Wavendon Lodge, Lower End Road, Milton Keynes

Archaeological Evaluation Report

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Wavendon Lodge, Lower End Road, Milton Keynes

Archaeological Evaluation Report

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Summary

In January 2019 Oxford Archaeology undertook a trial-trench evaluation at the site of a proposed development at Wavendon Lodge, Wavendon, Milton Keynes. The works comprised the excavation of nine trenches, each measuring 30m in length.

The southern half of the site contained a series of land management ditches, a curvilinear gully and a couple of pits. Pottery recovered from the features suggests three phases of activity: late Iron Age/early Roman, middle Roman and late Roman. Though uncertain at this time, the features identified are likely to be associated with known activity recorded to both the east and west of the site.

Remains in the north-west corner of the site were limited to medieval and post-medieval furrows, reflecting the agricultural use of the site.

In addition to the pottery, a small assemblage of worked flint was recovered, but it is not considered to be indicative of prehistoric activity within the site.

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The project was managed for Oxford Archaeology by John Boothroyd. The fieldwork was directed by Tom Black, who was supported by Phoebe Burrows, David Pinches and Jack Traill. Survey and digitising were carried out by Conan Parsons. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the management of Leigh Allen, processed the environmental remains under the management of Rebecca Nicholson, and prepared the archive under the management of Nicola Scott.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology (OA) was commissioned by CgMs Heritage on behalf of McCann homes to undertake a trial-trench evaluation at the site of a proposed residential development.

1.1.2 The work was undertaken as a condition of planning permission (planning ref. 17/03224/FUL). Although the local planning authority did not set a brief for the work, discussions between CgMs Heritage and Nick Crank, Senior Archaeological Officer for Milton Keynes Council, established the scope of work required. This was detailed in written scheme of investigation (WSI) produced by Oxford Archaeology (OA 2018). The current document outlines how OA implemented the specified requirements.

1.1.3 All work was undertaken in accordance with the Chartered Institute for Archaeologists' standard and guidance relevant to the work (CIfA 2014).

1.2 Location, topography and geology

1.2.1 The site lies to east of Milton Keynes in the parish of Wavendon. The site is bounded to the south by Lower End Road, to the east by Cranfield Road and to the west and north by fields used for grazing (Fig. 1; NGR: SP 93095 38271). The M1 motorway passes some 130m to the north of the site. Cranfield Road marks the county boundary between Milton Keynes and Bedfordshire.

1.2.2 The area of proposed development is *c* 2 hectares (ha) in size of which *c* 1ha is subject to the archaeological investigation. The evaluation is to be undertaken within the grounds surrounding Wavendon Lodge.

1.2.3 The geology of the area is mapped as Stewartby Member, Mudstone, a sedimentary bedrock formed approximately 164 to 166 million years ago in the Jurassic Period. Superficial deposits of Oadby Member, Diamicton, which formed up to 2 million years ago in the Quaternary period, are recorded across the site (BGS Online).

1.3 Archaeological and historical background

1.3.1 The following archaeological and historical background has been derived from a desk-based assessment produced for a proposed development immediately to the west of the site (Albion Archaeology 2016) and has been supplemented by a search of the Historic Environment Records (HER; Heritage Gateway 2018).

Prehistoric and Roman

1.3.2 No heritage assets of prehistoric or Roman date are recorded in the development area. Worked flints dating from the Mesolithic to the early Bronze Age were recovered during fieldwalking undertaken in advance of the improvements works to the M1 Motorway between junctions 10 and 15.

1.3.3 A geophysical survey undertaken *c* 500m to the east of the site identified a potential Iron Age or Roman D-shaped. Late Iron Age/Romano-British remains comprising

ditches and inhumations were recorded some 100m to the west of the site during a recent trial-trench evaluation enclosure.

1.3.4 Similar activity is recorded to the east of the site in Bedfordshire. Geophysical survey and trial trench evaluation identified remains of a farmstead founded in the 1st century AD and continuing in use until the 3rd or 4th century (Cotswold Archaeology 2016).

Early medieval

1.3.5 No remains of early medieval date have been recorded within the site or the surrounding area. The Domesday survey of 1086 records seven manors in Wavendon parish.

Medieval

1.3.6 The medieval hamlet of Lower End lies 500m to the south of the proposed development area. Although no extant remains of the settlement exist, the remains of the associated field system in the form of furrows are recorded by geophysical survey and trial trenching to the west of the development area.

1.3.7 A silver cut halfpenny and a silver short cross penny dating to the reign of King John (1119-1216) were recovered *c* 300m to the west of the site.

Post-medieval

1.3.8 The most notable heritage asset of post-medieval date within the vicinity of the site is the Grade II*-listed Wavendon House and grounds. Located 900m to the south-west, the house was constructed in 17th century by James Selby for his father. Over the course of the 18th century, the house was expanded, while substantial landscaping was undertaken, including the construction of canals, fish ponds, orchards and two lakes. The grounds of the house extend towards the east, ceasing some 300m to the west of the site and include an undesignated icehouse.

1.3.9 Five buildings forming part of the hamlet of Lower End are recorded on the HER with their locations shown on the Ordnance Survey (OS) map of 1815. On this map the site is depicted as being part of a large rectangular field and it is not until Bryant's map of Buckinghamshire dated to 1825 that the site is shown as being a separate parcel of land. Agricultural buildings to the north of the site are shown on the first edition OS map of 1885.

1.4 Potential

1.4.1 The WSI concluded that there is good potential for remains dated to the late Iron Age and Roman period associated with the activity recorded to both the east and west of the site to be found. Remains of later periods are likely to be confined to ridge and furrow associated with the agricultural landscape of the former hamlet of Lower End.

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The general aims of the evaluation were to record the presence or absence of archaeological deposits and features and report on the findings to inform the planning process.

2.1.2 The specific aims and objectives of the evaluation were:

i. To determine the presence or absence of any archaeological remains which may survive.
ii. To determine or confirm the approximate extent of any surviving remains.
iii. To determine the date range of any surviving remains by artefactual or other means.
iv. To determine the condition and state of preservation of any remains.
v. To determine the degree of complexity of any surviving horizontal or vertical stratigraphy.
vi. To assess the associations and implications of any remains encountered with reference to the historic landscape.
vii. To determine the potential of the site to provide palaeoenvironmental and/or economic evidence, and the forms in which such evidence may survive.
viii. To determine the implications of any remains with reference to economy, status utility and social activity.
ix. To determine or confirm the likely range, quality and quantity of the artefactual evidence present

2.2 Methodology

2.2.1 The trenches were laid out as shown in Figure 2 using a GPS with sub-25mm accuracy. Minor adjustments were made from the proposed location detailed in the WSI due to the presence of modern services, the most notable of these being the splitting of Trench 4 into two parts to avoid an electric cable.

2.2.2 The trenches were excavated using a JCB 3CX mechanical excavator fitted with a toothless bucket under the direct supervision of an archaeologist. Spoil was stored adjacent to, but at a safe distance from, trench edges.

2.2.3 Machining continued in spits down to the top of the undisturbed natural geology. Once archaeological deposits werr exposed, further excavation proceeded by hand and the appropriate use of machine.

2.2.4 The exposed surface was sufficiently clean to establish the presence/absence of archaeological remains. A sample of each feature, for example pits, postholes and ditches, were excavated and recorded in accordance with OA standard methodologies as detailed in the appendices of the WSI.

2.2.5 All features and deposits were issued with unique context numbers, and context recording was in accordance with established best practice and the OA Field Manual. Samples were allocated unique numbers and bulk finds were collected by context.

2.2.6 Digital photos were taken of any archaeological features, deposits, trenches and the evaluation work in general.

2.2.7 Plans were produced using a GPS with sub 25mm accuracy. Section drawings of features were drawn at a scale of 1:10 or 1:20. All section drawings were located using a GPS. The absolute height (m OD) of all principal strata and features, and the section datum line was collected.

2.2.8 Environmental samples were collected from a variety of features type.

2.2.9 Upon completion of excavation and recording the trenches were backfilled with the excavated spoil.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A. Finds data and spot dates are tabulated in Appendix B.

3.1.2 Context numbers reflect the trench numbers unless otherwise stated, for example. pit 102 is a feature within Trench 1, while ditch 304 is a feature within Trench 3.

3.2 General soils and ground conditions

3.2.1 The soil sequence between all trenches was fairly uniform. The natural geology consisted of a brownish yellow silty clay with chalk and flint inclusions. This was overlain by a firm yellowish-brown silty clay subsoil, which in turn was overlain by topsoil. The only variation was a layer of made ground, associated with site clearance recorded in Trenches 6 and 8. The deposit, a mix of gravel and topsoil, was recorded as overlying the topsoil (Plate 1)

3.2.2 All features were observed to truncate the natural geology and were sealed by suboil

3.2.3 Ground conditions throughout the evaluation were generally good, and the trenches remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 General distribution of archaeological deposits

3.3.1 Archaeological features were present in Trenches 4-9. Trench 2 was devoid of features and Trenches 1 and 3 only contained east-west aligned furrows (Fig. 3). The furrows measured between 5m and 1m in width and had an average depth of 0.14m. The fills were all comparable and consisted of a firm yellow brown silty clay with chalk and flint inclusions. Fragments of medieval and post-medieval ceramic building material (CBM) were recovered from several of the features.

3.4 Trench 4 (Fig. 4)

3.4.1 Aligned east-west, Trench 4 was split into two halves due to the presence of an electrical cable. Natural geology was encountered at 79.67m above Ordnance Datum (AOD) in the western half of the trench, and at 79.90m AOD in the eastern half.

3.4.2 No archaeological features were present in the eastern half of the trench.

3.4.3 The western half contained two north-south aligned ditches and one pit.

3.4.4 Ditch 403 had a concave profile and was observed to be greater than 1.3m wide and over 0.6m deep, with neither the full width or the base of the feature able to be recorded within the trench (Fig. 10 Section 400; Plate 2).

3.4.5 Pit 406 measured 0.52m in diameter but only survived to a depth of 0.07m (Fig. 10 Section 402; Plate 3). The pit contained a single fill, 407, from which late Iron Age/early Roman pottery (50 BC-AD 100), worked flint and animal bone were recovered. The

eastern edge of the pit was truncated by ditch 408. This ditch was broadly north-south aligned but curved slightly suggesting that the feature was curvilinear in plan. The ditch had a shallow concave profile and measured 0.82m wide and 0.16m deep. Animal bone and late Iron Age/early Roman pottery (50 BC-AD 100 was recovered from the sole fill of the ditch, fill 409.

3.5 Trench 5 (Fig. 5)

3.5.1 Trench 5 was aligned north south and contained four ditches. Natural geology was exposed at 79.98m AOD.

3.5.2 Located at the southern end of the trench, ditch 506 was aligned east-west with a concave profile and slightly irregular base, likely to be the result of bioturbation which was evident throughout the feature. The ditch measured 1.22m wide and 0.18m deep (Fig. 10 Section 501).

3.5.3 Two ditches were present in the centre of the trench. Ditch 504, aligned NW-SE, measured 1.44m wide and 0.36 deep with moderate sides and a flattish base (Fig. 10 Section 500; Plate 4). Curvilinear in plan, ditch 502 was located immediately adjacent to ditch 504. Despite a physical relationship in plan, no stratigraphic relationship between the two features could be established. Ditch 502 had a concave profile measuring 0.5m wide and 0.14m deep.

3.5.4 A large NE-SW aligned linear feature was located at the northern end of Trench 5. The ditch, 508, measured 6m wide but only 0.2m deep and had a shallow concave profile (Fig. 10 Section 502). Roman pottery (AD 43-410) was recovered from the sole fill of the ditch, fill 509.

3.6 Trench 6 (Fig. 6)

3.6.1 Trench 6 was aligned east-west and contained six ditches. Natural geology was exposed at 79.77m AOD.

3.6.2 Located at the eastern end of the trench, NW-SE aligned ditch 603 was cut by north-south ditch 606 (Fig. 10 Section 600; Plate 5). The earlier ditch had a shallow concave profile and measured over 1.5m wide and 0.54m deep. Roman pottery (AD 43-410), CBM, clinker and animal bone were recovered from the upper of two fills present within the ditch, fill 605. The later ditch had a concave profile with a flattish base. It measured 1.31m wide and 0.42m deep (Fig. 10 Section 602).

3.6.3 Ditch 608 crossed the centre of the trench. Aligned north-south, the ditch measured 1.31m wide by 0.42m deep and had an irregular profile with a straight western side but an irregular or stepped eastern side (Fig. 10 Section 601; Plate 6).

3.6.4 All aligned north-south, the three other ditches within Trench 6 were concentrated in the western half (Fig. 10 Section 603). Ditch 611 measured 1.53m wide and 0.16 with a slightly irregular concave profile. Ditch 615 measured 0.86m wide by 0.18m deep and had a concave profile. Ditch 614, the most substantial of the three, measured 1.74m wide and 0.62m deep with steep sides and a flat base.

3.7 Trench 7 (Fig. 7)

3.7.1 Trench 7 was aligned north-south and contained a single ditch. Natural geology was exposed at 79.74m AOD.

3.7.2 Crossing the northern half of the trench, the ditch, 703, was aligned NE-SW and measured over 1.18m wide and 0.34m deep with straight sides and a flat base (Fig. 11 Section 700; Plate 7). Due to the alignment of the ditch, limited investigation was undertaken into the feature. However, the section of the ditch suggests a feature similar in character to ditch 502 in Trench 5.

3.8 Trench 8 (Fig. 8)

3.8.1 Trench 8 was aligned NE-SW and contained four ditches and a pit. Natural geology was exposed at 79.74m AOD.

3.8.2 Ditch 816, located at the south-west end of the trench, measured 7.8m wide and 0.98m deep. Broadly aligned north-south the ditch had gently sloping sides with a pointed base (Fig. 11 Section 805). The ditch contained three fills, 817, 820 and 821. All three fills appeared to have accumulated through natural silting from east of the ditch indicating the possible presence of a bank on this side. Roman pottery dated to AD 170-200, flint, CBM and animal bone were recovered from the final fill of the ditch, fill 817. The pottery assemblage included a mortarium, samian ware and a beaker with roughcast decoration and suggests deposition in the late 2nd century. However, the middle fill, 820, contained Roman pottery dated to AD 240-410, suggesting the pottery from fill 817 is residual. It should be noted that the pottery from 820 was recovered from an environmental sample and is in significantly poorer condition than that recovered from fill 817 and therefore is indicative of different depositional processes (see Appendix B.1). In addition to the pottery, flint, burnt flint, hobnails, hammerscale and shell were recovered from fill 820.

