LAND NORTH OF NEEDINGWORTH ROAD INDUSTRIAL ESTATE, NEEDINGWORTH ROAD, HOLYWELL-CUM-NEEDINGWORTH, CAMBRIDGESHIRE, PE27 4NB

ARCHAEOLOGICAL EXCAVATION REPORT

NGR:	TL 32889 72084
Planning application:	1401871OUT
PCAS job no.	1573
Site code:	NRCX15
HER event no.:	EBC4608
OASIS ref:	preconst3-230582

Prepared for

Burgess and Walker Transport Ltd.

by

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Summary

Conditional planning permission for the erection of a new storage building on land to the north of the Needingworth Road Industrial Estate was granted by Huntingdon District Council. A scheme of archaeological mitigation was required to preserve by record the archaeological remains that would be impacted by the construction. Previous archaeological investigations have confirmed the presence of buried archaeological remains within the site, a discrete early medieval enclosure and a larger, late Bronze Age – early Iron Age enclosure with associated features.

Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was requested by Burgess and Walker Transport Ltd. to prepare a specification for a scheme of archaeological excavation to be undertaken prior to the development of land to the north of Needingworth Road Industrial Estate, Needingworth in Cambridgeshire. Outline planning permission for the construction of a new storage building, with additional ground for storage, was conditionally granted by Huntingdon District Council. A brief issued by the Cambridgeshire Historic Environment Team determined the requirement for archaeological mitigation to be undertaken on the site prior to construction impacts in areas identified as having high archaeological potential.

Site Location and Description

The site lay on the south side of the A1123 Needingworth Road, between St. Ives c.1km west and Needingworth c.1km east. It lay c.4km north of the A14, and 13km east of the A1M. The parish is Holywell-cum-Needingworth.

The site lay on the northern edge of the existing Needingworth Road Industrial Estate, just off of the A1123 (Figure 1). It was comprised of two formerly arable agricultural fields; the western field approximately rectangular, 3.8 hectares of land which was the main site of the excavation. The eastern field was more elongated and almost triangular in plan and is designated as the area for open storage. The total area was given as 5.2hectares.

The excavation areas were targeted in the western field, based on the results of trenching carried out in September 2015 by Archaeological Services Ltd (AS) during an archaeological evaluation. Two areas (Figure 2) were identified as having the highest archaeological potential.

Area A (Figure 4), a small approximately square area towards the southwest corner of the site measured c.26mx33m and was centred on NGR TL 32694 72041. Area B (Figure 5) was larger and lay slightly to the east across the centre of the western field. It had a total excavation area of c.5700m^2, centred on approximate NGR TL 2805 72081.

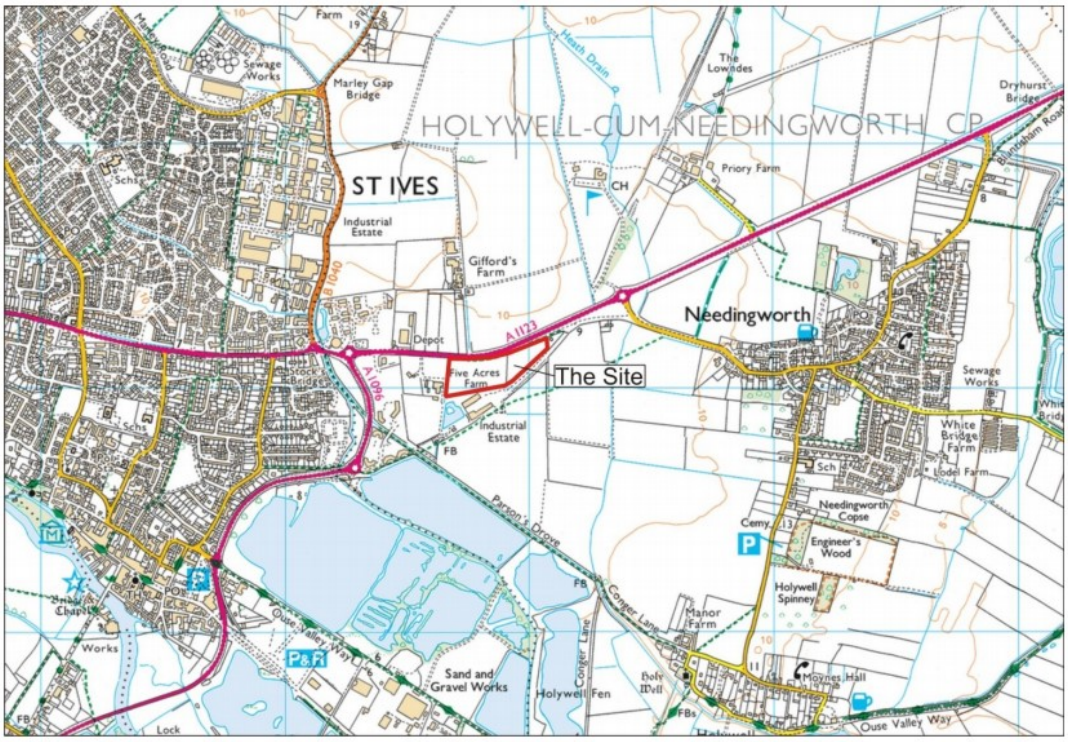

Figure 1: Site location map at scale 1:25,000. Site location is shown in red. OS map sheet 225. (OS Mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278)

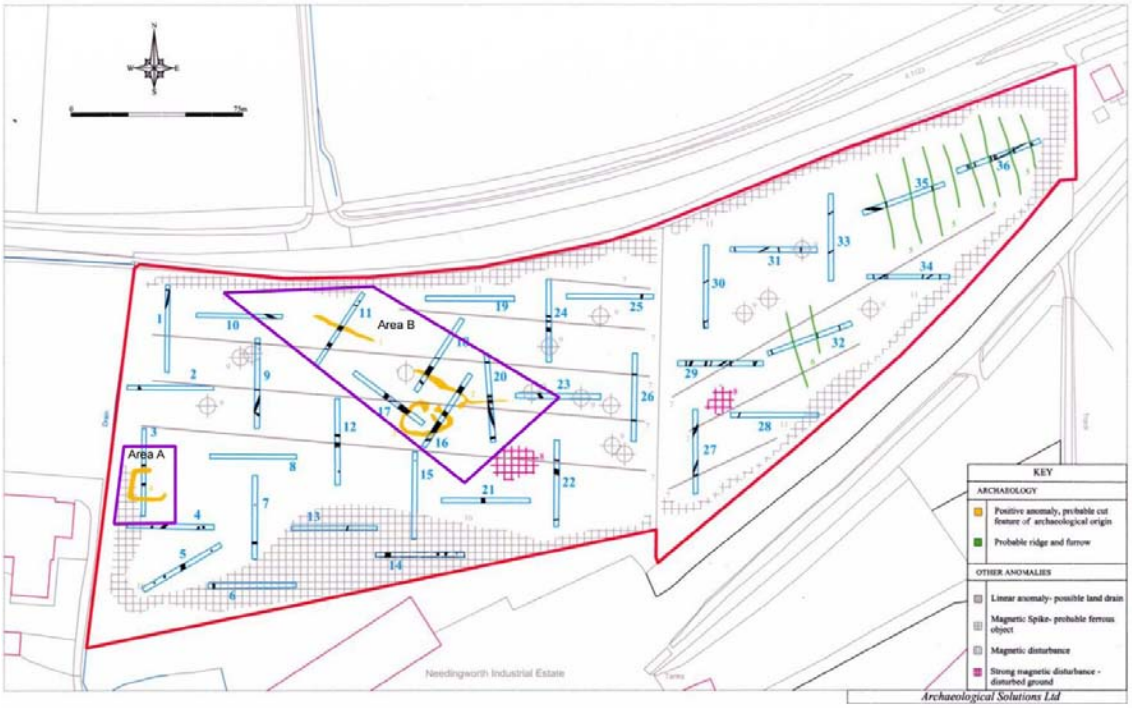

Figure 2: Plan showing excavation areas based on the AS trenching plan (Monahan 2015).

Archaeological and historical background

The site lay in an area of known archaeological remains. Less than 1km south of the site at the sand and gravel quarry a cluster of stone and flint tools dating from the Palaeolithic through to the early Bronze Age were recovered (Cambridge Historic Environment Record (CHER) ref: 01691; 01925; 02029), along with a handful of Iron Age pottery sherds found in a ditch revealed at the same quarry (CHER ref: 01916).

Investigations on the line of the Needingworth bypass in the mid-1990s by Cambridgeshire Archaeological Unit revealed a series of features relating to Romano-British occupation and industry, with the focus of activity thought to relate to a complex of cropmarks immediately north of the site (Schlee, 1995). Dating evidence suggest the site was occupied in the 3rd and 4th centuries. There is little evidence of occupation in the Saxon period within 1km of the site, although an early Saxon square-headed brooch (CHER ref: 01489) has been recovered from the same quarry site as the prehistoric flints. Both St. Ives and Holywell to the south appear in the Domesday Book, indicating occupation in these towns originated in the pre-Conquest period. A search of the CHER identified a series of cropmark enclosures on the site, seen on aerial photographs and interpreted as probably medieval in date (CHER ref: 08272). As a result, the Senior Archaeologist recommended a scheme of pre-determination investigative works to determine the potential of these cropmarks.

A geophysical survey of the site was undertaken in July 2015, identifying positive linear anomalies and two potential enclosures along with readings suggestive of modern land drains and disturbance (Baker & Bescoby, 2015). Subsequent evaluation trenching largely confirmed the geophysics, with much of the site being devoid of buried archaeological remains but with cut features corresponding with the magnetic anomalies. Towards the western edge of the site a discrete "D" shaped enclosure was identified on the geophysics. Trenching confirmed the presence of this enclosure, with two sherds of 11th-13th century pottery being recovered from a section through the enclosure ditch. To the east the second enclosure was confirmed with a number of re-cuts to the enclosure and associated outlying ditches. Artefacts recovered include flint, pottery and animal bone.

Aims and Objectives

A brief issued by the Senior Archaeologist for Cambridgeshire Historic Environment Team outlined the requirement for archaeological excavation of the identified remains, with discrete areas around the two enclosures determined (Figure 2).

- Area A (Figure 4) lay around the smaller enclosure on the western side of the site from which 11th-13th century pottery was recovered. The area measured c.858m².
- Area B (Figure 5) lay towards the centre of the western field, around the late Bronze Age – early Iron Age enclosure and ditches. The area measured c.6560m².

The aim of this excavation was to preserve by record the archaeological remains which would otherwise be directly impacted by the construction of a new storage building. The East of England Research Agenda highlights the regional variation in Bronze – Iron Age settlement structure and the importance of environmental remains in reconstructing the prehistoric landscape. The medieval landscape is better understood, however the change or

continuity between the Saxon to the Norman agricultural practices and the impacts of the environment are noted as research priorities.

The brief highlighted the following as key research priorities:

- To examine the evidence for late Neolithic – early Bronze Age activity in the area, with particular attention paid to the presence of contemporary features and their artefacts content, and the presence of late Neolithic /early Bronze Age material within later features.
- To examine the evidence for late Bronze Age – early Iron Age activity.
- To determine the character, date and morphology of the identified enclosures and boundary ditches, in order to determine the pattern of settlement, evidence for continuity or breaks in occupation throughout the period and the reasons for any identified discontinuity.
- To contribute to an understanding of the pattern of prehistoric land use, settlement and economy in the area.
- To contribute to the understanding of prehistoric ceramics and lithic technologies in the region.
- To contribute to an understanding of medieval land use in the area.

The purpose of the excavation was to gather sufficient information to establish the presence or absence, extent, depth, condition, character, quality and date of any archaeological deposits and to create a permanent record.

Methodology

The strip, map and record took place prior to the commencement of construction groundworks. Two zones within the site were investigated, concentrating on the areas around the two enclosures determined (Figure 2).

- Area A (Figure 4) lay around the smaller enclosure on the western side of the site from which 11th-13th century pottery was recovered. The area measured approx. 858m².

- Area B (Figure 5) lay towards the centre of the western field, around the late Bronze Age – early Iron Age enclosure and ditches. The area measured approx. 6,560m².

The stripping differed from the project specification in one instance; at a site visit on the 22nd December, it was agreed with the Senior Archaeologist of Cambridgeshire HET that the entire north-western extent of the area did not have to be stripped. Instead, the dark linear feature would be followed westwards to allow excavation of its terminal end. This feature was believed to be of possible Bronze Age and therefore of importance, given the dearth of evidence in the surrounding area from that time. The reason for this adjustment was largely due to the working conditions and the need for time to be spent prioritising the archaeologically busy areas.

Topsoil and subsoil was stripped from the areas of investigation using a mechanical excavator fitted with a flat toothless blade, removing spits no more than 200mm thick, to ensure a clean, even surface. Machine excavation was halted at the first archaeological

horizon, or at the surface of the natural substrate where no archaeological deposits were present; excavation thereafter was carried out by hand. On several occasions the landowners supplied a mechanical pump to remove groundwater from the site, and a smaller pump was brought in by PCAS Ltd. to remove groundwater from features prior to, and during, excavation.

All archaeological deposits or features exposed by the machining were sample excavated using hand tools, recorded by plan and tied into the National Grid using GPS. A circular feature [102] was believed to be domestic in nature, so was 100% excavated. Excavated features were drawn in section at scales of 1:20 or 1:10 as appropriate. The drawn record was supplemented by a photographic record in digital format (shots were also taken using monochrome film but these were unsuccessful, following processing the films were found to be blank): extracts from this are reproduced throughout the text. Deposits were recorded on standard PCAS context record sheets; an excavation site diary was also kept.

Finds were stored in labelled bags prior to their removal to the offices of PCAS for initial processing. The finds were washed and marked at PCAS before either being assessed in-house or being dispatched to appropriate specialists for assessment and reporting. Fifteen contexts were environmentally sampled, including thirty bags from deposit (183), which was deemed potentially of great regional importance.

The prehistoric pottery was sent to Sarah Percival (Appendix 2). Environmental samples were processed and reported on by Archaeological Services at Durham University (Appendix 3). Worked flint by Tom Lane (Appendix 4). Animal bone was sent to Jennifer Wood (Appendix 5) and the slag was assessed by Mike Wood (Appendix 6).

An online record of the project data has been initiated with the Archaeological Data Service (OASIS database) for public access, OASIS ref: preconst3-230582. When completed, it will include an uploaded digital copy of the final excavation report.

The excavation took place between November 26th 2015 and January 8th 2016 and was supervised by Richard Mandeville. The weather was generally favourable during the day, although on many occasions heavy overnight rain made ground conditions, already waterlogged due to a high water table, very difficult to work in.

In January 2017 Ian Rowlandson and Hugh Fiske of Ian Rowlandson Archaeological Consultants (IRAC) were commissioned to complete the final report on behalf of PCAS. This work included compilation of a site database, Harris matrix and a Land Use Diagram as well as digitisation of the written site records and Permatrace drawings which appear throughout the finished report. The work had to take account of and combine records from two separate excavations; the evaluation carried out by AS in September 2015 and the full area excavation by PCAS in November the same year.

During preparation of the report it was felt necessary to separate Group 5 from the other groups as it was clearly a complicated series of interleaving and inter-cutting ditches. The amount of dateable finds were generally low so relative dating within the group was achieved by noting the relative positions, cuts and superposition between the various

features. Accordingly sub-group 5.1 was found to be the oldest sub-group and 5.9 the most recent.

Comparison of the two pottery reports, one from the earlier evaluation trenching phase by AS, the other from the excavation by PCAS (published as Appendix 2), shows a discrepancy in the dating of the prehistoric pottery from the site. The majority of sherds in the earlier report are assessed as falling in the range from Neolithic to Iron Age, whereas in the later report the assemblage is dated almost entirely in the Later Iron Age (LIA) with a small number of sherds from the Earlier Iron Age (EIA). We have adopted the dating from the later report by Sarah Percival. Neolithic and later struck flints and a Neolithic polished axe or chisel fragment found on site are assumed to be residual as no evidence for contemporary occupation was found.

NB Four digit context numbers from the AS pre-excavation evaluation have been used in the text; please refer to the Context Summary (Appendix 1) for full descriptions.

Abbreviations:

EIA: Earlier Iron Age
LIA: Later Iron Age (350-100BC)

Results

The excavation was split into two areas, with the vast majority of the archaeological remains identified in Area B (Figure 5). Area A (Figure 4) revealed two ditches and a small number of discrete post holes. A prehistoric landscape was exposed, split into two phases: late Neolithic to early Bronze Age, and late Bronze Age through to early Iron Age. The majority of the remains lay towards the eastern side of the excavation area, although the series of ditches identified on the geophysical survey ran across the northern part of the site.

The earliest deposit encountered was the natural, revealed 0.80m beneath the present ground surface; varying amounts of sand and gravel contained in a sandy clay matrix into which most of the archaeology was cut. Apart from the western side of Area A, a thin layer of compact silty clay subsoil was present, into which features of medieval origin were cut. The bulk of the subsoil was a layer of compact, mid yellowish grey brown silty clay typically 0.30m thick, and sealed by the topsoil, which was between 0.30-0.40m thick across the entire site.

A full context summary list appears as Appendix 1.

Area A

(Plates 1 to 9, 12, 14, 15)

The most obvious features in Area A (Figure 4) were the set of two parallel ditches running across the area in an east-west orientation. These probably represent a drove road; however it is unclear whether it was contemporary with the demonstrably early features in Area B or substantially later as suggested by an isolated find of two sherds of medieval pottery in the northernmost ditch. The two groups of five small pits (one possibly a post hole) suggest

activity in the area at some point, unfortunately none of them contained dateable evidence and the relationship between all of them and the subsoil and natural deposit layers was not proven due to conditions on site during the excavation.

Group 1: E-W Ditches (Figures 4, 16) (Plates 4 to 7)

Two parallel ditches [001] and [003] representing a possible east to west oriented drove road cut into the lower subsoil, these were cut at right angles by AS evaluation Trench 3. Two sherds of medieval (11th to 13th century) pottery were recovered from the northern ditch [003] / [1005] during the evaluation. The fill of both ditches comprised light to mid-grey sandy clay with frequent small gravel pebbles and probably represents silting and washed-in deposits. Apart from the medieval pottery sherds no finds or dating evidence were recovered.

Dating – possibly medieval

Group 2: Pit/Post hole Group (Figures 4, 16) (Plates 8, 12).

A group of two sub-round pits or post holes situated to the west of Area A. Neither feature contained any datable material and it was unclear whether they were cut into the lower subsoil or underlying natural. The smaller of the two [009] was perhaps more likely to be a post hole, it contained a fill of light brown sandy clay with some small gravel inclusions. [015] was the larger in plan but shallower, with a light yellowish brown sandy clay fill, little gravel and no detectable organic remains.

Group 3: Pit Group (Figures 4, 16) (Plates 9, 14).

A group of three small pits in a roughly linear relationship situated to the south east of Area A. No finds or datable material were recovered and as with Group 2 it was unclear whether these features were cut into the lower subsoil or underlying natural. [007] was a small circular pit with mid-grey sandy clay fill containing frequent gravel pebbles. [013] was a small oval pit with light to mid-grey sandy fill and moderate to frequent gravel pebbles, while [011] was a small elliptical pit with the same fill as [013].

Area B

(Plates 10, 11, 19, 20, 21, 29, 37, 39, 40, 54, 56, 63, 77 to 81)

Group 4: Round House? (Figures 5, 17) (Plates 16, 17, 28, 30, 31, 32)

A small enclosure ditch with two associated post holes, using the site stratigraphy these would appear to be the oldest features on site however the pottery dating evidence puts them into the Later Iron Age. Circular ditch [102] had an overall diameter of c. 11.0m; the ditch cut was c. 0.8m across. In section it had a regular concave shape that deepened towards the terminals. The entrance was orientated ESE and had a width of 1.6m. The ditch fill was a firm mid greyish brown silty clay with some sand; finds included relatively large

quantities of Late Iron Age pottery and animal bone along with small amounts of fired clay and struck flint (dated to Bronze Age, see Appendix 4). Struck flint was also retrieved from the fill of [126] (undated, see Appendix 4). Possible post holes [104] and [106] were located inside ditch [102], they were small and shallow and the only finds retrieved from them were a single LIA pottery sherd and a small amount of animal bone.

Dating – Pottery from the fills of circular Ditch [102] and possible Post hole [106] was dated to the Later Iron Age (LIA).

Group 5: Ditch Group

A system of ditches cutting features in Group 4, with evidence of considerable re-cutting on the same alignments. This was much the largest group in terms of both area and the numbers of features and re-cuts so it has been divided into a further 9 sub-groups separated by relative age where possible.

Group 5.1: E-W Ditch (Figures 6, 18) (Plates 45, 65 to 68)

Seen to be at the bottom of the stratigraphic sequence of recut ditches in section Dr52 (242), and in AS trenches 11 [context 1030], 16 [1132] and 18 [1084].

Dating – Datable finds were a single LIA sherd from ditch [170], fill (171) and a Neolithic implement from Ditch [1030], fill (1031) which may be residual:

> *"The only conclusively Neolithic implement comprises a fragment of polished axe, or possibly chisel in Ditch F1030 L1031 (Trench 11). The fragment (18g) is from the narrow butt end of a very finely polished implement, the terminus of which retains a sharp, unworn crest, while the mid section close to the fracture bears slight scars from where the head was hafted. The narrow width of the fragment (25mm) suggests that either this was a small Neolithic axehead or possibly a comparably manufactured chisel that appears to have broken in use and been discarded, but would originally have been a very distinctive object with a deep orange brown colour."* (Peachey 2015)

Group 5.2: E-W Ditch (Figures 7, 19) (Plates 38, 45, 46, 59)

Cuts the ditch in Group 5.1 but is itself cut by later ditches, seen in sections Dr35 (context 173), Dr45 (211) & Dr52 (241), and in AS trenches 11 [1032], 18 (1083), 16 [1130] and 20 (1155). Undated struck flints were retrieved from (173) and (241), see Appendix 4.

Dating – Datable finds were LIA pottery from Ditch [172], fill (173) and Linear [236], fill (241).

Group 5.3: Curved Ditch (Figures 8, 20) (Plates 38, 43, 46, 65 to 68)

A distinctive wide curvilinear feature which cut through the circular enclosure in Group 4 in two places without an obvious entrance, it clearly has a close relationship with the enclosure in Group 5.7 as the ditch cuts are very similar in profile, width and depth and come together to within a few centimetres at one point without intercutting (see Figure 9).

Sections Dr30 (contexts 167/168), Dr33 (159) and AS evaluation trench 17 (1076) all show an earlier narrow ditch [150] on the same alignment underneath the north western to western arm of the loop which is not apparent further round on the eastern side, this may have been recut to form part of the newer and much broader ditch.

Dating – Datable evidence consisted of a single sherd of Early Iron Age (EIA) pottery from early Ditch [150] and LIA pottery from Ditches [151], fill (160) and [152], fill (169).

Group 5.4: Curved Ditch Re-cut (Figures 10, 21) (Plates 46, 65 to 68)

A broad and quite shallow re-cut of ditches [237] as seen in section Dr52, [174] in section Dr35, [1043] in AS trench 18, and [1134] in AS trench 16. It is notable that although it initially follows the same alignment as Groups 5.1, 5.2 and 5.6 it is not a long narrow linear feature like them but curves down into the curvilinear ditch feature in Group 5.3, perhaps inferring that the latter was already present and this is a recut leading to it from the main ditch sequence.

Dating – Datable finds included LIA pottery from Ditch [174], fill (176). A flint blade with slightly prismatic profile, typical of the Mesozoic was recovered from [1134] and two truncation burins also likely to be Mesolithic came from [1043] (Peachey 2015) but these may be residual.

Group 5.5: Gully (Figures 11, 22) (Plates 72, 73)

A short length of gully [220] and two associated post holes [216] and [218], cut by Ditch [214] from Group 5.6. The gully fill contained two struck flints (undated, see Appendix 4), no other finds were recovered.

Group 5.6: E-W Ditch (Figures 12, 23) (Plates 59, 65 to 68)

A long linear ditch following the same alignment as Groups 5.1 and 5.2 and very similar in nature, it appears to be the latest re-cut in the sequence.

Dating – Datable finds from PCAS contexts amounted to small amounts of LIA pottery and struck flint (undated, see Appendix 4) from the fills of [170=235]. A couple of struck flints in the form of snapped blades, possibly resulting from the process of creating microliths and dating to the Mesolithic (Peachey 2015) were retrieved from AS context [1035].

Group 5.7: Enclosure or Palisade with Post holes (Figures 13, 24) (Plates 24, 27, 33, 36, 69, 74, 75,

A roughly 'lozenge' shaped enclosure with the entrance to the north. Reminiscent of Enclosure E1 at HMP Littlehay (Brown 2011), some 11 miles WSW of this site and appears to have a relationship with the looped ditch in Group 5.3. The number of post holes in and around the feature suggest the possibility of a palisaded enclosure, perhaps supported by the evidence in section Dr15 (also seen in Trench 16 as cuts 1116 and 1138) of an older narrow feature or possible palisade slot beneath the southern part of [126] which emerges as terminal end [248]. There is evidence of re-cutting of the main ditch along the southern edge and at the North West terminal.

Dating – the largest assemblage of pottery, 21 sherds, (1 EIA, remainder LIA) came from context (132) the fill of the NW arm of [126] which also yielded flints (undated, see Appendix 4). A small amount of LIA pottery was retrieved from ditch terminus [134], fill (137) along with struck flint waste (dated to Bronze Age, see Appendix 4), a small amount of fuel ash slag (see Appendix 6) and animal bone. AS context [1124] yielded struck flint consisting of broken blades, a possibly late Neolithic to Early Bronze Age piercer and debitage (Mesolithic to early Neolithic, see Peachey 2015).

Group 5.8: Curving Ditch (Figures 14, 25) (Plates 59, 71)

In a similar way to the ditch in Group 5.4 this starts off following the alignment of the main group of ditches at the east end of the site but then deviates to the south west in the direction of the enclosure ditches. It was truncated by the U-shaped enclosure in Group 5.9 and disappears beneath it so its original purpose is not clear.

Dating – datable evidence from Ditch [210] to the east amounted to a small amount of LIA pottery and struck flint, one carinate flint scraper has been provisionally dated to the Upper Palaeolithic (see Appendix 4).

Group 5.9: U-shaped Enclosure (Figures 15, 26) (Plates 22, 23, 25, 26)

Superimposed over and re-using part of the enclosure ditch in Group 5.7. Cut by later ditch in Group 6.

Dating – datable finds were largely as Group 5.7 with which it shared several contexts. Contexts within the southern arm, outside Group 5.7, yielded a flint blade flake (undated, see Appendix 4) from Ditch [119] and pottery (15 sherds, 1 EIA remainder LIA) and struck flint (undated, see Appendix 4) from the fills of Linear [112].

Group 6: Ditch System (Figure 5, 27) (Plates 26, 44, 49, 50, 51, 55, 64)

Group 6 comprised boundary or perhaps more likely drainage ditches, parallel to some of Group 5 but with no evidence of association. The main ditches in the group were aligned roughly NNW-WSW with other elements at right angles. The main NW-SE ditches, including [157], [158] and [182] were apparently in use for some time as their sections clearly show multiple episodes of re-cutting on the same alignment.

Dating – finds from the group during the main excavation included LIA pottery and struck flint (mostly undated, however a side scraper from (194) has been provisionally dated to the Middle Palaeolithic, see Appendix 4) from the multiple fills of Ditches [157], [158], [180] and [184]. Ditch terminus [204] which was isolated from the main ditches and at right angles to them contained 17 sherds of pottery (1 sherd EIA, remainder LIA) and struck flint (undated, see Appendix 4). The earlier evaluation trench across the main ditches found struck flint debitage (likely Mesolithic to early Neolithic in date, Peachey 2015) in context [1047].

Ditch [125] has been included in the group due to its very similar alignment; although it was physically amongst elements of Group 5 it was clearly later than them but contained no dateable finds.

Group 7: Modern Drain or Ditch (Figures 5, 28) (Plate 76)

Group 7 comprised two discrete ditches, possibly field boundaries. They do not cut any other features and were only investigated in AS evaluation trenches 16, 20 and 23. The first two of these can be considered to show the same linear feature as their alignment and profile in section were very similar as were their respective fills. The latter ditch although included in the same group is probably a separate feature. No finds were retrieved from either ditch.

Group 8: Pit Group (Figures 5, 29) (Plates 48, 52)

A small closely grouped set of pits, positioned well away from any other known features but broadly within the area semi-enclosed by Group 6. The group consisted of a relatively large oval pit [197] cut into by [196] which was smaller and more rounded, with another small sub-circular pit [179] slightly further to the south. The fill matrix was waterlogged when excavated but consisted of mid grey-brown silty clay containing sparse charcoal fragments and gravel pebbles. [196] was a small almost circular pit, 0.5m in diameter, the fill was light to mid-grey silty clay, firmly compacted with gravel inclusions and animal bone. This feature cut into the adjacent pit [197]. [197] was larger than the other two pits in the group at almost 1.5m at its widest point and oval in plan. The lower primary fill was light to mid grey-brown silty clay, firmly compacted with gravel inclusions. The upper fill was similar to the lower but was slightly darker in colour and contained no finds.

Dating – Pits [179], fill (178) and [196], fill (199) contained significant assemblages of LIA pottery.

Group 9: Gullies (Figures 5, 30) (Plates 60 to 62)

Group 9 consisted of two gullies, [225] re-cut by [223], both c. 17m long and aligned NNW-SSE, cutting across clearly older ditches in Group 5. Both contained fills of light brown silty clay and no dateable finds.

