planning application for a programme of development work at the site, which has been submitted by the college to Oxford City Council. The requirement for a geophysical survey as part of the evaluation is specified in the brief for the project issued by the City Council.

The survey was commissioned on behalf of the college by Oxford Archaeology, and the fieldwork done on 5th March 2008. Copies of plans showing the survey data plots were supplied to Oxford Archaeology on completion of the fieldwork, and in advance of subsequent trenching. The results are now presented here together with brief comments on their significance.

The Site

The site at present contains a number of modern and earlier buildings and outbuildings in the grounds of an 17th century house (The Rookery). Some of the modern buildings are to be demolished and replaced as part of the development scheme. Other new developments are proposed in the grounds of Stoke House, which forms an extension to the campus, and is located to the east of Stoke Place. The main site overlooks open fields to the north, but much of the remaining open ground within its boundaries has been planted or landscaped. Only limited areas of the site therefore appear to retain an original ground surface of a kind which might be suitable for geophysical investigation.

The survey location plan (Fig. 1) shows the proposed development areas (which are cross hatched in blue, and numbered 1-8). These areas include existing buildings which are to be replaced, as well as woodland, tennis courts, and other obstructions. The intention was to collect magnetometer survey data wherever possible within these areas. The actual survey coverage which was achieved is indicated by the superimposed cross hatching in orange. The survey was extended beyond the proposed developments in some places so that data could be collected from unobstructed ground nearby.

Geology

The site is located near to the boundary of two Jurassic formations. Corallian deposits (described on BGS sheet 237 as calcareous sandstone) extend to the south, and the Oxford Clay to the north. Sites with bedrock of these periods usually provide soil conditions which are favourable for the magnetic detection of archaeological features, although at this site the complexity of recent land use is likely to have a greater influence on the results than the underlying geology.

Survey Procedure

The procedure used for the survey was recorded magnetometer surveying. This is the method most likely to detect burnt debris associated with any Roman pottery making or other industrial activity at the site. It may also detect related structures such as kilns. A

magnetometer survey should also, in principle, respond to such features as ditches, enclosures or hearths which may be associated with later periods of settlement at the site, although modern subsurface disturbances will also be detected.

A magnetometer survey will rarely find such relatively non-magnetic structural remains as stone wall footings, which are more likely to be detected in a resistivity survey. This was not done here because a complex and disturbed site is unlikely to provide clear or useful resistivity findings, and the primary concern was to test for evidence of Roman industrial activity.

Readings were taken with Bartington 1m fluxgate Grad 601 gradiometers at 25cm intervals along transects 1m apart. The results are presented in the plans of this report as grey scale images in figure 2 and as graphical (x-y trace) plots in figure 3, both at 1:1000 scale. An interpretation of the survey results is shown overlying the graphical plot in figure 3, and is reproduced separately to provide a summary of the findings in figure 4.

The survey plots show the magnetometer readings after standard treatments which include adjustment for irregularities in line spacing caused by variations in the instrument zero setting, and slight linear smoothing.

The survey within each of the areas investigated was tied to temporary grid markers or a baseline, and located on the site plan by means of measurements to adjacent buildings or structures. These have been related to the OS grid.

Results

Findings from Areas 1-8 are described in turn.

Area 1

The southern part of the proposed development area is obstructed by an existing building, and by shrubbery. The survey was therefore extended across open ground to achieve equivalent coverage to the north and east. The survey plots show very strong magnetic disturbances across much of this area, as indicated by shading in figures 3 and 4. Both the grey scale and graphical plots (Figs. 2 and 3) of this and the other survey areas have been drawn at lower sensitivities than usual because of the strength of much of the detected magnetic activity.

The western part of the survey in Area 1 is free of strong background disturbances, and a group of individual magnetic anomalies (as outlined in red in Figs. 3 and 4) can be seen in the north west corner.

The significance of these findings is difficult to establish from the survey evidence alone, given the extreme strength of much of the detected magnetic activity. Archaeological features were seen here during the trenching, but they were ill-defined, and difficult to characterise. The findings included potsherds, perhaps suggesting that mortaria were produced nearby. A build-up of modern soil was noticed above these features, together with a former metalled path. It is probable, therefore, that much of the magnetic activity arises from modern debris within the recent soil layer, rather than underlying archaeological features. Roman industrial remains can be strongly magnetic, but it would be unusual for the magnetic response to be as strong as is seen here. The presence of modern slag or similar material in the metalling could account for the observed response.