3.8.3 Ditch 809 was located just to the north-east of ditch 816. Aligned north-south the ditch measured 0.5m wide and 0.12m deep and had a shallow concave profile (Plate 8). Roman pottery was recovered from the sole fill of the ditch, fill 810. Ditch 807 was located 1.5m to the east and ran parallel to ditch 809 on a north-south alignment. The ditch had a shallow concave profile and measured 0.56m by 0.16m. The eastern side of the ditch was observed to truncate an area of root disturbance, 805.

3.8.4 Circular in plan with a diameter of 0.7m, pit 803 measured 0.16m deep with steep straight sides and a flat base (Fig. 11 Section 800; Plate 10). Post-medieval CBM and clinker were recovered from the fill 804, the only fill within the pit.

3.8.5 Located at the very north-east end of the trench, ditch 818 was only partially observed within the trench and was not excavated.

3.9 Trench 9 (Fig. 9)

3.9.1 Trench 9 was aligned east-west and contained seven ditches. Natural geology was exposed at 79.72m AOD.

3.9.2 Located at the eastern end of Trench 9, ditch 902 was aligned NE-SW and measured 0.84m wide and 0.42m deep with steep sides and a rounded base (Fig. 12 Section 901;

Plate 11). Ditch 912 was located to west of ditch 902 but on a north-south alignment. The ditch measured 3.88m wide and 0.72m deep, and had a wide stepped profile potentially suggesting a re-cut (Fig. 12 Section 904; Plate 12). Due to the depth of the feature the base was not reached. Roman pottery (AD 150-300), animal bone and a fragment of possible hammerscale were recovered from fill 913, the upper fill of the ditch.

3.9.3 Ditches 908 and 910 were also aligned north-south. Ditch 908 measured 3.60m wide and 0.46m deep with a concave profile (Fig. 12 Section 906; Plate 13). Ditch 910 was 1.32m wide and 0.16 and also had a concave profile (Fig. 12 Section 905).

3.9.4 Aligned NE-SW, ditch 904 measured 1.0m wide and 0.44m deep with steep sides and a rounded base, a profile similar to ditch 902 (Fig. 12 Section 902; Plate 14).

3.9.5 Two intercutting ditches, 906 and 912, were recorded at the western end of the trench (Fig. 12 Section 903). The earlier ditch, 906, measured over 5m wide and 1.18m deep. The ditch had a concave profile and contained three fills, 907, 919 and 920. The lowest two fills, 920 and 919, appeared to have been accumulated from the west and are likely to be a mix of natural silting and up-cast from the creation of the later ditch. Ditch 912 measured 2.9m wide and 0.78m wide with straight sides and a flattish base.

3.10 Finds summary

3.10.1 A total of 86 sherds of pottery, weighing 1326g, was recovered from the evaluation. The date range of the material suggest three phases of activity within the site: late Iron Age/early Roman, later 2nd century and late Roman. The earliest forms were recovered solely from Trench 4 and included grog-tempered pottery dated between 50 BC and AD 100. The most notable assemblage was recovered from the uppermost fill, fill 817, of ditch 816 and dates to the late 2nd century. A jar in pink grogged ware dating to the second half of the second century or the 3rd century was recovered from Trench 9.

3.10.2 A small assemblage of flint comprising four struck flints and five burnt fragments was recovered from the evaluation, suggesting a very limited flint-related presence within the site during prehistory. As with the pottery, the largest assemblage was recovered from ditch 816 in Trench 8. The assemblage lacked diagnostic forms but did include one broken awl or piercer.

3.10.3 The CBM assemblage comprised 13 fragments with a combined weight of 377g. With the exception of fragments from ditch 816, all the fragments are suspected to be of medieval or post-medieval date.

3.10.4 Other finds included, hobnails, nails, post-medieval coal, clinker, fuel ash, and shell.

Type	Quantity	Weight
Pottery	86	1326
Flint	4	-
Burnt flint	5	
CBM	13	377
Fe Obj	9	-
Clinker	9	
Shell	2	42
Ash	1	-

3.11 Environmental summary

3.11.1 Three samples were collected during the evaluation for the identification of charred plant remains (CPR) and artefacts. The samples were all collected from dated features. Fragments of charcoal were present within all three samples but were generally small in size and of mixed condition. The grain recovered is mostly in very poor condition and mostly unidentifiable, although wheat grains were recovered from samples taken from ditch 816 and ditch 912. A grain recovered from ditch 912 is notable for the excellent condition and suggests preservation conditions on site are good despite the condition of the bulk of the material. Small amounts of chaff were also present in the samples, but were mostly too small and broken to identify beyond glume wheat, probably either spelt wheat or emmer.

3.11.2 A small assemblage of animal bone was recovered but due to the alkaline soils the bone is in very poor condition. Domestic cattle and sheep were identifiable within the assemblage of 153 specimens.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 The weather and ground conditions through this evaluation were generally good. Despite occasional heavy rainfall there was no flooding, or other adverse circumstances which might have compromised the reliability of the field investigation. The trenches were all dug roughly in their proposed locations with only slight modification needed due to on site obstructions, achieving good coverage of the site. The ground and site conditions were generally good throughout the course of the evaluation and the machining was carried out cleanly with good visibility of features and deposits in the trenches.

4.1.2 The evaluation demonstrated a presence of archaeological remains associated with late Iron Age, Roman and medieval activity across the site. As such, the results of the evaluation can be considered to be an accurate reflection of the archaeological potential of site.

4.2 Evaluation objectives and results

4.2.1 The aims and objects of the evaluation are detailed above within Section 2. The trenching successfully confirmed the location and extent of archaeological remains with the site. Where possible, archaeological features have been dated through the recovery of artefactual evidence.

4.2.2 Excluding furrows, over 50% of the archaeological features excavated survived to a depth of less than 0.2m, this along with the presence of a subsoil across the site does suggest a level of truncation resulting from agricultural practices has occurred across the site.

4.2.3 The earliest feature identified within the site dated to the late Iron Age/early Roman period and are limited to Trench 4. The features are likely to form part of a land management or enclosure system. However, the absence of other features dated to this period means that it is not possible to establish the full extent of this activity at this time. Late Iron Age/early Roman remains have previously been identified some 100m to the west of the development area (Albion Archaeology 2016). Though not certain, there is good potential for the activity recorded within the site to be associated with the enclosure systems and inhumations identified to the west. However, the limited evidence within the site suggests that these remains lie beyond the focus of the activity.

4.2.4 Although many of the features in Trenches 5 to 9 are not dated, those that have been are dated to the Roman period with at least two phases of activity represented. Very few of the ditches can be associated with one another across the trenches, although ditch 603 is likely to be the continuation of ditch 904. As with the earlier remains, it is difficult to establish a coherent field system with the results. However, the presence of both north-south and NE-SW aligned features suggest at least two different systems.

4.2.5 The curvilinear gully recorded in Trench 5 is similar to features previously identified to the east of the site that have been interpreted as roundhouses. However, it is unclear at this stage if the feature within the site is roundhouse as well. Given the limited

artefactual evidence and material recovered from the environmental samples there is little evidence to suggest significant settlement activity within the site and settlement focus lying beyond the limits of the proposed development area.

4.2.6 Ditch 508 has been dated to the Roman period, but the function of the feature is unclear. Even when taking into consideration an element of truncation, the depth of the feature comparable to its width suggests that the feature is unlikely to have function as a boundary or drainage ditch but may be the remains of a holloway or trackway. Though only partially excavated, ditch 703 appears to have a very similar profile and is parallel to ditch 508.

4.2.7 The results of an evaluation undertaken to the east of the site in 2016 by Cotswold Archaeology (2016) identified a late Iron Age or Roman farmstead. Most activity was dated to the early Roman period with a shift in focus towards the south in the late Roman period. The results of the trenching, and the preceding geophysical survey, suggest a well-defined settlement. As such, it is unclear how the archaeological features identified during these works relate to this activity. Given their proximity it is likely they are related and may represent an expansion or extension of the settlement identified to the east.

4.2.8 The north-west corner of the development area appears to be devoid of significant archaeological remains with features limited to furrows only. Based on their profiles, several of the ditches recorded in the south-east corner of the site, including 504, 611, 807 and 809, maybe furrows. However, they lack the material culture recovered from the furrows in Trenches 1 and 3, and the fills were easier to differentiate from the subsoil. If the features are furrows their alignments would suggest a different farming regime being undertaken in this part of the site compared to the north-west.

4.2.9 The presence of post-medieval or modern clinker and ash within several features should be considered intrusive and is likely to be associated with the development and use of Wavendon Lodge.

4.3 Significance

4.3.1 The results of the evaluation have demonstrated that remains of late Iron Age/early Roman to late Roman of moderate significance lie within the southern half of the site. Further investigation would not only aid our understanding on these remains but the use of the wider landscape in these periods.

4.3.2 Activity within the north-west corner of the site was limited to furrows which can be considered to hold little to no archaeological significance.

APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					**Orientation**	N-WS
Trench contained three furrows cutting natural geology of clay with chalk and flint and overlain by subsoil and topsoil.					**Length (m)**	20
					Width (m)	1.50
					Avg. depth (m)	0.34
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
100	Layer	-	0.24	Topsoil: dark grey brown silty clay	-	-
101	Layer	-	0.24	Subsoil: mid yellowish brown silty clay	-	-
102	Layer	-	-	Natural: brownish yellow clay with chalk and flint	-	-
103	Cut	2.50	0.22	Cut of WNW-ESE furrow	-	
104	Fill	2.50	0.22	Fill of Furrow 103: firm, mid yellowish brown silty clay with chalk and flint.	CBM	C13-C17
105	Cut	5.05	0.22	Cut of WNW-ESE furrow	-	-
106	Fill	5.05	0.22	Fill of Furrow 105: firm, mid yellowish brown silty clay with chalk and flint.	-	-
107	Cut	4.75	0.18	Cut of WNW-ESE furrow	-	-
108	Fill	4.75	0.18	Fill of Furrow 107: firm, mid yellowish brown silty clay with chalk and flint.	-	-

Trench 2						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay with chalk and flint.					**Length (m)**	23.80
					Width (m)	1.50
					Avg. depth (m)	0.38
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
200	Layer	-	0.20	Topsoil: dark grey brown silty clay	-	-
201	Layer	-	0.20	Subsoil: mid yellowish brown silty clay	-	-
202	Layer	-	-	Natural: brownish yellow clay with chalk and flint	-	-

Trench 3		
General description	**Orientation**	N-S
Trench contained seven furrows cutting natural geology of clay with chalk and flint and overlain by subsoil and topsoil.	**Length (m)**	31
	Width (m)	1.50
	Avg. depth (m)	0.32

Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
300	Layer	-	0.15	Topsoil: dark grey brown clayey silt	-	-
301	Layer	-	0.15	Subsoil: mid – dark yellowy brown silty clay	-	-
302	Layer	-	-	Natural: brownish yellow clay with chalk and flint	-	-
303	Cut	1.88	0.12	Cut of WNW-ESE furrow	-	-
304	Fill	1.88	0.12	Fill of furrow 303: firm, mid yellowish brown silty clay with chalk and flint	-	-
305	Cut	1.0	0.11	Cut of WNW-ESE furrow	-	-
306	Fill	1.0	0.11	Fill of furrow 305: firm, mid yellowish brown silty clay with chalk and flint	-	-
307	Cut	2.80	0.14	Cut of WNW-ESE furrow	-	-
308	Fill	2.80	0.14	Fill of furrow 307: firm, mid yellowish brown silty clay with chalk and flint	-	-
309	Cut	2.16	0.14	Cut of WNW-ESE furrow	-	-
310	Fill	2.16	0.14	Fill of furrow 309: firm, mid yellowish brown silty clay with chalk and flint	-	-
311	Cut	3.90	-	Cut of WNW-ESE furrow	CBM	
312	Fill	3.90	-	Fill of furrow 311: mid yellowish brown silty clay with chalk and flint	CBM	C15-16
313	Cut	1.40	-	Cut of WNW-ESE furrow	-	-
314	Fill	1.40	-	Fill of furrow 313: mid yellowish brown silty clay with chalk and flint	-	-
315	Cut	3.80	-	Cut of WNW-ESE furrow	-	-
316	Fill	3.80	-	Fill of furrow 315: mid yellowish brown silty clay with chalk and flint	CBM	C13-C17

Trench 4						
General description					**Orientation**	E-W
Trench contained two ditches and a pit cutting natural of silty sand and clay overlain by subsoil and topsoil.					**Length (m)**	17.40 + 9.90
					Width (m)	1.50
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
400	Layer	-	0.22	Topsoil: dark grey brown silty clay	-	-
401	Layer	-	0.22	Subsoil: mid yellowy brown silty clay	-	-

402	Layer	-	-	Natural: light yellowish brown silty sand and silty clay	-	-
403	Cut	1.30	0.60	Cut of N-S ditch		
404	Fill	1.10	0.36	Fill of ditch 403: firm, mid greyish brown clayey silt.	-	-
405	Fill	1.30	0.24	Fill of ditch 403: firm, mid grey brown sandy silty clay	Pottery Animal bone	50BC - AD 100
406	Cut	0.52	0.07	Cut of pit or posthole		
407	Fill	0.52	0.07	Fill of pit or posthole 406: firm, dark grey brown silty clay with frequent charcoal.	Pottery Flint Animal bone	50BC - AD 100
408	Cut	0.82	0.16	Cut of curvilinear ditch		
409	Fill	0.82	0.16	Fill of ditch 408: firm, mid brownish grey silty clay with occasional charcoal.	Pottery Animal bone	50BC - AD 100

Trench 5						
General description					**Orientation**	N-S
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of silty sand.					**Length (m)**	30.60
					Width (m)	1.50
					Avg. depth (m)	0.30
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
500	Layer	-	0.23	Topsoil: dark grey brown silty clay	-	-
501	Layer	-	0.22	Subsoil: mid yellowish brown silty clay	-	-
502	Cut	0.50	0.14	Cut of ring ditch	-	-
503	Fill	0.50	0.14	Fill of ring ditch 502: firm, mid greyish brown silty clay	-	-
504	Cut	1.44	0.36	Cut of NW-SE ditch	-	-
505	Fill	1.44	0.36	Fill of ditch 504: firm, mid brownish grey silty clay	-	-
506	Cut	1.22	0.18	Cut of E-W ditch	-	-
507	Fill	1.22	0.18	Fill of ditch 506: friable, mid greyish brown silty clay	-	-
508	Cut	6.0	0.20	Cut of NE-SW linear		
509	Fill	6.0	0.20	Fill of linear 508: friable, mid greyish brown silty clay	Pottery	AD 43 - 410
510	Layer	-	-	Natural: mid yellowish grey clay with chalk.	-	-