Group 10: Pit Group (Figures 5, 31) (Plates 18, 53, 57)

A small widely spaced group of pits. [101] was a medium sized (1.35m diameter) circular pit or post pit with vertical sides. The basal fill comprised pale brown silty clay with moderate to frequent gravel. The natural layer beneath this fill was un-oxidised blue/grey clay so it can be assumed that the lowest fill was dumped or packed very soon after the pit was dug. [202] was a small circular pit just over 0.5m in diameter with steeply sloping sides. The fill was light grey silty clay, firmly compacted with a small amount of gravel. It contained no finds. [206] was a small circular pit 0.30m in diameter, the fill was very dark grey silty clay, firmly compacted and without any inclusions. Significantly it contained a small quantity of cremated human bone (see Appendix 5) along with animal bone.

Dating – The primary (111) and topmost (100) fills of Pit [101] each contained six sherds of LIA pottery.

Group 11: Modern Drain or Ditch (Figures 5, 32) (Plates 34, 35, 41, 42)

A right-angled linear ditch or gully [146]=[149], representing a possible field boundary and was clearly cutting across features in Groups 4 and 5 without itself being cut by other features. In addition, as it was the only feature seen to be cutting into the upper subsoil (all other features were cutting either the lower subsoil or the underlying natural), it can be considered the most recent of all the groups in Area B and is probably modern. Although shown on the plan of AS evaluation trench 17 (albeit incorrectly aligned) it was apparently not considered significant and did not warrant further description. No finds were recovered.

Group 12: Single Pit (Figures 5, 33) (Plate 70)

A single small pit [238], not obviously associated with any other recognised features. The fill was mid-brown silty clay, firmly compacted with sparse gravel and contained no finds.

Discussion and Conclusions

"In general terms, it can be said that in the East Midlands enclosures, usually, but not invariably, representing single family units, formed a recurring element in the settlement pattern from at least as early as the fourth century BC to the Roman Conquest and later. Where the subsoil was suitable storage pits were dug but, elsewhere, on the gravels and on the clay land, grain must have been stored above ground. On present evidence it would seem that the enclosed settlements of the Midlands were significantly smaller than the broadly contemporary Wessex sites of Little Woodbury type." Cunliffe 1991, p.236

"It is difficult to use pottery to provide a secure chronological framework for the Iron Age in Cambridgeshire." Bryant 2000, 14

The earliest finds from the site were struck flints, both tools and waste materials, however as Lane explains in Appendix 4 it is highly unlikely that any of them, with the possible exception of the Bronze Age items, were in situ, they may span a long period of use and not be all contemporary. It is now accepted that "*many of the residues of later prehistoric occupation only now occur within ploughsoil and sealed buried soil deposits*" (Evans et al, 2014), so it should be no surprise that there are no features on site which can be confidently assigned to the Early Bronze Age or earlier. This part of Eastern England is a landscape which has been used from the earliest prehistory onwards but it is only from the Middle Bronze Age onwards that we start to see the first signs of short-lived settlements.

In the absence of a fully diagnostic suite of pottery the site sequence as excavated is based on the stratigraphic relationships between recorded features. This proved problematic due to the amount of re-cutting and enlargement of ditches over time which, as it was largely done along existing alignments, has clearly removed much evidence of the earliest features and disturbed in-situ pottery evidence.

It can be seen that rather than being a small part of a larger Iron Age settlement such as at Stonea or Little Paxton this was probably a single low status family farmstead typical of the sort described by Prof. Cunliffe, and not dissimilar to one excavated at Orton Longueville, also in Cambridgeshire, in 1974 (Mackreth 2001). Here, as there, we see a progression in land use from an enclosed roundhouse for human occupation and adjoining animal

enclosure bounded by shallow narrow ditches in the earliest phase (Earlier Iron Age), to a Later Iron Age landscape of ditched enclosures, probably for animal husbandry with broader and deeper ditches replacing the narrower originals which were then re-cut several times on the same alignments and probably forming part of a wider landscape of land management.

The roundhouse, if that is what is represented by the one near-circular ditch or gully, conformed to both national and local trends in having a diameter of close to eleven metres and an entrance orientated east-southeast. The underlying reason for the often seen entrance alignment of somewhere between east and south is a much-debated subject (see Oswald 1997 and Haselgrove & Pope 2007) but it is a trend also seen at nearby Iron Age sites where evidence of similar contemporary structures survives, such as Hurst Lane, Ely (Evans et al 2007), Colne Fen, Earith (Evans et al 2013) and Tort Hill West (Ellis et al 1998). Unfortunately little survives here of any original internal structures or features and the excavation notes left no indication of where in the ditch circuit the pottery was found.

The purpose of the long linear ditch is a little enigmatic; if it was primarily for drainage one would expect that it would be oriented N-S instead of E-W, as the ground slopes gently south towards low-lying waterlogged areas and ultimately the river Great Ouse. Indeed a nearby excavation in advance of road construction (Schlee 1995) found modern field drains running almost exclusively N-S in the immediate area. If there were separate Iron Age drainage ditches on this orientation it is possible they are now obscured by colluvium washing downslope or were destroyed during the building of the low railway embankment that runs around the southern side of the excavated fields or by the more modern farming/industrial units that have since been built on the track bed. If it was not primarily for drainage then it may have functioned as a land boundary and/or part of a larger field system extending beyond the excavated area, or even to mark the division between wet and dry land.

It is tempting to suggest that the site, which has always had a high water table and is still prone to flooding, was abandoned for living on at some point prior to the Roman Conquest after a relatively short period of occupation (as suggested by the pottery dating, the relative scarcity of finds and the fact that the gully marking the dwelling showed no sign of being re-cut), and that the dwelling and any associated structures were moved to drier ground a couple of hundred metres to the north, where crop marks and a small scale excavation (Schlee 1995) point towards occupation broadly during the Roman period. The enclosures were then perhaps retained for agricultural use in managing livestock and subsequently deepened, enlarged and extended and cut across the former roundhouse site.

In many respects the history, though not scale, of this site seems to echo that at Cambourne, 7 miles to the south (Wright et al, 2009):

"The excavations revealed evidence for intermittent human occupation of the Cambourne landscape from at least the Middle Bronze Age to the present day. Ephemeral evidence of short-lived Bronze Age occupation has been recorded from three sites, all lying close to watercourses or within partly-silted palaeochannels. From the Middle Iron Age the Cambourne landscape was settled by small farming communities occupying roundhouses, perhaps initially unenclosed but subsequently set within enclosures linked by droveways to

extensive field systems. The full spatial extent of these farmsteads is not known but the economy seems to have been based largely on stock rearing with some arable agriculture. Apart from the largest and most complex site investigated, at Lower Cambourne, the Late Iron Age seems to have seen something of a recession with abandonment of earlier settlements. This may have been partly due to increased waterlogging making farming less viable."

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References

Baker, M. & Bescoby, D., 2015, Land at Needingworth Road, St Ives, Cambridgeshire Geophysical Survey. AS report number 4925

Brown, J., 2011, Middle to Late Iron Age settlement and a Roman palisade at HMP Littlehey, West Perry, Cambridgeshire. Proceedings of the Cambridge Antiquarian Society, 2011.

Cox, C. and Lang, N., 2015, Land at Needingworth Road, St Ives, Cambridgeshire. Assessment of Aerial Photographs for Archaeology. Air Photo Services Ltd

Cunliffe, B., 1991, Iron Age Communities in Britain, 3rd edition, Routledge

Ellis, P. et al, 1998, Excavations alongside Roman Ermine Street, Cambridgeshire 1996, Birmingham University Field Archaeology Unit Monograph 1, BAR British Series 276, Archaeopress, Oxford.

Evans, C. et al, 2007, Iron Age settlement and Romanisation on the Isle of Ely: the Hurst Lane Reservoir site, in Proceedings of the Cambridge Antiquarian Society Volume: 96 (2007)

Evans, C. et al, 2013, Romano-British Communities at Colne Fen, Earith, Oxbow books

Evans et al, 2014, Making time work: sampling floodplain artefact frequencies and populations, Antiquity 88: 241–258

Glazebrook, J., 1997, Research and Archaeology: a framework for the eastern counties 1 resource assessment. online at http://www.eaareports.org.uk/research_and_archaeology.htm

Haselgrove, C. and Pope, R., 2007 (eds), The Earlier Iron Age in Britain and the Near Continent, Oxbow Books

Jones, A. (ed.), 2011, Excavations at Little Paxton Quarry, Cambridgeshire, 1992-1998, BAR 545

Mackreth, D.F., 2001, Orton Longueville, Cambridgeshire: A late Pre-Roman Iron Age and Early Roman Farmstead, EAA 97

Monahan, V., 2015, Land north of Needingworth Industrial Estate, Needingworth Road, Holywell-Cum-Needingworth, Cambridgeshire PE27 4NB An Archaeological Evaluation. AS report number 4948

Oswald, A., 1997, A doorway on the past: practical and mystical concerns in the orientation of roundhouse doorways, in Gwilt and Haselgrove 1997, 87-95

Peachey, A., 2015, The Struck Flint, in Land north of Needingworth Industrial Estate, Needingworth Road, Holywell-Cum-Needingworth, Cambridgeshire PE27 4NB An Archaeological Evaluation. AS report number 4948

Schlee, D. E., 1995, Excavation of a Romano-British settlement on the Needingworth bypass. CAU report no. 99

Wright, J. et al, 2009, Cambourne New Settlement: Iron Age and Romano-British Settlement on the Clay Uplands of West Cambridgeshire, Wessex Archaeology Report No. 23

http://list.historicengland.org.uk/mapsearch.aspx

http://mapapps.bgs.ac.uk/geologyofbritain/home.html

https://www.old-maps.co.uk/

http://www.ordnancesurvey.co.uk/benchmarks/

Planning documents accessed at http://publicaccess.huntingdonshire.gov.uk/online-applications/applicationDetails.do?activeTab=externalDocuments&keyVal=NEIK7GIKLOY00

Appendices

Appendix 1: Context Summary.

Note that 4-digit context numbers relate to the earlier AS evaluation, 3-digit numbers are from the subsequent full excavation by PCAS.

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
001	Cut feature	Ditch	1	Parallel to ditch [003] to possibly form a drove road running E-W	>20 x 0.48 x 0.19m	Linear, sides 45 degrees approx, base flat	
002	Fill	Ditch	1	Silting/washed in deposit of possible drove road ditch	>20 x 0.48 x 0.19m	Light to mid grey, sandy clay, friable/sticky, frequent small gravel, horizon clarity fair	none
003	Cut feature	Ditch	1	Runs parallel to ditch [001] to possibly form a drove road orientated E-W	>20 x 0.44 x 0.16m	Linear, sides 45 degrees approx, base flat	
004	Fill	Ditch	1	Silting fill of possible drove road ditch	>20 x 0.44 x 0.16m	Light to mid grey, sandy clay, friable/sticky, frequent small gravel, horizon clarity fair	none
005	Fill	Ditch	1	Possible fill of drove road ditch	>20 x 0.78 x 0.20m	Light to mid grey, sandy clay, friable/sticky, frequent small gravel, horizon clarity fair	none
006	Fill	Ditch	1	Possible fill of drove road ditch	>20 x 0.50 x 0.16m	Light to mid grey, sandy clay, friable/sticky, frequent small gravel, horizon clarity fair	none
007	Cut feature	Pit	3	Small pit	0.70 x 0.22m	Circular, sides 45 degrees approx, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
008	Fill	Pit	3	Silting fill of small pit	0.70 x 0.22m	Mid grey, sandy clay, friable/sticky, frequent small gravel, horizon clarity fair	none
009	Cut feature	Small pit or post hole	2	Cut of a small pit or post hole	0.29 x 0.29 x 0.19m	U shape profile, sides sloping inwards, base concave	
010	Fill	Small pit or post hole	2	Fill of small pit or post hole	0.29 x 0.29 x 0.19m	Light brown, sandy clay, friable, small gravel inclusions 15% approx, horizon clarity fair	
011	Cut feature	Pit	3	Cut of small elliptical pit	1.55 x 0.55 x 0.20m	Elliptical, sides 45 degrees approx, base flat	
012	Fill	Pit	3	Fill of small elliptical pit	1.55 x 0.55 x 0.20m	Light to mid grey, sandy clay, moderate to frequent gravel, friable, sticky, horizon clarity fair	none
013	Cut feature	Pit	3	Cut of small oval pit	1.45 x 0.60 x 0.16m	Oval, sides 45 degrees approx, base concave	
014	Fill	Pit	3	Fill of small oval pit	1.45 x 0.60 x 0.16m	Light to mid grey, sandy clay, friable/sticky, moderate to frequent gravel, horizon clarity fair	none
015	Cut feature	Pit	2	Shallow pit cut	1.20 x 0.21m	Shallow U shape, sides sloping inwards, base concave	
016	Fill	Pit	2	Fill of shallow pit, no visible organic inclusions	1.20 x 0.21m	Light yellowish brown, sandy clay, friable, few small gravel inclusions, horizon clarity clear	none

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
017	Layer	Layer		Topsoil	Whole area x 0.25-0.30m	Dark greyish brown, slightly silty clay, compact but sticky when wet, occasional small gravel, horizon clarity clear	
018	Layer	Layer		Upper subsoil layer, sealing in lower subsoil (019) and probably all the archaeology except pits and post holes which are unclear	Whole area x 0.30-0.40m	Mid slightly yellowish brown, silty clay, firm but sticky when wet, occasional small gravel/rounded pebbles, horizon clarity clear with topsoil (017), less so with lower subsoil (019)	
019	Layer	Layer		Lower subsoil layer, cut by linear features	Whole area x 0.12m	Mid to light slightly reddish brown, silty clay, firm but sticky when wet, occasional small gravel/rounded pebbles, horizon clarity not always clear with subsoil (018)	
020	Layer	Layer		Natural	Whole area	Light to mid orangey brown, sandy gravel in clay, mostly friable, common rounded gravel and small pebbles, horizon clarity fairly clear	
100	Fill	Deposit	10	Silting deposit, possibly fill of re-cut pit. Pottery LIA.	1.08 x 0.30m	Mid grey, clayish silt, friable to sticky, moderate gravel, horizon clarity fair	Pot x6, animal bone

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
101	Cut feature	Pit	10	Medium sized pit, could be post/pit originally but (100) could be fill of a recut pit, (111) could be dumped/packed straight after pit was dug due to lowest natural of clay staying an un-oxidised blue/grey.	1.35 x 0.40m	Circular, sides vertical, base flat	
102	Cut feature	Gully or Ditch	4	Cut of a small NS gully or ditch with regular concave shape that deepens towards its terminus.	0.38 x 0.80m	Linear, sides sloping inwards, base concave	
103	Fill	Gully or Ditch	4	Friable single fill of gully/ditch. Pottery LIA.	0.38 x 0.80m	Greyish brown, silty clay, friable, small gravel, horizon clarity clear	Pot x34 (4 vessels), animal bone
104	Cut feature	Possible post hole	4	Small concave cut, possible post hole	0.62 x 0.20m	Circular, sides sloping inwards, base concave	
105	Fill	Possible post hole	4	Single fill of possible post hole	0.62 x 0.20m	Greyish brown, silty clay, friable, gravel inclusions, horizon clarity clear	None
106	Cut feature	Possible post hole	4	Small concave cut, possible post hole	0.39 x 0.15m	Circular, sides sloping inwards, base concave	
107	Fill	Possible post hole	4	Single fill of possible post hole. Pottery LIA.	0.39 x 0.15m	Greyish brown, silty clay, friable, gravel inclusions, horizon clarity clear	Pot x1, animal bone
108	Fill	Pit	10	Clayish pit fill, possibly cut by (100) if latter is in a re-cut.	0.50 x 0.30m in section	Orangey brown, silty clay, friable to sticky, occasional to moderate gravel, horizon clarity fair	None
109	Fill	Pit	10	Silting fill of pit	0.30 x 0.15m in section	Mid grey, clayish silt, friable to sticky, moderate gravel, horizon clarity fair	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
110	Fill	Pit	10	Silting pit fill, possibly cut by (100) if latter is in a re-cut.	0.60 x 0.28m in section	Greyish brown, clayish silt, friable to sticky, moderate gravel, horizon clarity fair	None
111	Fill	Pit	10	Primary fill of pit, possibly formed when pit left open. Pottery LIA.	1.35 x 0.10m	Pale brown silty clay, friable to sticky, moderate to frequent gravel, horizon clarity fair	Pot x6, animal bone
112	Cut feature	Linear	5.9	Cut of a NW-SE protrusion from the main enclosure ditch [126], earlier AS plan shows it cutting [248]=?[116]. Possibly a partitioning device for a livestock control gate?	c.5.0 x 2.20 x 0.50m	Linear, U shaped, sides 45 degrees approx and slightly concave, base concave	
113	Fill	Ditch	5.7	Upper fill of ditch. Pottery LIA.	>1.0 x 2.20 x 0.40m	Pale to mid brownish grey, clayish silt, friable, moderate gravel	Pot x9, animal bone, flint
114	Fill	Ditch	5.7	Silting/washed in ditch deposit	>1.0 x 1.80 x 0.10-0.15m	Mid grey, clayish silt, friable, moderate gravel	
115	Fill	Ditch	5.9	Single fill of ditch	>1.0 x 0.72 x 0.35m	Pale to mid brownish grey, clayish silt and sand, friable, frequent small gravel	Flint
116	Cut feature	Ditch	5.9	Possible enclosure ditch, recut as [112]	>1.0 x 0.72 x 0.35m	Irregular oval, sides steep to very steep, base concave	
117	Cut feature	Ditch terminus	5.9	Cut of a NW-SE terminus end linear ditch	1.42 x 0.71m	Linear, sides sloping inwards, base concave	
118	Fill	Ditch	5.9	Single fill of ditch. Pottery EIA/LIA.	0.86 x 0.49m	Greyish brown, silty clay with sand, firm to friable, gravel inclusions, horizon clarity clear	Pot x6, fired clay x6, animal bone, flint, slag

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
119	Cut feature	Ditch	5.9	Cut of a NW-SE linear ditch terminus	0.86 x 0.49m	Linear, sides sloping inwards, U shaped	
120	Fill	Ditch terminus	5.9	Primary ditch fill	0.54 x 0.29m	Light brown, silty clay with sand, friable, gravel, horizon clarity clear	None
121	Fill	Ditch terminus	5.9	Secondary ditch fill. Pottery LIA.	1.42 x 0.52m	Greyish brown to light brown, silty clay with sand, firm to friable, gravel, horizon clarity clear	Pot x12, animal bone
122	Cut feature	Pit or post hole	5.7	Cut of small shallow pit or post hole	0.77 x 0.12m	Circular, sides sloping inwards, base concave	
123	Fill	Pit or post hole	5.7	Single fill of pit or post hole. Pottery LIA.	0.77 x 0.12m	Greyish brown, silty clay with sand, friable, small gravel, horizon clarity clear	Pot x3
124	Fill	Linear	6	Lower clay silting fill of linear	>1.0 x 0.82 x 0.18m	Pale grey, clay, friable to sticky, occasional small gravel, horizon clarity clear	None
125	Cut feature	Linear	6	Cut of linear feature	>1.0 x 0.82 x 0.18m	Linear?, sides 45 degrees, base concave	
126 (1)	Cut feature	Ditch	5.7	Cut of a NE-SW linear ditch	2.0 x 0.50m	Linear, Sides sloping inwards, base flat	
126 (2)	Cut feature	Ditch	5.7	Small enclosure ditch, possible recut of [116]. Sheet states "First slot put through [126], initially thought as part of the enclosure - at the time believed to include the "finger" in the middle. This has been re-numbered (112). RM"	>1.0 x 2.20 x 0.50m	Irregular oval, sides 45 degrees approx, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
127	Fill	Ditch	5.9	Upper ditch fill. Pottery EIA/LIA.	>1.0 x c.1.10 x 0.23m	Mid grey, clayish silt, friable, sticky, moderate small gravel, horizon clarity fair	Pot x5, animal bone, flint
128	Fill	Ditch	5.9	Lower ditch fill. Pottery LIA.	>1.0 x 0.55 x 0.15m	Mid greyish brown to brown, sandy clayish silt, friable, sticky, moderate to frequent small gravel, horizon clarity fair	Pot x10, animal bone
129	Fill	Post pit?	5.9	Possible fill of post pit	0.90 x 0.52m	Mid greyish brown, clayish silty sand, friable, sticky, moderate to frequent small gravel, horizon clarity fair	
130	Cut feature	Post pit?	5.9	Possible post pit associated with terminus of ditch [112]	0.90 x 0.52m	Part circular, sides very steep, base concave	
131	Fill	Ditch	6	Upper ditch fill	>1.0 x 0.50 x 0.08m	Mid grey, clay, friable, sticky, occasional small gravel, horizon clarity fair	
132	Fill	Ditch	5.7	Single fill of NE-SW linear. Pottery EIA/LIA.	2.0 x 0.50m	Greyish brown, silty clay with sand, firm to friable, gravel inclusions, horizon clarity clear	Pot x12, animal bone, flint
133	Fill	Gully or ditch	4	Single fill of gully/ditch. Pottery LIA.	0.72 x 0.15m	Greyish brown, silty clay with sand, firm to friable, gravel inclusions, horizon clarity clear	Pot x7, animal bone
134	Cut feature	Ditch terminus	5.7, 5.9	Cut of NW-SE ditch terminus, possible post pit [141] seen at end, not bottomed due to high water	>1.0 x 1.60 x 0.92m	Linear-terminus, sides steeper than 45 degrees, base concave	
135				Void			