A pottery production site, by contrast, would perhaps show strong individual magnetic anomalies (representing kilns, stoke holes or waster heaps), with more moderate readings elsewhere. It remains a possibility, however, that archaeological features or debris might contribute to the total magnetic response in this area.

Areas 2 and 3

Area 2 is located next within the crinkle-crankle walled garden, but is occupied by buildings and hard tennis courts. The tennis court was scanned briefly with the magnetometer to test the nature of the response, but gave wild readings.

Area 3 is covered by overgrown woodland, with much recent rubbish in the only open corner. Neither of these areas was therefore suitable for a magnetometer survey.

Area 4

Most of the proposed area was surveyed apart from a small section at the western edge of the area where tree cover made it difficult to work. The survey has picked up strong magnetic anomalies along the southern wall, and over a BT manhole cover. Some other magnetic anomalies (as outlined in blue) are probably caused by ferrous objects. A communications cable is shown on the site plan beneath this plot (but is not included in the visible layers of the plan as reproduced here). This was not clearly detected in the survey.

The trenching in this area appeared to show the presence of ditches. These may contribute to the disturbed response along the southern boundary, but otherwise have not been clearly detected.

Area 5

Much of the proposed development area is occupied by existing buildings, and only a sample block at the north east of the area could be surveyed. The results from this survey show interference from the nearby brick walls in the south-west corner. A sewage pipe is known to run through this area, but its response is probably obscured by magnetic interference from the adjacent building.

Area 6

Just over half of the proposed area could be surveyed. Coverage of the eastern part of the site was restricted by the presence of a greenhouse and trees. The survey results seem to confirm the presence of a known sewage pipe. There are also some magnetic disturbances of a probably modern origin at the northern edge of the site.

Area 7

The proposed survey area was bisected by a retaining wall running north to south, with raised ground to the east. Only the lower western part of the proposed area was surveyed. The survey appears to have responded mainly to the wall, to a water tank at the north-east of the site, and to a known sewage pipe.

Area 8

There is a fenced-off vegetable patch in the western part of the proposed area, which was not surveyed. The magnetometer plots show strong anomalies indicative of buried ferrous or

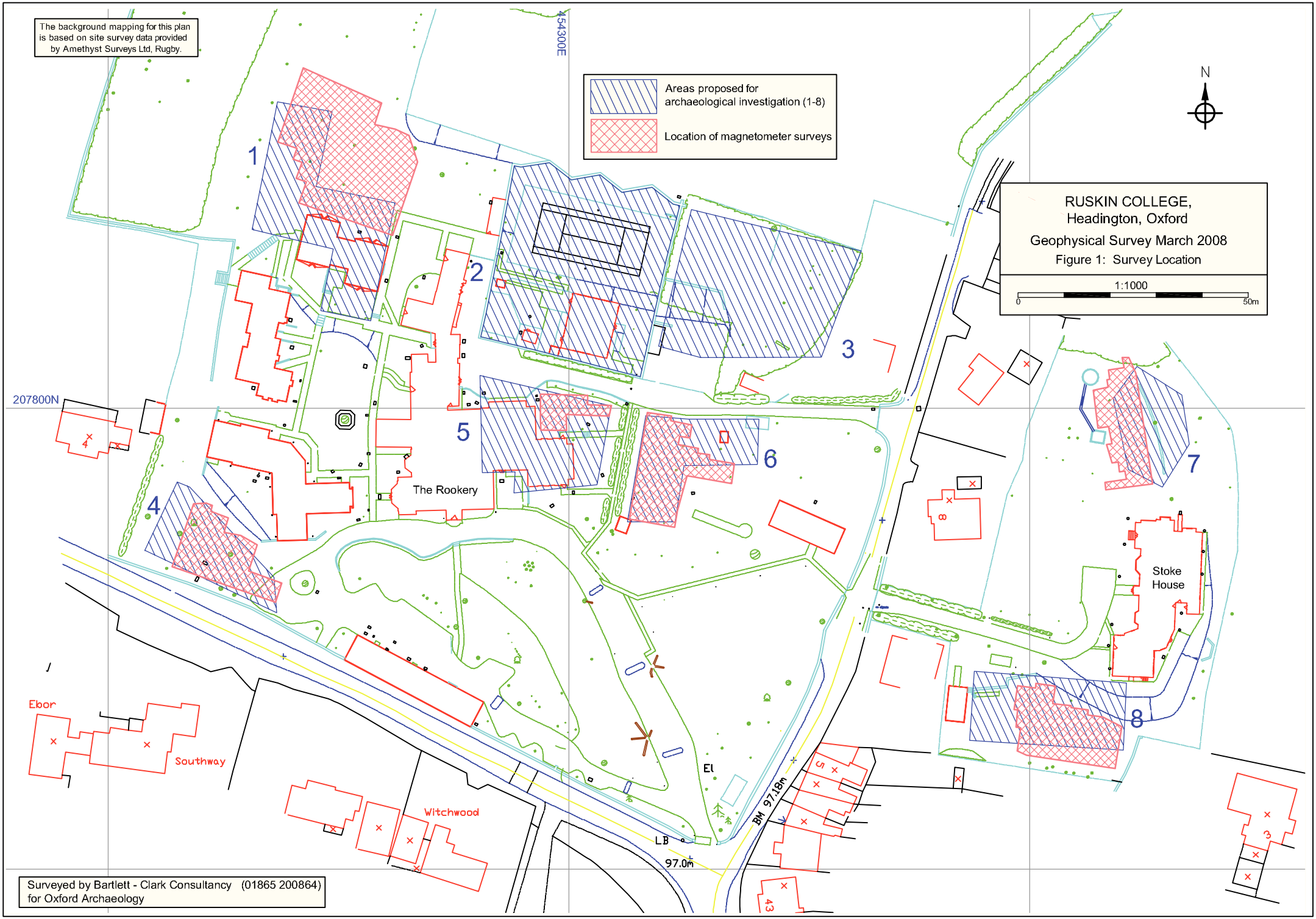
other modern material. Magnetic disturbances close to the southern boundary are probably caused by the extant fence.