Trench 6		
General description	**Orientation**	E-W
Trench contained six ditches cutting natural of sandy clay and overlain by subsoil and topsoil.	**Length (m)**	30.60
	Width (m)	1.50
	Avg. depth (m)	0.50

Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
600	Layer	-	0.40	Topsoil: very dark grey brown sandy clayey silt	-	-
601	Layer	-	0.30	Subsoil: mid grey brown clayey silt	-	-
602	Layer	-	-	Natural: mid yellowish brown sandy clay	-	-
603	Cut	1.50	0.54	Cut of NW-SE ditch	-	
604	Fill	0.94	0.26	Fill of ditch 603: firm, mid greyish brown silty clay with sand and flint fragments.	-	-
605	Fill	1.50	0.22	Fill of ditch 603: firm mid greyish brown clayey silt with occasional charcoal and flint fragments	Pottery CBM Clinker Animal bone	AD 43 - 410
606	Cut	1.08	0.28	Cut of N-S ditch	-	-
607	Fill	1.08	0.28	Fill of ditch 606: firm, mid greyish brown clayey silty	-	-
608	Cut	1.31	0.42	Cut of N-S ditch	-	-
609	Fill	1.31	0.42	Fill of ditch 608: firm mid greyish brown silty clay	-	-
610	Layer	-	0.14	Modern made ground	-	-
611	Cut	1.53	0.16	Cut of N–S ditch	-	-
612	Fill	1.53	0.16	Fill of ditch 611: Firm, mid greyish brown silty clay with occasional chalk	-	-
613	Cut	1.74	0.62	Cut of N-S ditch	-	-
614	Fill	1.74	0.62	Fill of ditch 613: Firm, mid greyish brown silty clay with occasional chalk	-	-
615	Cut	0.86	0.18	Cut of N-S ditch	-	-
615	Fill	0.86	0.18	Fill of ditch 614: Firm, mid greyish brown silty clay with occasional chalk	-	-

Trench 7

General description					Orientation	N-S
Trench contained a single ditch cutting natural of sandy silty clay and overlain by subsoil and topsoil.					Length (m)	30.60
					Width (m)	1.50
					Avg. depth (m)	0.64
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
700	Layer	-	0.34	Topsoil: very dark brownish grey sandy clayey silt	-	-
701	Layer	-	0.36	Subsoil: mid greyish brown clayey silt	-	-

702	Layer	-	-	Natural: mid yellowish brown sandy silty clay	-	-
703	Cut	1.18	0.34	Cut of NE – SW ditch	-	-
704	Fill	1.18	0.34	Fill of ditch 703: firm, mixed yellowish brown silty clay and dark brownish red clayey sand with occasional gravel.	-	-

Trench 8						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of silty sand.					**Length (m)**	30
					Width (m)	2
					Avg. depth (m)	0.30
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
800	Layer	-	0.32	Modern Made Ground	-	-
801	Layer	-	0.14	Topsoil: dark greyish brown silty clay	-	-
802	Layer	-	0.20	Subsoil: mid greyish brown silty clay	-	-
803	Cut	0.70	0.16	Cut of pit	-	
804	Fill	0.70	0.16	Fill of pit 803: soft, dark greyish brown silty clay	CBM Clinker	Post-med?
805	Cut	0.58	0.14	Rooting/Bioturbation	-	
806	Fill	0.58	0.14	Fill of rooting 805: firm, dark yellowish brown silty clay.	-	
807	Cut	0.56	0.16	Cut of N-S ditch	-	-
808	Fill	0.56	0.16	Fill of ditch 807: soft, dark greyish brown clayey silt	-	-
809	Cut	0.50	0.12	Cut of N-S ditch		
810	Fill	0.50	0.12	Fill of ditch 809: soft, dark greyish brown clayey silt	Pottery	AD 43 - 410
811	Cut	0.20	>0.12	Land drain and backfill	-	-
812	Layer	-	-	Natural: brownish yellow clay with chalk and sand	-	-
813	Cut	0.20	0.50	Land Drain and backfill	-	-
814	Layer	-	0.50	Modern Made Ground	-	-
815	Cut	0.40	0.10	Bioturbation	-	-
816	Cut	7.80	0.98	Cut of N-S ditch	-	
817	Fill	0.58	0.20	Fill of ditch 816: firm dark brownish grey silty clay	Pottery Flint CBM Animal Bone	AD 170 - 200
818	Cut	1.0	-	Unexcavated N-S ditch	-	-
819	Fill	1.0	-	Unexcavated fill of ditch 818: firm, dark grey brown silty clay	-	-

820	Fill	5.80	0.40	Fill of ditch 816: firm, mid brownish grey silty clay	Pottery Flint Burnt flint Fe Objs Shell	AD 240-410
821	Fill	2.30	0.28	Fill of ditch 816: firm, mid brownish grey silty clay with frequent gravel	-	-

Trench 9						
General description					**Orientation**	E-W
Trench contained seven ditches cutting natural of sandy clay with flint overlain by subsoil and topsoil.					**Length (m)**	30
					Width (m)	1.50
					Avg. depth (m)	0.60
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
900	Layer	-	0.40	Topsoil: dark greyish brown clayey sandy silt	-	-
901	Layer	-	0.34	Subsoil: mid greyish brown sandy silty clay	-	-
902	Cut	0.84	0.42	Cut of NE-SW ditch	-	-
903	Fill	0.84	0.42	Fill of ditch 902: friable, mid greyish brown silty clay	-	-
904	Cut	1.0	0.44	Cut of NE-SW ditch	-	-
905	Fill	1.0	0.44	Fill of ditch 904: friable, mid greyish brown silty clay	-	-
906	Cut	5.0	1.18	Cut of N-S ditch	-	
907	Fill	4.36	0.58	Fill of ditch 906: friable, mid greyish brown, silty clay	Ash Flint Animal Bone	Post-med?
908	Cut	3.60	0.46	Cut of N-S ditch	-	
909	Fill	3.10	0.46	Fill of ditch 908: friable, mid greyish brown sandy clay	CBM	Post-med? / modern
910	Cut	1.32	0.16	Cut of N-S ditch	-	-
911	Fill	1.32	0.16	Fill of ditch 910: friable, mid greyish brown silty clay	-	-
912	Cut	3.88	0.72	Cut of NE-SW ditch	-	
913	Fill	3.40	0.36	Fill of ditch 912: firm, mid-light brownish grey sandy clay	Pottery Fe Obj Animal Bone	AD 150-300
914	Layer	-	-	Natural: mid orangey crown and yellowy brown sandy clay	-	-
915	Fill	3.88	0.36	Fill of ditch 912: firm, mid brownish grey silty clay	-	-
916	Fill	1.0	0.10	Fill of ditch 908: firm mid yellowish grey silty clay.	-	-
917	Cut	2.90	0.78	Cut of NE-SW ditch	-	

918	Fill	2.90	0.78	Fill of ditch 917: friable dark greyish brown silty clay	-	-
919	Fill	3.0	0.50	Fill of ditch 906: loose, reddish brown silty sand.	-	-
920	Fill	2.10	0.50	Fill of 906: friable, mid greyish yellow silty clay	-	-

APPENDIX B FINDS REPORTS

B.1 Late Iron Age and Roman pottery

By Edward Biddulph

Introduction

B.1.1 Eighty-six sherds of pottery, weighing 1326g, were recovered from the evaluation. The assemblage was scanned to identify diagnostic forms and fabrics, provide spot-dates, and make recommendations for the treatment of the material. The pottery was assigned form and fabric codes from OA's standard recording system for later Iron Age and Roman pottery (Booth 2019). Reference was also made to the National Roman Fabric Reference Collection (NRFRC; Tomber and Dore 1998).

B.1.2 Each context-group was quantified by sherd count and weight (grammes), and any rims present were additionally quantified by estimated vessel equivalent (EVE), which measures the proportion of rim that survives; thus, 0.11 EVE equals 11%. The total EVE is 0.79.

B.1.3 The following fabrics were noted (NRFRC codes in brackets):

- C10 Shell-tempered wares
- C11 Shell-tempered ware (HAR SH)
- E40 Late Iron Age/early Roman shelly fabric
- E80 Grog-tempered ware (SOB GT)
- F51 Oxford red colour-coated ware (OXF RS)
- M21 Verulamium-region white ware mortarium fabric (VER WH)
- O10 Fine oxidised wares
- O20 Sandy oxidised wares
- O80 Coarse-tempered oxidised wares
- O81 Pink grogged ware (PNK GT)
- Q20 White-slipped oxidised wares
- Q30 White-slipped reduced wares
- R10 Fine reduced wares
- R20 Sandy reduced wares
- R30 Medium sandy reduced wares
- S30 Central Gaulish samian ware (LEZ SA 2)
- S40 East Gaulish samian ware
- W21 Verulamium-region white ware (VER WH)

B.1.4 The following forms, except the Drag. 45 vessel, were identified by rim:

- CD Medium-mouthed jar
- CJ Lid-seated jar
- CM Wide-mouthed jar
- DC Necked bowl or jar
- Drag. 31 Curving-sided dish
- Drag. 45 Wall-sided mortarium

- I Dish or bowl
- KA Bead-and-flanged mortarium

Description

Context	Sherds	Weight (g)	Description	Spot-date
405	2	8	Fabrics E80, E40	50 BC-AD 100
407	1	22	Fabric E80	50 BC-AD 100
409	2	7	Fabric E80	50 BC-AD 100
509	2	29	Fabrics R20, O20	AD 43-410
605	1	10	Fabric O80 (contains grog and glauconite)	AD 43-410
810	1	8	Fabric C10	AD 43-410
817	63	1145	Drag. 45 body sherd (S40), Drag. 31 (S30; 0.11 EVE), jar CD (C11; 0.14 EVE), mortarium KA with spout (M21; 0.04 EVE), jar CJ (R20; 0.12 EVE), jar CJ (R20; 0.08 EVE), jar/bowl DC (R20; 0.13 EVE), fabrics W21, O81, O10 (roughcast beaker), Q20 (flagon handle), R10, Q30	AD 170-200
820	5	19	Sample 3. Bowl/dish I (F51; 0.03 EVE), fabrics C11, R30	AD 240-410
913	9	78	Jar CM (O81; 0.14 EVE), fabric R20	AD 150-300
Total	**86**	**1326**		

B.1.5 The earliest context-groups were recovered from Trench 4. The groups included grog-tempered pottery (fabric E80), which dates deposition to the late Iron Age or early Roman period.

B.1.6 A relatively large group of pottery was collected from the top fill (817) of ditch 816 in Trench 8. A mortarium and dish in samian wares appear to place deposition in the late 2nd century, a date supported by the remains of a beaker with roughcast (clay pellet) decoration and a lid-seated reduced ware jar. The group also included a mortarium in Verulamium-region white ware, although, with production of the form ceasing by c AD 160, this is likely to be residual. That said, a bowl or dish in Oxford red colour-coated ware collected from the middle fill (820) of the same ditch dates to the mid-3rd or 4th century and must make the entire group within context 817 residual. It should be noted, however, that the context-group 820 was recovered from a sample (3) and is of very different size and condition to group 817. The mean sherd weight (weight divided by sherd count) of the latter is 18g, compared with 4g of the former. The mean EVE values (or 'completeness'; total EVE divided by number of vessels) are also different – 0.1 EVE in 817, compared with 0.03 in 820. It is worth noting, too, that the surfaces and edges of the pottery in 820 are abraded, in contrast to the relatively fresh condition of the pottery in 817.

B.1.7 Given these observations, it is reasonable to suggest that context-group 820 has a different depositional history to that of 817 and may be intrusive, although the precise mechanism that introduced the pottery into the fill is uncertain at this point.

B.1.8 A jar in pink grogged ware, recovered from a ditch in Trench 9, was produced in the Stowe area near Buckingham and dates to the second half of the 2nd century or 3rd

century. Context-groups 509, 605 and 810 contained pottery that could not be dated closely within the Roman period. Fabric O80 in context 605 appears to contain glauconite, which suggests a source close to the band of Upper Greensand that runs south of the site. The closest point of this geology to the site is *c* 15km away.

Discussion

B.1.9 The pottery indicated at least three phases of activity: late Iron Age/early Roman, later 2nd century and late Roman. A degree of spatial patterning is evident, the earliest material being confined to Trench 4 in the central part of the site and mid- and late Roman pottery recovered from trenches 8 and 9 to the south.

B.1.10 The overall mean sherd weight is 15g, although the figure is skewed by context-group 817. Removing this relatively well-preserved group of large fragments reduces the overall value to 8g. The difference points to different depositional profiles, the material in 817 possibly having undergone fewer episodes of disturbance and redeposition, with final deposition occurring closer to areas of use and initial discard. In contrast, the other material may have been recovered from more peripheral areas of settlement.

B.1.11 The range of forms and fabrics, with imported and specialist food preparation vessels present, is consistent with a rural settlement of more than basic function. The presence of a Central Gaulish Drag. 45 mortarium is especially noteworthy. In his survey of samian from Milton Keynes, Hedley Pengelly (1989, tables 13 and 14) notes just six Central Gaulish Drag. 45 mortaria, representing less than 1% of the total number of vessels from the area. Two of these were found at Wood Corner, a minor farm with rectangular and circular buildings and crop-processing structures (Allen *et al.* 2018), while another two came from Bancroft villa.

Recommendations regarding the conservation, discard and retention of material

B.1.12 The pottery reported on here has the potential to inform future research through re-analysis and thus it is recommended that all the pottery is retained. This follows the advice set out in the 'Standard for Pottery Studies in Archaeology' (PCRG, SGRP, MPRG 2016).

B.2 Flint

By Michael Donnelly

Introduction

B.2.1 A very small assemblage of four struck flints and five burnt fragments weighing 14g was recovered from this evaluation. Nearly all the flint came from one ditch in trench 8. The assemblage lacked genuine diagnostic forms but did include one broken tool, probably an awl or piercer that looked very typically later prehistoric. Overall, the assemblage indicated a very limited flint-related presence here during prehistory.

B.2.2 Trench 8, ditch 816 contained three flakes, one retouched fragment and two pieces of burnt unworked flint weighing 6g. The retouched fragment looked to be a broken

scraper or similar abruptly retouched tool. There is some possibility that this piece was a utilised or broken core tablet. If this was the case, then this piece would indicate limited early prehistoric activity here. The remaining pieces consisted of three quite irregular trimming flakes, all of which were recovered from sample 3. This does suggest that this ditch may have had a much larger flint assemblage than was recovered. The flakes were undiagnostic, although one may have also been early and been related to axe working.