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
136	Fill	Gully or ditch	4	Single fill of gully/ditch. Pottery LIA.	0.62 x 0.22m	Greyish brown, silty clay with sand, friable, gravel inclusions, horizon clarity clear	Pot x16 (1 vessel), ?human bone, animal bone, flint
137	Fill	Ditch terminus	5.7, 5.9	Upper main fill of ditch terminus. Pottery LIA.	>1.0 x 1.60 x 0.88m	Mid grey, clayish silt, friable to sticky, moderate small/medium gravel, horizon clarity fair	Pot x2 (1 vessel), animal bone, flint, slag
138	Fill	Ditch terminus	5.7, 5.9	Slumping deposit on south side of ditch terminus	>1.0 x 0.70 x 0.62m	Mixed mid grey, mostly orangey brown, sandy silt and clay, friable, moderate to frequent gravel, horizon clarity fair	Animal bone
139	Fill	Gully or ditch	4	Single fill of gully/ditch. Pottery LIA.	0.68 x 0.26m	Greyish brown, silty clay with sand, friable, gravel inclusions, horizon clarity clear	Pot x8, fired clay x3, animal bone, flint
140	Fill	Post pit	5.7, 5.9	Fill of post pit	c.0.40 x 1.0+m	Mid grey, clayish silt, friable, moderate gravel, horizon clarity fair	
141	Cut feature	Post pit	5.7	Top two post holes associated with ditch [134] terminal, main post hole at north end of ditch, possibly forms a gated entrance. Due to high water table unable to record or dig fully, no photos taken	c.0.40 x 1.0+m as seen	Circular, sides vertical to very steep, not bottomed	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
142	Fill	Post hole	5.7	Single fill of post hole, more gravel around edge of cut	c.0.45 x 0.25m	Mid grey, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None
143	Cut feature	Post hole	5.7, 5.9	One of two post holes associated with ditch [134] terminal, possibly placed as support to post hole [141]	c.0.45 x 0.25m	Circular, sides very steep, base concave	
144	Fill	Gully or ditch	4	Single fill of gully/ditch. Pottery LIA.	0.56 x 0.10m	Greyish brown, silty clay with dand, friable, gravel inclusions, horizon clarity clear	Pot x2
145	Fill	Ditch	11	Upper ditch fill	>1.0 x 1.05 x 0.17m	Mid grey, silty clay, friable, occasional to moderate gravel, horizon clarity fair	None
146	Cut feature	Ditch	11	Possible field boundary running NE-SW. This is the only feature in Area B encountered in the upper subsoil layer (256) when this was removed. All others were cut into the natural (258) and sealed by the lower subsoil (257)	>1.0 x 1.05 x 0.27m	Linear, sides 45 degrees, base concave	
147	Fill	Ditch	11	Lower ditch fill	>1.0 x 0.50 x 0.10m	Mid brownish grey, sandy clayish silt, friable, moderate to frequent gravel, horizon clarity fair	None
148	Fill	Gully	11	Fill of gully	0.85 x 0.20m	Mid grey-brown, silty clay (mainly clay), friable to plastic, occasional gravel up to 5mm	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
149	Cut feature	Gully	11	Cut of NE-SW gully feature	0.85 x 0.20m	Linear, rounded corners, sides gently curving, concave, base gently rounded	
150	Cut feature	Ditch	5.3	Distinct cut of earliest ditch which was recut along much of its course by [151]. Pottery EIA.	>5.0 x 0.9 x 0.24m	Linear (oval enclosure), Sides concave and 45 degrees approx, U shaped, base concave	Pot x1
151	Cut feature	Ditch	5.3	Recut of ditch [150]	2.0 x 0.6m	Curving linear, corners gently rounded, sides curving, base concave	
152	Cut feature	Ditch	5.3	Appears to be a recut of earlier ditch [153]	2.0 x 0.80m	Linear, sharp corners, sides curving, concave base	
153	Cut feature	Ditch	5.2	Possibly original ditch cut, orientated SW-NE	0.45+ x 0.35m	Linear, curved corners, sides curving, base rounded	
154	Fill	Ditch	11	Fill of ditch, appears to be a field boundary as the fills appear similar throughout.	0.70 x 0.21m	Mid greyish brown, slightly silty clay, sticky, occasional gravel to 5mm	None
155	Fill	Ditch	11	Fill of boundary ditch [148], NW of (154)	0.72 x 0.26m	Mid greyish brown, slightly silty clay, sticky, occasional gravel to 5mm	None
156	Cut feature	Ditch terminus or post hole	6	Possible linear terminus, NW-SE orientated, recut by [157]	>1.0 x 0.75 x 0.45m	Poss linear terminus, sides steep to very steep, base concave	
157	Cut feature	Ditch	6	Possible boundary or drainage ditch, orientated NW-SE, recut by [158]	>1.0 x 1.90 x 0.64m	Linear, sides	
158	Cut feature	Ditch	6	Recut of ditch [157] orientated NW-SE	>1.0 x 1.80 x 0.65m	Linear, sides 45 degrees approx, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
159	Fill	Ditch	5.3	Single fill of original oval enclosure ditch [150]. Finds from upper ditch indicate probable Early Bronze Age date (may be late Neolithic but pot too sturdy). No finds from this context.	0.90 x 0.24m	Mid greyish brown, slightly silty clay, sticky, infrequent gravel pebbles to 2cm, horizon clarity clear	None
160	Fill	Ditch	5.3	Single fill of upper (recut) ditch of oval enclosure [151. Pottery LIA.	2.0 x 0.6m	Mid greyish brown slighly lighter than (159), Slightly silty clay, sticky, occasional gravel to 5mm, horizon clarity clear	Pot x5 (1 vessel), animal bone, flint
161	Fill	Ditch terminus or post hole	6	Lower/primary fill of ditch terminus or post hole	>1.0 x 0.36 x 0.80m	Mid to dark grey organic looking, silty clay, waterlogged with plastic/friable elements, occasional charcoal flecks and gravel pebbles to 5mm, horizon clarity discernable	Animal bone
162	Fill	Ditch terminus or post hole	6	Secondary fill of ditch terminus or post hole, this is material that has slumped in	>1.0 x 0.12 x 0.30m	Yellow-orange, silty sand, waterlogged with friable/plastic elements, occasional gravel pebbles, horizon clarity good	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
163	Fill	Ditch terminus or post hole	6	Upper fill of ditch terminus or post hole	>1.0 x 0.48 x 0.20m	Mid to dark grey organic looking, silty clay, waterlogged with friable/plastic elements, occasional charcoal flecks and gravel pebbles to 5mm, horizon clarity discernable	None
164	Fill	Ditch terminus or post hole	6	Fill of ditch terminus or post hole	>1.0 x 2.20 x 0.60m max	Dark grey (near black) organic looking, silty clay, waterlogged with friable/plastic elements, moderate charcoal and pebbles to 5mm, horizon clarity discernable	None
165	Fill	Ditch	6	Middle fill of ditch	>1.0 x 1.60 x 0.40m	Pale brown & pale orange-brown mixed, silty sandy clay, waterlogged with friable/plastic elements, inclusions of occasional light grey clay with charcoal and pebbles to 5mm, horizons a mix of materials/deposits	None
166	Fill	Ditch	6	Upper fill of ditch	>1.0 x 1.20 x 0.16m	Mid grey-brown, silty clay, wet plastic, occasional charcoal and rounded pebbles to 5mm, horizon clarity fair	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
167	Fill	Ditch	5.3	Fill of ditch	0.45+ x 0.35+m	Mid grey-brown (more grey), silty clay, friable/plastic elements, moderate gravel pebbles to 5mm with occasional charcoal flecks, horizon clarity good	
168	Fill	Ditch	5.3	Lowest/primary fill of ditch	0.60 x 0.10m	Mid grey-brown (more grey), silty clay, friable/plastic elements, moderate gravel pebbles to 5mm and occasional charcoal flecks, horizon clarity good	
169	Fill	Ditch	5.3	Upper fill of ditch. Pottery LIA.	2.0 x 0.68m	Mid grey-brown, silty clay, wet/plastic, occasional gravel pebbles to 5mm and occasional charcoal flecks, horizon clarity good	Pot x1, fired clay x2
170	Cut feature	Ditch	5.1, 5.6	Cut of SE-NW linear ditch	1.86 x 0.58m	Linear, sides sloping inwards, base flat and rising towards NE end	
171	Fill	Ditch	5.1, 5.6	Single fill of ditch. Pottery LIA.	1.86 x 0.58m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	Pot x1, animal bone, flint
172	Cut feature	Ditch	5.2	Cut of SE-NW linear ditch	0.80 x 0.44m	Linear, sides slope inwards, base flat	
173	Fill	Ditch	5.2	Single fill of ditch. Pottery LIA.	0.80 x 0.44m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	Pot x2, animal bone, flint
174	Cut feature	Ditch	5.3, 5.4	Cut of SE-NW linear ditch.	2.50 x 1.0m	Linear, sides sloping inwards, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
175	Fill	Ditch	5.3, 5.4	Primary ditch fill	1.90 x 0.60m	Light brown with orange flecks, silty clay, firm, gravel inclusions, horizon clarity clear	Animal bone
176	Fill	Ditch	5.3, 5.4	Secondary (top) fill of ditch. Pottery LIA.	2.15 x 0.40m	Light grey, clay, firm, gravel inclusions, horizon clarity clear	Pot x2, animal bone
177	Fill	Gully/terminus	6	Fill of gully/terminus. Pottery LIA.	1.55+ x 0.40m	Dark grey (near black) organic looking, silty clay, waterlogged with plastic/friable elements, moderate charcoal and occasional pebbles to 5mm and yellow orange silty clay deposits, horizon clarity discernable	Pot x8 (1 vessel), fired clay x2, animal bone, flint
178	Fill	Pit	8	Fill of small pit. Pottery LIA.	0.50 x 0.08m	Mid grey-brown (more grey), silty clay, friable/plastic elements, sparse charcoal and pebbles to 5mm, horizon clarity good	Pot x18
179	Cut feature	Pit	8	Cut of small pit	0.50 x 0.08m	Sub-circular, sides curve gently to base, base gently undulating	None
180	Cut feature	Ditch	6	Cut of linear NE-SW ditch	1.54 x 0.63m	Linear, sides sloping inwards, base flat	
181	Fill	Ditch	6	Single fill of ditch. Pottery EIA.	1.54 x 0.63m	Greyish brown, silty clay, firm, gravel inclusions, horizon clarity clear	Pot x6 (1 vessel), fired clay x1, animal bone, flint
182	Cut feature	Ditch	6	Cut of possible NW-SE boundary/drainage ditch, recut by [157]	>1.0 x 0.80 x 0.44m	Linear, sides 45 degrees approx, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
183	Fill	Ditch	6	Possible fill of recut ditch. Pottery LIA.	>1.0 x 1.30 x 0.24m	Dark grey/black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	Pot x9, fired clay x1 (sf2), animal bone, flint
184	Cut feature	Ditch	6	Possible recut of NW-SE ditch [157]	>1.0 x 1.30 x 0.24m	Linear, sides 45 degrees approx, base concave	
185	Fill	Ditch	6	Upper silting fill of ditch [157]	>1.0 x 0.80 x 0.50m	Dark grey/black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None
186	Fill	Ditch	6	Slumping deposit on E side of ditch [157]	>1.0 x 0.42 x 0.20m	Mixed orange/brown/grey, clayish sand, friable, moderate to frequent gravel, horizon clarity fair	None
187	Fill	Ditch	6	Base fill of ditch [157]	>1.0 x 0.40 x 0.12m	Mid grey to black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None
188	Fill	Ditch	6	Single fill of ditch	>1.0 x 0.80 x 0.44m	Pale grey, silty sand, friable, occasional small gravel, horizon clarity good	Animal bone
189	Fill	Ditch	6	Top fill of ditch, possibly natural silting. Pottery EIA/LIA.	>1.0 x 1.36 x 0.36m	Light grey, silty clay, firm, gravel inclusions, horizon clarity clear	Pot x6, animal bone, flint
190	Fill	Ditch	6	Primary fill of ditch	>1.0 x 1.68 x 0.72m	Light brown, silty clay with sand, firm, gravel inclusions, horizon clarity clear	Animal bone
191	Fill	Ditch	6	Lower fill of ditch. Pottery LIA.	>1.0 x 1.50 x 0.15m	Dark grey, silty clay, friable, occasional to moderate gravel, horizon clarity fair	Pot x1
192	Fill	Ditch	6	Upper fill of ditch [157] partially truncated by recut ditch [158]	>1.0 x 0.70 x 0.15m	Mid grey, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
193	Fill	Ditch	6	Lower fill of ditch [157]	>1.0 x 1.10 x 0.45m	Dark grey to black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None
194	Fill	Ditch	6	Lower fill of ditch [157]. Pottery LIA.	>1.0m	Dark grey to black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	Pot x2, animal bone, flint
195	Fill	Ditch	6	Upper fill of ditch [157]	>1.0m	Dark grey to black, clayish silt, friable, occasional to moderate gravel, horizon clarity fair	None
196	Cut feature	Pit	8	Cut of small pit	0.55 x 0.24m	Almost circular, sides sloping inwards	
197	Cut feature	Pit	8	Cut of pit	1.46 x 0.31m	Oval, sides sloping inwards, base flat	
198	Fill	Ditch	6	Upper fill of ditch	>1.0 x 1.20 x 0.18m	Mid grey-brown, silty clay, friable, occasional to moderate gravel, horizon clarity fair	None
199	Fill	Pit	8	Single fill of pit. Pottery LIA.	0.55 x 0.24m	Light to mid grey, silty clay, firm, gravel inclusions, horizon clarity clear	Pot x8
200	Fill	Pit	8	Primary fill of pit	1.46 x 0.21m	Light to mid grey-brown, silty clay, firm, gravel inclusions, horizon clarity clear	Animal bone
201	Fill	Pit	8	Top fill of pit	1.02 x 0.20m	Mid grey, silty clay, firm, gravel inclusions, horizon clarity clear	None
202	Cut feature	Pit	10	Cut of small pit	0.58 x 0.22m	Circular, sides steep and sloping inwards, base flat	
203	Fill	Pit	10	Single fill of pit	0.58 x 0.22m	Light grey, silty clay, firm, rare gravel, horizon clarity clear	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
204	Cut feature	Ditch terminus	6	Cut of NE-SW ditch terminus	>1.0 x 1.68 x 0.44m	Linear, Sides sloping inwards, base almost flat	
205	Fill	Ditch terminus	6	Single fill of ditch terminus. Pottery EIA/LIA.	>1.0 x 1.68 x 0.44m	Light grey, silty clay, firm, rare gravel, horizon clarity clear	Pot x17, animal bone, flint
206	Cut feature	Pit	10	Cut of small pit	0.30 x 0.11m	Circular, sides sloping inwards, base concave	
207	Fill	Pit	10	Single fill of pit	0.30 x 0.11m	Very dark grey, silty clay, firm, no inclusions, horizon clarity clear	Animal bone, small amount human cremated bone
208	Cut feature	Ditch	7	Cut of discrete probable NW-SE field boundary (AS evaluation trench 23, not excavated by PCAS, no fill sheet)	>2.0 x 1.0 x 0.25m	Linear, sides 35-45 degrees U shaped, base concave	None
209	Fill	Ditch	5.8	Upper main silting fill of possible boundary/drainage ditch. Pottery LIA.	>1.0 x 1.35 x 0.46m	Mid to dark grey, clayish silt, friable, occasional to moderate small gravel, horizon clarity fair	Pot x1, animal bone, flint
210	Cut feature	Ditch	5.8	Cut of possible NW-SE boundary/drainage ditch	>1.0 x 1.35 x 0.55m	Linear, sides steep to 45 degrees, base concave	
211	Fill	Ditch	5.2	Main upper fill of boundary/drainage ditch	>1.0 x 1.22 x 0.35m	Pale to mid grey, clayish silt, friable, occasional to moderate small gravel, horizon clarity fair	Animal bone
212	Cut feature	Ditch	5.2	Cut of possible NW-SE boundary/drainage ditch	>1.0 x 1.22 x 0.42m	Linear, sides 45 degrees approx, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
213	Fill	Ditch	5.6	Upper main silting fill of possible boundary/drainage ditch	>1.0 x 1.0 x 0.26m	Mid grey, clayish silt, friable, occasional to moderate small gravel, horizon clarity fair	None
214	Cut feature	Ditch	5.6	Cut of possible NW-SE boundary/drainage ditch	>1.0 x 1.0 x 0.26m	Linear, sides 45 degrees approx, base concave	
215	Fill	Post hole	5.5	Fill of post hole, indistinguishable from (217) and (219)	c.0.35 x 0.18m	Mid to pale grey, clayish silt with sand, friable, occasional to moderate gravel,, horizon clarity fair	None
216	Cut feature	Post hole	5.5	Cut of post hole, associated with [218] and contemporary with [220]	c.0.35 x 0.18m	Circular, sides 45 degrees approx, base concave	
217	Fill	Post hole	5.5	Fill of post hole, indistinguishable from (215) and (219)	c.0.40 x 0.30m	Mid to pale grey, clayish silt with sand, friable, occasional to moderate gravel,, horizon clarity fair	None
218	Cut feature	Post hole	5.5	Cut of post hole, associated with [216] and gully [220]	c.0.40 x 0.30m	Circular, sides 45 degrees approx, base concave	
219	Fill	Gully	5.5	Fill of gully, indistinguishable from (215) and (217)	5.2 x 0.82 x 0.52m	Mid to pale grey, clayish silt with sand, friable, occasional to moderate gravel,, horizon clarity fair	Flint
220	Cut feature	Gully	5.5	Cut of NW-SE gully, associated with post holes [216] and [218]	5.2 x 0.82 x 0.52m	Linear, sides very steep to 45 degrees, base concave	
221	Cut feature	Ditch		Cut of a shallow E-W ditch	>1.0 x 0.58 x 0.21m	Linear, sides sloping inwards, base concave	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
222	Fill	Ditch		Single fill of shallow ditch	>1.0 x 0.58 x 0.21m	Light grey, silty clay, firm, gravel inclusions, horizon clarity clear	None
223	Cut feature	Ditch	9	Re-cut of a small NE-SW linear ditch	>1.0 x 0.38 x 0.09m	Linear, sides sloping inwards, base concave	
224	Fill	Ditch	9	Single fill of ditch	>1.0 x 0.38 x 0.09m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	None
225	Cut feature	Ditch	9	Cut of a shallow NE-SW linear ditch	0.37 x 0.12m	Linear, sides sloping inwards, base concave	
226	Fill	Ditch	9	Single fill of ditch	>1.0 x 0.37 x 0.12m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	None
227	Fill	Ditch	5.5	Lower ditch fill, silting or washed in deposit	>1.0 x 0.78 x 0.40-0.50m	Mid grey to brown, clayish silt with sand, friable, frequent gravel, horizon clarity fair	None
228	Fill	Ditch	5.2	Lower ditch fill, silting or washed in deposit	>1.0 x 0.48 x 0.30-0.40m	Mid grey to brown, clayish silt with sand, friable, frequent gravel, horizon clarity fair	None
229	Fill	Ditch	5.6	Lower ditch fill, silting or slumping deposit	>1.0 x 0.38 x 0.50-0.60m	Mid greyish brown, clayish silt with sand, friable, frequent gravel, horizon clarity fair	None
230	Fill	Ditch	9	Single fill of ditch	>1.0 x 0.37 x 0.16m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	None
231	Fill	Ditch	9	Fill of ditch	>1.0 x 0.35 x 0.11m	Light brown, silty clay, firm, gravel inclusions, horizon clarity clear	None
232	Cut feature	Ditch terminus	6	Cut of NW-SE ditch terminus	>1.0 x 1.02 x 0.42m	Linear, sides sloping inwards	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
233	Fill	Ditch terminus	6	Primary fill of ditch terminus. Pottery LIA.	>1.0 x 0.78 x 0.37m	Mid to light grey, silty clay, firm, sparse gravel, horizon clarity clear	Pot x1, animal bone
234	Fill	Ditch terminus	6	Top fill of ditch terminus	>1.0 x 0.60 x 0.18m	Mid to light grey (slightly darker than (233)), silty clay, firm, sparse gravel, horizon clarity clear	None
235	Cut feature	Linear	5.6	Cut of linear/curvilinear feature	>1.0 x 0.80+ x 0.30m	Linear or curvilinear, curving sides, curved base	
236	Cut feature	Linear	5.1, 5.2	Cut of linear/curvilinear feature	>1.0 x 1.40+ x 0.90m	Linear or curvilinear, curving sides, rounded base	
237	Cut feature	Linear	5.3, 5.4	Cut of linear/curvilinear feature	>1.0 x 1.60+ x 0.40m	Linear or curvilinear, curving sides, curved base	
238	Cut feature	Pit	12	Cut of small pit	1.13 x 0.34m	Circular, sides sloping inwards, base concave	
239	Fill	Pit	12	Top fill of small pit	0.97 x 0.34m	Mid brown, silty clay, firm, sparse gravel, horizon clarity clear	None
240	Fill	Linear	5.6	Fill of linear feature. Pottery LIA.	>1.0 x 0.80 x 0.30m	Mid to dark grey-brown, silty/sandy clay, friable, occasional pebbles to 10mm, horizon clarity good	Pot x1, animal bone, flint
241	Fill	Linear	5.2	Upper fill of linear feature. Pottery LIA.	>1.0 x 1.40+ x 0.25m	Mid grey-brown, silty clay, friable, moderate pebbles to 10mm, horizon clarity good	Pot x1, flint
242	Fill	Linear	5.1	Lower fill of linear feature	>1.0 x 2.10+ x 0.25m	Mix of red/orange sand and mid grey-brown silty sand, loose, frequent gravel pebbles to 10mm, horizon clarity clear	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
243	Fill	Linear	5.3, 5.4	Upper fill of linear feature	>1.0 x 1.40+ x 0.20m	Mid grey-brown, sandy clay, plastic, occasional pebbles to 10mm, horizon clarity discernable	
244	Fill	Linear	5.3, 5.4	Fill of linear feature	>1.0 x 1.30+ x 0.25m	Yellowish grey-brown, sandy clay, plastic, occasional gravel pebbles to 10mm, horizon clarity good	
245	Cut feature	Ditch	5.8	Cut of ditch	>1.0 x 1.10 x 0.40m	Linear/curvilinear, sides curving, base rounded concave	
246	Fill	Ditch	5.8	Fill of ditch	>1.0 x 1.10 x 0.40m	Mix of mid grey-brown and dark grey-brown, silty clay, plastic, occasional flints/pebbles to 10mm, horizon clarity good	
247	Fill	Gully	5.7	Fill of gully	>1.0 x 0.70 x 0.25m	Mid to light grey-brown, silty clay, plastic, moderate pebbles to 10mm, horizon clarity good	Animal bone
248	Cut feature	Gully	5.7	Cut of SW-NE gully	>1.0 x 0.70 x 0.25m	Linear/curvilinear, sides curved, base rounded	
249	Cut feature	Ditch/gully	7	Cut of E-W ditch/gully	>0.50 x <0.12m	Linear, sides sloping and very shallow, base slightly concave	
250	Fill	Pit	12	Primary fill of pit, represents a slumped deposit	0.15 x 0.30m	Light yellowish brown, silty clay with sand, firm, gravel inclusions, horizon clarity clear	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
251	Fill	Ditch	5.7	Upper fill of major ditch feature	3.0 x 0.65m	Mid to dark grey-brown silty clay with yellow-brown silty clay deposits, friable to plastic, occasional pebbles to 10mm, horizon clarity good	
252	Fill	Ditch	5.7	Lower fill of major ditch feature	3.25 x 0.75m	Mid to dark grey-brown silty clay with yellow-brown silty clay and red-orange sand deposits, friable to plastic, frequent pebbles to 10mm, horizon clarity good	
253	Cut feature	Ditch	5.7	Cut of major NE-SW ditch feature	3.25 x 0.75m	Curvilinear, sides double-curved, base flat	
254	Fill	Ditch/gully	7	Natural silting of ditch/gully	>0.50 x <0.12m	Light to mid grey-brown, slightly sandy silt, friable to firm (waterlogged), horizon clarity moderate	None
255	Layer	Layer		Topsoil	Whole area x 0.30-0.40m	Dark greyish brown, slightly silty clay, firm & sticky, occasional pebble/stone, horizon clarity clear	None
256	Layer	Layer		Upper subsoil	Whole area x 0.20-0.30m	Slightly yellowish grey-brown, silty clay, compact, occasional small pebble/stone, horizon clarity clear with topsoil less so with lower subsoil	None

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
257	Layer	Layer		Lower subsoil	Whole area x 0.10m	Mid slightly orangey brown, silty clay, compact, occasional pebble/small stone, horizon clarity generally well defined with natural (258) and moderately clear with upper subsoil (256)	
258	Layer	Layer		Natural	Whole area	Mid orange-brown, sandy clay, variable-friable, small gravel & pebble inclusions, horizon clarity fairly clear	None
1005	Cut	Ditch	1	Located in Trench 3	2.00+ x 0.60 x 0.13m	Linear in plan orientated east/ west. It had moderately sloping sides and a concave base.	
1006	Fill	Ditch 1005	1	Pottery Medieval		Firm, mid grey brown silt clay with occasional small angular stones.	Pot x2
1009	Cut	Ditch	1	Located in Trench 3	2.00+ x 0.84 x 0.21m	Linear in plan, orientated east/west. It had moderately sloped sides and a concave base.	
1010	Fill	Ditch 1009	1			Compact, light red brown silt clay with occasional, small rounded stones.	None
1030	Cut	Ditch	5.1	Located in Trench 11	2.00+ x 0.42 x 0.24m	Linear in plan (NW / SE), with steep sides and a flat base.	
1031	Fill	Ditch 1030	5.1			Compact, dark yellow brown chalk clay with occasional small, sub-rounded stones.	Str. Flint x1

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1032	Cut	Ditch	5.2	Located in Trench 11	2.00+ x 0.56 x 0.39m	Linear in plan (NE / SW), with steep sides and a concave base.	
1033	Fill	Ditch 1032	5.2	Basal fill		Compact, mid yellow grey chalk clay with occasional small, subrounded stones	None
1034	Fill	Ditch 1032	5.2	Upper fill		Compact, mid yellow brown chalk clay with occasional small, subangular stones.	None
1035	Cut	Ditch	5.6	Located in Trench 11	2.00+ x 1.34 x 0.30m	Linear in plan (NW / SE), with moderately sloping sides and a concave base.	
1036	Fill	Ditch 1035	5.6			Compact, mid blue grey silt clay with occasional small, irregular shaped stones.	Str. Flint x1
1041	Cut	Ditch	4	Located in Trench 18	2.00+ x 0.50 x 0.29m	Linear in plan (NW/SE), with near vertical sides and a concave base.	
1042	Fill	Ditch 1041	4	Pottery Late Neo/EBA		Compact, mid green [?grey] brown clay gravel.	Pot x22, animal bone
1043	Cut	Ditch	5.3	Located in Trench 18	2.00+ x 2.50 x 0.79m	Linear in plan (NW/SE), with steep sides and a concave base.	
1044	Fill	Ditch 1043	5.3	Pottery LBA/EIA		Firm, mid grey brown silt clay with small, sub-angular stones.	Pot x29, CBM, animal bone, burnt stone x1, str. Flint x2

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1045	Cut	Re-cut ditch	5.4	Located in Trench 18	2.00+ x 1.65 x 0.36m	Linear in plan (NW/SE), with steep sides and a concave base.	
1046	Fill	Re-cut ditch 1045	5.4	Pottery Late Neo/EBA		Compact, dark grey brown silt clay with moderate small, subangular stones.	Pot x26, animal bone
1047	Cut	Ditch	6	Located in Trench 11	2.00+ x 0.81 x 0.60m	Linear in plan (N / S), with steep sides and a narrow concave base.	
1048	Fill	Ditch 1047	6			Friable, dark brown silt clay with occasional small stones.	Animal bone, str. flint
1059	Cut	Ditch	6	Located in Trench 11	2.00+ x 0.80 x 0.36m	Linear in plan (N / S), with steep sides and a concave base.	
1060	Fill	Ditch 1059	6			Friable, dark brown silt clay with occasional small stones.	Animal bone, str. flint
1075	Cut	Ditch	5.3	Located in Trench 17	2.00+ x 1.80 x 0.90m	Linear in plan (NE/SW), with moderately sloping sides and a concave base.	
1076	Fill	Ditch 1075	5.3	Pottery Neolithic		Firm, mid grey blue silt clay with occasional small, subrounded stones.	Pot x10, animal bone
1077	Fill	Ditch 1075	5.3	Pottery IA		Firm, mid brown grey silt clay with occasional small, subrounded stones.	Pot x5, animal bone
1082	Cut	Ditch	5.2	Located in Trench 18	2.00+ x 0.70 x 0.33m	Linear in plan (NW/SE), with steep sides and a concave base.	
1083	Fill	Ditch 1082	5.2	Pottery Late Neo/EBA		Firm, mid grey brown silt clay with moderate small, subrounded stones.	Pot x3

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1084	Cut	Ditch	5.1	Located in Trench 18	2.00+ x 0.30 x 0.20m	Linear in plan (NW/SE), with moderately sloping sides and a concave base	
1085	Fill	Ditch 1084	5.1			Firm, light yellow brown silt with moderate small, subrounded stones.	None
1086	Cut	Ditch	5.6	Located in Trench 18	2.00+ x 1.10 x 0.37m	Linear in plan (NW/SE), with moderately sloping sides and a concave base	
1087	Fill	Ditch 1086	5.6			Compact, mid yellow brown silt with moderate small, subangular stones.	None
1098	Cut	Ditch	5.3	Located in Trench 17	2.00+ x 1.90 x 0.80m	Linear in plan (E/W), with steep sides and a flat base	
1099	Fill	Ditch 1098	5.3	Pottery Late Neo/EBA		A firm, light brown silt clay with occasional small, subrounded stones.	Pot x25
1100	Cut	Ditch	5.7	Located in Trench 17	2.00+ x 2.30 x 0.75m	Linear in plan (E/W), with steep sides and a flat base	
1101	Fill	Ditch 1100	5.7	Pottery LBA/IA		Firm, light brown silt clay with occasional small, subrounded stones.	Pot x4, animal bone, cu frags
1115	Cut	Ditch	5.7, 5.9	Located in Trench 16	2.00+ x 2.00 x 0.67m	Linear in plan (NW/SE), with steep sides and a concave base.	
1116	Fill	Ditch 1115	5.7, 5.9			Firm, blue grey clay silt with occasional small stones.	Animal bone
1117	Fill	Ditch 1115	5.7, 5.9	Pottery Prehistoric		Friable, light orange brown silty sand with occasional small, sub-rounded stones.	Pot x1

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1118	Fill	Ditch 1115	5.7, 5.9	Pottery LBA/EIA		Friable, light orange brown silty sand with occasional small, sub-rounded stones.	Pot x3
1119	Fill	Ditch 1115	5.7, 5.9	Pottery LBA/EIA		Firm. Mid blue grey sand clay with occasional small, sub-angular stones.	Pot x23, animal bone, burnt stone
1120	Cut	Ditch	5.9	Located in Trench 16	2.00+ x 1.78 x 0.69m	Linear in plan (NW/SE), with steep sides and a concave base.	
1121	Fill	Ditch 1120	5.9			Friable, dark grey brown silty clay.	Animal bone
1122	Fill	Ditch 1120	5.9			Friable, light red brown sand with frequent small stones None (grit).	None
1123	Fill	Ditch 1120	5.9	Pottery LBA/EIA		Firm, mid red brown silt clay with occasional chalk and small, sub-angular stones.	Pot x2, animal bone, slag
1124	Cut	Ditch	5.7	Located in Trench 16	2.00+ x 1.90 x 0.75m	Linear in plan (E/W), with steep sides and a concave base.	
1125	Fill	Ditch 1124	5.7	Pottery LBA/EIA		Compact, mid grey brown silt clay with moderate charcoal and small, sub-rounded and subangular stones.	Pot x29, animal bone, str. Flint, f.clay
1126	Fill	Ditch 1124	5.7			Friable, mid red yellow sand gravel.	None
1127	Fill	Ditch 1124	5.7	Pottery LBA/EIA		Compact, dark grey brown silt clay with moderate, medium sized subangular stones.	Pot x4, animal bone, str. flint

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1128	Cut	Ditch	5.6	Located in Trench 16	2.00+ x 0.82 x 0.40m	Linear in plan (E/W), with steep sides and a concave base.	
1129	Fill	Ditch 1128	5.6			Compact, light brown yellow chalk gravel.	None
1130	Cut	Ditch	5.2	Located in Trench 16	2.00+ x 0.51 x 0.35m	Linear in plan (E/W), with near vertical sides and a concave base.	
1131	Fill	Ditch 1130	5.2			Compact, mid brown yellow clay gravel.	None
1132	Cut	Ditch	5.1	Located in Trench 16	2.00+ x 0.72 x 0.50m	Linear in plan (E/W), with steep sides and a concave base.	
1133	Fill	Ditch 1132	5.1	Pottery Late Neo/EBA		Compact, dark brown yellow clay gravel with occasional chalk.	Pot x1, animal bone
1134	Cut	Ditch	5.3	Located in Trench 16	2.00+ x 1.35 x 0.47m	Linear in plan (E/W), with steep sides and a concave base.	
1135	Fill	Ditch 1134	5.3	Pottery Late Neo/EBA		Compact, mid yellow brown clay gravel with frequent chalk.	Pot x8, animal bone, str. flint
1136	Cut	Gully	5.4	Located in Trench 16	2.00+ x 0.80 x 0.23m	Linear in plan (E/W), with moderately sloping sides and a concave base.	
1137	Fill	Gully 1136	5.4	Pottery LBA/EIA		Compact, dark grey brown silt clay with occasional chalk and small, subrounded stones.	Pot x2, animal bone
1138	Cut	Post hole	5.7	Located in Trench 16	0.12 x 0.15 x 0.09m	Sub-circular in plan, with steep sides and a concave base.	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1139	Fill	Post hole 1138	5.7			Compact, dark grey brown silt clay with occasional small, sub-rounded stones.	None
1140	Cut	Ditch	5.7	Located in Trench 16	2.00+ x 1.09 x 0.40m	Linear in plan (E/W), with steep sides and a concave base.	
1141	Fill	Ditch 1140	5.7			Firm, light yellow brown silt clay with moderate small, sub-rounded stones.	None
1142	Cut	Ditch	7	Located in Trench 16	2.00+ x 0.50 x 0.25m	Linear in plan (E/W), with steep sides and a concave base.	
1143	Fill	Ditch 1142	7			Friable, dark grey brown silt clay with occasional small, sub-rounded stones.	None
1144	Cut	Ditch	7	Located in Trench 20	2.00+ x 0.55 x 0.33m	Linear in plan (N/S), with near vertical sides and a concave base	
1145	Fill	Ditch 1144	7			Friable, dark grey brown silt clay with occasional, subrounded small stones.	None
1146	Cut	Gully	9	Located in Trench 20	4.00+ x 0.45 x 0.13m	Linear in plan, orientated NE/SW). It had steep sides and a concave base.	
1147	Fill	Gully 1146	9			Firm, mid grey brown silt clay with occasional small, sub-rounded stones.	Animal bone, clay pipe
1148	Cut	Gully	9	Located in Trench 20	4.00+ x 0.50 x 0.12m	Linear in plan, orientated NE/SW). It had steep sides and a concave base.	

NRCX15 Context Summary							
Context	**Context type**	**Feature type**	**Group No.**	**Interpretation**	**Dimensions**	**Description**	**Finds**
1149	Fill	Gully 1148	9			Firm, mid grey brown silt clay with occasional small, sub-rounded stones.	None
1152	Cut	Ditch	5.8	Located in Trench 20	2.00+ x 1.30 x 0.54m	Linear in plan (E/W), with steep sides and a flat base.	
1153	Fill	Ditch 1152	5.8	Pottery LBA/EIA		Friable, dark grey brown silt clay with occasional small, subangular stones.	Pot x8, animal bone
1154	Cut	Ditch	5.2	Located in Trench 20	2.00+ x 0.90 x 0.32m	Linear in plan (E/W), with moderately sloping sides and a concave base.	
1155	Fill	Ditch 1154	5.2			Friable, dark grey brown silt clay with occasional small, subangular stones.	Animal bone
1156	Cut	Ditch	5.6	Located in Trench 20	2.00+ x 0.80 x 0.24m	Linear in plan (E/W), with moderately sloping sides and a concave base.	
1157	Fill	Ditch 1156	5.6			Friable, dark grey brown silt clay with occasional small, subangular stone inclusions.	None
1158	Cut	Ditch	7	Located in Trench 23	2.00+ x 1.00 x 0.25m	Linear in plan, orientated NW/SE. It had moderately sloped sides and a concave base.	
1159	Fill	Ditch 1158	7			Compact mid grey brown silt clay.	None

Prehistoric Pottery

By Sarah Percival

A total of 230 sherds weighing 1,302g were collected from 26 excavated contexts. A small number of sherds have flint-tempered fabrics suggesting that they are of earlier Iron Age date (500-350BC) however the majority of the sherds are Later Iron Age dating to around 350-100/50BC.The assemblage is in poor condition with an average sherd weight of 6g.

Pottery Spotdate	Quantity	Weight (g)
Earlier Iron Age	12	39
Later Iron Age 350-100BC	218	1263
Total	**230**	**1302**

Table 1: Quantity and weight of pottery by spotdate

Methodology

The assemblage was analysed in accordance with the guidelines for analysis and publication laid down by the Prehistoric Ceramic Research Group (PCRG 1997, 2010). The total assemblage was studied and a full catalogue prepared. The sherds were examined macroscopically and were divided into fabric groups defined on the basis of inclusion types. Fabric codes were prefixed by a letter code representing the main inclusion type: F representing flint, G representing grog and Q representing quartz. Vessel form was recorded: R representing rim sherds, B representing base sherds, D representing decorated sherds and U representing undecorated body sherds. The sherds were counted and weighed to the nearest whole gram. Decoration, condition, food residues and sooting were also noted. The catalogue was recorded using Microsoft Excel 2010.

Earlier Iron Age

Twelve sherds weighing 39g are made of flint-tempered fabrics suggesting a Post Deverel-Rimbury date. The assemblage includes a rim from a small plain cup but is otherwise composed of undecorated bodysherds. Three sherds weighing 12g came from curvilinear features [119], [126] and [150], seven sherds including the cup rim from ‘L’ shaped feature [180] and single sherds from ditch [112] and linear [204].

Later Iron Age

The small Later Iron Age assemblage comprises 218 sherds weighing 1,263g and includes rims from nine vessels.