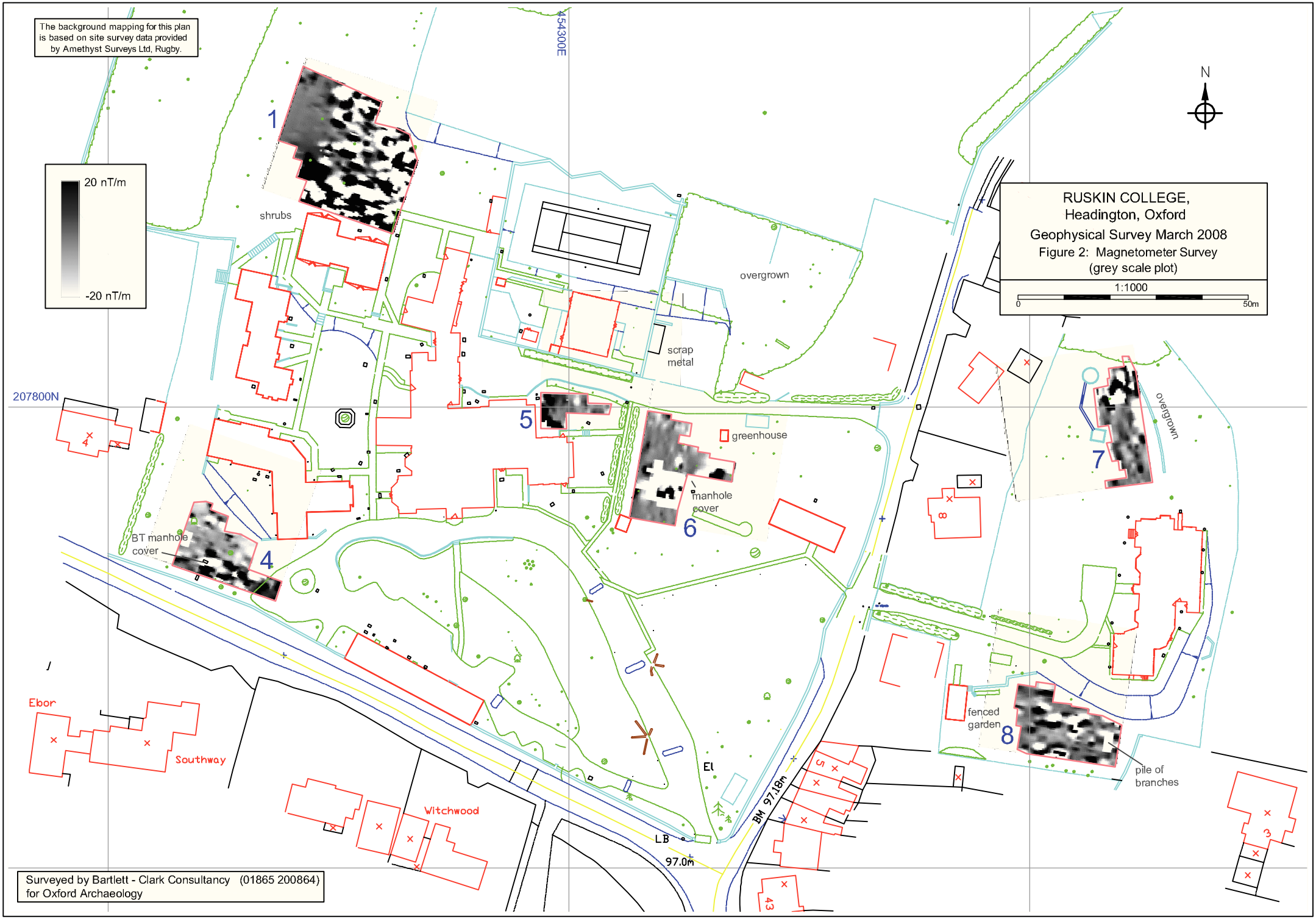
Conclusions

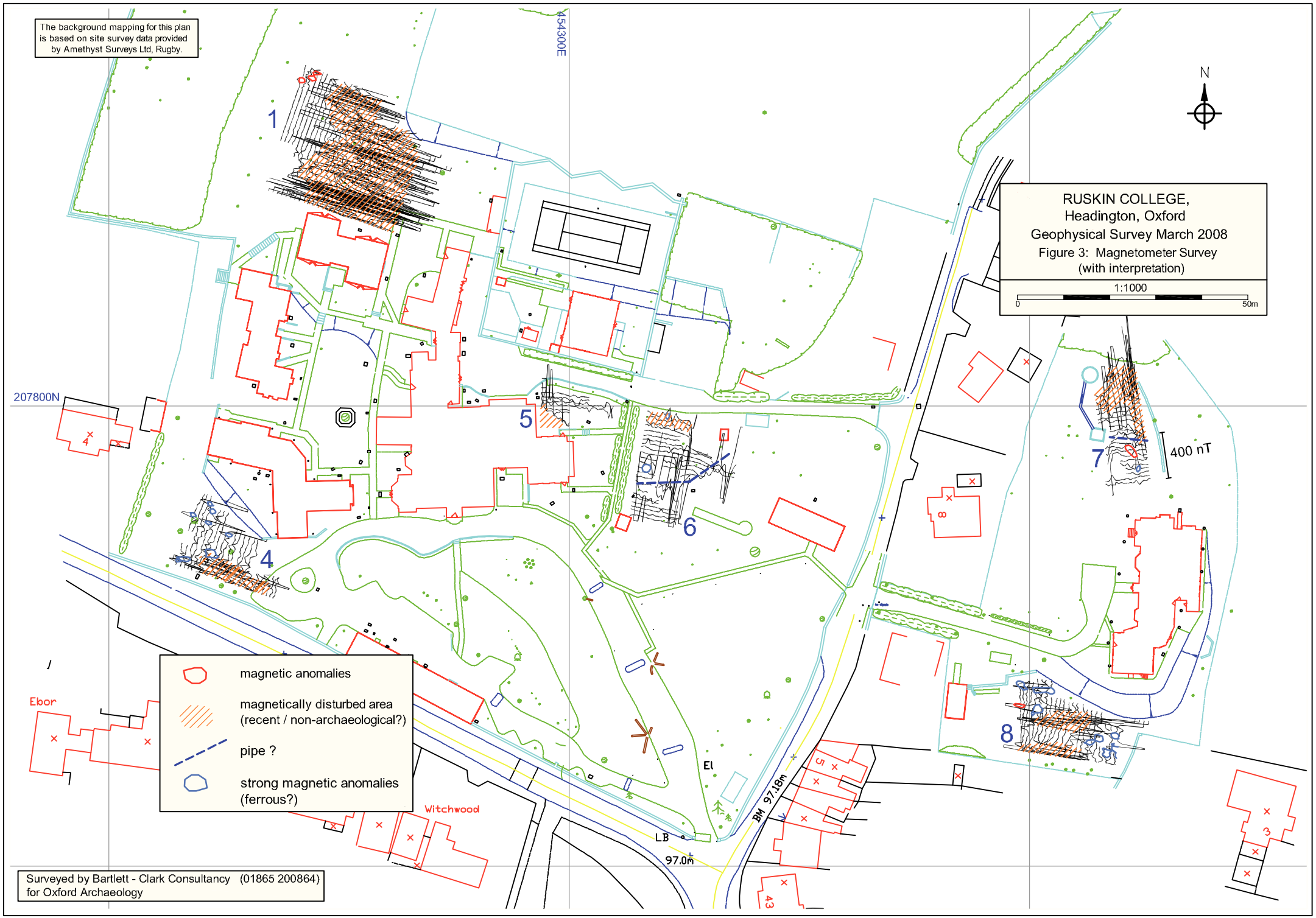
Geophysical results from a confined and disturbed site are always difficult to interpret with confidence, but the findings here perhaps help constrain the number of locations at which Roman industrial features might possibly be found.