B.2.3 Ditch 906 produced the broken awl or piercer tool mentioned above. This piece is very typically later prehistoric in form and is quite fresh, suggesting that it had not moved very far.

B.2.4 This small assemblage indicates very limited flint-related activity here during prehistory. Most of the assemblage was probably later prehistoric in date and there is some possibility that the expedient awl or piercer from 906 could be Iron Age. One or two pieces also suggest a limited early prehistoric element to the assemblage, but this could not be dated any more precisely. Further work in this evaluation area is unlikely to encounter significant flint-related activity.

Methodology

B.2.5 The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type (Anderson-Whymark 2013; Bradley 1999), general condition noted and dating was attempted where possible. The assemblage was catalogued directly onto an Open Office spreadsheet. During the assessment additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (eg Bamford 1985, 72-77; Healy 1988, 48-9; Bradley 1999). Technological attribute analysis was initially undertaken and included the recording of butt and termination type (Inizan et al. 1999), flake type (Harding 1990), hammer mode (Onhuma and Bergman 1982), and the presence of platform edge abrasion.

Context	Type	Sub-type	Notes	Date
407	Burnt unworked	Fragments x 3	Very hard-hammer or metal hammer struck flake with cortical platform. From sample 1. 8g	
804	Natural			
806	Natural			
817	Misc retouch	Inner flake	Possibly a broken core tablet but more likely a steeply retouched flake such as a scraper	?EPH
820	Flake	Misc and side trimming	Irregular trimming flakes	?LPH
820	Flake	Misc trimming	Possible axe working flake	?EPH
820	Burnt unworked	Fragments x 2	From sample 3, 6g	
907	Retouched flake	Distal trimming	Probable broken awl or piercer, notched distal mid and mid left to form distal lower projection, now snapped	LPH

B.3 Metal

By Ian R Scott

B.3.1 There are just eight metal finds from two contexts, all recovered from soil samples. They comprise five tiny pieces from context 820 and similar small fragments from context 913.

B.3.2 The finds from context 820 consist of two hobnails, a small fragment of nail stem, and one piece of hammerscale and two fragments of either possible hammerscale or hobnail stem. The finds from context 913 comprise two tiny pieces of possible hammerscale.

Context 820	(1-2) (3) (4-6)	Hobnails. Two hobnails. Fe. Not measured. Sample 3 Nail stem fragment. Fe. Not measured. Sample 3 Fragments fe (x 3). One probable Hammerscale. Two very small fragments possibly hobnails stem rather than hammerscale. Not measured. Sample 3
Context 913	(7-8)	Possible hammerscale. Fe Not measured Sample 2

B.4 Ceramic building material

By Cynthia Poole

Introduction and methodology

B.4.1 A small quantity of ceramic building material (CBM) amounting to 13 fragments weighing 377g was recovered from five trenches. Preservation was relatively poor with

several small scrappy pieces present. The material is predominantly of late medieval to early post-medieval date.

B.4.2 The assemblage has been spot dated, quantified and briefly recorded in the table below including a brief description of the fabric, form, complete dimensions when present and any significant characteristics noted. The dating of broken fragments of ceramic building material is an imprecise art and spot-dates derived from them are necessarily broad and should therefore be regarded with caution.

Date and nature of the assemblage

B.4.3 Three fragments from ditch fill 817 were amorphous, but made in a light orange sandy laminated clay with chaff and organic voids is probably Roman. It is well fired and may be tile, but the organic inclusions suggest it is more likely to derive from a fired clay artefact such as a circular disc or plate.

B.4.4 The roof tile consisted of flat fragments, probably derived from peg tile and one curved, probably from a ridge tile. The two flat tiles measured 12 and 15mm thick and based on surface finish and fabric characteristics are broadly dated to 14th-17th century.

B.4.5 Brick fragments are all post-medieval and consist of small amorphous fragments. One larger piece had a complete thickness of 55mm typical of 'Tudor' bricks of 15th-16th century date. The other brick fragments could be of the same date or later up to 18th century, except one amorphous fragment in a dark grey sandy gritty fabric, which may derive from a modern mass-produced brick base on the fabric character.

B.4.6 Most of the CBM collected during excavation was found in furrow and ditch fills, apart from a small scrap of brick in a small pit 804. It is likely that all the CBM relates to post-medieval agricultural activity, most probably manuring in relation to arable agriculture.

B.4.7 It is also worth noting that a field drain appearing in the site photo of ditches 807/811 was constructed with horseshoe type drain tile stamped on the apex 'DRAIN' , which firmly dates this phase of field drainage between 1826 and 1850, when any tiles thus stamped were exempted from the Brick Tax. A field drain of slightly later date in a very pale fabric, probably of mid-late 19th date appears in the background of the photo of pit 803. The two types are visible in section cutting through ditch 906, illustrating different phases of agricultural improvement carried out during the 19th century.

Recommendations

B.4.8 The CBM has little potential for further analysis or wider research and may be discarded at the completion of the project. However, if more extensive excavation follows the evaluation, it is recommended that samples of the different types of field drain are collected for further analysis.

Context	Nos	Wt g	Date	Fabric	Form	Description
104 (Furrow 103)	1	7	C13-C17	Orange red, fine sandy clay with quartz sand & red iron oxide inclusions.	Roof: flat	Flat rough surface, with possible fine organic impressions. 12mm th.
312 (Furrow 311)	1	120	C15-C16	Red coarse sandy with coarse stone grits	Brick	Flat upper surface, rough irregular base. 55mm th.
316 (Furrow 315)	1	224	C13-C17	Pinkish red with cream laminations, sandy lenses, frequent rounded voids ?leached chalk; common red/black iron oxide inclusions.	Roof: flat	Tile (4 joining fragments) with smooth flat top surface; rough pitted base. Small patch of lime mortar over broken edge >135mm L, >120mm W, 15mm th.
605 (Ditch 603)	1	10	Pmed	Orange red sandy; fine-med quartz sand.	Brick	Amorphous
804 (Pit 803)	2	4	Pmed	Red, coarse sandy	Brick	Amorphous
817 (Ditch 816)	3	28	Roman?	Light orange with pale laminations containing sparse medium quartz sand and red iron oxide inclusion. Chaff & organic inclusions.	Tile	No original surfaces. General character and fabric is closest to Roman tile, though the presence of organic inclusions may indicate fired clay discs.
909	2	5	Pmed	Red, coarse sandy	Brick	Amorphous
909 (ditch 908)	1	5	Mod	Dark grey, high density sand & coarse mixed rock grits 1-3mm	Brick	Amorphous
909 (ditch 908)	1	2	Med/Pmed	Orange coarse sandy	Roof: ?ridge	Rough sanded concave surface, probably underside of ridge tile.
Total	**13**	**377**				

B.5 Clinker and miscellaneous burnt debris

By Cynthia Poole

B.5.1 Fragments of fuel waste comprising coal and clinker from context 804 and compacted ash from 907 represent fuel waste probably resulting from 18th-19th domestic heating.

B.5.2 The material has no research potential and may be discarded.

Ctx	Nos	Wt g	Material	Form	Description
804	8	25	Coal & clinker	Fuel waste	Broken fragments of shaly coal burnt to varying degrees, largest has veneer of vitrification. 5-60mm long.
907	1	3	Ash	Fuel waste	Compacted lump of ash and fine sandy sediment

B.6 Miscellaneous finds

By Geraldine Crann

Context	Description
605	Single fragment of clinker, 12g
820	<3> 2 oyster (Ostrea edulis) shells, 1 right and 1 left valve, and a single small fragment of marine mussel shell, were recovered from environmental sample 3. 42g

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental samples

By Sharon Cook

Introduction

C.1.1 Three samples were taken during the evaluation. All were from datable features and were processed for the retrieval of charred plant remains (CPR) and artefacts. The samples all comprised a sandy silt loam ranging between 10YR 5/4 yellowish brown and 10YR 6/2 light brownish grey with subangular-subrounded flint inclusions.

C.1.2 The samples were processed in their entirety at Oxford Archaeology using a modified Siraf-type water flotation machine. The flots were collected in a 250µm mesh and heavy residues in a 500µm mesh and dried. The residue fractions were sorted by eye while the flot material was scanned using a low power (x10) binocular microscope to identify cereal grains and chaff, smaller seeds and other quantifiable remains.

C.1.3 Identifications were carried out using standard morphological criteria for the cereals (Jacomet 2006), identification of wild plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers et al. 2006) and by comparison with modern reference material. Classification and nomenclature of plant material follows Stace (2010).

Results

C.1.4 The charred taxa identified from each sample are listed in the table below. All three samples produced flots of a good size. However, most of the material in each case largely comprises modern material such as roots with uncharred seeds and modern insects. Sample 2 in addition contains a number of modern leaf fragments.

C.1.5 While charcoal is present within all three flots, the fragments are generally small in size and of mixed condition. The grain in these samples is generally in very poor condition being 'clinkered', fragmented and in many cases at least partially vitrified. As a result, the majority of cereal grains is unidentifiable although samples 2 and 3 both produced single grains of identifiable wheat (*Triticum* sp.). The grain within sample 2 was in extremely good condition, indicating that the poor condition of the remaining grains is not a result of poor preservational conditions on site.

C.1.6 The small amounts of chaff present are all fragments of glume bases but in most cases are too small and broken to identify further than glume wheat, probably either spelt wheat (*Triticum spelta*) or emmer (*T. dicoccum*) which are the varieties commonly cultivated in the Iron Age and Roman period. The chaff from sample 2 is less fragmented and four glume base pieces have been identified as being consistent in appearance to spelt (as is the single well preserved grain) although all were incomplete.

Discussion and Recommendations

C.1.7 With only three samples, interpretations are inevitably limited. Despite the poor condition of the majority of cereal grains, which is largely a result of the burning process, a range of charred material clearly survives at this site.

C.1.8 There would appear to be a certain amount of continuity between the late Iron Age/early Roman and later Roman samples examined for this evaluation although further sampling would be required to confirm this. Spelt wheat in this area would appear to be present from as early as the Bronze Age (Kidd 2007) and is the usual crop found on Roman sites in Buckinghamshire (Zeepvat and Radford 2007).

C.1.9 It is likely that both Iron Age and Roman material on this site conforms to that pattern although the poor condition of both chaff and grains in the samples means that this is impossible to confirm at this stage. The small amount of charred remains within these features and its fragmented nature may be an indication that these features were not close to the original source of the material.

C.1.10 If further work is carried out on this site, it is recommended that further samples be taken from a variety of features in accordance with the most recent sampling guidelines (eg. Historic England 2011, Oxford Archaeology 2017) and the recommendations of the Solent-Thames Research Framework. Of particular interest in the region is further data on agricultural changes and/or continuity for both crop types and domestic animal species between the Iron Age and Roman period (Lambrick 2014). In addition, for the Roman period there is value in ascertaining the composition of farmed resources to define how individual settlements feed themselves and if they are contributing to the wider economy (Fulford 2014).

C.1.11 The flots warrant retention at least until all works on this site are complete, when the relationships of these features are better understood, at which point a firm decision on discard and retention will be more easily made. Further work on these flots is unlikely to be required.

Sample No.	Context no.	Area/Trench	Sample vol. (L)	Feature /Deposit	Date	Flot vol. (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Molluscs	Other	Notes
1	407	4	14	Fill of Pit [406]	LIA-ERB 50BC-AD100	35	*	**	**	*	**		Almost entirely modern material – mostly roots with occasional uncharred seeds and modern insects. Charcoal is generally small in size. Nine indeterminate cereal grains, fragmented, clinkered and vitrified. Small fragments of glume base. Two legume *Vicia/Lathyrus* halves. Land snails present but not abundant.
2	913	9	38	Fill of Ditch [912]	Roman AD150-300	100	**	**	***	*			Almost entirely modern material – mostly roots with occasional uncharred seeds and modern insects. Modern leaf fragments also present. Charcoal is generally small with the majority being <2mm. 8 indeterminate cereal grains, fragmented, clinkered and vitrified with a single well preserved wheat grain. Glume base fragments mostly very small with about 10 in more complete condition. Small amount of anthracite and indeterminate clinkered material. Single dock (*Rumex sp.*) seed.
3	820	8	40	Fill of Ditch [816]	Roman AD240-410	75	**	*	**	*	**		Almost entirely modern material – mostly roots with occasional uncharred seeds and modern insects. Charcoal is generally small in size. 1 indeterminate cereal grain, fragmented, clinkered and vitrified, 1 wheat grain also fragmented. Small fragments of glume base. 1 Vicia/Lathyrus half. Land snails present. Moderate amount of anthracite and indeterminate clinkered material.
Key: * = present (up to 5 items), ** = frequent (5-25), * = common (25-100) **** = abundant (>100)**													

C.2 Animal Bone

By Lee G Broderick

Introduction

E.3.1 A total of 160 animal bone specimens were recovered from the site, all of which were collected by hand. Environmental samples were also taken from contexts 407, 820 and 913, and were sieved at 10mm, 4mm, 2mm and 0.5mm fractions but these did not yield any identifiable specimens. Features on the site were dated on the basis of associated ceramic finds, to the Late Iron Age or Romano-British periods.

E.3.2 The hand-collected material was recorded in full, with the aid of the Oxford Archaeology skeletal reference collection and standard identification guides, using a diagnostic zone system (Serjeantson 1996).

Description

E.3.3 Preservation on the site was very poor, likely to be due to alkali soils, which made the bones very brittle even though surface modification was negligible. No doubt this affected the size of the recovered assemblage and also the proportion which could be identified. What could be identified consisted of large mammals.

E.3.4 Domestic cattle (*Bos taurus taurus*) and caprine (sheep [*Ovis aries*] and/or goat [*Capra hircus*] were both identified among the Late Iron Age/Early Roman material, the latter from loose teeth.

Conclusions

E.3.5 Little can be read into such a small assemblage. Domestic cattle and sheep, in particular, are the mainstay of the rural economy in Iron Age and Romano-Britain and so this site fits that pattern. The assemblage has undoubtedly suffered from post-depositional diagenesis, which has affected the size and quality of the assemblage.

Recommendations regarding the conservation, discard and retention of material

E.3.6 The assemblage should not be considered a priority for retention.

	50 BC-AD 100	AD 150-300	AD 170-200	AD 43-410	Undated
domestic cattle	**5**				1
caprine	**2**				
medium mammal		1			
large mammal	146		2	1	2
Total NISP	153	1	2	1	3
Total NSP	153	1	2	1	3

Total NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures per period from hand-collected material from the site.