Fabric

Eleven fabrics were identified in two fabric groups (Table 2). Sandy fabrics containing dense quartz sand and a range of other inclusions (Q fabrics) were the most numerous forming 60% of the total assemblage by weight (756g). The remaining 40% of the sherds contain fossil shell, either sparse to moderate or coarse (fabrics S1 and S2). The range of fabrics is similar to those observed at many sites in the

area for example Bobs Wood, Huntingdon and Little Paxton, St Neots (Percival in prep; Hancocks 2003). At the Iron Age site at Loves Farm, St Neots, sandy fabrics dominate the assemblage from perhaps around 300BC and predominantly sandy assemblages were also found at later Iron Age sites along the A428 corridor (Percival 2008, Appendix 05)

Spot Date	Fabric	Description	Quantity	Weight (g)	No. of vessels
Later Iron Age	Q1	Common quartz sand clear to opaque rounded grains >1mm	25	186	3
	QCh	Common quartz sand with moderate medium sub-angular chalk >3mm	25	124	1
	QG	Common quartz sand with sub-rounded pale grog >3mm	1	1	
	QL	Common quartz sand with coarse sub-angular limestone	3	13	
	QQuS	Common quartz sand with sub-angular white quartzite and sparse shell	14	110	
	QS	Common quartz sand with moderate shell or plate-like voids	51	217	2
	QspF	Common quartz sand with sparse flint	7	62	1
	QspS	Common quartz sand with sparse shell or plate-like voids	7	43	
	S1	Common fossil shell in fine clay matrix	42	102	1
	S1v	Common fossil shell in fine clay matrix with common plate-shaped voids	24	61	
	S2	Common coarse fossil shell in fine clay matrix	19	344	1
Total			**218**	**1263**	**9**

Table 2: Quantity and weight of Later Iron Age pottery by fabric

Form and Decoration

Rims were recovered from eleven later Iron Age vessels (Table 3). These include two burnished bowls with upright rims (type A2), two unburnished slack-shouldered upright rim jars (type A), a slack-shouldered everted rim jar (type D) and a bead rim jar (type P). The assemblage is largely undecorated however one sandy body sherd from curvilinear [235] has scoring to the vessel body. Plainware vessels such as these are ubiquitous within mid to later Iron Age assemblages in Cambridgeshire and represent the basic utilitarian cooking jar (Hill and Horne 2003, 174).

One rim from a large storage jar in coarse shell rich fabric from curvilinear feature [151] has an applied cordon running beneath the rim. The preference for coarser shelly fabrics for larger storage vessels and for some cooking jars was also observed at Loves Farm (Percival forthcoming), Little Paxton (Hancocks 2003, 76), Haddenham V (Hill and Braddock 2006) and Bob's Wood, Hinchingbrooke (Percival forthcoming).

Spot Date	Vessel Type	Form	Quantity	Weight (g)	No. of vessels
Later Iron Age 350-100BC	Bowl	A2	5	107	2
	Jar	Uncertain	1	3	1
		A	2	28	2
		D	1	13	1
		P	1	8	1
	Storage jar		1	125	1
Total			**11**	**284**	**9**

Table 3: Quantity and weight of Later Iron Age pottery by form

Deposition

Over 57% of the total assemblage by weight was recovered from the fills of curvilinear features (Table 4). The bulk of the remainder came from ditches and linear features. A total of 8% was found in pits and less than 1% in the fills of 'L'-shaped features [181] and [189]. The deposition of the pottery is again typical for Later Iron Age sites in the region being found for example at Bobs Wood and Loves Farm (Percival forthcoming a and b).

Feature Type	Quantity	Weight (g)	No. of vessels	% weight
Curvilinear	97	562	6	44.50%
Curvilinear terminus	7	158	1	12.51%
Ditch	14	168		13.30%
Linear	41	231	2	18.29%
Linear terminus	12	39		3.09%
L-shaped feature	5	4		0.32%
Pit	42	101		8.00%
Total	**218**	**1263**	**9**	**100.00%**

Table 4: Quantity and weight of Later Iron Age pottery by feature type

Discussion

The assemblage appears to be typical of later Iron Age pottery found in the region from around 300BC onwards. The origin of the pottery is likely to be domestic with the majority of the sherds being redeposited in ditches and linear features.

Appendix 1: Prehistoric Pottery by feature

Feature	Feature Type	Context	Spot Date	Quantity	Weight (g)	No. of vessels
101	Pit	100	Later Iron Age	6	13	
		111	Later Iron Age	6	24	
102	Curvilinear	103	Later Iron Age	34	159	4
		133	Later Iron Age	7	13	
		136	Later Iron Age	16	27	1
		139	Later Iron Age	8	31	
		144	Later Iron Age	2	7	
106	Pit	107	Later Iron Age	1	10	
112	Ditch	127	Earlier Iron Age	1	8	
			Later Iron Age	4	78	
		128	Later Iron Age	10	90	
117	Linear terminus	121	Later Iron Age	12	39	
119	Curvilinear terminus	118	Earlier Iron Age	1	3	
			Later Iron Age	5	59	
122	Pit	123	Later Iron Age	3	4	
126	Curvilinear	113	Later Iron Age	9	50	
		132	Earlier Iron Age	1	8	
			Later Iron Age	11	75	
134	Curvilinear terminus	137	Later Iron Age	2	99	1
150	Curvilinear	150	Earlier Iron Age	1	1	
151	Curvilinear	160	Later Iron Age	5	169	1
152	Curvilinear	169	Later Iron Age	1	1	
157	Linear	194	Later Iron Age	2	22	
158	Linear	177	Later Iron Age	8	41	1
		191	Later Iron Age	1	4	
170	Linear	171	Later Iron Age	1	5	
172	Linear	173	Later Iron Age	2	3	
174	Curvilinear	176	Later Iron Age	2	8	
179	Pit	178	Later Iron Age	18	41	
180	L-shaped feature	181	Earlier Iron Age	6	6	1
		189	Earlier Iron Age	1	7	
			Later Iron Age	5	4	
184	Linear	183	Later Iron Age	9	69	
196	Pit	199	Later Iron Age	8	9	
204	Linear	205	Earlier Iron Age	1	6	
			Later Iron Age	16	52	
210	Linear	209	Later Iron Age	1	13	1
232	Linear	233	Later Iron Age	1	22	
235	Curvilinear	240	Later Iron Age	1	14	
236	Curvilinear	241	Later Iron Age	1	8	
Total				230	1302	10

Bibliography

Hancocks, A.,	2003	*'Little Paxton Pottery' in Gibson, A., Prehistoric Pottery, People, Pattern and Purpose' Prehistoric Ceramic Research Group, Occasional Publication No.4, BAR International Series 1156, 71-110.*
Hill J.D. and Braddock, P.	2006	*The Iron Age pottery from Haddenham V. In Evans, C. and Hodder, I. Marshland communities and cultural landscapes from the Bronze Age to the present day., MacDonald Institute Monograph, Cambridge.*
Hill J.D. and Braddock, P.	1999	*The Later Iron Age pottery from Hinchingbrooke Park, Huntingdon. Unpublished report for Cambridgeshire County Council Archaeological Field Unit*
Hill, J.D. and Horne, L.	2003	*'Iron Age and Early Roman pottery' in Power and Island Communities: Excavations at the Wardy Hill Ringwork, Coveney, Ely. East Anglian Archaeology 103.145-184.*
Percival, S.,	2008	*'Pottery (Bronze Age and Iron Age)' in Abrams, J. and Ingham, D. Farming on the Edge: Archaeological Evidence from the Clay Uplands to the West of Cambridge. East Anglian Archaeology 123. (NB Specialist contributions on CD).*
Percival, S.,	2007	*'Iron Age Pottery' in Evans, C., Knight, M. and Webley, L. 'Iron Age settlement and Romanisation on the Isle of Ely: the Husrt Lane reservoir site', Proceedings of the Cambridge Antiquarian Society, XCVI, 52-56.*
Percival, S.,	2005	*'Iron Age pottery' in Mortimer, R., Regan, R. and Lucy, S. The Saxon and medieval Settlement at West Fen Road, Ely: The Ashwell Site. East Anglian Archaeology 110.*
Percival, S.,	In prep	*The Late Pre Roman Iron Age, Early Roman and Romano-British Pottery. in Zant, M. Loves Farm: Colonisation Conquest and Continuity on the Cambridgeshire Claylands. Earlier Prehistoric evidence, Iron Age, Romano-British and Early Saxon Agriculture and Settlement on land at Loves Farm, St Neots land at Loves Farm, St Neots, Cambridgeshire. East Anglian Archaeology.*
Percival, S.,	Forthcoming	*The Late Pre Roman Iron Age, Early Roman and Romano-British Pottery. In Hinman, M. Bobs Wood: Exploitation, Colonisation and Settlement on the Cambridgeshire Claylands. Neolithic Activity and Iron Age to Romano-British Settlement near Hinchingbrooke Country Park, Cambridgeshire. East Anglian Archaeology*
Prehistoric Ceramic Research Group,	2010.	*Guidelines for the Analysis and Publication, PCRG, Occasional Papers 1& 2. Third Edition*

ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of

Pre-Construct Archaeological Services Ltd

Needingworth Road
Holywell-cum-Needingworth
Cambridgeshire

palaeoenvironmental assessment

report 4134

May 2016

Durham University

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Contents

1. Summary

The project

1.1 This report presents the results of palaeoenvironmental assessment of 15 bulk samples taken during archaeological works at Needingworth Road, Cambridgeshire.

1.2 The works were commissioned by Pre-Construct Archaeological Services Ltd (PCAS), and conducted by Archaeological Services Durham University.

Results

1.3 Abundant charred plant macrofossil remains were recorded in a ditch fill [183] of possible Bronze Age origin. The presence of emmer-type wheat grains and false oat-grass tubers are consistent with an earlier prehistoric origin. There is evidence that pits [F101] and [F206](the latter comprising a token cremation deposit) may have a Bronze Age origin. Spelt wheat remains recorded in two fills from curvilinear feature [F102] may reflect a later prehistoric date for this feature, or the early cultivation of spelt in the region.

Recommendations

1.4 The Research Framework for the Eastern Counties highlights the scarcity of archaeobotanical evidence for Neolithic and Bronze Age sites for the region. If a Bronze Age date is confirmed, full plant macrofossil and charcoal analysis is recommended for ditch fill [183], in order to address key research themes including the relative importance of farming and foraging, changing patterns of agricultural production and consumption, and human impact on the natural landscape.

1.5 Full recording of the small cremated bone assemblage from pit [F206] may be worthwhile.

1.6 If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced. The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

2. Project background

Location and background

2.1 Archaeological works were conducted by PCAS at Needingworth Road, Holywell-cum-Needingworth, Cambridgeshire. This report presents the results of palaeoenvironmental assessment of 15 bulk samples comprising pit, gully and ditch fills of probable prehistoric origin.

Objective

2.2 The objective of the scheme of works was to assess the palaeoenvironmental potential of the samples, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

Dates

2.3 Samples were received by Archaeological Services on 15th March 2016. Assessment and report preparation was conducted between April and May 2016.

Personnel

2.4 Assessment and report preparation was conducted by Dr Charlotte O'Brien. Sample processing was by Stephanie Piper and Sophie Newman.

Archive

2.5 The site code is **NRCX15**. The flots are currently held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University awaiting collection. Finds have been returned to PCAS. The charred plant remains will be retained at Archaeological Services Durham University.

3. Methods

3.1 The bulk samples were manually floated and sieved through a 500μm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred

and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (2010). Habitat classifications follow Preston *et al.* (2002).

3.2 Selected charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University.

3.3 The snail assemblages was scanned and the remains identified to species using the descriptions of Cameron (2008), Kerney & Cameron (1979) and Macan (1977). Nomenclature follows Anderson (2005) and habitat classifications follow Cameron (2008), Kerney & Cameron (1979) and Macan (1977).

3.4 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Brown & Glazebrook 2000; Glazebrook 1997).

4. Results

Curvilinear gully [F102]

4.1 Palaeoenvironmental samples were assessed from fills [103], [133], [136] and [139] taken from curvilinear feature [F102]. The samples comprised fragments of bone, pottery, heat-affected stones and flints. Small quantities of poorly preserved oak, Maloideae (which includes hawthorn, apple and whitebeam) and cherries (*Prunus* sp) charcoal were identified. The small charred plant macrofossil assemblages comprised cereal remains (barley and wheat) and weed seeds of brome, fat-hen, redshank, docks, vetches and members of the pink family. A few diagnostic chaff remains (glume bases) confirmed the presence of spelt wheat.

Pits

4.2 Cremated human bone was identified in pit fill [207]. This fill contained a large number of charred grass-type rhizomes, which occurred only rarely elsewhere on the site. The charcoal from this fill was oak stemwood comprising radial cracks.

4.3 Four other sampled pits [F101, F122, F179 and F196] comprised small amounts of burnt and unburnt bone, animal tooth, heat-affected stones, flint and pottery. Oak, Maloideae and cherries charcoal were identified, but all of the fragments were mineralised and in poor condition. The small charred plant macrofossil assemblage in fill [100] included barley grains, wheat grains and wheat chaff (glume bases). The

poor condition of the cereal remains prevented identification to species in most cases, but a single glume base each of emmer and spelt wheat were recorded. Charred weed seeds included fat-hen, wild radish, knotgrass, grasses and vetches. Pit fill [178] comprised two wheat glume bases, but these could not be identified further. A barley grain and a few weed seeds were recorded in pit fill [199], and four poorly preserved, indeterminate cereal grains occurred in fill [123].

Linear features

4.4 Two samples of context [169], fill of ditch [F152], were assessed. A fragment of pottery was recovered from sample 7, and two flints were noted in sample 10. Small amounts of poorly preserved charcoal (oak) were present, but charred plant macrofossils were absent. Although land snails occurred infrequently elsewhere on the site, ditch [F152] was the only feature with significant numbers of snails. These included the freshwater species *Radix balthica* (Linnaeus) and *Galba truncatula (*Müller), and terrestrial taxa *Pupilla muscorum* (Linnaeus), *Vallonia* sp and *Trochulus* sp.

4.5 Bone, pot, flint, heat-affected stones and a quartz pebble were recovered from fill [183] of probable Bronze Age ditch [F184]. The fill contained abundant charred plant macrofossils dominated by cereal remains (grains and chaff). Wheat and barley were identified, with three of the wheat grains having the high dorsal ridge and tear drop shape associated with emmer (cf. Jacomet 2006). However, the poor condition of the remains restricted identification to genus in most cases. Other remains included a hazel nutshell fragment, a false oat-grass tuber and weed seeds of fat-hen, black-bindweed, cleavers, sedges, grasses, docks and vetches. Maloideae, oak and cherries charcoal was noted.

4.6 Ditch fill [205] comprised wheat grains, indeterminate cereal grains, grasses, vetches and Maloideae and oak charcoal. Poorly preserved wheat and barley remains, a sloe fruitstone and a limited weed flora were recorded in ditch fill [177]. The identified charcoal included ash, Maloideae, oak and cherries. This sample was distinctive in having a trace of fish bone.

4.7 Material for radiocarbon dating is available for all of the samples, although some of this may be unsuitable due to size or long-lived species. The results are presented in Appendix 1.

5. Discussion

5.1 The presence of charcoal, animal bone and burnt food remains (cereals, nutshell and fruitstones) provides evidence for the disposal of domestic hearth waste in many of the features. The poor condition of the charred plant macrofossils (pitted and degraded) is typical of hearth waste, reflecting intense heat, rapid combustion or exposure to repeated burning (Boardman & Jones 1990), although taphonomic

processes such as soil conditions may have contributed to the poor state of preservation.

5.2 The cereal crops recorded on the site were emmer, spelt and barley. Emmer wheat was a significant crop in the Eastern Counties during the Neolithic and Bronze Age, with a shift to spelt production taking place through the Iron Age (Glazebrook 1997). Emmer chaff was identified in pit [F101] and emmer-type grains were recorded in ditch [F184], suggesting an earlier date for these features. False oat-grass tubers in ditch [F184] would also be consistent with an earlier date for this feature, as the remains of this grass occur frequently (although not exclusively) in Bronze Age contexts (Roehrs *et al.* 2013). The presence of a spelt glume base in pit [F101] may reflect an early use of this crop at the site, or represent intrusive material.

5.3 Although identifiable charred macrofossils were few in number from the fills of curvilinear feature [F102], the remains suggest that barley and spelt wheat were the main cereals contemporary with the use of this feature, possibly reflecting a later prehistoric origin. The use of glume wheats (emmer or spelt) is indicated for gully [F158] and pit [F179], but the poor condition of the remains prevented differentiation between these crops. Wild-gathered foods, such as hazelnuts and sloes, supplemented the diet.

5.4 Brome grass was identified in gully fill [133], which is an arable weed often associated with spelt wheat, and is believed to have been brought to Britain in imported spelt (Godwin 1975). Fat-hen, wild radish, cleavers, redshanks and knotgrass are common weeds of cultivated land, and suggest the soils were relatively nutrient-enriched (Preston *et al.* 2002), probably as a result of pastoral farming activities.

5.5 The small assemblage of human bone fragments from pit [F206] denotes a token or disturbed cremation deposit. The presence of abundant remains of charred rhizomes is consistent with other prehistoric cremation-related deposits, such as the Bronze Age cremations at Milnthorpe, Cumbria (Platell 2013). The rhizomes are believed to represent the remains of turves burnt as fuel or structural material during the cremation process (ibid.). The presence of oak stemwood charcoal probably reflects the fuelwood used for the cremation. As oak allows the high temperatures (500+°C) needed to maintain combustion during the cremation process, it was frequently used for this purpose (O'Donnell 2007). Charcoal studies have shown that rapid combustion at high temperatures can cause tissue deformation and fissures (Schweingruber 1990), which is the likely explanation for the radial cracks noted in this charcoal assemblage.

5.6 A moderate assemblage of snails was recorded in the fills of ditch [F152]. Wet conditions are indicated by the occurrence of the freshwater taxa *Radix balthica* (Linnaeus) and *Galba truncatula* (Müller). The land snails *Pupilla muscorum* (Linnaeus) and *Vallonia* sp suggest nearby areas of dry grassland (Cameron 2008).

6. Recommendations

6.1 The Research Framework for the Eastern Counties highlights the scarcity of archaeobotanical evidence for Neolithic and Bronze Age sites for the region. If a Bronze Age date is confirmed, full plant macrofossil and charcoal analysis is recommended for ditch fill [183], in order to address key research themes including the relative importance of farming and foraging, changing patterns of agricultural production and consumption, and human impact on the natural landscape.

6.2 Full recording of the small cremated bone assemblage from pit [F206] may be worthwhile.

6.3 If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced. The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

7. Sources

Anderson, R, 2005 An annotated list of the non-marine Mollusca of Britain and Ireland. *J Conch* **38**, 607-637

Boardman, S, & Jones, G, 1990 Experiments on the effects of charring on cereal plant components. *J Archaeol Sci* **17**, 1-11

Brown, N, & Glazebrook, J, 2000 *Research and archaeology: a framework for the Eastern Counties, 2. Research agenda and strategy.* East Anglian Archaeol. Occ. Paper No. **8**

Cameron, R, 2008 *Land Snails in the British Isles*. Field Studies Council Occasional Publication **79**. Shrewsbury

Glazebrook, J, 1997 *Research and Archaeology: a Framework for the Eastern Counties, 1. resource assessment.* East Anglian Archaeol. Occ. Paper No. **3**

Godwin, H, 1975 *History of the British Flora*. Cambridge

Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London

Jacomet, S, 2006 *Identification of cereal remains from archaeological sites*. Basel

Kerney, M P, & Cameron, R A D, 1979 *A Field Guide to the Land Snails of Britain and North-west Europe.* London

Macan, T T, 1977 British fresh- and brackish-water gastropods: a key. Ambleside

O'Donnell, L, 2007 Charcoal and Wood, in E Grogan, L O'Donnell & P Johnston (eds) *The Bronze Age Landscapes of the Pipeline to the West, an Integrated Archaeological and Environmental assessment*. Wicklow

Platell, A, 2013 A Bronze Age cremation cemetery at Dallam School, Milnthorpe, Cumbria. *Trans Cumberland Westmorland Antiq Archaeol Soc* **13**, 33-55

Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora.* Oxford

Roehrs, H, Klooss, S, & Kirleis, W, 2013 Evaluating prehistoric finds of *Arrhenatherum elatius* var. *bulbosum* in north-western and central Europe with an emphasis on the first Neolithic finds in Northern Germany. *Archaeol Anthropol Sci* **5(1),** 1-15

Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf

Stace, C, 2010 *New Flora of the British Isles*. Cambridge

Appendix 3.1: Data from palaeoenvironmental assessment

Sample		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Context		**100**	**103**	**123**	**133**	**136**	**139**	**169**	**178**
Feature number		**101**	**102**	**122**	**102**	**102**	**102**	**152**	**179**
Feature		**P**	**G**	**P**	**G**	**G**	**G**	**D**	**P**
Material available for radiocarbon dating		✓	(✓)	(✓)	✓	(✓)	(✓)	(✓)	✓
Volume processed (l)		17	18	13	13	14	19	19	11
Volume of flot (ml)		20	20	10	40	25	25	50	30
Residue contents									
Bone (burnt)	indet. frags	-	-	-	-	-	+	-	-
Bone (calcined)	indet. frags	(+)	(+)	(+)	(+)	(+)	-	-	(+)
Bone (unburnt)	indet. frags	+	++	-	++	+	-	-	-
Bone (burnt)	fish	-	-	-	-	-	-	-	-
Bone (calcined)	human	-	-	-	-	-	-	-	-
Charcoal		(+)	+	-	+	+	-	(+)	-
Cracked stones (burnt)		+	(+)	-	++	-	-	-	+
Fired clay		+	+	(+)	+	-	+	-	-
Flint (number of fragments)	worked	1	-	1	2	1	1	-	-
Flint	naturally-fractured	++	++	+++	+++	+++	+++	+++	+
Glass (number of fragments)		-	-	-	-	-	-	-	-
Pot (number of fragments)		4	1	2	5	13	3	1	7
Quartz pebble		-	-	-	-	-	-	-	-
Tooth (number of fragments)		1	3	-	8	4	-	-	-
Flot matrix									
Charcoal		+	+	+	++	+	(+)	+	+
Fuel ash slag		-	-	+	-	-	-	-	-
Leaves (modern)		+	-	-	-	+	-	-	+
Roots (modern)		+	-	-	-	+	+	+	-
Snails		-	-	-	-	+	+	+++	-
Straw / chaff (modern)		(+)	-	-	-	-	-	+	-
Tuber/ rhizome (charred)	grass-type	-	-	-	-	-	-	-	-
Uncharred seeds		-	-	-	-	-	-	-	-
Charred remains (total count)									

(a) *Bromus* sp (Bromes)	caryopsis	-	-	-	1	-	-	-	-
(a) *Chenopodium album* (Fat-hen)	seed	9	4	-	5	-	-	-	-
(a) *Fallopia convolvulus* (Black-bindweed)	nutlet	-	-	-	-	-	-	-	-
(a) *Raphanus raphanistrum* (Wild Radish)	pod	1	-	-	-	-	-	-	-
(c) Cerealia indeterminate	grain	3	-	4	10	-	1	-	-
(c) *Hordeum* sp (Barley species)	grain	7	1	-	-	-	-	-	-
(c) *Hordeum* sp (Barley species)	rachis frag.	2	-	-	-	-	-	-	-
(c) *Triticum* cf. *dicoccum* (cf. Emmer Wheat)	grain	-	-	-	-	-	-	-	-
(c) *Triticum dicoccum* (Emmer Wheat)	glume base	1	-	-	-	-	-	-	-
(c) *Triticum spelta* (Spelt Wheat)	glume base	1	-	-	1	-	1	-	-
(c) *Triticum* sp (Wheat species)	glume base	11	1	-	-	-	-	-	2
(c) *Triticum* sp (Wheat species)	spikelet fork	-	2	-	1	-	-	-	-
(c) *Triticum* sp (Wheat species)	grain	2	-	-	1	-	-	-	-
(g) *Arrhenatherum elatius* ssp *bulbosum* (False Oat-grass)	tuber	-	-	-	-	-	-	-	-
(r) *Galium aparine* (Cleavers)	seed	-	-	-	-	-	-	-	-
(r) *Persicaria maculosa* (Redshank)	nutlet	-	-	-	1	-	-	-	-
(r) *Polygonum aviculare* (Knotgrass)	nutlet	1	-	-	-	-	-	-	-
(t) *Corylus avellana* (Hazel)	nutshell frag.	-	-	-	-	-	-	-	-
(t) *Prunus spinosa* (Sloe)	fruitstone	-	-	-	-	-	-	-	-
(w) *Carex* sp (Sedges)	trigonous nutlet	-	-	-	-	-	-	-	-
(w) *Persicaria lapathifolia* (Pale Persicaria)	nutlet	-	-	-	-	-	-	-	-
(x) Caryophyllaceae undiff. (Pink family)	seed	-	2	-	-	-	-	-	-
(x) Poaceae undiff. (Grass family)	<1mm caryopsis	8	-	-	-	-	-	-	-
(x) Poaceae undiff. (Grass family)	>1mm caryopsis	-	-	-	-	-	-	-	-
(x) *Rumex* sp (Docks)	nutlet	-	-	-	2	-	-	-	-
(x) *Vicia* sp (Vetches)	seed	1	-	-	-	-	1	-	-
Identified charcoal (✓presence)									
Fraxinus excelsior (Ash)		-	-	-	-	-	-	-	-
Maloideae (Hawthorn, apple, whitebeams)		✓	-	-	✓	-	-	-	✓
Quercus sp (Oaks)		-	✓	✓	-	✓	-	✓	✓
Prunus sp (Cherries-blackthorn, wild and bird cherry)		-	-	-	✓	-	-	-	-

[a-arable; c-cultivated; g-grassland; r-ruderal; t-tree/shrub; w-wet/damp ground; x-wide niche. P-Pit; G-gully; D-Ditch

(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant. (✓) may be unsuitable for dating due to size or species]

Sample	**9**	**10**	**11**	**12**	**13**	**14**	**15**

Context		**181**	**169**	**177**	**199**	**205**	**207**	**183**
Feature number		**180**	**152**	**158**	**196**	**204**	**206**	**184**
Feature		**D**	**D**	**G**	**P**	**D**	**P**	**D**
Material available for radiocarbon dating		✓	(✓)	✓	✓	✓	(✓)	✓
Volume processed (l)		20	11	20	19	17	8	19
Volume of flot (ml)		60	30	30	50	60	80	100
Residue contents								
Bone (burnt)	indet. frags	-	-	(+)	-	-	-	(+)
Bone (calcined)	indet. frags	(+)	-	(+)	(+)	(+)	-	(+)
Bone (unburnt)	indet. frags	+	(+)	(+)	++	(+)	-	+
Bone (burnt)	fish	-	-	(+)	-	-	-	-
Bone (calcined)	human	-	-	-	-	-	+++	-
Charcoal		+	+	(+)	++	+	-	+
Cracked stones (burnt)		-	-	+	++	-	-	++
Fired clay		-	++	(+)	(+)	-	(+)	+
Flint (number of fragments)	worked	-	2	1	2	2	-	5
Flint	naturally-fractured	++	++	++	++	++	++	++
Glass (number of fragments)		-	-	2	-	-	-	-
Pot (number of fragments)		3	-	2	7	1	-	4
Quartz pebble		-	-	-	-	-	-	1
Tooth (number of fragments)		-	-	-	4	-	-	-
Flot matrix								
Charcoal		++	+	++	++	++	++	++
Fuel ash slag		-	-	-	-	-	-	-
Leaves (modern)		-	-	-	-	-	-	-
Roots (modern)		+	+	-	+	-	-	-
Snails		-	++	(+)	-	-	-	-
Straw / chaff (modern)		-	-	(+)	-	-	-	-
Tuber/ rhizome (charred)	grass-type	-	-	(+)	-	-	+++	(+)
Uncharred seeds		-	-	-	(+)	-	-	-
Charred remains (total count)								
(a) *Bromus* sp (Bromes)	caryopsis	-	-	-	-	-	-	-
(a) *Chenopodium album* (Fat-hen)	seed	-	-	1	1	-	-	11
(a) *Fallopia convolvulus* (Black-bindweed)	nutlet	-	-	-	-	-	-	3

(a) *Raphanus raphanistrum* (Wild Radish)	pod	-	-	-	-	-	-	-
(c) Cerealia indeterminate	grain	-	-	25	3	18	-	117
(c) *Hordeum* sp (Barley species)	grain	-	-	1	1	-	-	10
(c) *Hordeum* sp (Barley species)	rachis frag.	-	-	-	-	-	-	-
(c) *Triticum* cf. *dicoccum* (cf. Emmer Wheat)	grain	-	-	-	-	-	-	3
(c) *Triticum dicoccum* (Emmer Wheat)	glume base	-	-	-	-	-	-	-
(c) *Triticum spelta* (Spelt Wheat)	glume base	-	-	-	-	-	-	-
(c) *Triticum* sp (Wheat species)	glume base	-	-	1	-	-	-	20
(c) *Triticum* sp (Wheat species)	spikelet fork	-	-	-	-	-	-	29
(c) *Triticum* sp (Wheat species)	grain	-	-	7	-	6	-	27
(g) *Arrhenatherum elatius* ssp *bulbosum* (False Oat-grass)	tuber	-	-	-	-	-	-	3
(r) *Galium aparine* (Cleavers)	seed	-	-	1	1	-	-	2
(r) *Persicaria maculosa* (Redshank)	nutlet	-	-	-	-	-	-	-
(r) *Polygonum aviculare* (Knotgrass)	nutlet	-	-	-	-	-	-	-
(t) *Corylus avellana* (Hazel)	nutshell frag.	-	-	-	-	-	-	1
(t) *Prunus spinosa* (Sloe)	fruitstone	-	-	1	-	-	-	-
(w) *Carex* sp (Sedges)	trigonous nutlet	-	-	-	-	-	-	1
(w) *Persicaria lapathifolia* (Pale Persicaria)	nutlet	-	-	-	-	-	1	-
(x) Caryophyllaceae undiff. (Pink family)	seed	-	-	-	-	-	-	-
(x) Poaceae undiff. (Grass family)	<1mm caryopsis	-	-	-	-	1	-	-
(x) Poaceae undiff. (Grass family)	>1mm caryopsis	-	-	1	-	-	-	4
(x) *Rumex* sp (Docks)	nutlet	-	-	-	1	-	1	8
(x) *Vicia* sp (Vetches)	seed	-	-	7	2	1	-	14
Identified charcoal (✓presence)								
Fraxinus excelsior (Ash)		-	-	✓	-	-	-	-
Maloideae (Hawthorn, apple, whitebeams)		-	-	✓	✓	✓	-	✓
Quercus sp (Oaks)		-	-	✓	✓	✓	✓	✓
Prunus sp (Cherries-blackthorn, wild and bird cherry)		✓	-	✓	✓	-	-	✓

[a-arable; c-cultivated; g-grassland; r-ruderal; t-tree/shrub; w-wet/damp ground; x-wide niche. P-Pit; G-gully; D-Ditch

(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant. (✓) may be unsuitable for dating due to size or species]

Appendix 4: Flint

Flint

By Tom Lane

Introduction

A collection of 30 flints was submitted for Assessment. Recovered chiefly from the fills of linears the collection was interesting for the number of redeposited Palaeolithic items.