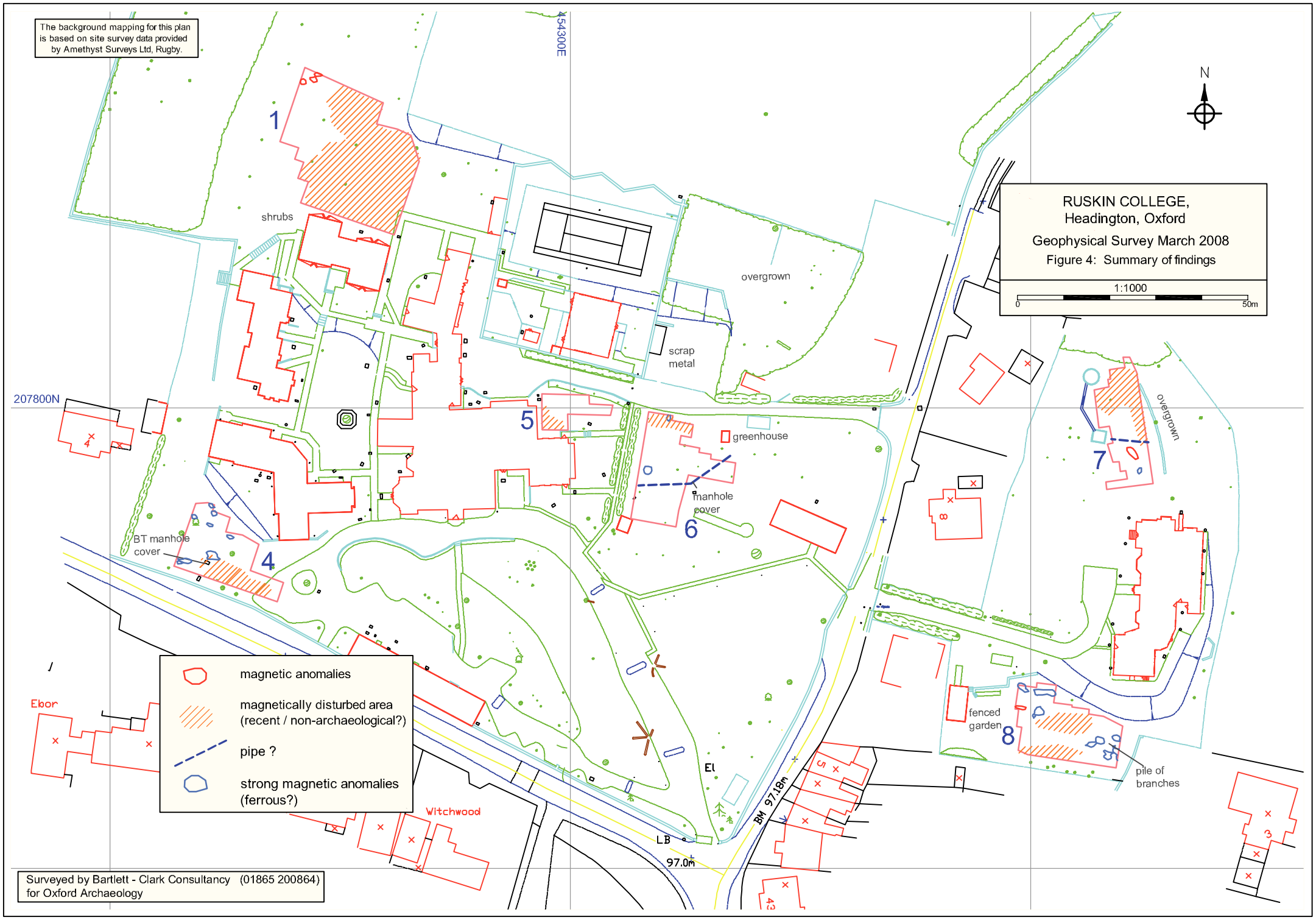
The particularly strong magnetic interference across much of Area 1 appears to result from modern infilling rather than underlying archaeological features, but it is not impossible that debris from a nearby pottery making site could contribute to the overall response.