Context	NSP	Species
405	146	Large mammal, cattle and sheep/goat
407	2	Cattle and sheep/goat
409	5	Large mammal
605	1	Large mammal
817	2	Large mammal
907	2	Large mammal
907	1	Cattle
913	1	Medium mammal

NSP (Number of SPecimens) and species by context

APPENDIX D BIBLIOGRAPHY

ACBMG, 2007 Ceramic building material, minimum standards for recovery, curation, analysis and publication

Albion Archaeology, 2016 Land at Eagle Farm, Lower End Road, Wavendon, Milton Keynes, Heritage Statement, Albion Archaeology, unpublished client report.

Allen, M, Blick, N, Brindle, T, Evans, T, Fulford, M, Holbrook, N, Lodwick, L, Richards, J D, and Smith, A, 2018 The Rural Settlement of Roman Britain: an online resource, Archaeology Data Service, York https://doi.org/10.5284/1030449

Anderson-Whymark, H, 2015, the flint, in *Opening the wood, making the Land; The Archaeology of a Middle Thames Landscape, Mesolithic, Neolithic and Bronze Age, Vol 1* (T Allen, A Barclay, A M Cromarty, H Anderson-Whymark, A Parker, M Robinson and G Jones),: Oxford Archaeological Unit Thames Valley Landscapes Monograph 38, Oxford

Bamford, H, 1985 *Briar Hill: excavation 1974-1978*, Northampton Development Corporation. Archaeological monograph 3, Northampton

Behrensmeyer, A K, 1978 Taphonomic and Ecologic Information from Bone Weathering, *Paleobiology* 4 (2), 150–162

BGS Online, British Geological Survey online viewer, accessed December 2018, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Booth, P, 2019 Oxford Archaeology Roman pottery recording system: an introduction, unpublished, updated January 2019

Bradley, P, 1999 The worked flint, in *Excavations at Barrow Hills, Radley, Oxfordshire* (A Barclay and C Halpin), Oxford Archaeological Unit Thames Valley Landscapes Monograph 11, Oxford, 211-227

Brodribb, G, 1987 *Roman brick and tile*, Alan Sutton, Gloucester

Warry, P, 2006 *Tegulae manufacture, typology and use in Roman Britain*, BAR British Series 417, Oxford

Cappers, R T J, Bekker R M, and Jans, J E A, 2006 *Digital Seed Atlas of the Netherlands*. Groningen Archaeological Studies 4, Barkhuis Publishing, Eelde, The Netherlands. www.seedatlas.nl

CIfA, 2014 *Standard and guidance for archaeological field evaluation*, Chartered Institute for Archaeologist.

Cotswold Archaeology, 2016 Land South-East of Milton Keynes, Cranfield Road, Central Bedfordshire, Archaeological Evaluation, Cotswold Archaeology

Fulford, M 2014 The Roman Period: Research Agenda *in Solent-Thames Research Framework for the Historic Environment, Resource Assessments and Research Agendas* (eds G Hey and J Hind), Oxford Wessex Monograph 6, Oxford and Salisbury, 179-184

Harding, P, 1990 The worked flint, in *The Stonehenge environs project* (ed J C Richards) London, English Heritage

Healy, F, 1988 *The Anglo-Saxon Cemetery at Spong Hil, North Elmham, Part VI: Occupation during the seventh to second Millennia BC*, East Anglian Archaeological reports 38

Heritage Gateway, 2018 http://www.heritagegateway.org.uk/gateway/ accessed December 2018

Historic England, 2011 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*, 2 edn), Centre for Archaeology guidelines

Inizan, M.-L, Reduron-Ballinger, M, Roche, H and Tixier, J, 1999 *Technology and terminology of knapped stone, Cercle de Recherches et d'Etudes Préhistoriques*, CNRS, Nanterre

Jacomet, S 2006 *Identification of cereal remains from archaeological sites* (2nd edition). Archaeobotany Lab, IPAS, Basel University.

Kidd, S, 2007, Buckinghamshire later Bronze Age and Iron Age: historic environmental resource assessment, https://oxfordarchaeology.com/images/pdfs/Solent_Thames/County_resource_assessments/LBA_IA_Bucks.pdf

Lambrick, G, 2014 The later Bronze Age and Iron Age research agenda in *Solent-Thames Research Framework for the Historic Environment, Resource Assessments and Research Agendas* by G Hey & J Hind (Eds) Oxford Wessex Monograph 6, Oxford and Salisbury, 149-153.

OA, 2018 Wavendon Lodge, Lower End Road, Milton Keynes, Written Scheme of Investigation for an Archaeological Evaluation, Oxford Archaeology

Oxford Archaeology, 2017 *Sampling guidelines*. Unpublished document.

Onhuma, K and Bergman, C A, 1982 Experimental studies in the determination of flake mode, *Bulletin of the Institute of Archaeology, London* 19, 161-171

PCRG, SGRP, MPRG, 2016 *A standard for pottery studies in archaeology*, Prehistoric Ceramics Research Group, Study Group for Roman Pottery, and the Medieval Pottery Research Group

Pengelly, H, 1989 The samian ware, in *Roman and Belgic pottery from excavations in Milton Keynes 1972-82* (P T Marney), Bucks Archaeol Soc Monogr 2, Aylesbury, 146-169

Saville, A., 1980 On the measurement of struck flakes and flake tools, *Lithics* 1, 16-20.

Serjeantson, D, 1996 Animal Bone, in *Runnymede Bridge Research Excavations, Volume 2: Refuse and Disposal at Area 16 East, Runnymede* (S Needham and T Spence), British Museum Press, London, 194–223

Silver, I A, 1969 The ageing of domestic animals, in, *Science in Archaeology: A Survey of Progress and Research* (eds D R Brothwell and E S Higgs), Thames & Hudson, London, 283–302.

Stace, C 2010 *New Flora of the British Isles*, 3 edn,CUP, Cambridge

Tomber, R and Dore, J, 1998 *The National Roman Fabric Reference Collection: a handbook*, MoLAS Monograph 2, London

Zeepvat, R J, and Radford, D, 2007 Roman Buckinghamshire, https://oxfordarchaeology.com/images/pdfs/Solent_Thames/County_resource_assessments/Roman_Bucks.pdf

APPENDIX E SITE SUMMARY DETAILS

Site name:	Wavendon Lodge, Milton Keynes
Site code:	WAVL19
Grid Reference	SP 93095 38271
Type:	Evaluation
Date and duration:	6 days,
Area of Site	1ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Buckinghamshire County Museun in due course, under the following accession number: AYBCM:2019.5.
Summary of Results:	In January 2019 Oxford Archaeology undertook a trail trench evaluation at site of a proposed development at Wavendon Lodge, Wavendon, Milton Keynes. The works comprised the excavation of nine trenches measuring 30m in length. The southern half of the site comprised a series of land management ditches, a ring ditch and a couple of pits. Pottery recovered from the features suggest three phase of activity: late Iron Age/early Roman, middle Roman and late Roman. Though uncertain at this time the features identified are likely to be associated with known activity recorded to both the east and west of the site. Remains in the north-west corner of the site were limited to medieval and post-medieval furrows reflecting the agricultural use of the site. In addition to the pottery, a small assemblage of worked flint was recovered but it is not considered to be indicative of prehistoric activity with the site.

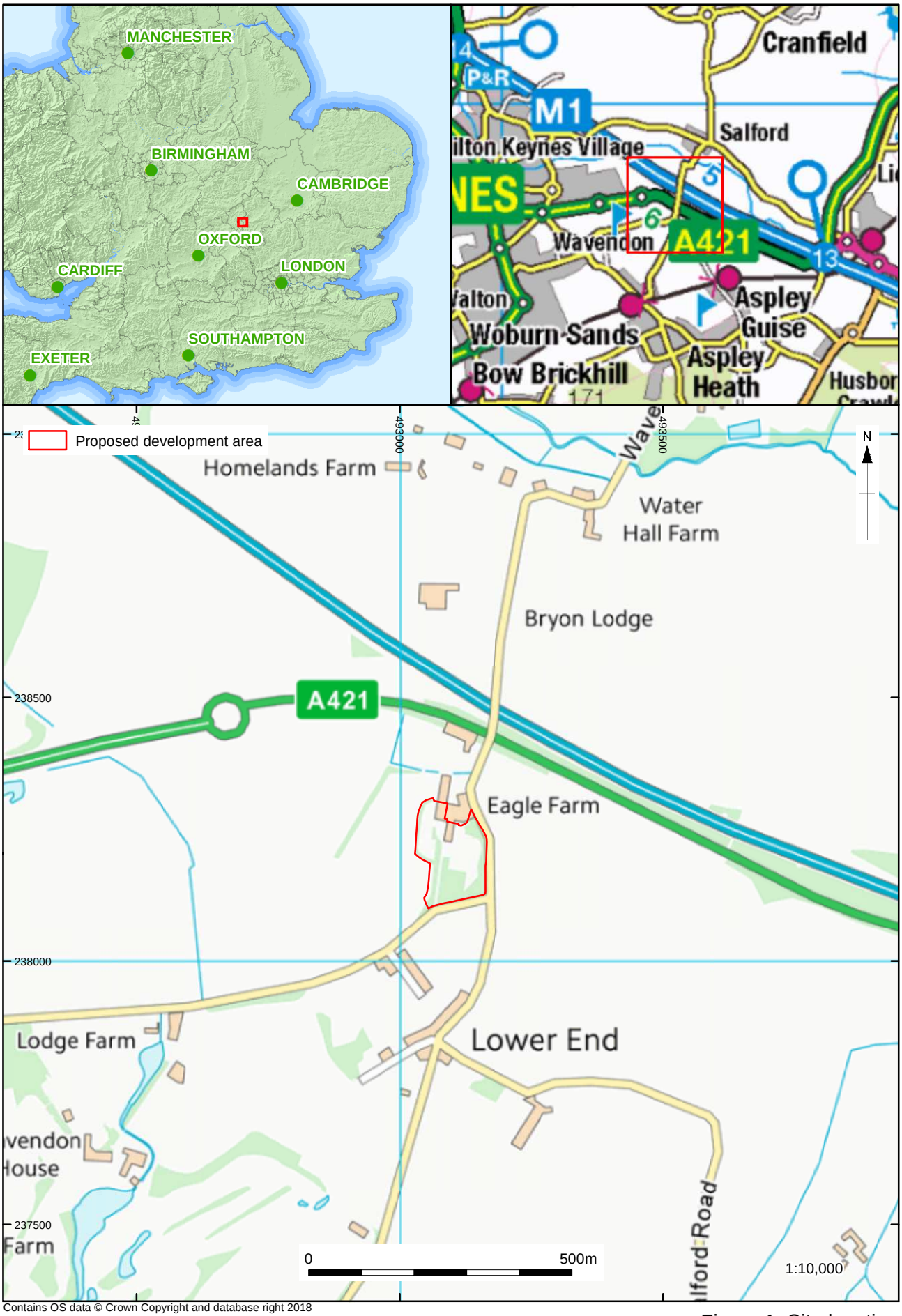

Figure 1: Site location

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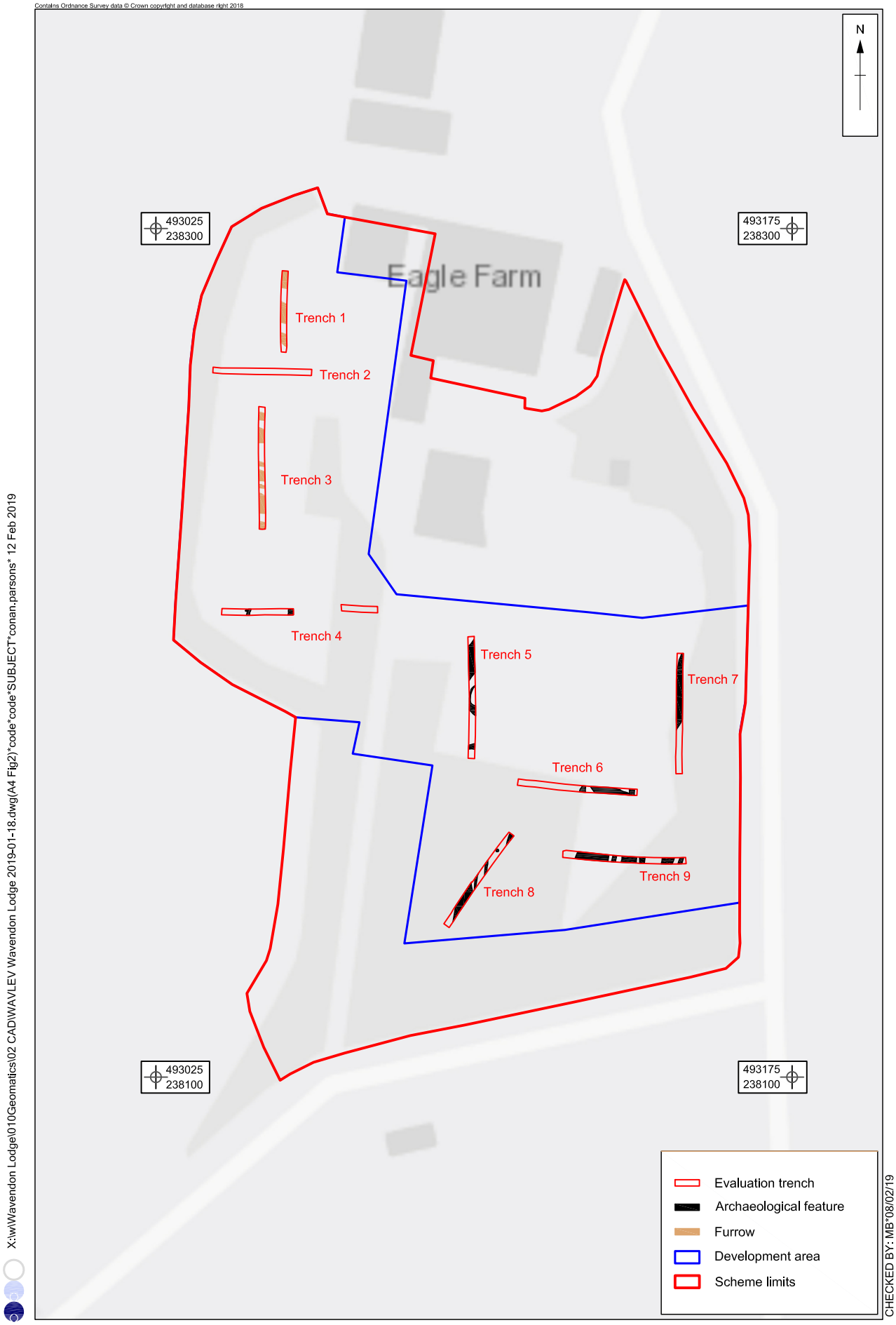