Condition

As might be expected items were variously abraded, some severely so. However, no special conservation methods are required

Results

Cxt No	Description	No	Wt(g)	Date
U/S	Flake. Large – 87 x 35 x 13mm. Blue patination. Blade-like flakes removed from dorsal surface 10 and 16mm wide. Some cortex remaining on dorsal surface.	1	30	
U/S	End Scraper. Damage along one lateral edge. 58 x 27 x 16mm	1	20	
113	Triangular sectioned blade flake with notch on one side. 42 x 14 x 5mm. No patination.	1	3	
115	Unworked flake. Natural	1		
118	Blade Flake. Edge damage on both sides. No Patination. 5mm wide blade scar runs the length of the flake. 45 x 14 x 5mm	1	7	
127	Flake. Honey coloured. Some cortex remaining. Some edge damage. Irregular scars on dorsal surface. 22 x 13 x 4mm	1	2	
127	Waste flake. Heavily patinated. Poor quality flint. 25 x 15 x 6mm	1	3	
132	Large Irregular flake. Brown patination. Probable natural	1		
132	Irregular flake. Blue patination. Some irregular flake scars. 41 x 26 x 18mm	1	18	
136	Broken Blade Flake. Slight blue patination. 26 x 15 x 3mm	1	1	
137	Waste Flake. Much cortex remaining on dorsal surface. Black flint. No patination. 34 x 17 x 11	1	8	Bronze Age
139	Flake with irregular retouch on dorsal surface. No Patination of black flint. Possible unfinished invasively retouched scraper. 19 x 19 x 6mm	1	2	Bronze Age
160	Waste Flake. Dorsal side has some cortex but at least two flake scars 10 and 12mm wide. Some blue patination. 53 x 29 x 15mm	1	23	
160	Waste flake. Some blue patination. Abraded. 40 x 23 x 8mm	1	10	

160	Broken waste flake. Blue patination. 31 x 22 x 8mm	1	6	
I60	Irregular waste flake. Slight patination. 33 x 25 x 4mm	1	3	
171	Flake. Much cortex remaining. Damage on distal end. Blue patination. 42 x 33 x 15mm	1	24	
173	Waste Flake. Some blue patination. 35 x 26 x 7mm	1	8	
177	Waste flake with blade scars on dorsal surface. Blue patination. 56 x 24 x 15mm	1	19	
181	Flake. Blue patination. 75 x 27 x 11mm	1	23	
183	Flake. Blue patinated. 33 x 24 x 9mm	1	7	
183	Flake. Some blue patination but with later re-working.35 x 29 x 12mm	1	10	
189	Piercer. On blade with notch in one side. Blue patination. 49 x 22 x 6mm	1	7	
194	Side scraper. Brown patination. 45 x 45 x 9mm			Middle Palaeolithic?
205	Flake. Some blade scars on dorsal surface and some cortex. No Patination. 57 x 35 x 5mm	1	14	
209	Struck flake. 31 x 20 x 3mm	1	3	
209	Scraper. Carinate type. Some blue patination. Some cortex remaining of dorsal surface. 32 x 26 x 9mm	1	11	Earlier? Upper Palaeolithic
219	Broken blade flake. Blue/white patination. Triangular section. 17 x 19 x 3mm	1	1	
219	Broken Flake. 22 x 20 x 3mm. V. slight patination	1	2	
240	Flake. Blade scars on dorsal surface. Slight patination. 26 x 22 x 5mm	1	4	
241	Blade flake. Mid-brown patination. 40 x 19 x 3mm	1	6	

Provenance

It is highly unlikely that any of the flints (with the possible exception of the Bronze Age items?) are in situ, but are redeposited. The items indicates the presence of very early prehistoric flints, boths tools and waste materials, in the area, but these may span a long period of use and not be all contemporary.

Range

The collection contains both tools and debitage, with a side scraper, end scraper and piercer being present, along with numerous flakes. The dates range from Middle to mainly Upper Palaeolithic, along with two items of Bronze Age date. The date range reflects that of finds from a quarry site a kilometre to the south (noted in the Brief). In the Table above the majority of finds are of Upper Palaeolithic date with those of other dates noted in the date column.

Summary

Appendix 4.1: Flint from Samples

Flint

By Tom Lane

Introduction

Material from samples from a site in Needingworth, Cambridgeshire was submitted for assessment.

Condition

The material is in various states of abrasion. The small flints/chips are in good condition. None of the material would need special conservation for museum storage.

Results

Cxt No	Description	No	Wt(g)	Date
100<1>	Fragments of fire cracked stone	15	13	
103 <2>	Burnt Stone	1	17	
133 <4>	Burnt stone	20	291	
177 <11>	Burnt and fire-cracked stone	7	152	
178 <8>	Burnt Stone	7	178	
183 <15>	Burnt stone	8	188	
183 <15>	Pebble	1	63	
199 <12>	Fired cracked stone and flint	3	115	
100 <1>	Waste flake from microlith preparation. Honey-cloured flint. 9 x 4 x 1mm	1	<1	Mesolithic
123 <3>	Natural unworked flint	1		
133 <4>	Natural unworked flints	2		
136 <5>	Broken blade flake. 10 x 7 x 1mm	1	<1	Mesolithic?
139 <6>	Broken blade. 17 x 9 x 2mm	1	<1	Mesolithic?
169 <10>	Natural unworked flint	1		
169 <10>	Flake. Possible core rejuvenenation flake. Unpatinated 39 x 25 x 7mm	1	9	Bronze Age
177 <11>	Natural unworked flint	1		

177 <11>	Broken Flake. 40 x 24 x 15mm Slightly patinated	1	11	prehistoric
183 <15>	Broken flake. 16 x 16 x 1mm	1	<1	prehistoric
183 <15>	Chips	4	<1	Prehistoric
199 <12>	Burnt flint	1	<1	
199 <12>	Natural unworked flint	1		
199 <12>	Chip	1	<1	prehistoric
205 <13>	Natural unworked flakes	2	1	

Provenance

The material submitted is from samples of predominantly ditch fills.

Range

Included are items dated from the Mesolithic which indicate a phase of flintworking in that period. Many of the tiny chips are probably of that date but it is not possible to date them precisely. A single flint is of probable Bronze Age date and also flintworking. A large proportion of the items submitted are unworked flints and stones which have been severely burnt and fire cracked.

Potential

Early prehistoric flintworking was reported for the flints from the excavation and the material from the samples falls into the same broad date range.

Summary

Land north of Needingworth Road Industrial Estate, Needingworth Road, Holywell-cum-Needingworth, Cambridgeshire (NRCX 15)

The Animal and Human Bone

By Jennifer Wood

Introduction

A total of 288 (4070g) refitted fragments of animal bone and 4 fragments (13g) of cremated human bone were collected by hand by Pre-Construct Archaeological Services Ltd at Land north of Needingworth Road Industrial Estate, Needingworth Road, Holywell-cum-Needingworth, Cambridgeshire. A further 291 (97g) fragments of bone were recovered from sieved samples and a further 32g of cremated human remains were recovered from sieved samples.

The remains were recovered from a variety of contexts including curvilinear ditches/ring gullies, boundary ditches, enclosure ditches and discrete pits. The remains were tentatively dated as late Iron Age.

Methodology

The entire assemblage has been fully recorded into a database archive. Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986) in addition to the use of the reference material. Where distinctions could not be made the bone was recorded as sheep/goat (S/G).

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one. The data produced the basic NISP (Number of Identified Specimen) counts.

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982), Levine (1982) and Payne (1973), and fusion data was analysed according to Silver (1969). Measurements of adult, that is, fully fused bones were taken according to the methods of von den Driesch (1976), with asterisked (*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

Results

Condition and Taphonomy

The remains were generally of a moderate overall condition, averaging at grade 3 on the Lyman criteria (1996). However the some of the remains were highly fragmentary, which may limit collection of general taphnomical data.

Burning

A single fragment of burnt bone was late Iron Age curvilinear ditch [126]. The burnt bone probably represented incidental burning events or hearth sweepings.

Pathology

No pathological conditions were noted within the assemblage.

Gnawing

Three fragments of bone recovered from late Iron Age ring gully [102], curvilinear ditch [174] and linear ditch [125] displayed evidence of carnivore gnawing. The lack of gnawing on the remaining assemblage may suggest the remains were buried rapidly after disposal, limiting the access of scavengers.

Working

No evidence on working was noted in the assemblage.

Butchery

A total of four fragments of bone recovered from linear ditches [157], [184], [210], and curvilinear ditch terminal [119] displayed evidence of butchery. The cut mark evidence appeared consistent with disarticulation of the carcass and meat removal. The cattle horncore recovered from [119] displayed cut mark evidence consistent with horncore removal, which may indicate horn working occurred on site.

Species Representation

Table 1 summarises the identified taxa identified within the assemblage, by feature and date. As can be seen, cattle are the most abundant species identified within the assemblage. Sheep/goat remains are the second most abundantly identified species, with a single fragment positively identified as sheep, followed by *equid* (horse family). Smaller numbers of pig were also identified. The remaining assemblage was unidentifiable beyond taxa. Within the sieved assemblage (Table 2), the main species were similarly represented, a single fragment of small fish vertebra was also identified.

Table 1, Summary of taxa, by feature type and date.

	Late Iron Age						**Undated**				
Taxon	**Curvilinear Ditch**	**Linear Ditch**	**L-Shaped feature**	**Pit**	**Ring Gully**	**Curvilinear terminal**	**?**	**Curvilinear**	**Linear**	**Pit**	**Total**
Equid (Horse Family)					8						8
Cattle	4	16	3	4	4	9	3		2		45
Sheep/Goat	3	3		3	4	1			4		18
Sheep		1				1					2
Pig		1									1
Large Mammal	4	6	4	4	8	7		1	1		35

Medium Mammal	2	4		1	2	1					10
Unidentified	3	2	1	2	1	1			1	1	12
N=	**16**	**33**	**8**	**14**	**27**	**20**	**3**	**1**	**8**	**1**	**131**

Table 2, Summary of sieved remains by Taxa

	Late Iron Age				
Taxon	**Linear**	**L-Shaped feature**	**Pit**	**Ring Gully**	**Total**
Cattle				3	3
Sheep/Goat				7	7
Pig			1		1
Fish	1				1
Large Mammal				6	6
Medium Mammal	13	7	1	10	31
Unidentified	50	1	25	166	242
N=	**64**	**8**	**27**	**192**	**291**

Human Remains

A single deposit (45g) of highly calcined human remains were recovered from deposit (207) within a discrete undated pit feature [206].

Table 3, Quantification Summary of the Cremated Deposits

Context Number	**Total Weight of Deposit (g)**	**Total Weight of Identifiable remains (g)**	**Percentage of Identifiable Remains**
207	45	21	46%

Table 4, Summary of Identifiable Remains

Context	**Sample Number**	**Fragment Types**
207	-	Lower limb long bones fragments x 2
207	-	Upper limb long bone fragments x 4
207	14	Lower limb bone fragment x1
207	14	Upper limb bone fragment x5

207	14	R proximal phalanx head, fused x1
207	14	Skull fragments x4
207	14	Unid x 152 (19g)

The cremated bone assemblage was very small which may suggest the remains were heavily disturbed or that the selective collection of remains for interment took place such as a token cremation deposit or cenotaph, rather than the burial of the entire pyre deposit. A single individual from a modern cremation deposit can weigh between 1227.4g and 3001.3g of bone. From this it is suggested that a whole body and deposition of the remains in an archaeological context would realistically produce between 1001.5g and 2422g of cremated human bone (Mckinley 1993).

The identified remains suggest that a minimum of 1 individual was represented within the deposit. No sexually diagnostic remains were identified within the assemblage. Very little material has survived that would have provided an approximate age at death was identifiable within the assemblage. A single fragment of a possible fully fused distal articulation of a middle phalanx may suggest that the individual was <12 years (Schaefer, Black and Scheuer 2009). The small sample size and fragmentation make the macroscopic observation of bone structure and possible build impossible.

Deposit (207) represented a minimum of a single individual, aged <12 years. The cremated remains white in colour, suggesting that the bones were fully oxidised and had been burnt at a temperature of over 600˚.

Discussion

The assemblage recovered from the site Land north of Needingworth Road Industrial Estate, Needingworth Road, Holywell-cum-Needingworth is relatively small and of a moderate overall condition. The remains are cohesively dated to the late Iron Age period.

The assemblage is too small to provide notable information on the underlying site economy, save the presence of the remains on site. The composition of the assemblage appears relatively typical for a domestic assemblage, with a slight emphasis on cattle remains. The skeletal elements represented suggest the remains were probably from a mixture of food and butchery waste, with the presence of horncorn removal possibly indicating a small amount of craft industry taking place on site.

The presence of cremated human remains is not un-expected, both cremation and inhumation funerary practices were undertaken during the late Iron Age period and internment of remains was commonly undertaken within the proximity of settlement activity.

References

Baker, J, and Brothwell, D, 1980 *Animal Diseases in Archaeology*, Academic Press

Binford, L., 1981, *Ancient Men and Modern Myths*, New York: Academic Press.

Boessneck, J, 1969 Osteological Differences in Sheep (*Ovis aries* Linné) and Goat (*Capra hircus* Linné), in D Brothwell and E Higgs (eds) *Science in Archaeology*, Thames and Hudson, 331-358

von den Driesch, A, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum

Grant, A, 1982 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in B Wilson *et al*. *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series 109, 91-108, Oxford

Halstead, P, 1985 A Study of Mandibular Teeth from Romano-British Contexts at Maxey, in F Pryor, *Archaeology and Environment in the Lower Welland Valley*, East Anglian Archaeology Report 27:219-224

Levine, M A, 1982 The Use of Crown Height Measurements and Eruption-Wear Sequences to Age Horse Teeth. In Wilson, B et al. *Ageing and Sexing Animal Bones from Archaeological Sites*. BAR British Series 109. 223 – 250

Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge

McKinley, J.I. 1993, Bone Fragment Size and Weights of Bone from Modern British Cremations and their Implications for the Interpretation of Archaeological Cremations. In *Internat. J. Osteoarchaeology* 3, 283-7.

Payne, S. 1973. Kill-off patterns in sheep and goats: the mandibles from Asvan Kale. *Anatolian Studies* **23**, 139-47.

Prummel, W and Frisch, H-J, 1986 A Guide for the distinction of species, sex and body size in bones of sheep and goat, *Journal of Archaeological Science* XIII*.,* 567–77

Schaefer, M., Black, S. & Scheuer, L. 2009, *Juvenile Osteology: A Laboratory and Field Manual*. Academic Press.

Appendix 6: Slag Assessment

NRCX15 Slag assessment

M.Wood BA (Hons) Mlitt MCIfA

Introduction

Three fragments of slag were recovered during a programme of archaeological investigation on land off Needingworth Road, Holywell-cum-Needingworth, Cambrideshire. The slag was recovered from the fills of ditches [119] and [134].

Methodology

The assemblage was cleaned of surface debris, counted, weighed and macroscopically examined to identify diagnostic material. Full reference was made to published guides (Crew 1996, English Heritage 2011).

Results

A summary of the assemblage is recorded below in Table 1.

Context	No. Frags	Weight (g)	Description	Recommendations
118	2	49	Highly vesicular light weight fuel ash	discard
137	1	23	Fuel ash, very similar to material from 118	discard

Table 1: Slag

Discussion

This is a small assemblage of fuel ash slag, with no associated evidence for industrial activity. Fuel ash slag is typically lightweight and light coloured vesicular material formed from the reaction of wood ash with silica rich minerals such as natural sand (Crew 1996).

Such a small assemblage of material offers little opportunity for further study beyond noting its presence within the excavation area. Fuel ash is light weight and could easily have been dumped or washed into a convenient open feature on site as casual discard.

Recommendations

No further work is recommended and the fuel-ash slag could be discarded. Any environmental samples taken from this or nearby features should be scanned for small fragments of metalworking debris, which may indicate any industrial activity in the vicinity.

References

Crew, P. 1996 *Bloom refining and smithing slags and other residues* The Historical Metallurgy Society Data sheet 6

English Heritage, 2011 *pre-industrial ironworks* Introductions to Heritage Assets

Illustrations

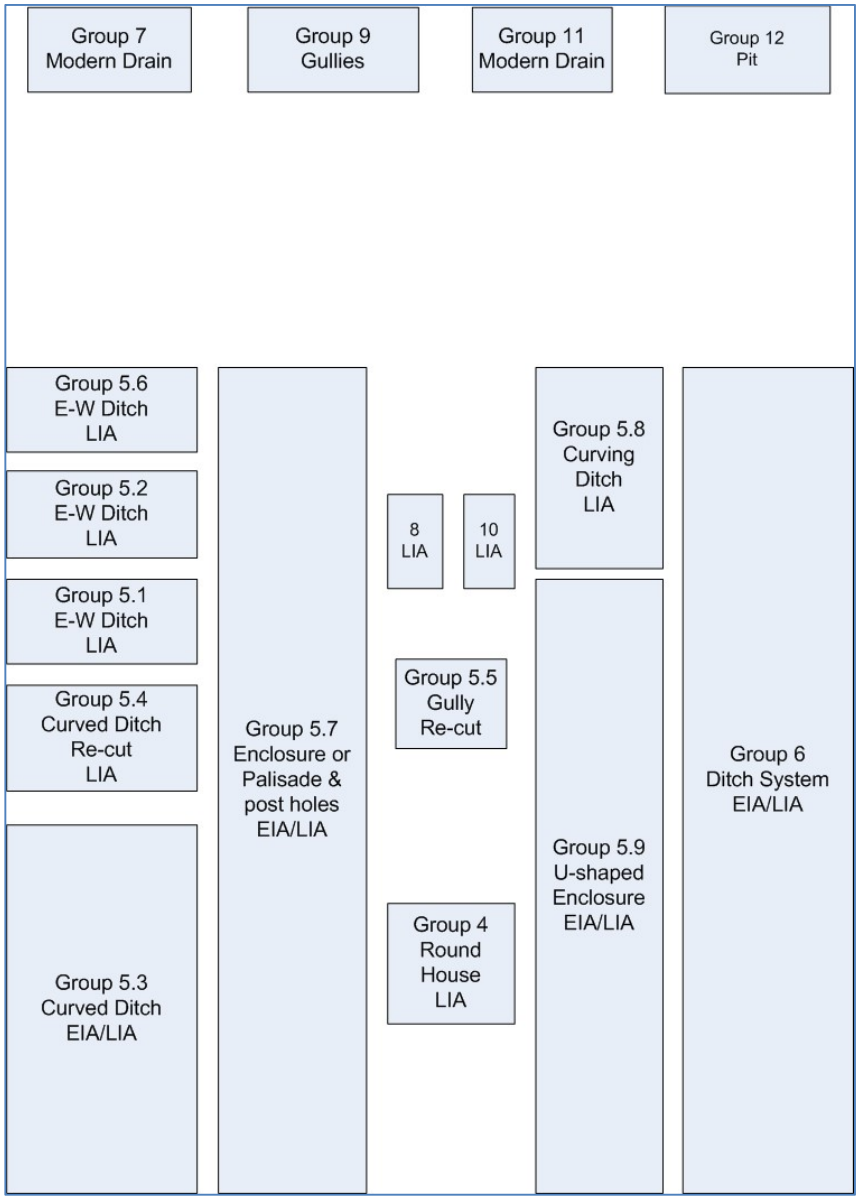


Figure 3: Land Use Diagram

Plans

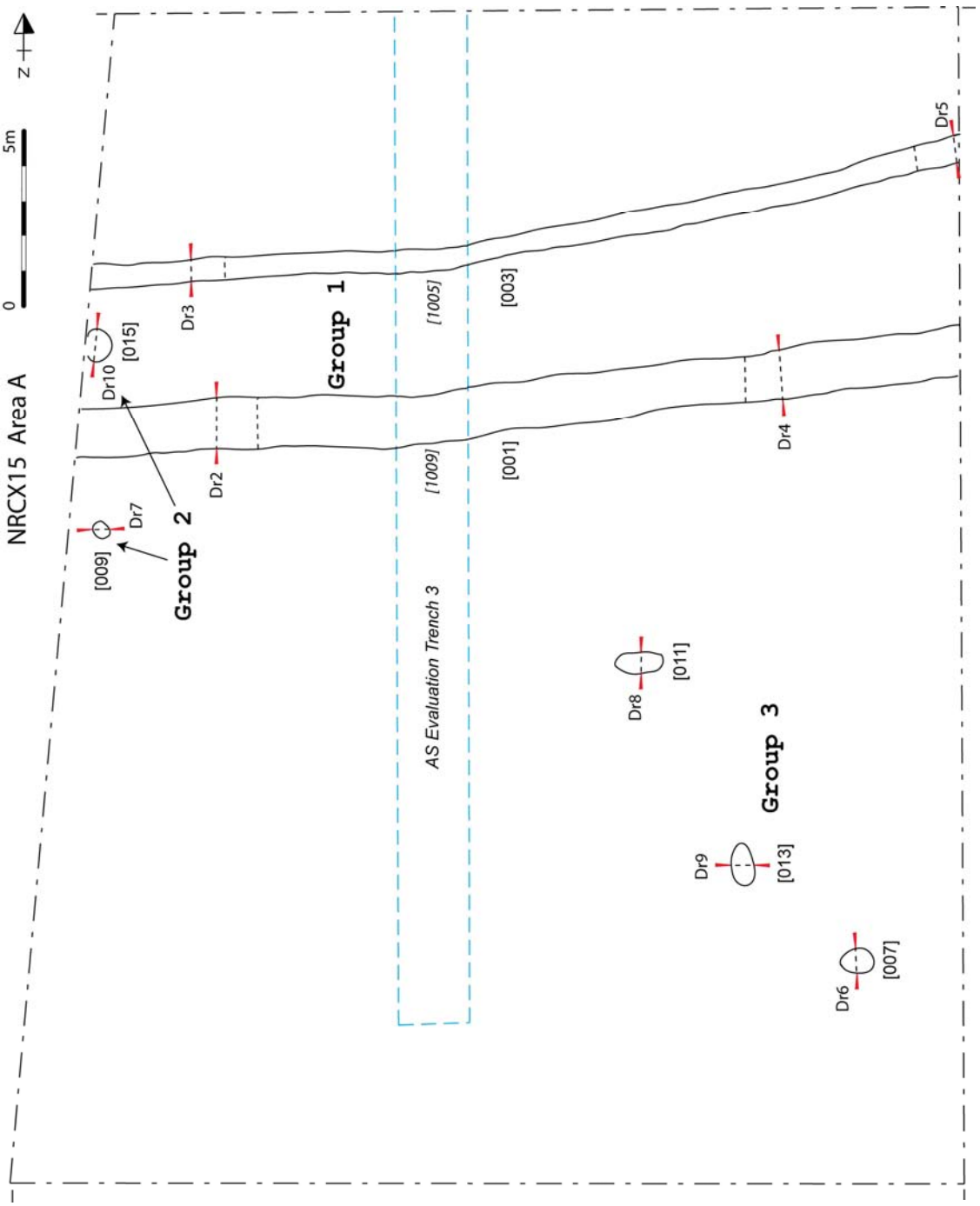


Figure 4: Area A Detailed Plan

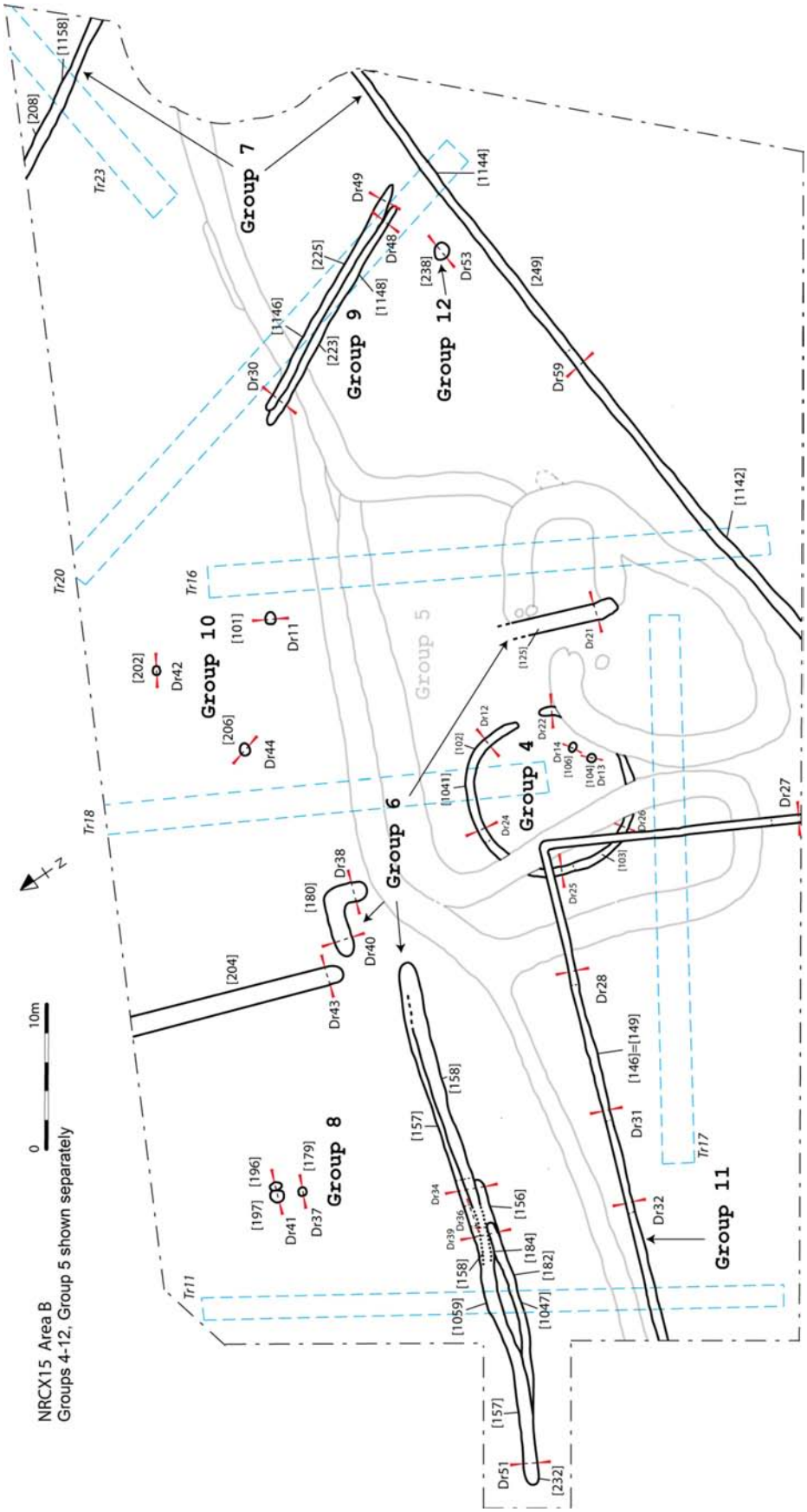


Figure 5: Area B Detailed Plan showing groups (Group 5 shown separately)