The trenching does not appeared to have produced evidence of industrial activity or remains in the other proposed development areas, which may be consistent with the apparent lack of such findings in the survey results from those areas. There are strong magnetic anomalies in all the areas, but there do not appear to be any clearly defined individual disturbances of a kind to be expected from pottery kilns or related features. Some of the magnetic anomalies could represent individual buried metal objects, and others may relate to known underground services. The ditches identified by trenching in Area 4 do not appear to be distinguishable in the survey data from other strong magnetic disturbances nearby. It is perhaps therefore unlikely that substantial industrial features are present in the areas investigated, except perhaps in the vicinity of Area 1.


The background mapping for this plan is based on site survey data provided by Amethyst Surveys Ltd, Rugby.
454300E
Areas proposed for archaeological investigation (1-8)
Location of magnetometer surveys
N
RUSKIN COLLEGE,
Headington, Oxford
Geophysical Survey March 2008
Figure 1: Survey Location
1:1000
0
50m
1
2
3
4
5
6
7
8
207800N
The Rookery
Stoke House
Ebor
Southway
Witchwood
LB
97.0m
BM 97.18m
El
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for Oxford Archaeology


The background mapping for this plan is based on site survey data provided by Amethyst Surveys Ltd, Rugby.
20 nT/m
-20 nT/m
454300E
207800N
N
RUSKIN COLLEGE,
Headington, Oxford
Geophysical Survey March 2008
Figure 2: Magnetometer Survey
(grey scale plot)
1:1000
0
50m
1
shrubs
overgrown
scrap metal
5
greenhouse
manhole cover
6
7
overgrown
BT manhole cover
4
8
fenced garden
pile of branches
Ebor
Southway
Witchwood
LB
97.0m
BM 97.18m
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for Oxford Archaeology


The background mapping for this plan is based on site survey data provided by Amethyst Surveys Ltd, Rugby.
454300E
207800N
N
RUSKIN COLLEGE,
Headington, Oxford
Geophysical Survey March 2008
Figure 3: Magnetometer Survey
(with interpretation)
1:1000
0
50m
400 nT
1
2
3
4
5
6
7
8
magnetic anomalies
magnetically disturbed area
(recent / non-archaeological?)
pipe ?
strong magnetic anomalies
(ferrous?)
Ebor
Witchwood
LB
97.0m
BM 97.18m
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for Oxford Archaeology


The background mapping for this plan is based on site survey data provided by Amethyst Surveys Ltd, Rugby.
454300E
N
RUSKIN COLLEGE,
Headington, Oxford
Geophysical Survey March 2008
Figure 4: Summary of findings
1:1000
0
50m
1
shrubs
overgrown
scrap metal
207800N
5
greenhouse
manhole cover
6
7
overgrown
BT manhole cover
4
8
fenced garden
pile of branches
magnetic anomalies
magnetically disturbed area (recent / non-archaeological?)
pipe ?
strong magnetic anomalies (ferrous?)
Ebor
Witchwood
El
BM 97.18m
LB
97.0m
3
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for Oxford Archaeology

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APPENDIX 7 SUMMARY OF SITE DETAILS

Site name: Ruskin College, Old Headington, Oxford

Site code: OXRUSK 08

Grid reference: SP 543 078

Type of evaluation:

Date and duration of project: 10th March - 19th March 2008

Area of site:

Summary of results: Oxford Archaeology undertook a two-stage field evaluation within the Headington grounds of Ruskin College on behalf of the College prior to determination of an application for redevelopment. This took the form of a magnetometer survey followed by the excavation of 12 trial trenches to investigate the impact areas of the proposed development. The geophysical survey produced limited results although the trenches identified remains of early Iron Age, Roman and medieval/post-medieval date. The Roman remains were restricted to Trench 9 although these are consistent with previous discoveries along the western fringe of the College grounds suggesting occupation along a raised finger of land. The Roman pottery assemblages also imply the close proximity of a mortarium production site. Significant domestic charred cereal remains were recorded from the excavated Roman feature.

Medieval remains were more limited although a 12th or early 13th century cow burial was encountered by Stoke House within the eastern portion of the site. No significant remains were encountered within the listed crinkle-crankle walled garden.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Oxfordshire County Museums Service in due course, under the following accession number: OCMS:2008.21.

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