Figure 2: Trench location plan

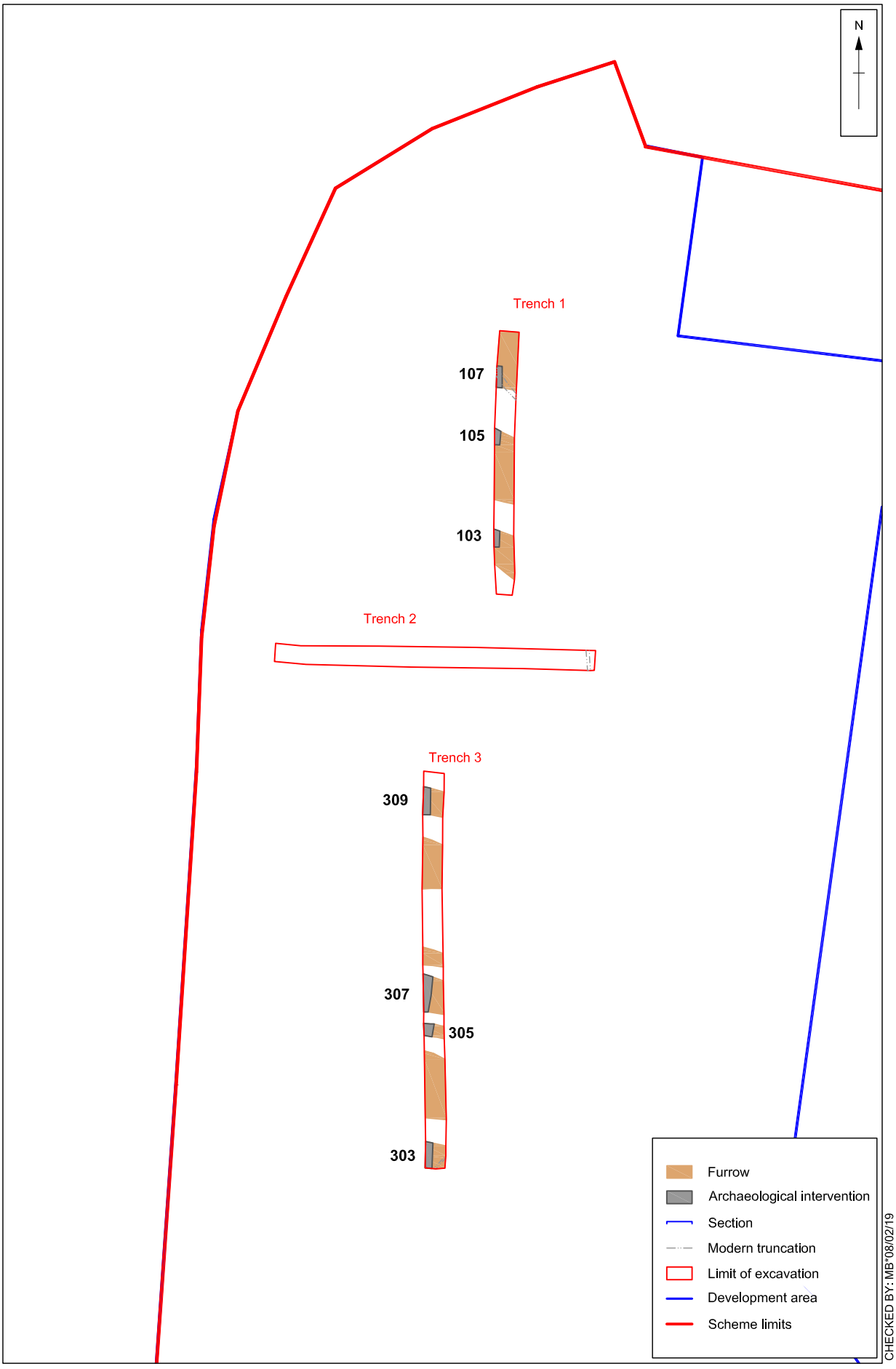

Figure 3: Trenches 1 to 3

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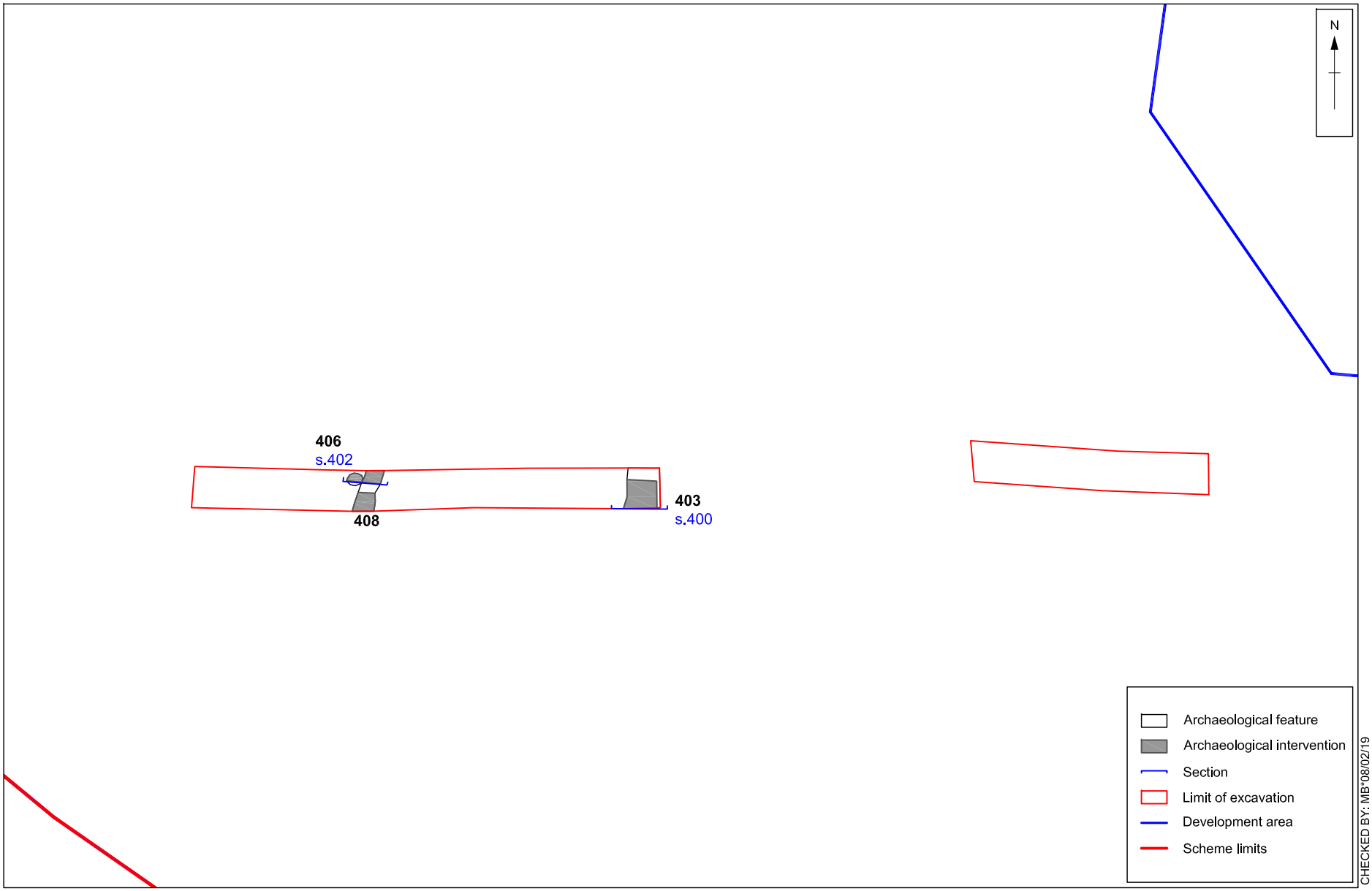

Figure 4: Trench 4

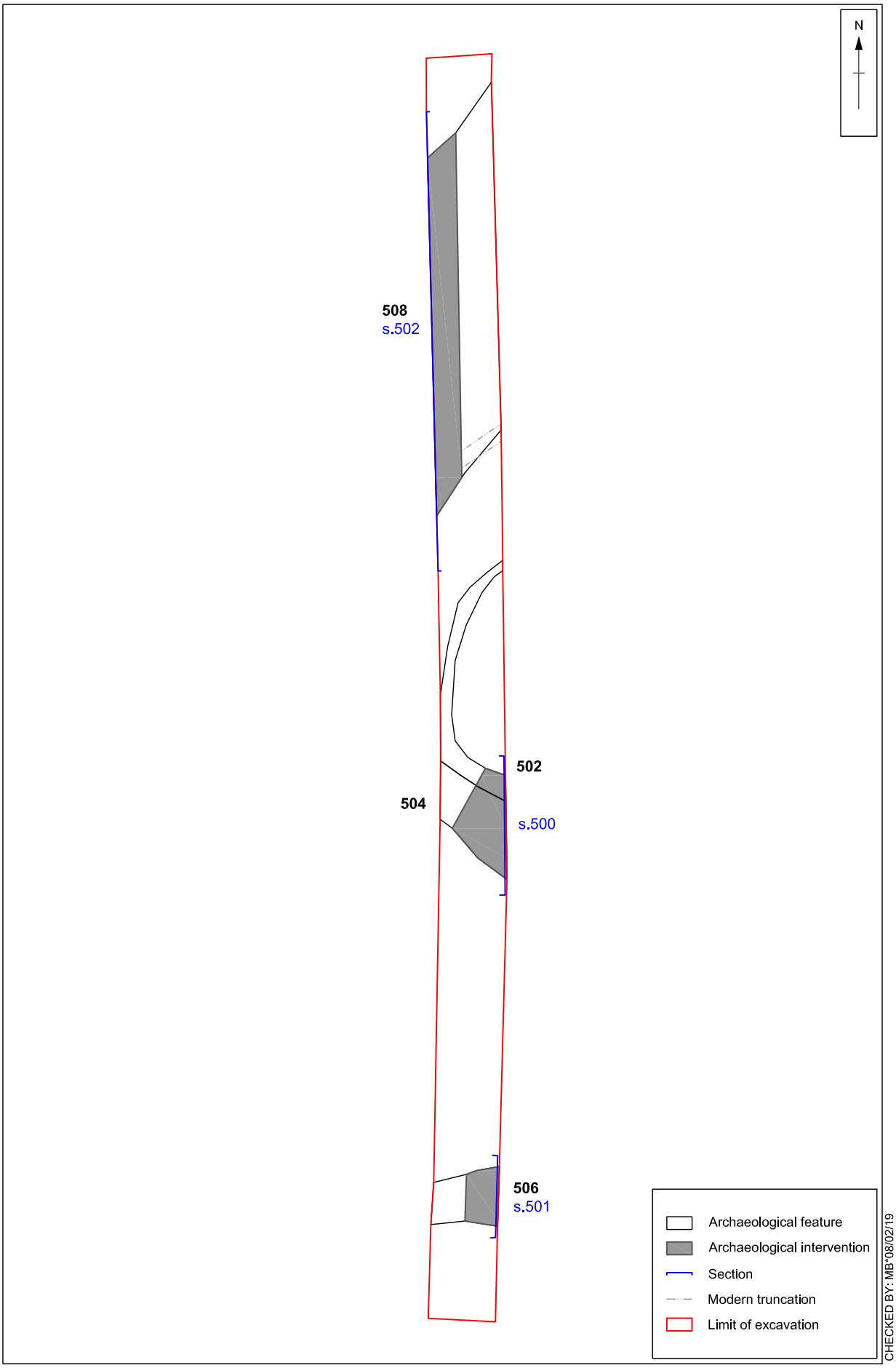

Figure 5: Trench 5

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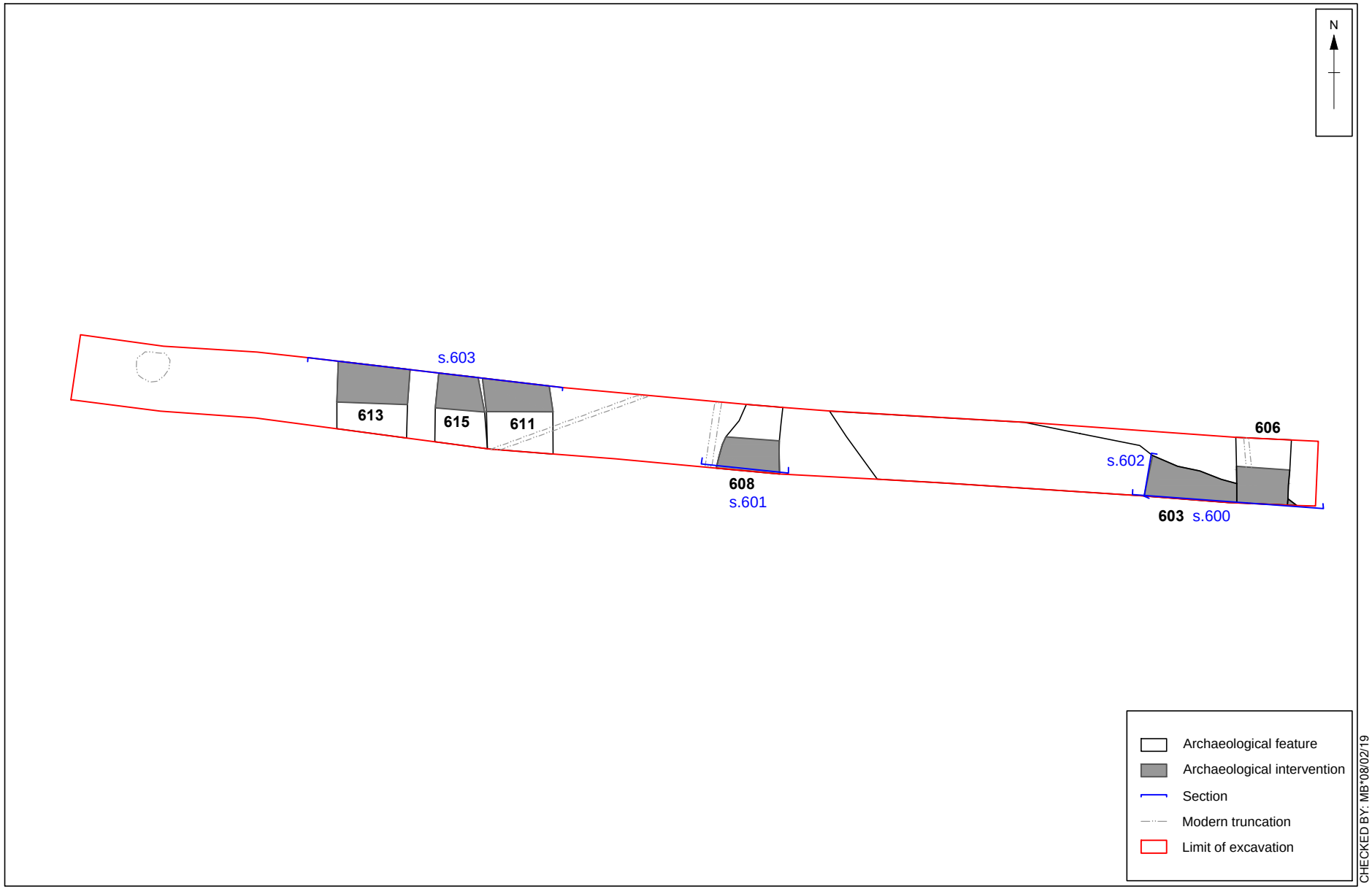