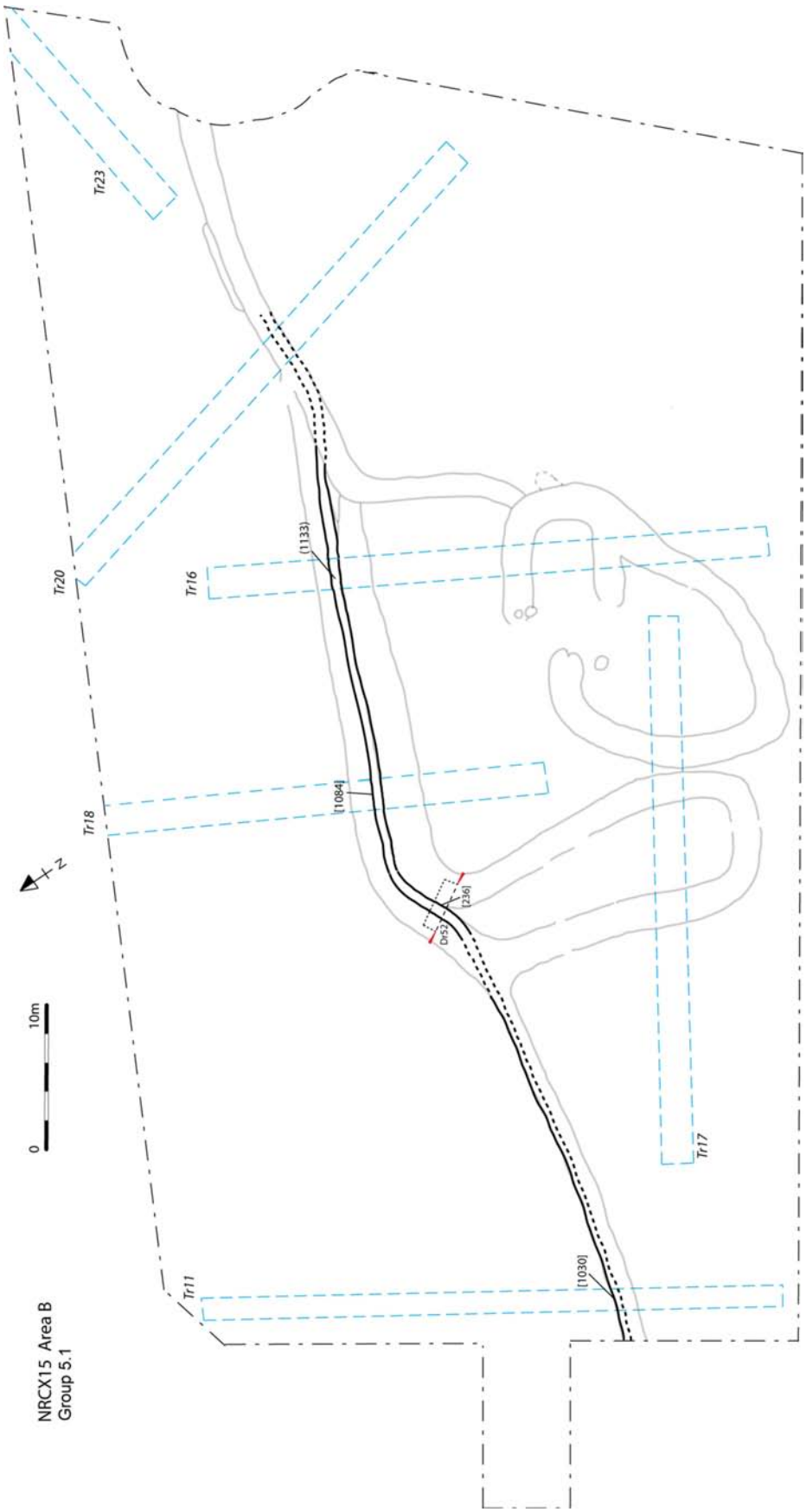


Figure 6: Area B Plan, Group 5.1

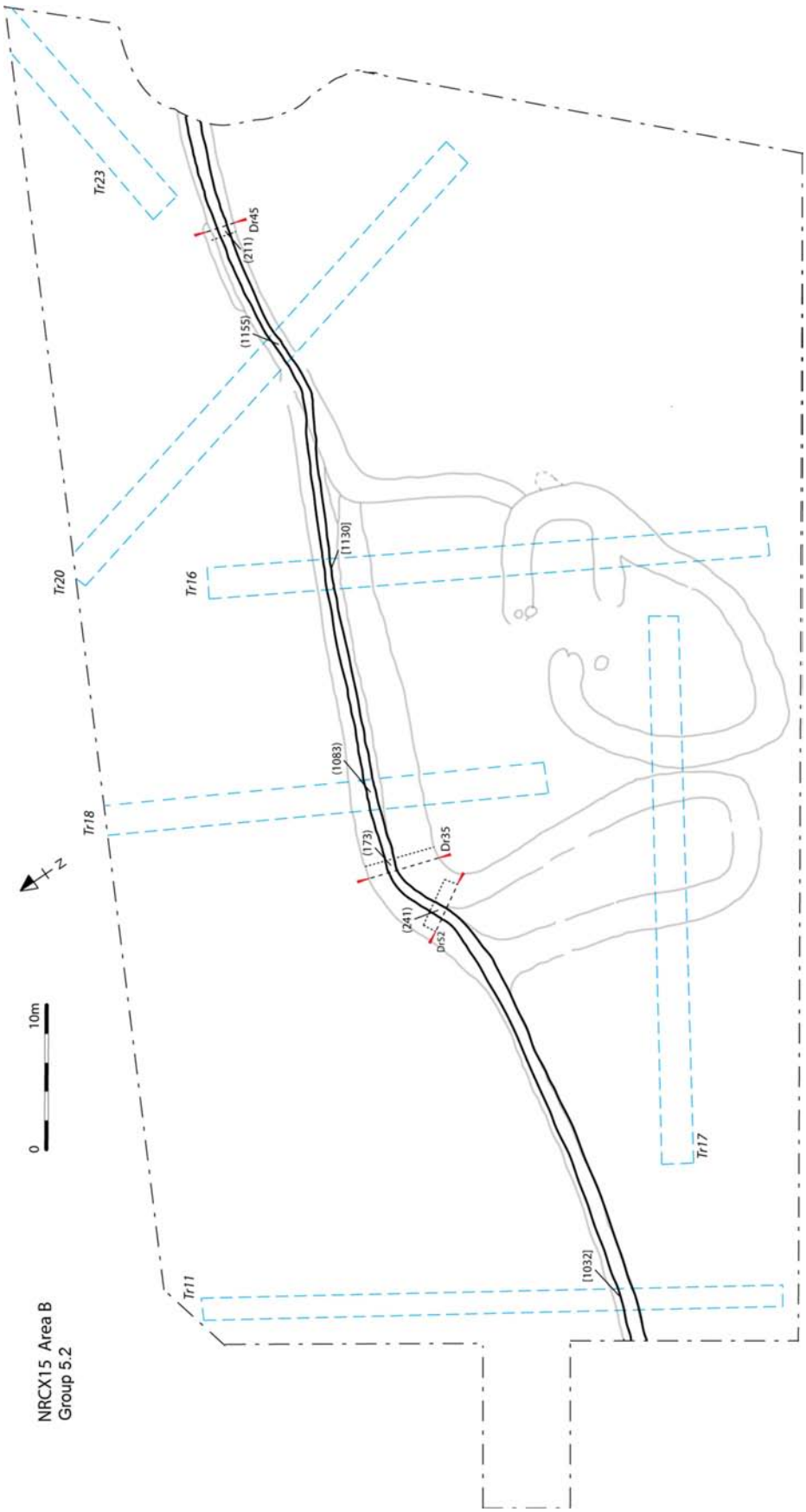


Figure 7: Area B Plan, Group 5.2

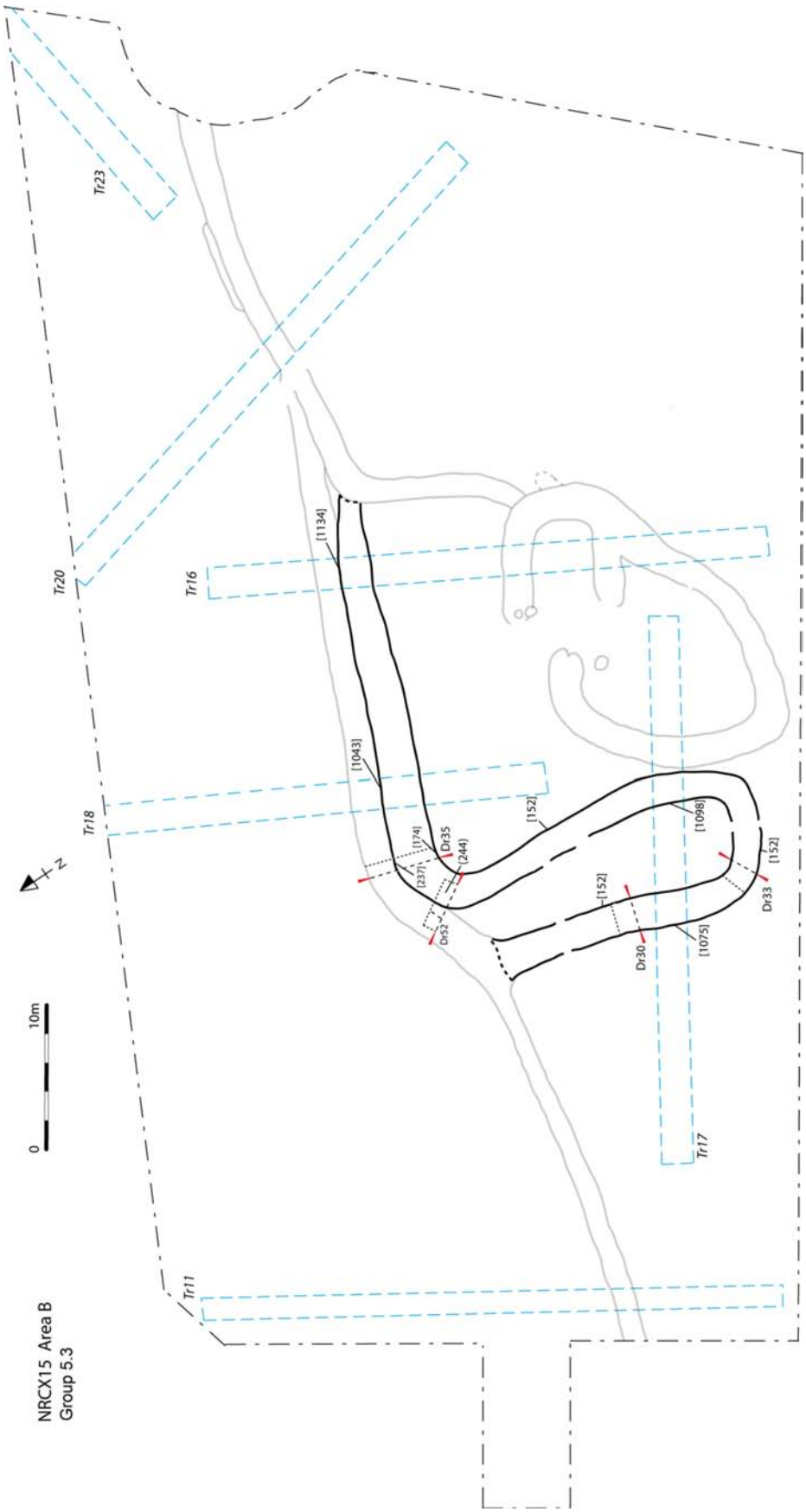


Figure 8: Area B Plan, Group 5.3

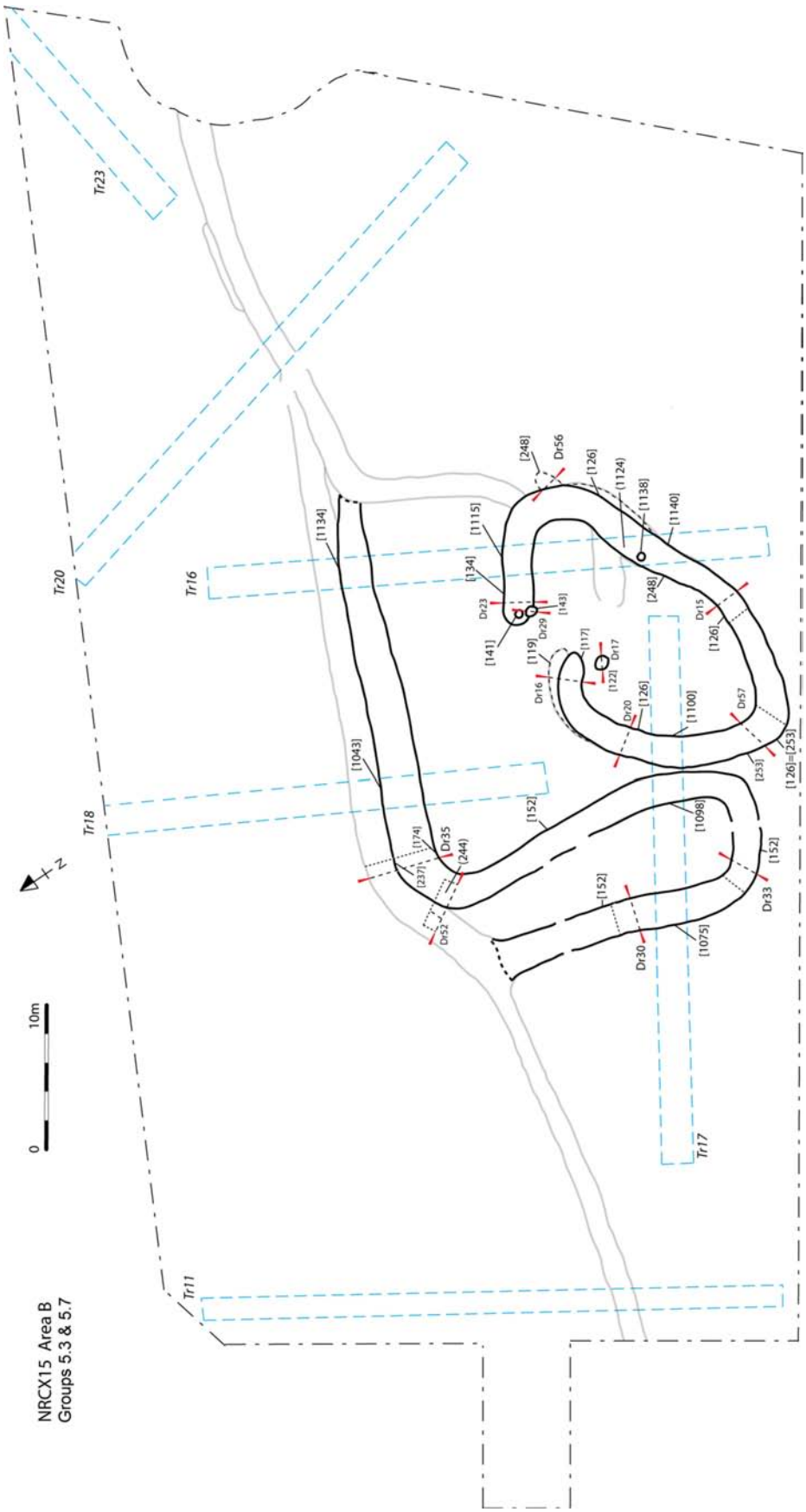


Figure 9: Area B, Relationship of Groups 5.3 & 5.7

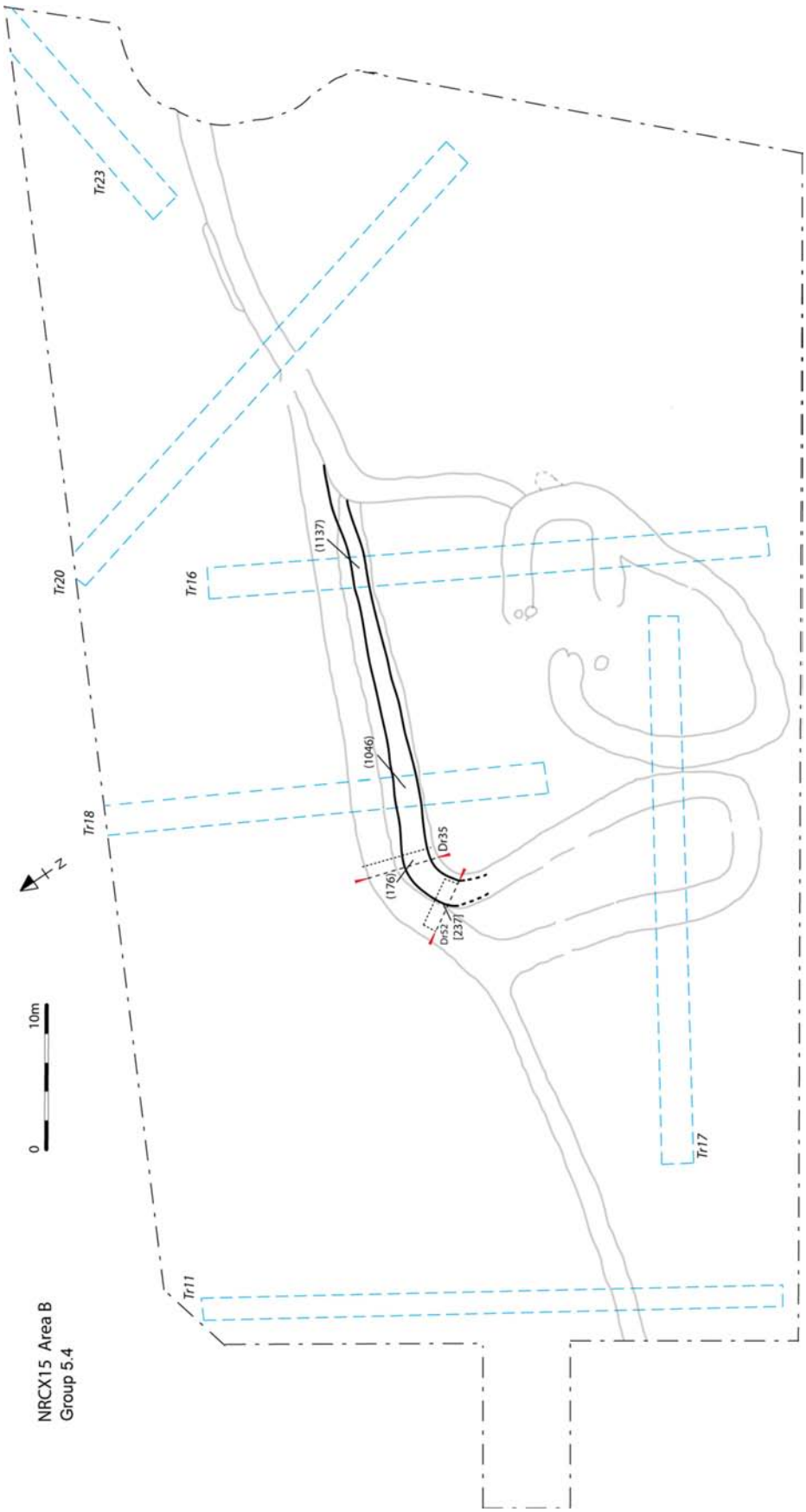


Figure 10: Area B, Group 5.4

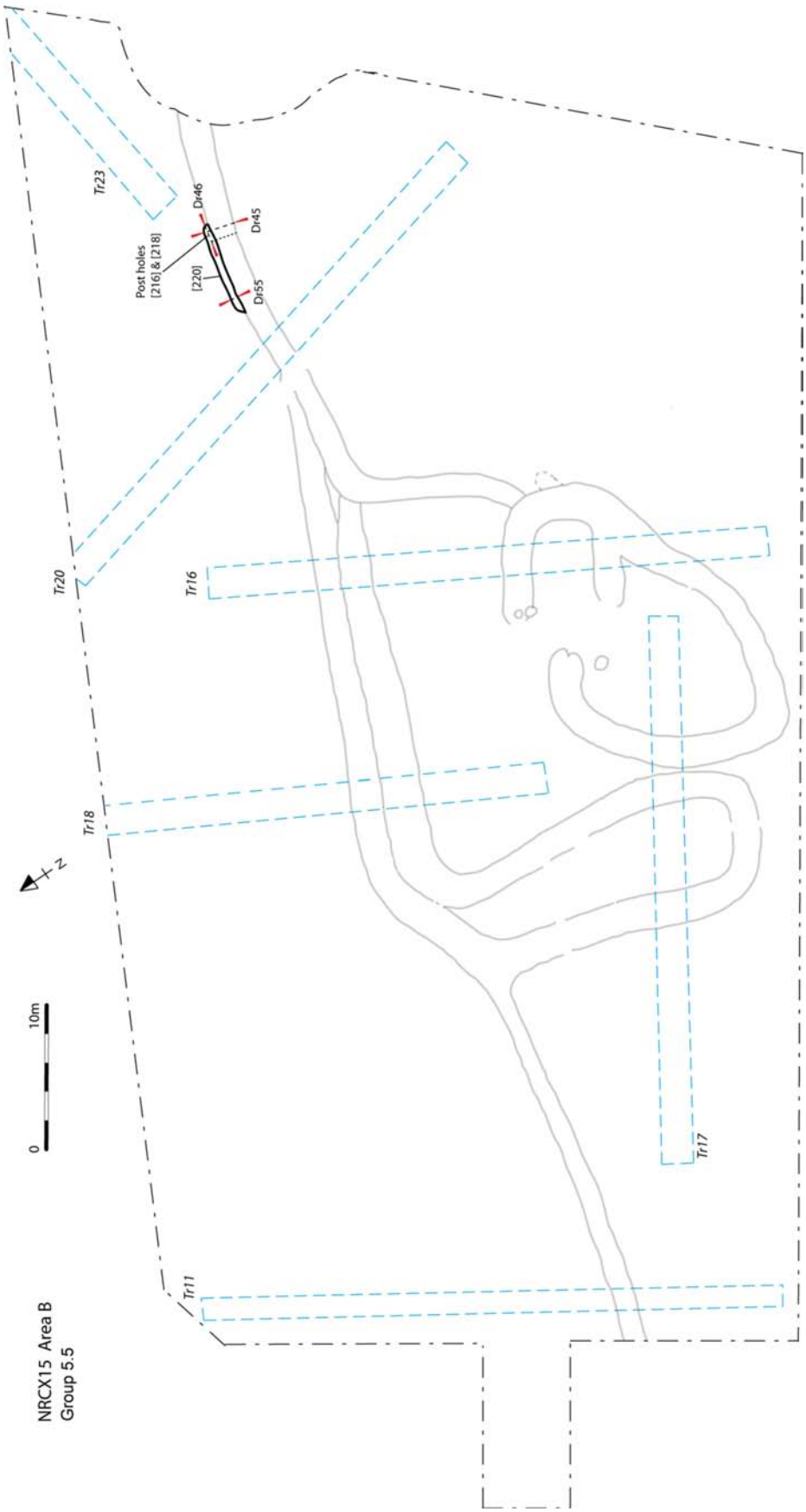


Figure 11: Area B, Group 5.5

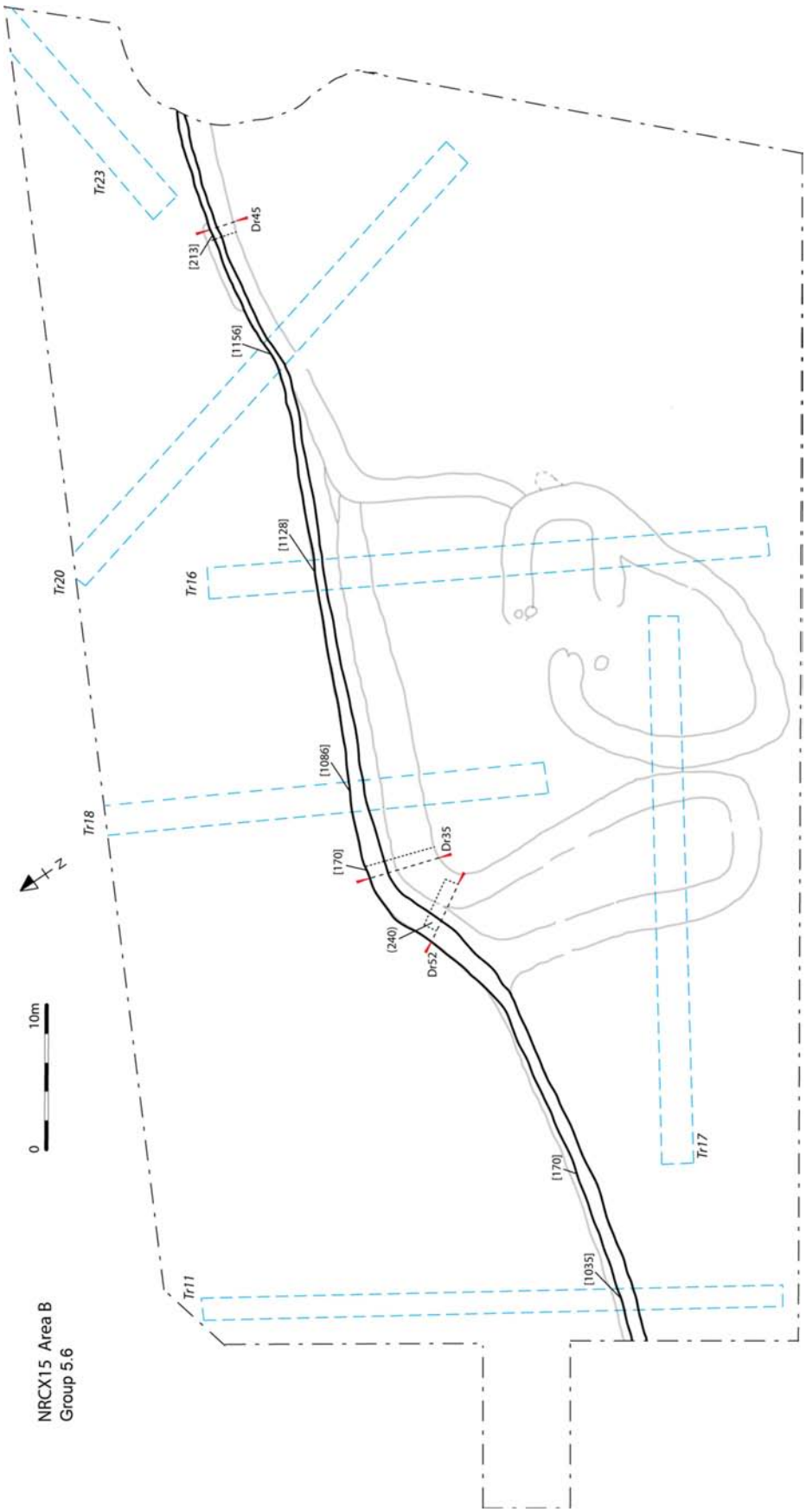


Figure 12: Area B, Group 5.6

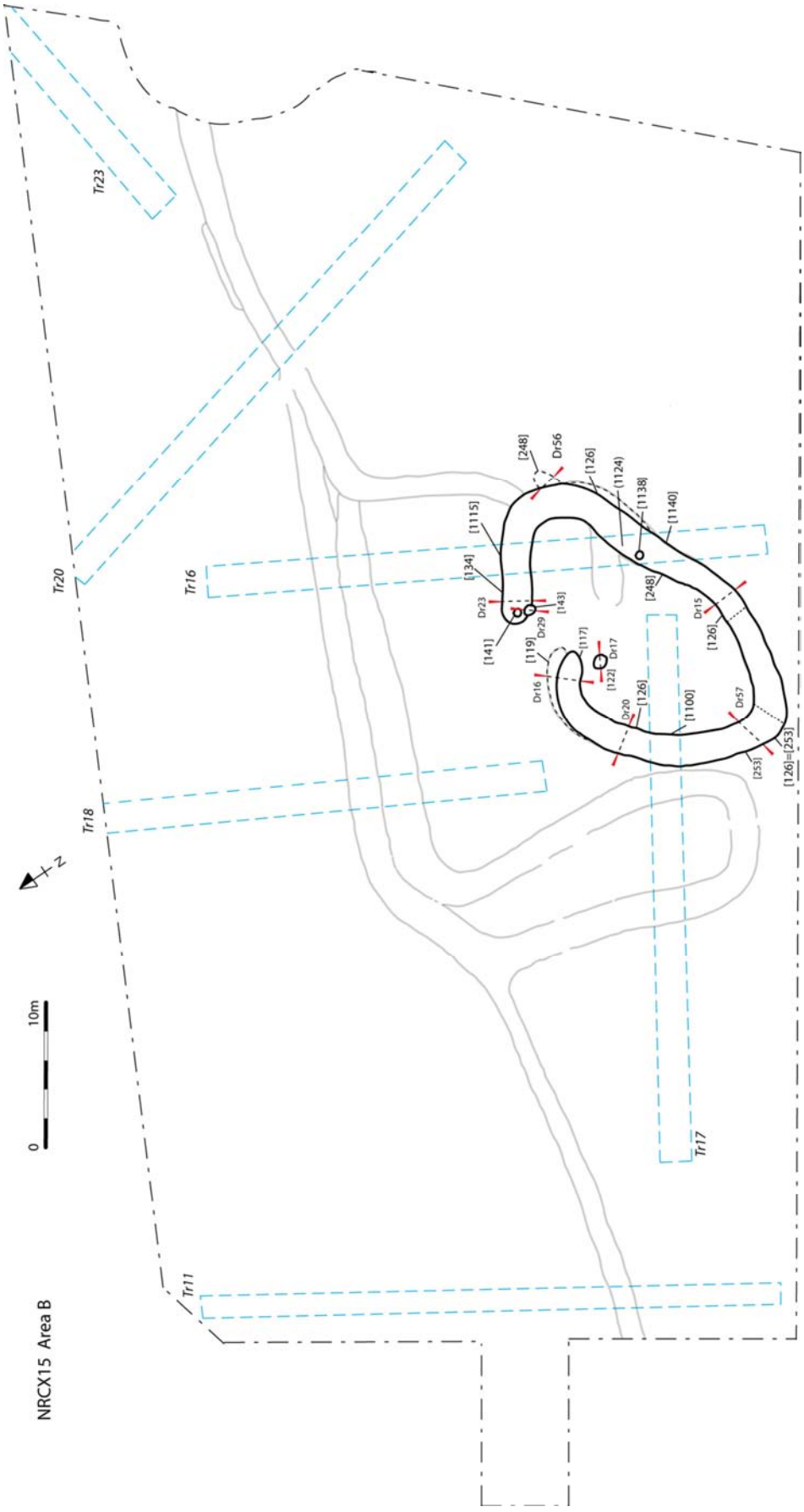


Figure 13: Area B, Group 5.7

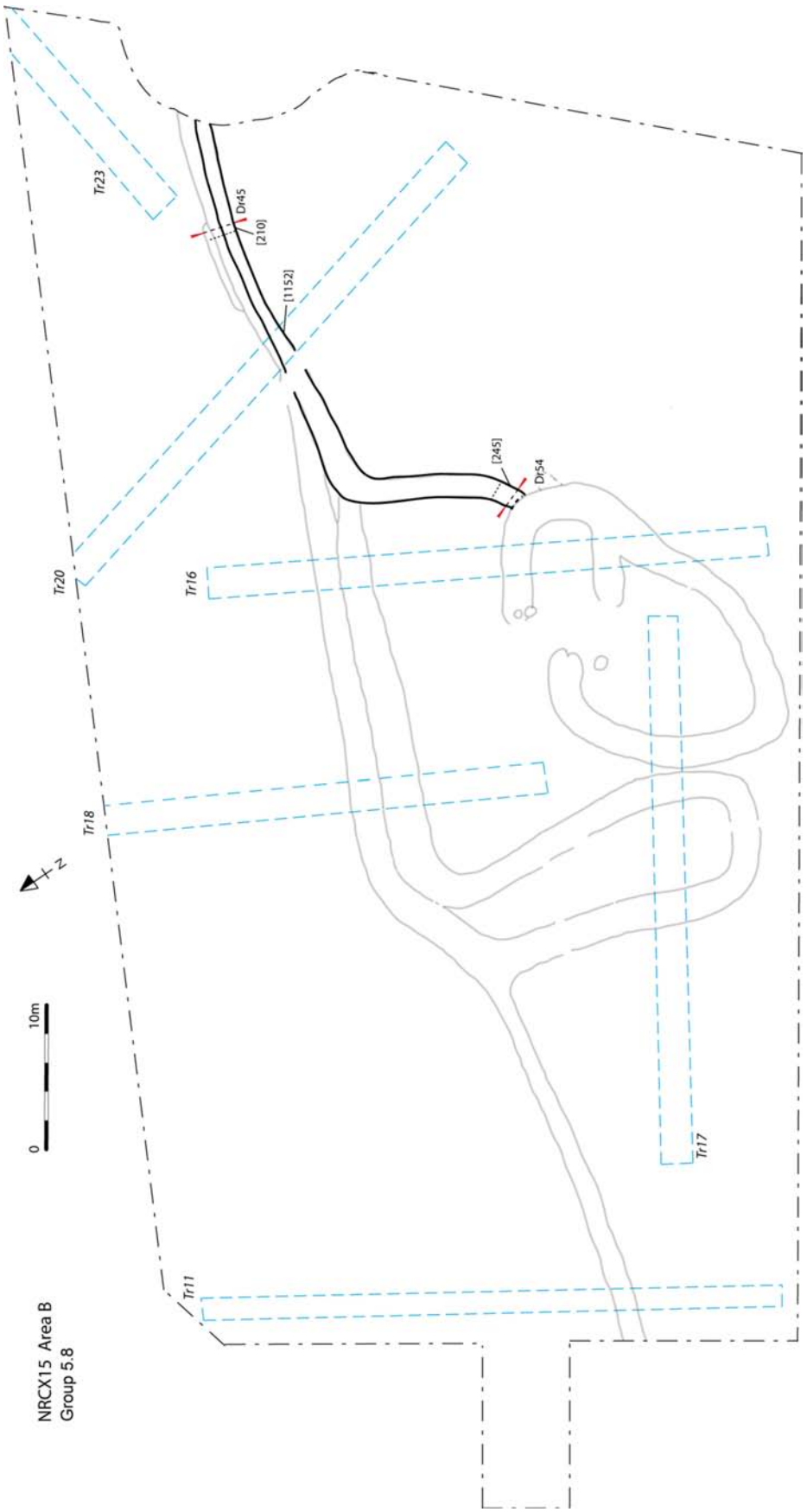


Figure 14: Area B, Group 5.8

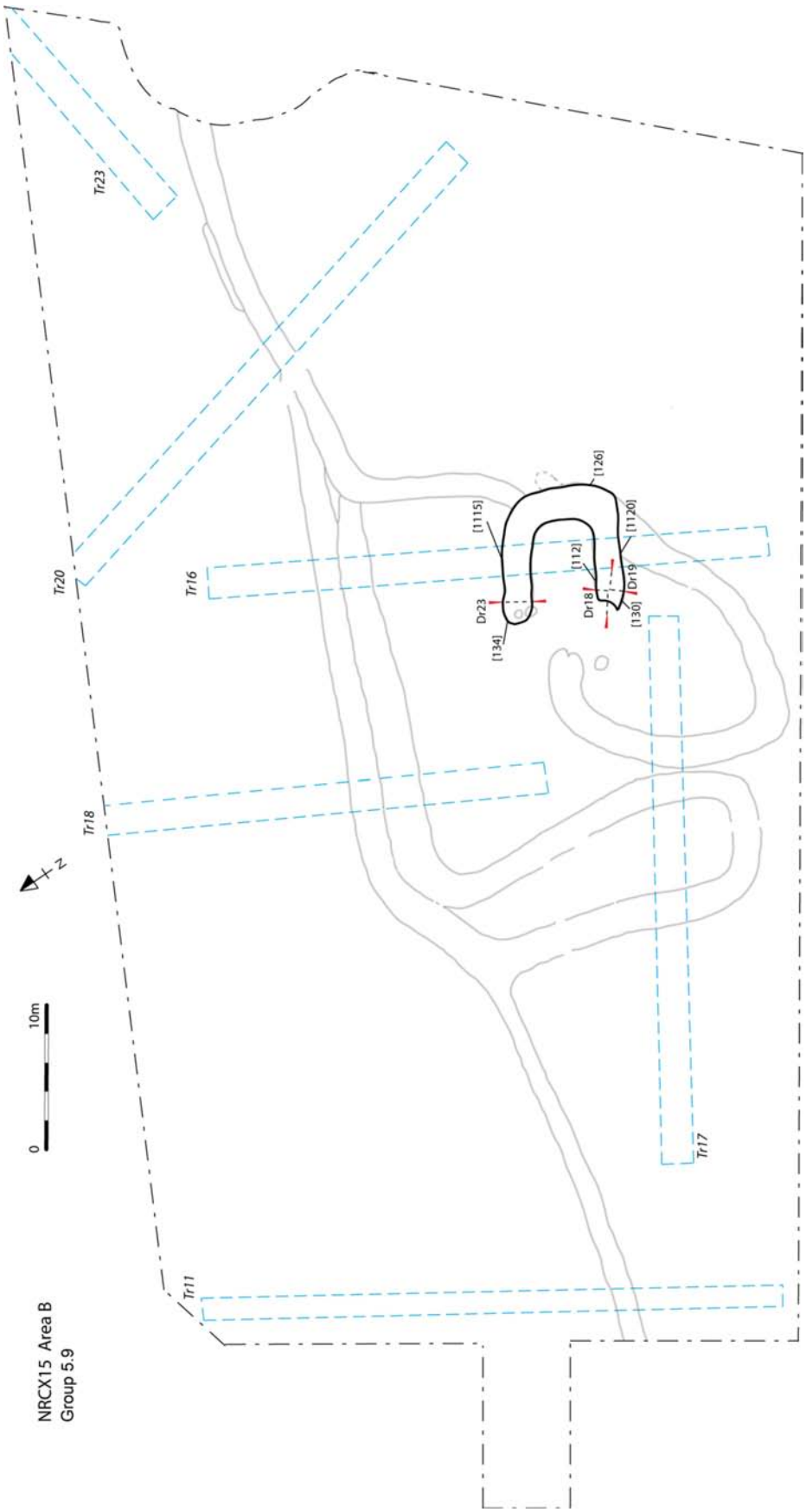


Figure 15: Area B, Group 5.9

Section Drawings

Dr no.	Description
Dr2	E facing section of ditch [001]
Dr3	E facing section of ditch [003]
Dr4	W facing section of ditch [001]
Dr5	W facing section of ditch [003] and rep. sec.
Dr6	E facing section of post hole [007]
Dr7	N facing section of pit [009]
Dr8	E facing section of pit [011]
Dr9	S facing section of pit [013]
Dr10	E facing section of pit [015]
Dr11	SE facing section of pit [101]
Dr12	S facing section of gully [102]
Dr13	S facing section of post hole [104]
Dr14	S facing section of post hole [106]
Dr15	W facing section of ditch [116] and possible recut [126]
Dr16	SE facing section of linear terminus [117]
Dr17	SE facing section of post hole [122]
Dr18	Interface of ditch [112], gully [125] and possible post hole [130]
Dr19	Interface of ditch [112] and gully [125]
Dr20	NE facing section of linear ditch [126]
Dr21	S facing section of gully [125]
Dr22	N facing section of linear gully [102]
Dr23	NW facing section of ditch terminus [134]
Dr24	W facing section of linear gully [102]
Dr25	S facing section of linear ditch [102]
Dr26	SE facing section of linear ditch [102]
Dr27	NE facing section of ditch [146]
Dr28	NW facing section of gully [149]
Dr29	NW facing section of post hole [143]
Dr30	NE facing section of ditches [152] and [153]
Dr31	NW facing section of ditch [149]
Dr32	NW facing section of ditch [149]
Dr33	S facing section of ditches [150] and [151]
Dr34	SE facing section of ditches [157] and [158]
Dr35	SE facing section of ditches [170] [172] and [174]
Dr36	NE facing section of gully terminus [158] (177)
Dr37	SW facing section of pit/post hole [179]
Dr38	SW facing section of linear ditch terminus [180]
Dr39	SE facing section of ditches [158] [182] [184]
Dr40	NW facing section of ditch [180]
Dr41	SW facing section of pits [196] and [197]
Dr42	SW facing section of pit [202]

Dr no.	Description
Dr43	SW facing section of ditch terminus [204]
Dr44	S facing section of pit [206]
Dr45	SE facing section of ditches [210] [212] [214]
Dr46	SW facing section of gully terminal [220]
Dr47	W facing section of ditch [221]
Dr48	SW facing section of ditch [223]
Dr49	SW facing section of ditch [225]
Dr50	NE facing section of ditches [223] and [225]
Dr51	NW facing section of linear [232]
Dr52	E facing section of cuts [236] and [237]
Dr53	NE facing section of pit [238]
Dr54	NE facing section of ditch [245]
Dr55	NW facing section of gully terminal [220]
Dr56	E facing section of gully [248]
Dr57	SW facing section of ditch [126]=[253]
Dr59	NE facing section of ditch/gully [249]
Sections with 4-digit numbers are taken from the AS evaluation report	

Section Drawings by Group	
Figure 16	Area A, Groups 1-3 section drawings
Figure 17	Area B, Group 4 section drawings
Figure 18	Area B, Group 5.1 section drawings
Figure 19	Area B, Group 5.2 section drawings
Figure 20	Area B, Group 5.3 section drawings
Figure 21	Area B, Group 5.4 section drawings
Figure 22	Area B, Group 5.5 section drawings
Figure 23	Area B, Group 5.6 section drawings
Figure 24	Area B, Group 5.7 section drawings
Figure 25	Area B, Group 5.8 section drawings
Figure 26	Area B, Group 5.9 section drawings
Figure 27	Area B, Group 6 section drawings
Figure 28	Area B, Group 7 section drawings
Figure 29	Area B, Group 8 section drawings
Figure 30	Area B, Group 9 section drawings
Figure 31	Area B, Group 10 section drawings
Figure 32	Area B, Group 11 section drawings
Figure 33	Area B, Group 12 section drawing

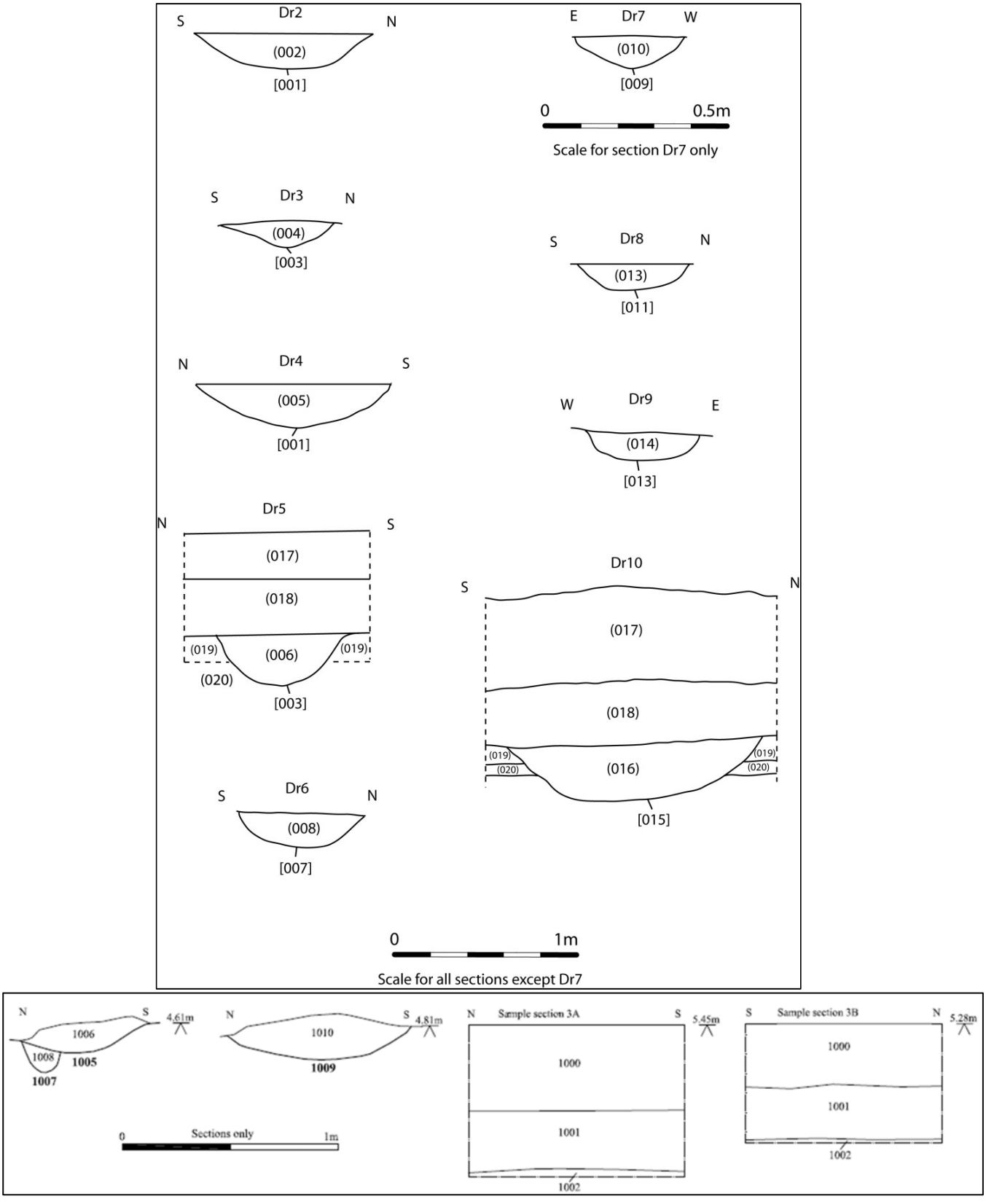


Figure 16: Area A section drawings

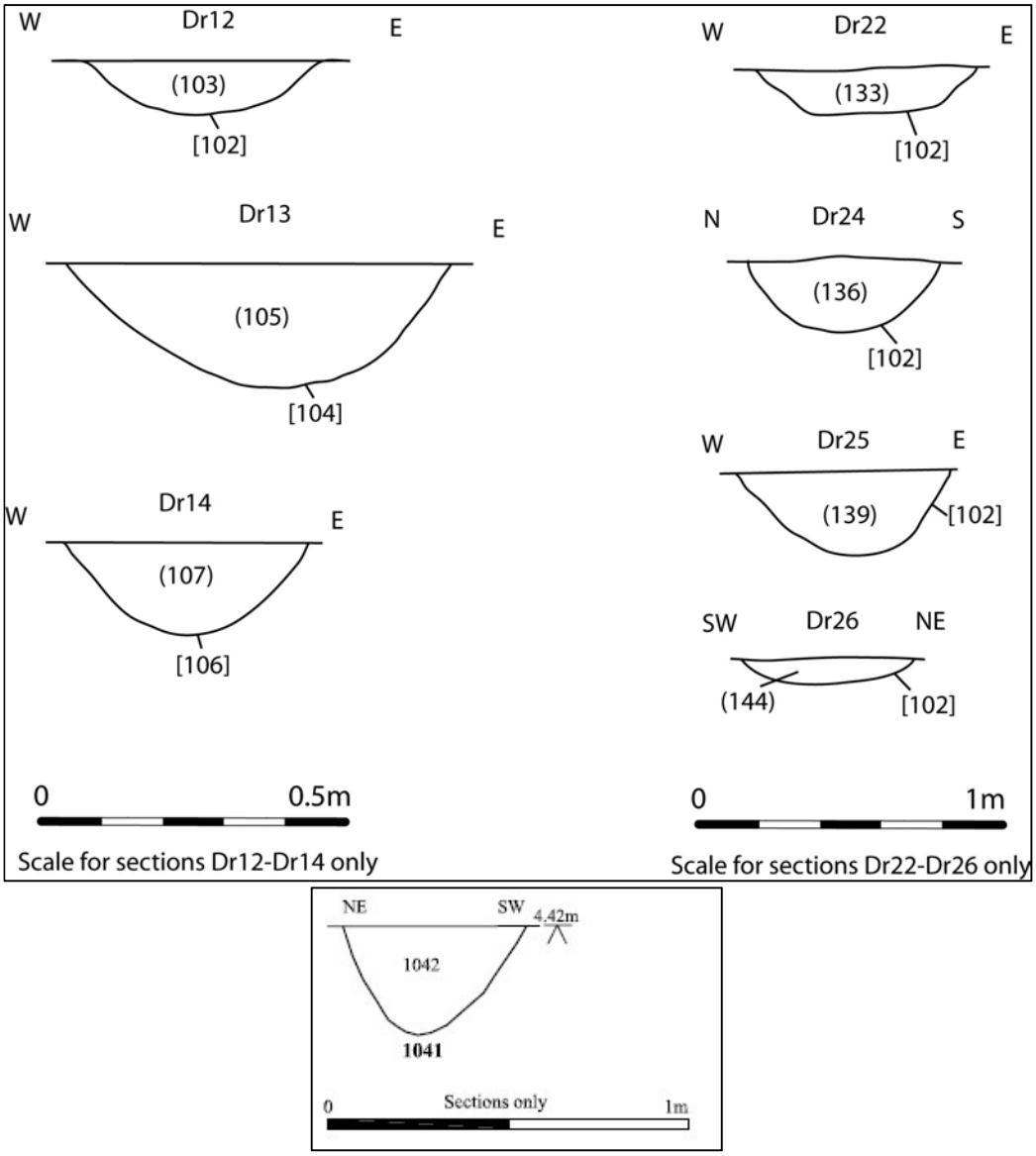


Figure 17: Area B, Group 4 section drawings

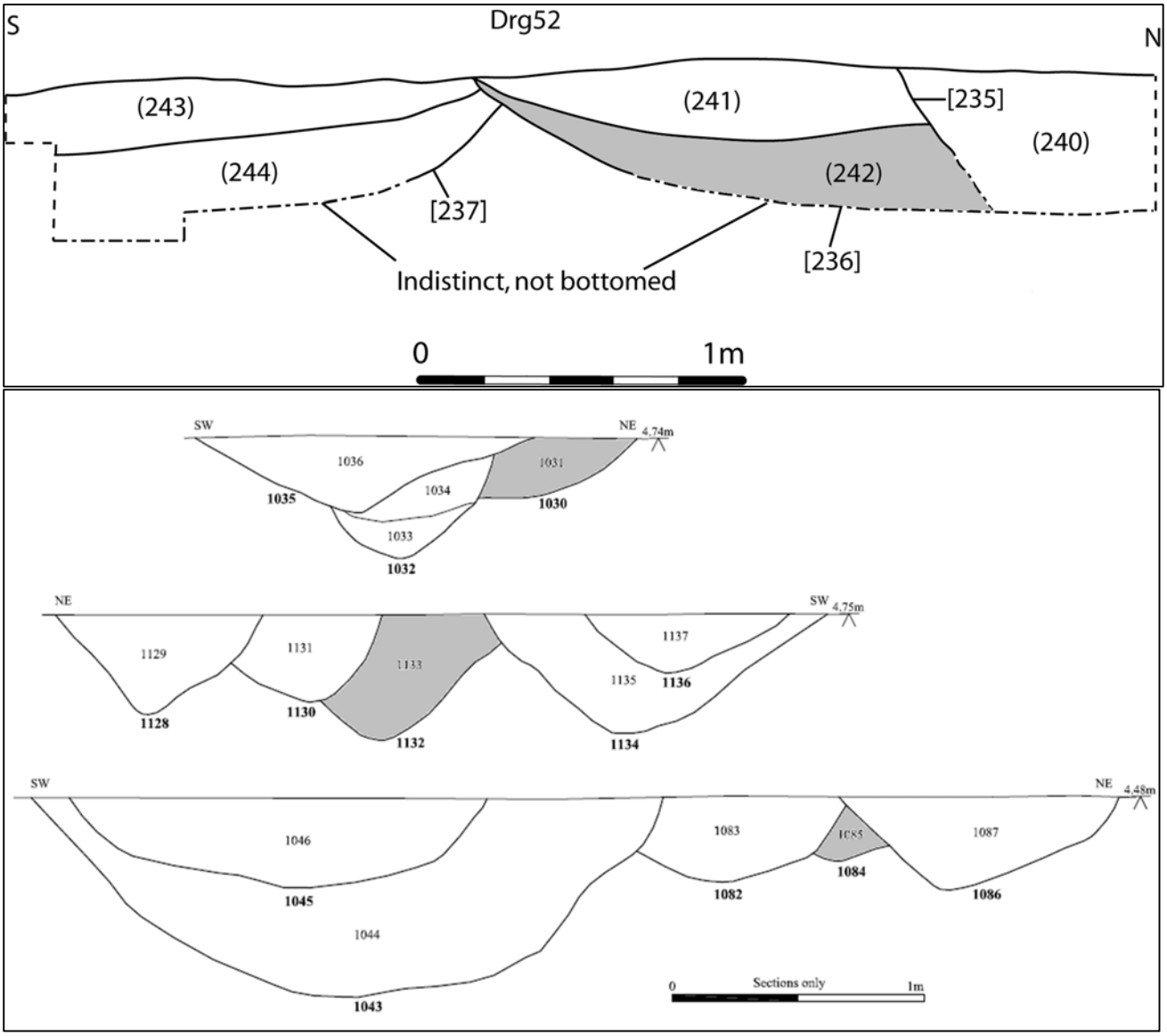


Figure 18: Area B, Group 5.1 section drawings

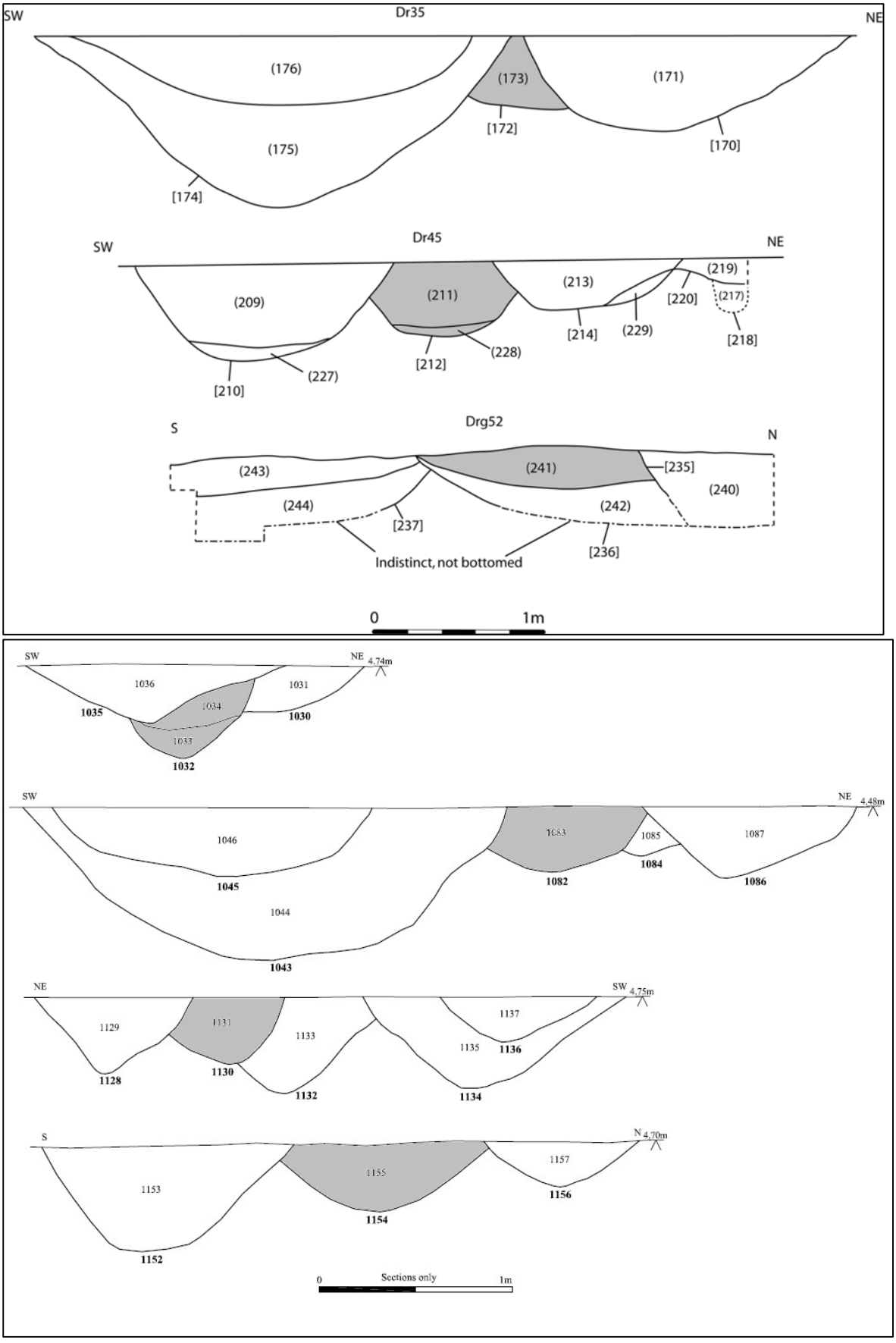


Figure 19: Area B, Group 5.2 section drawings

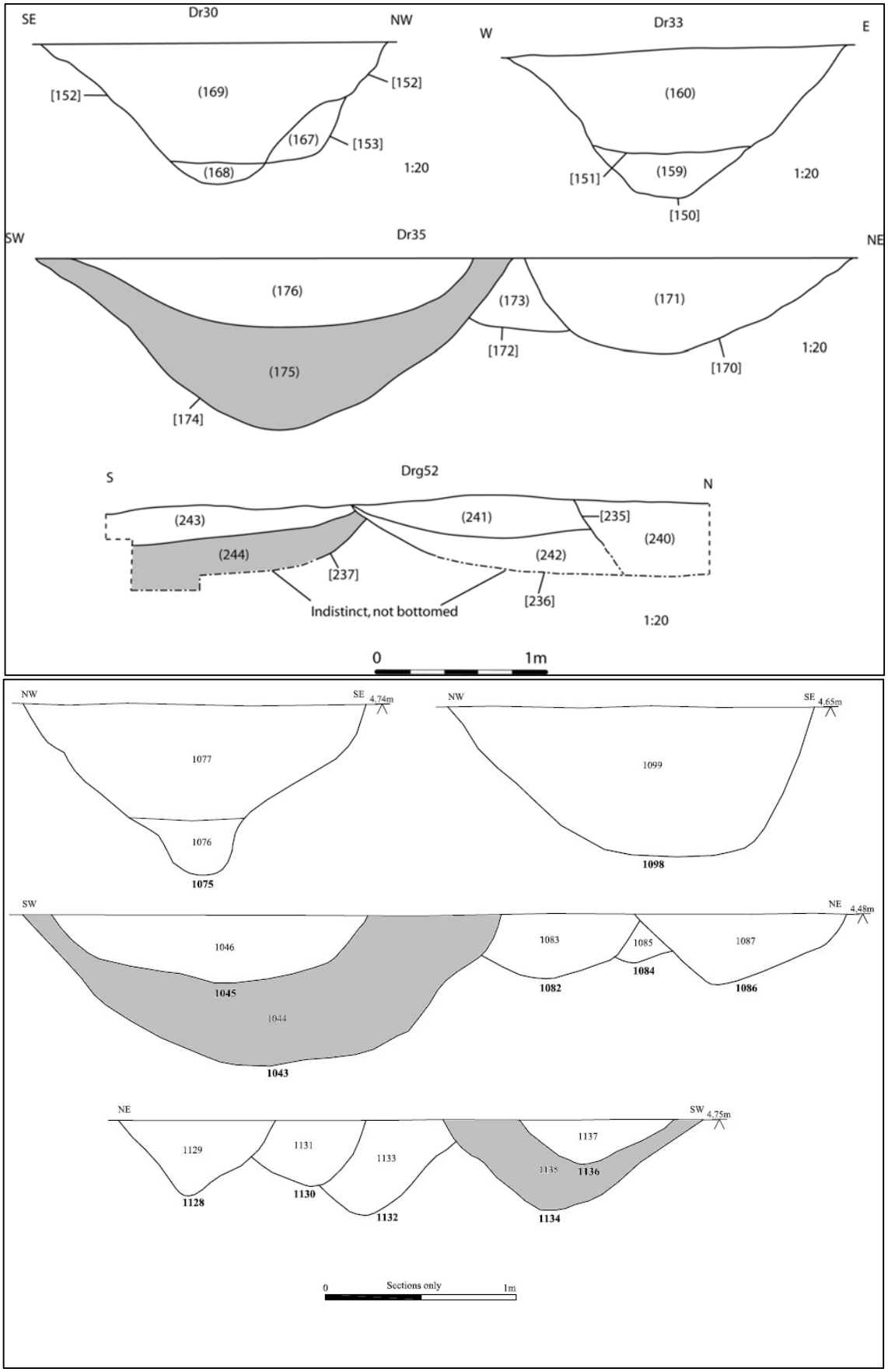


Figure 20: Area B, Group 5.3 section drawings

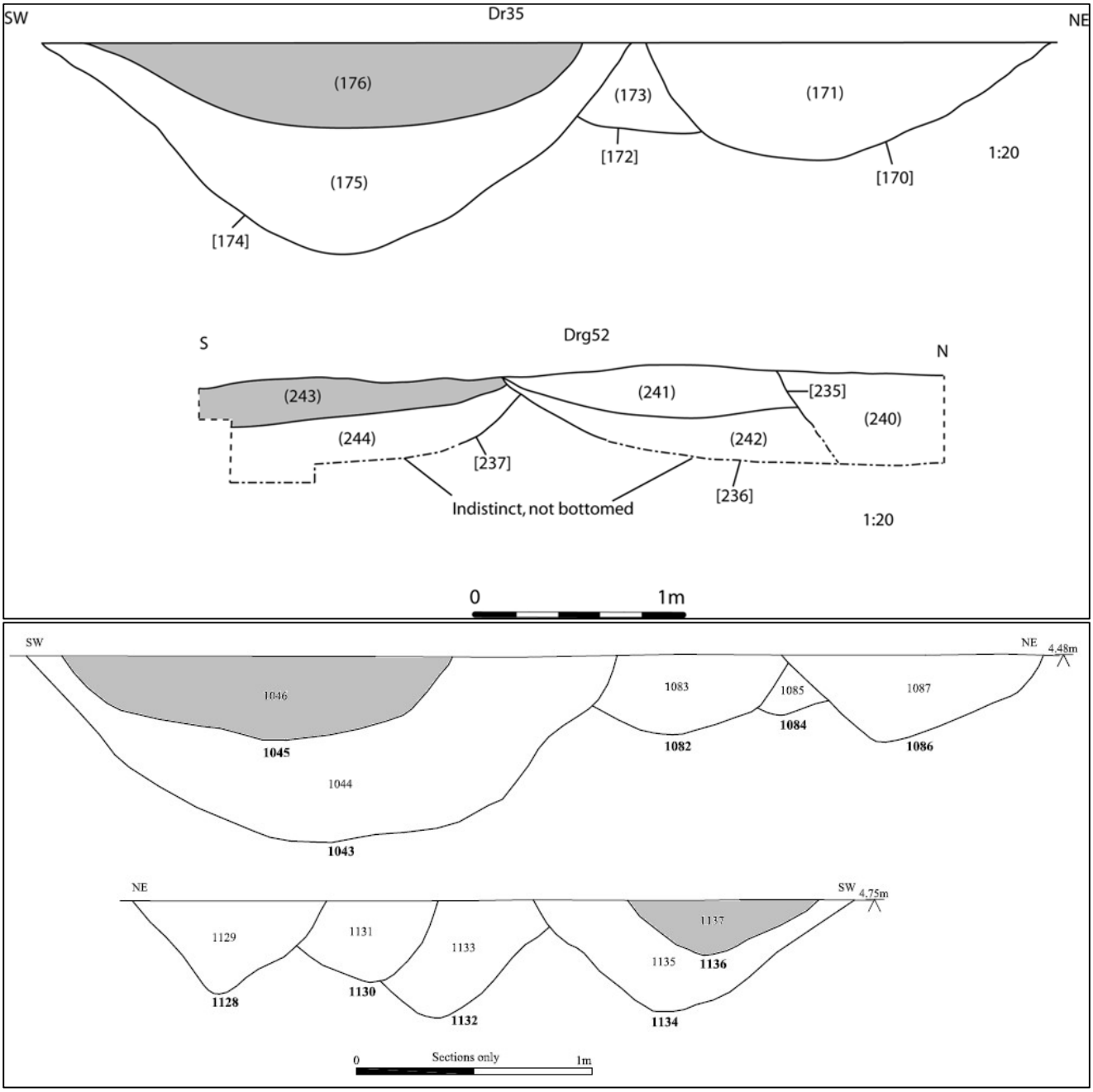


Figure 21: Area B, Group 5.4 section drawings

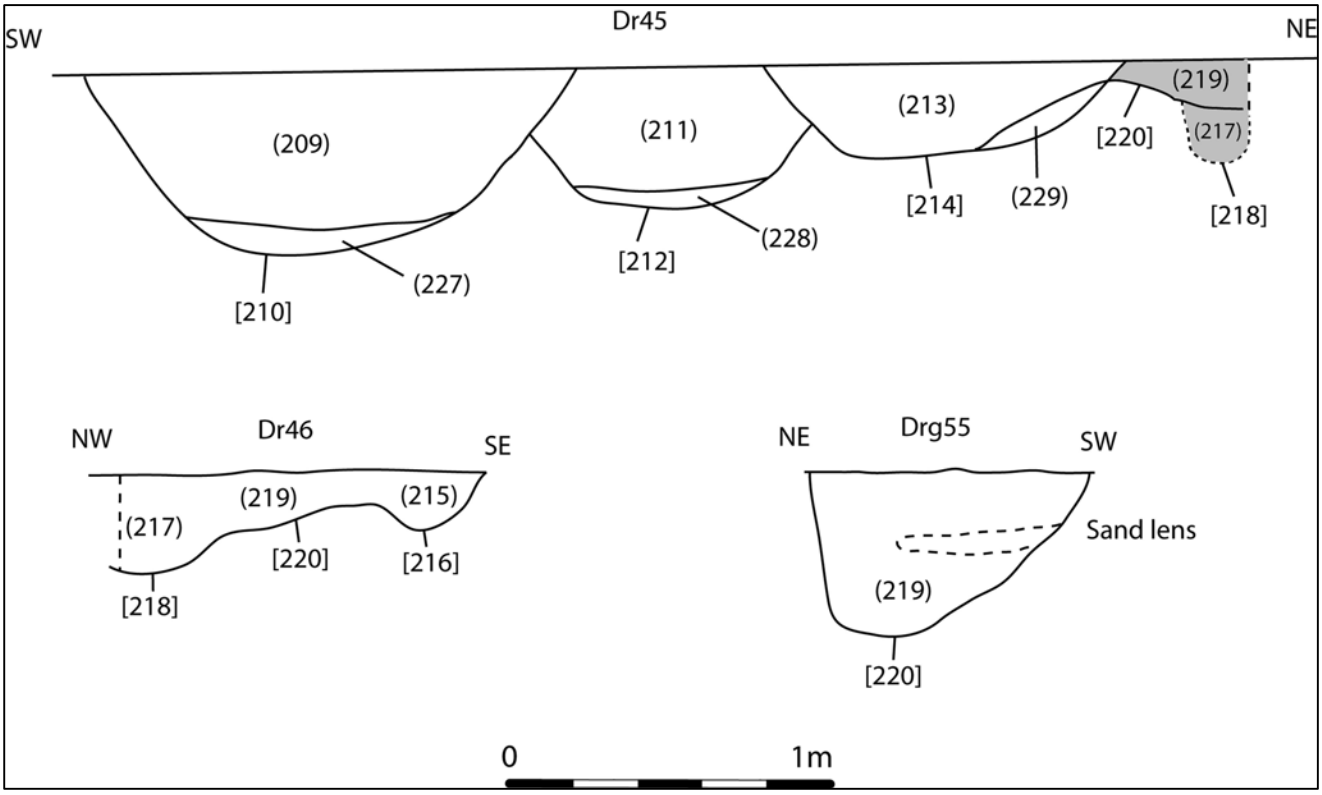


Figure 22: Area B, Group 5.5 section drawings

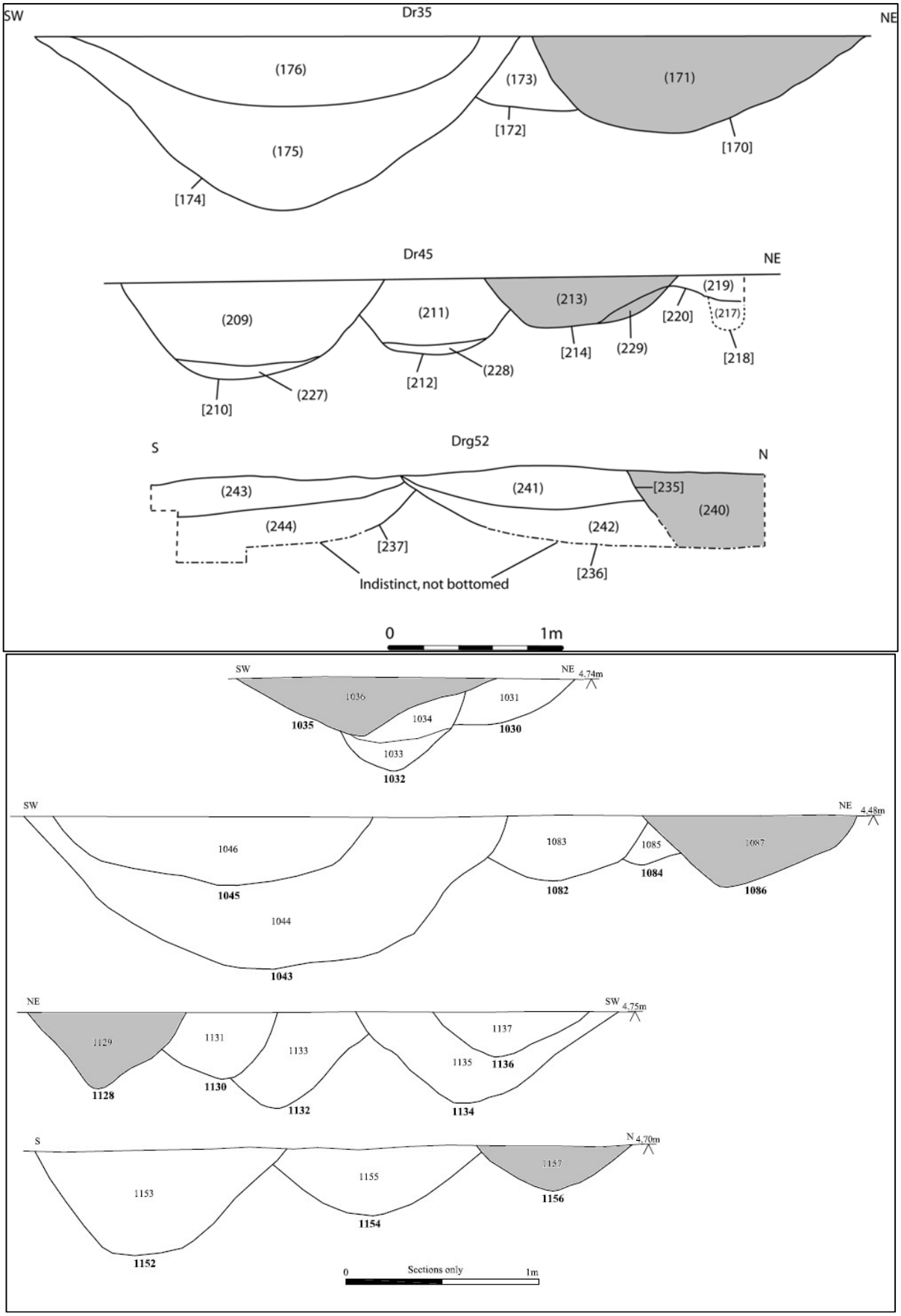