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Figure 6: Trench 6

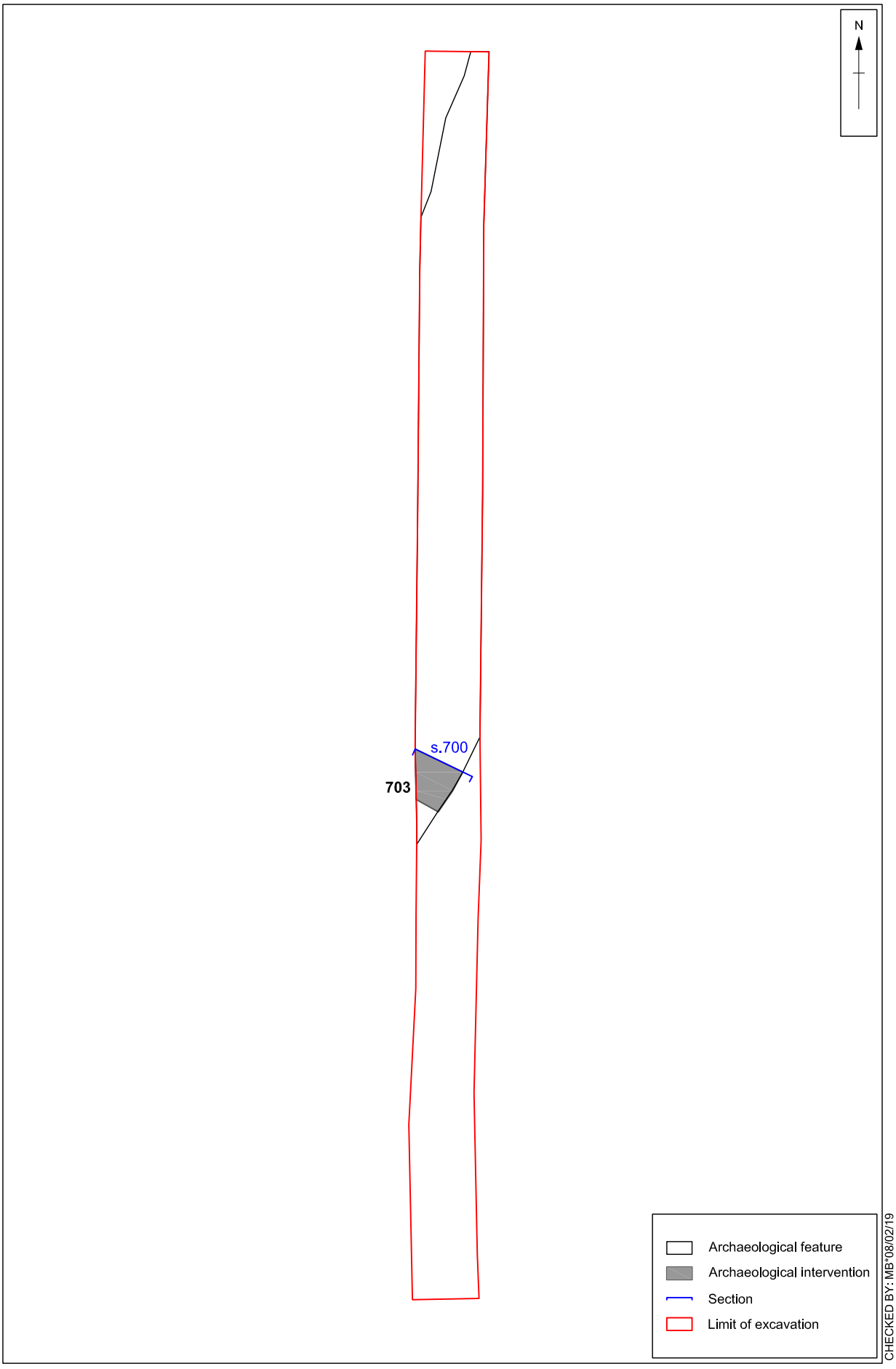

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Figure 7: Trench 7

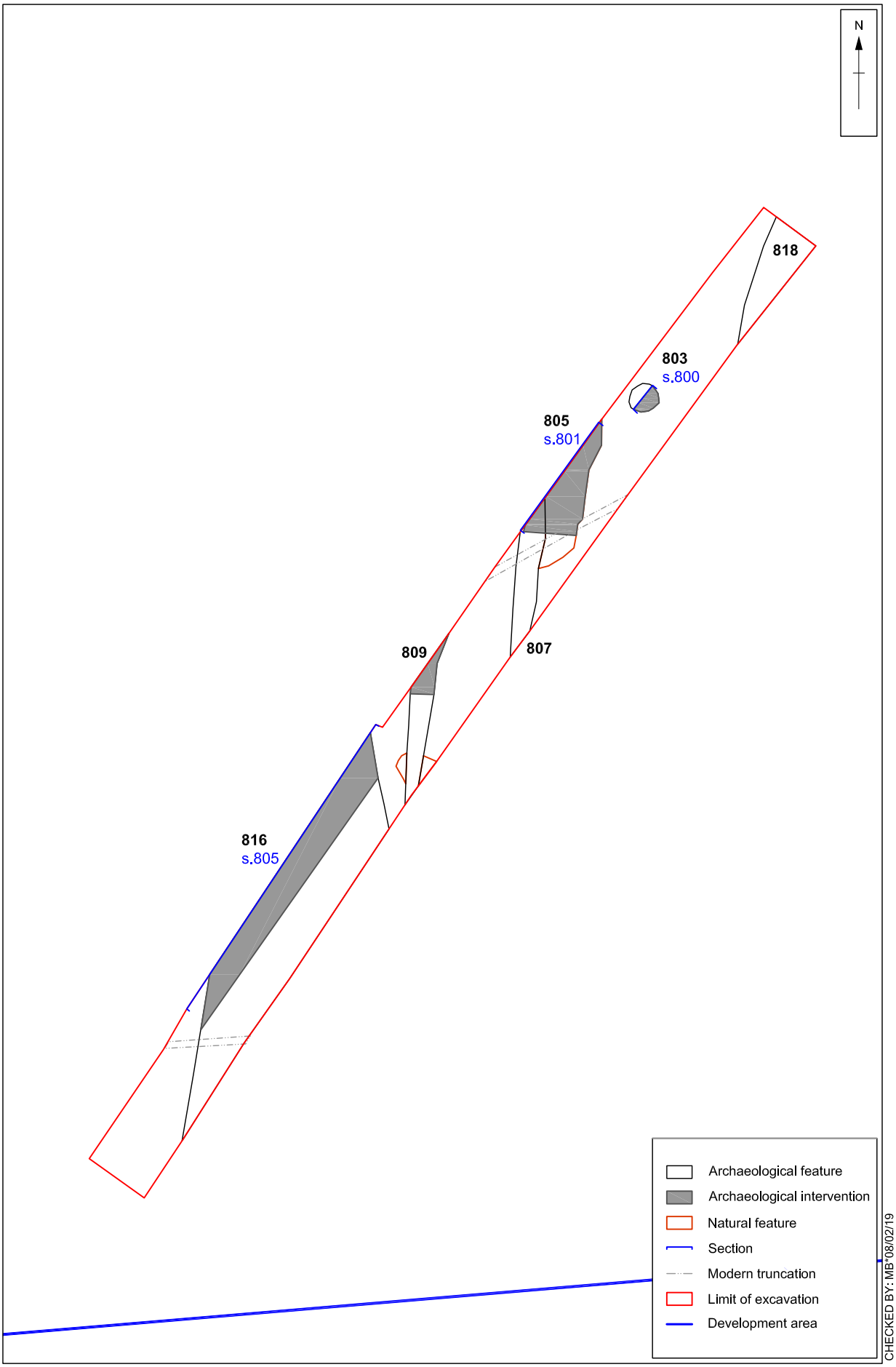

Figure 8: Trench 8

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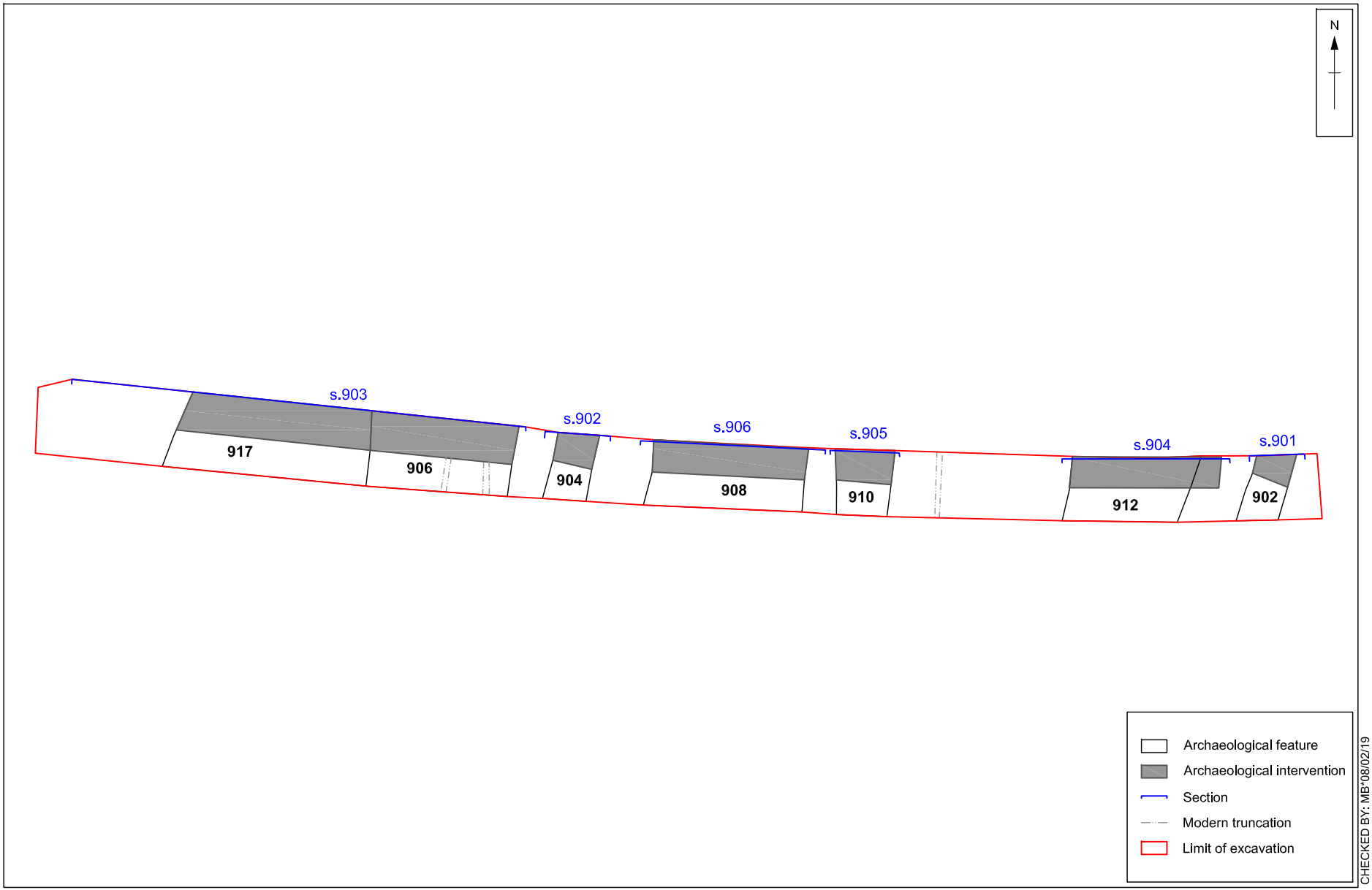

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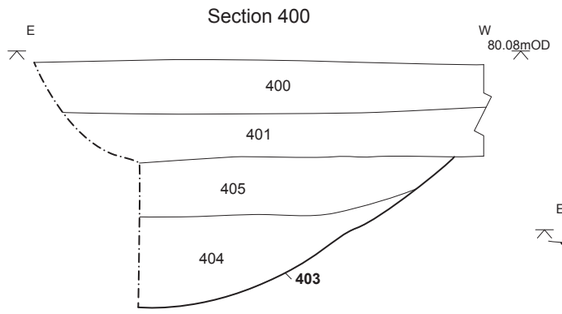
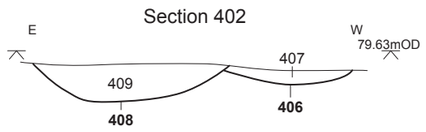
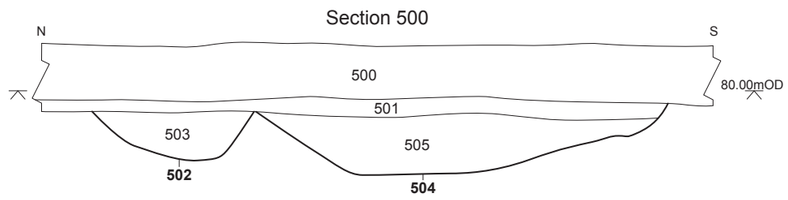
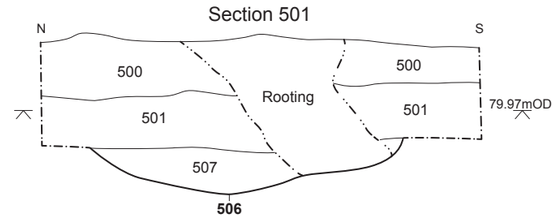
Scale at A4 1:125

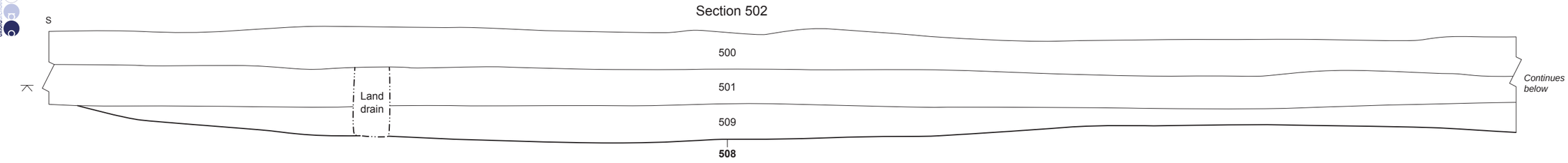
Figure 9: Trench 9

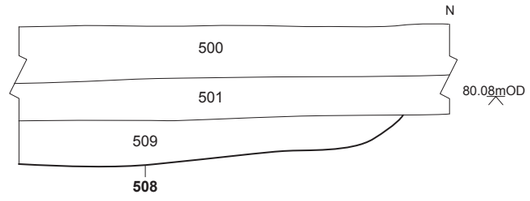


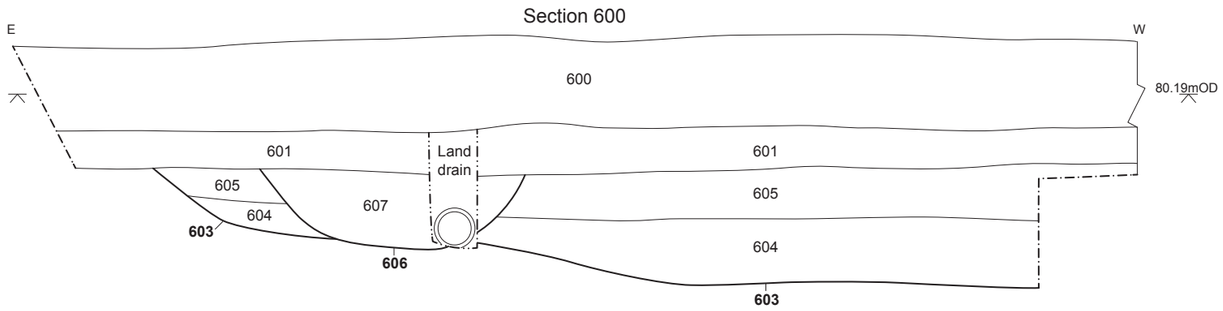


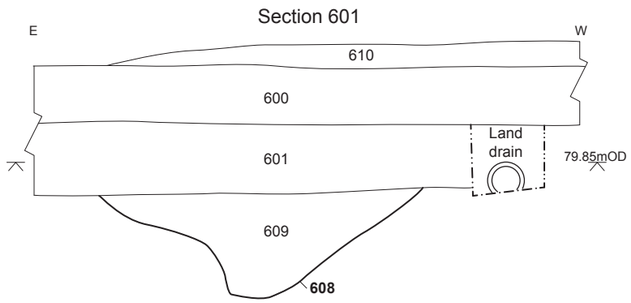


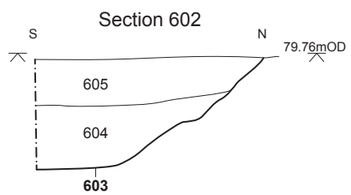












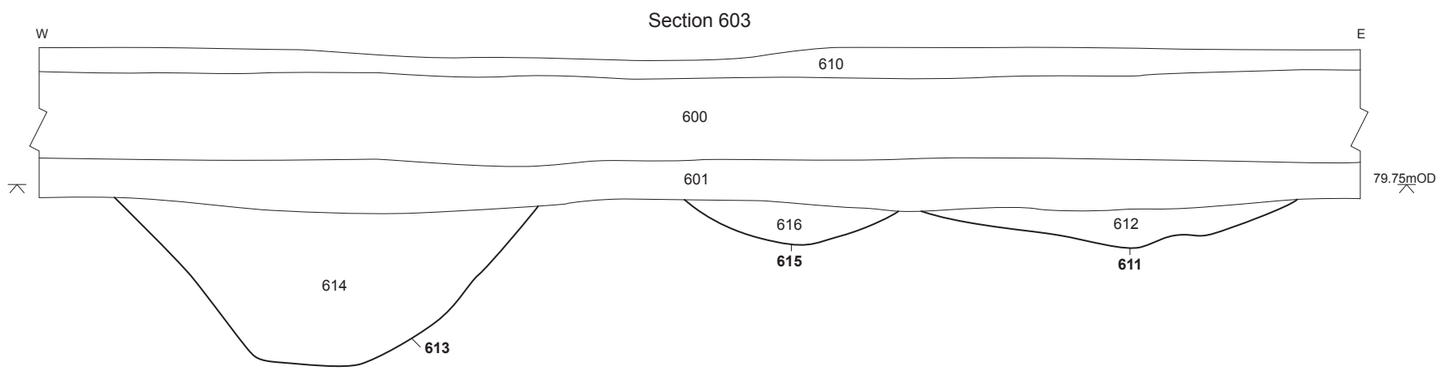


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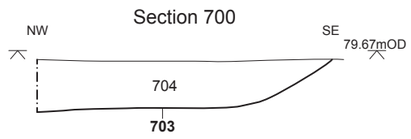
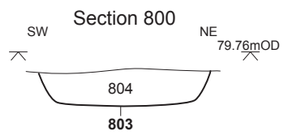
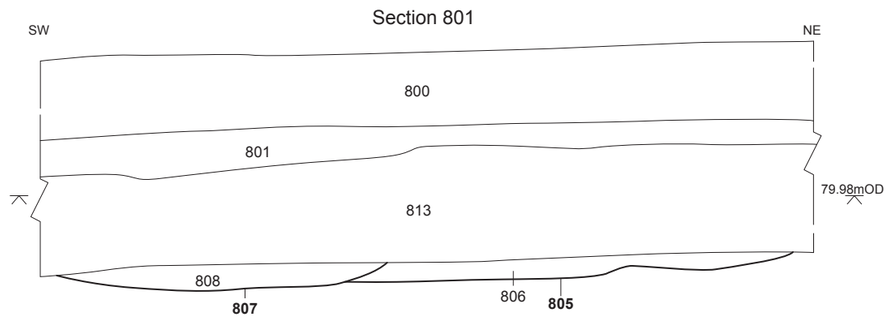
Figure 10: Trench 4, 5 and 6 sections







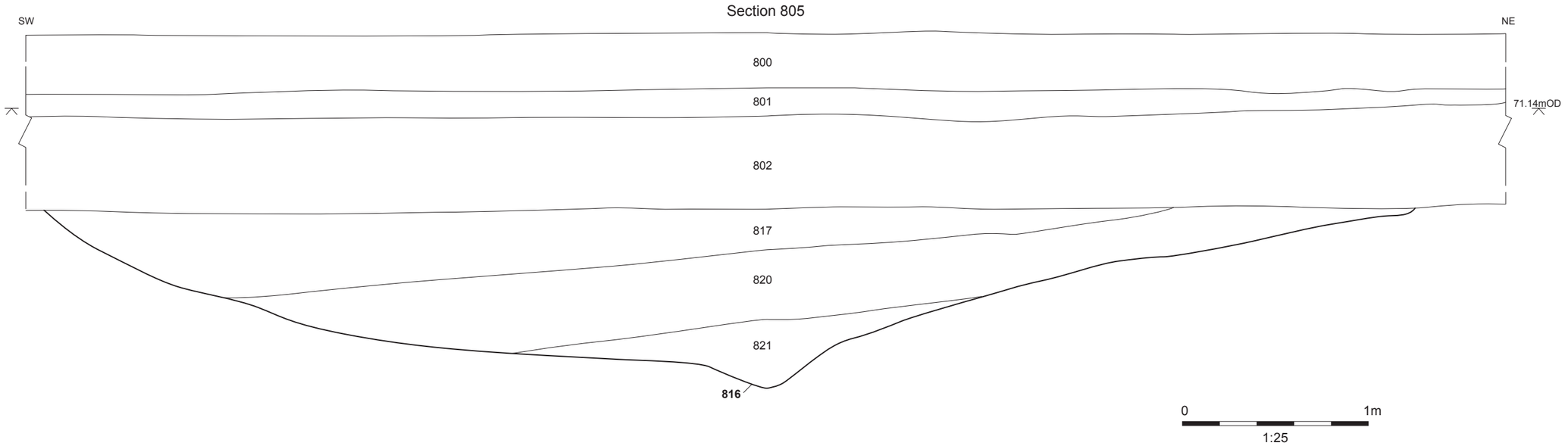
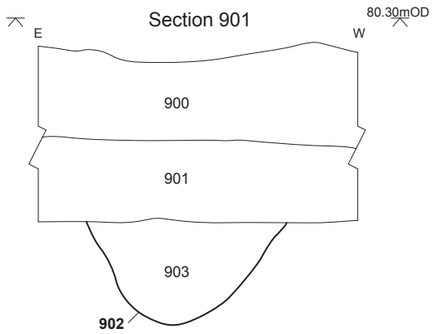
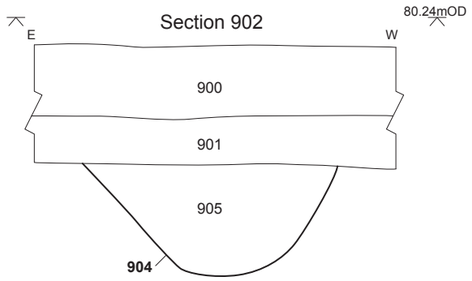
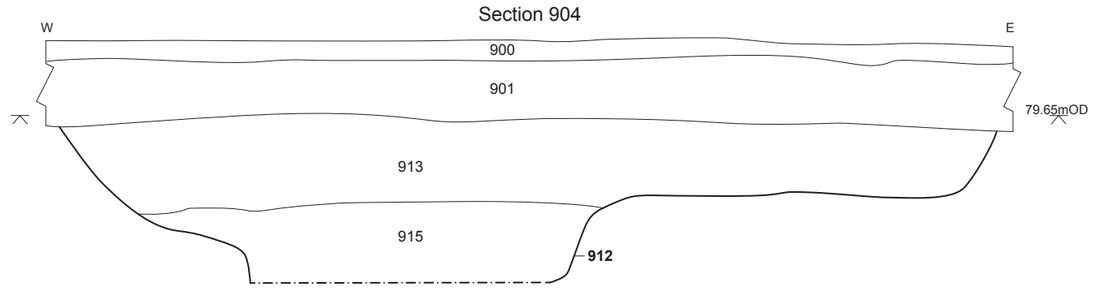
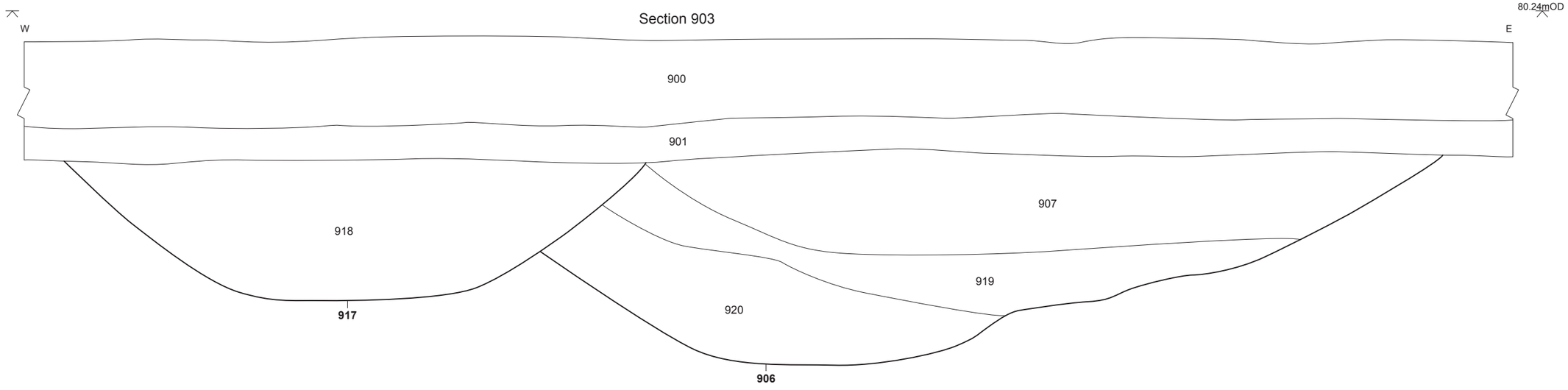


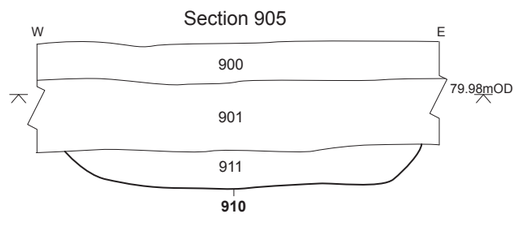
Figure 11: Trench 7 and 8 sections











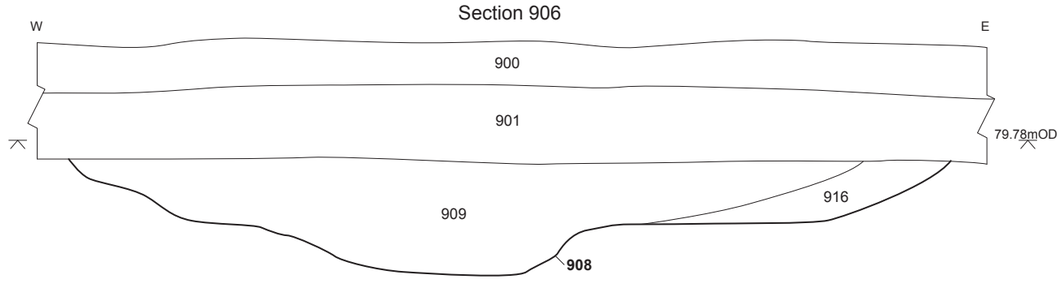


Figure 12: Trench 9 sections

Plate 1: Trench 8, deposit sequence, view to NW

Plate 2: Trench 4, ditch 403, view to south

Plate 3: Trench 4, ditch 408 and pit 406, view to south

Plate 4: Trench 5, ditches 502 and 504, view to east

Plate 5: Trench 6, ditches 603 and 606, view to south

Plate 6: Trench 6, ditch 608, view to south

Plate 7: Trench 7, ditch 700 view to NE

Plate 8: Trench 8, ditch 809 view to south

Plate 9: Trench 8, ditch 807, view to south

Plate 10: Trench 8, pit 803, view to NW

Plate 11: Trench 9, ditch 902, view to north

Plate 12: Trench 9, ditch 912, view to north

Plate 13: Trench 9, ditch 908, view to north

Plate 14: Trench 9, ditch 904, view to north

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