Figure 23: Area B, Group 5.6 section drawings

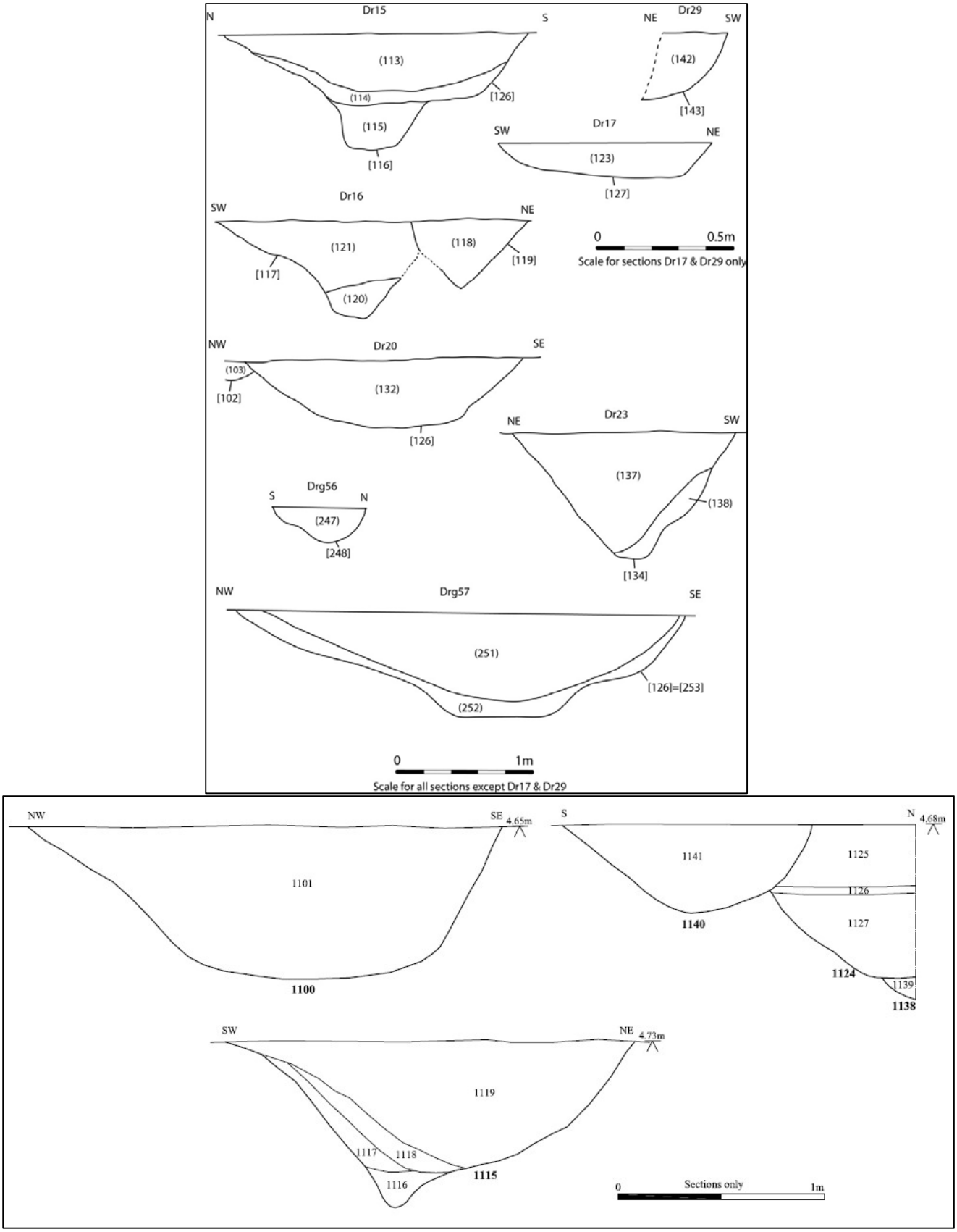


Figure 24: Area B, Group 5.7 section drawings

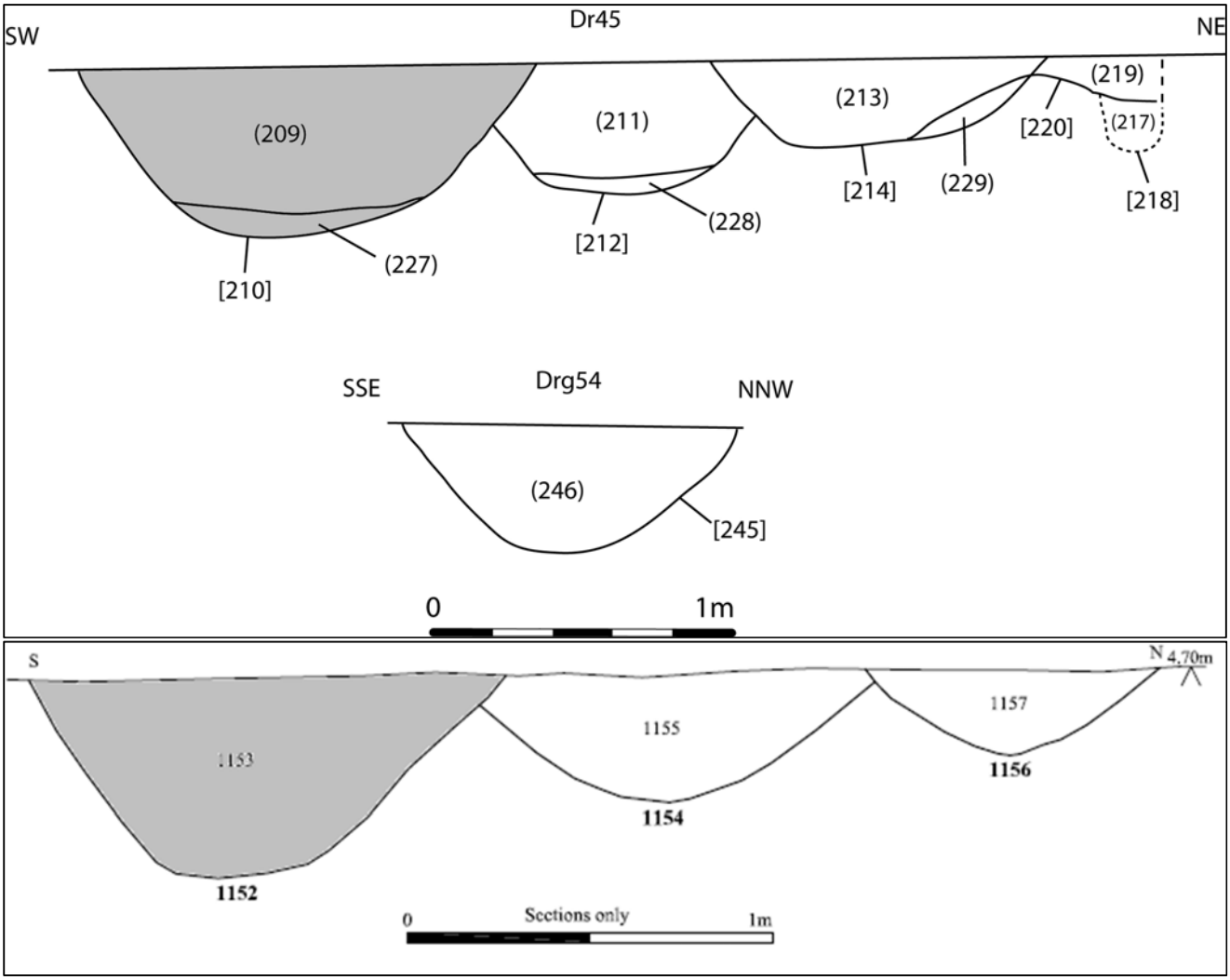


Figure 25: Area B, Group 5.8 section drawings

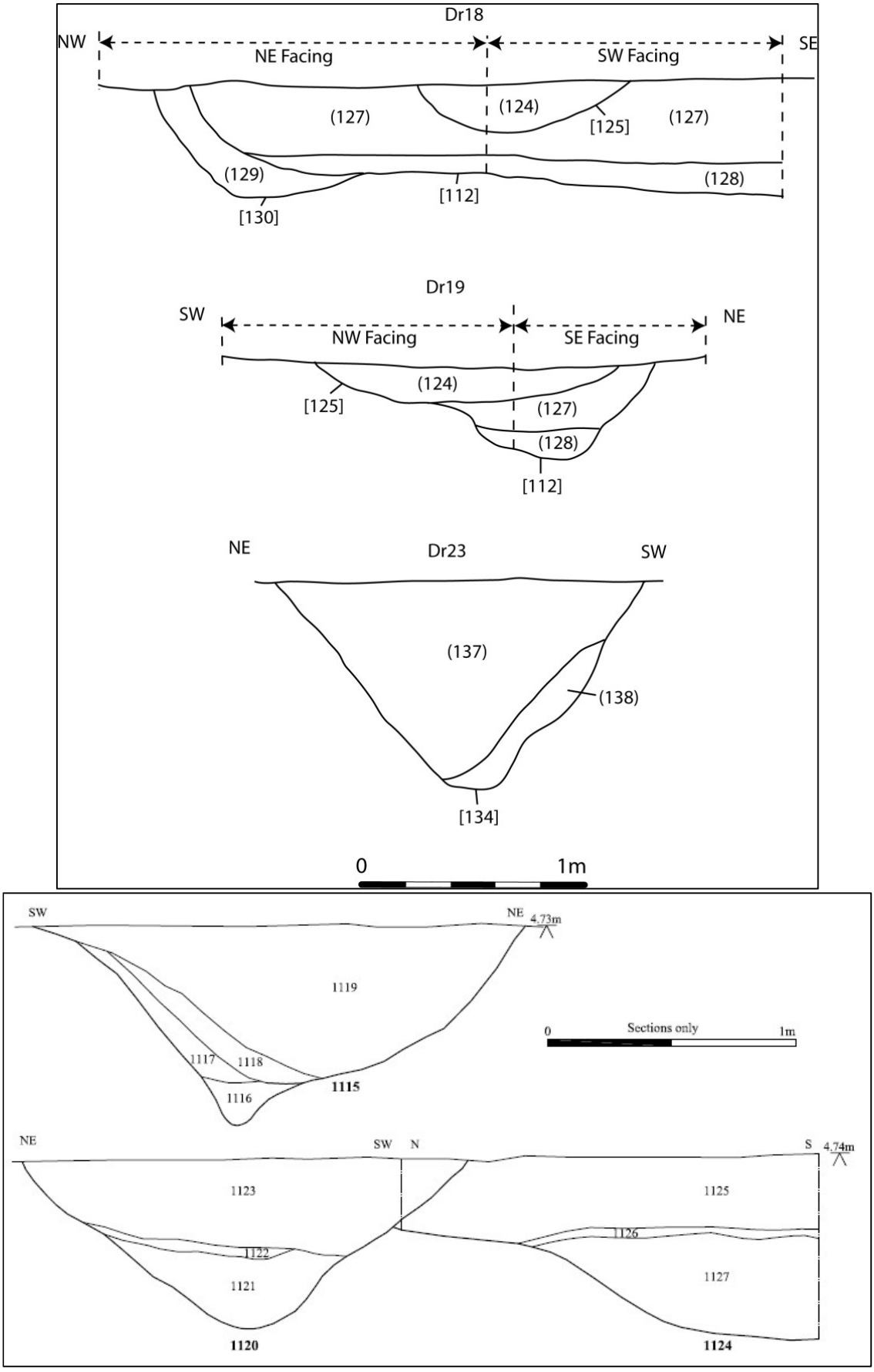
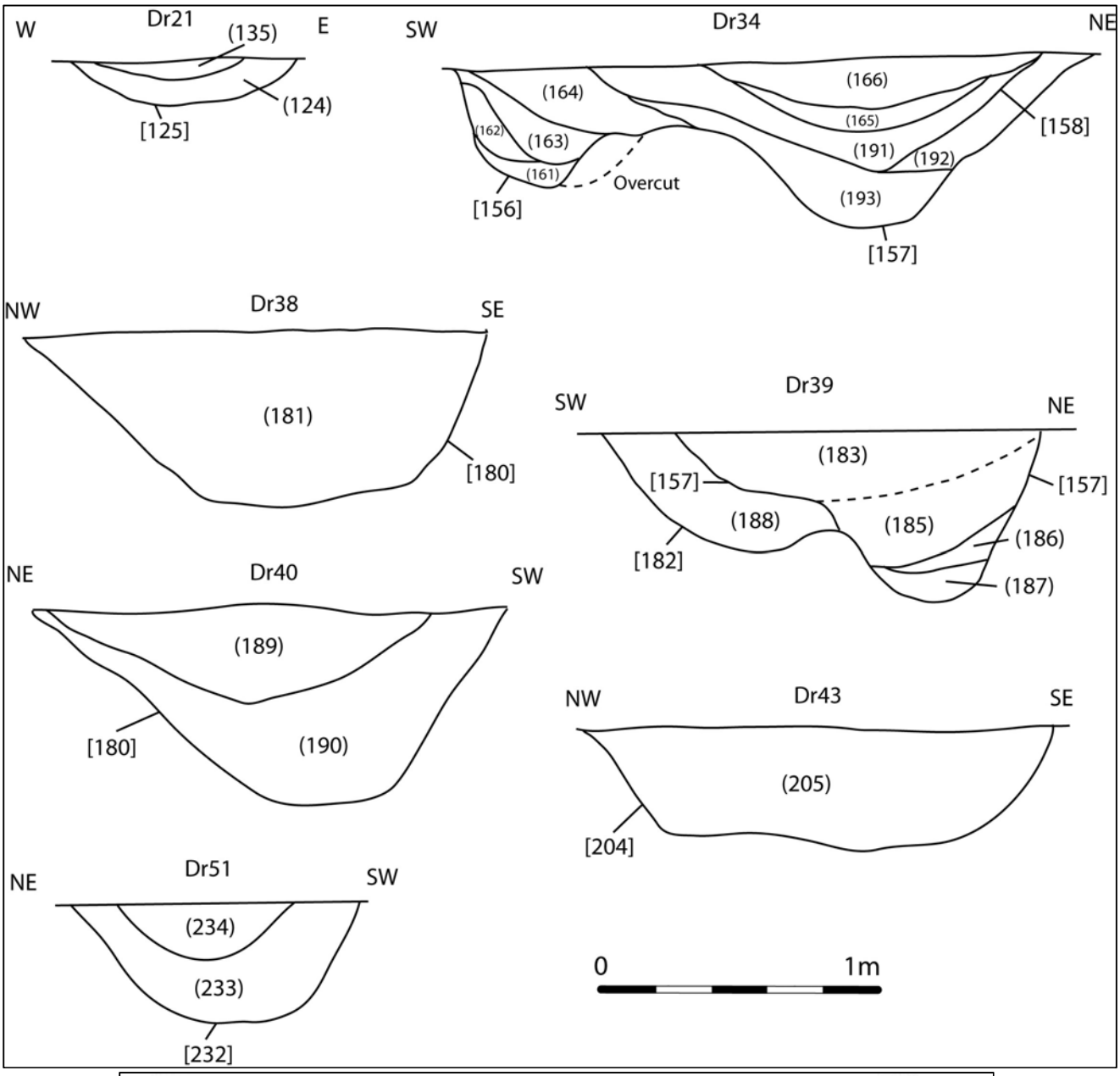


Figure 26: Area B, Group 5.9 section drawings



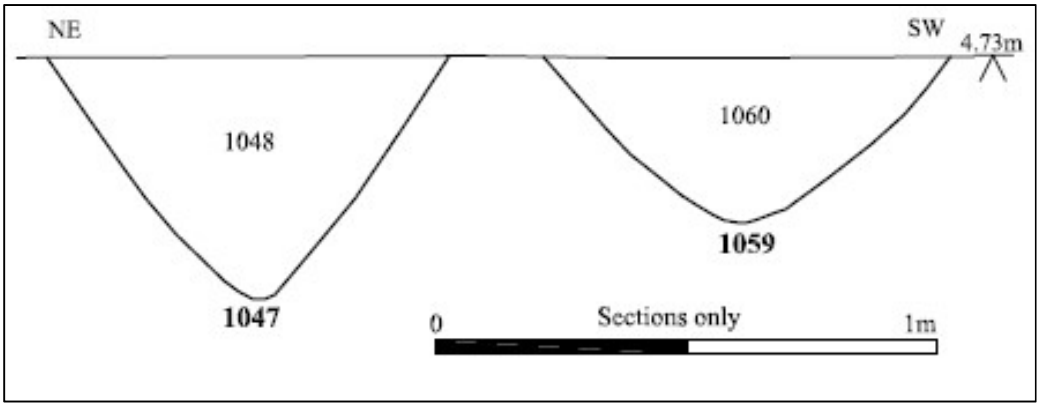


Figure 27: Area B, Group 6 section drawings

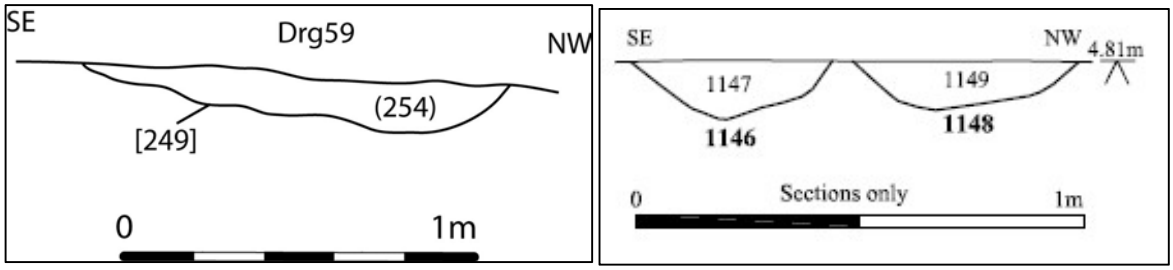


Figure 28: Area B, Group 7 section drawings

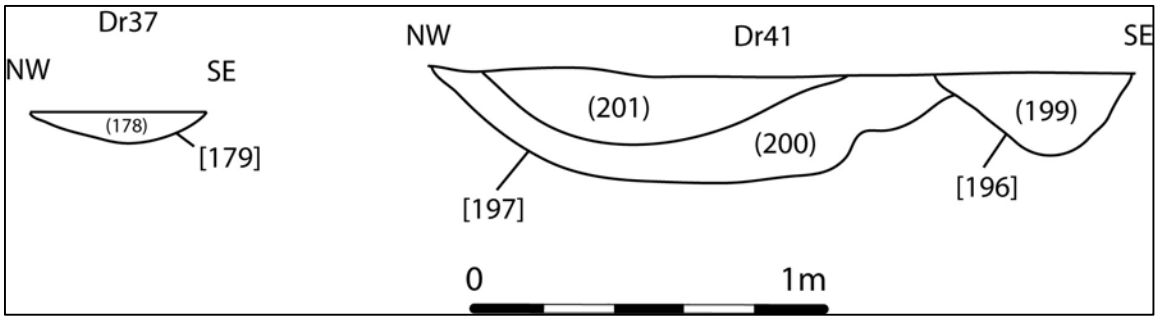


Figure 29: Area B, Group 8 section drawings

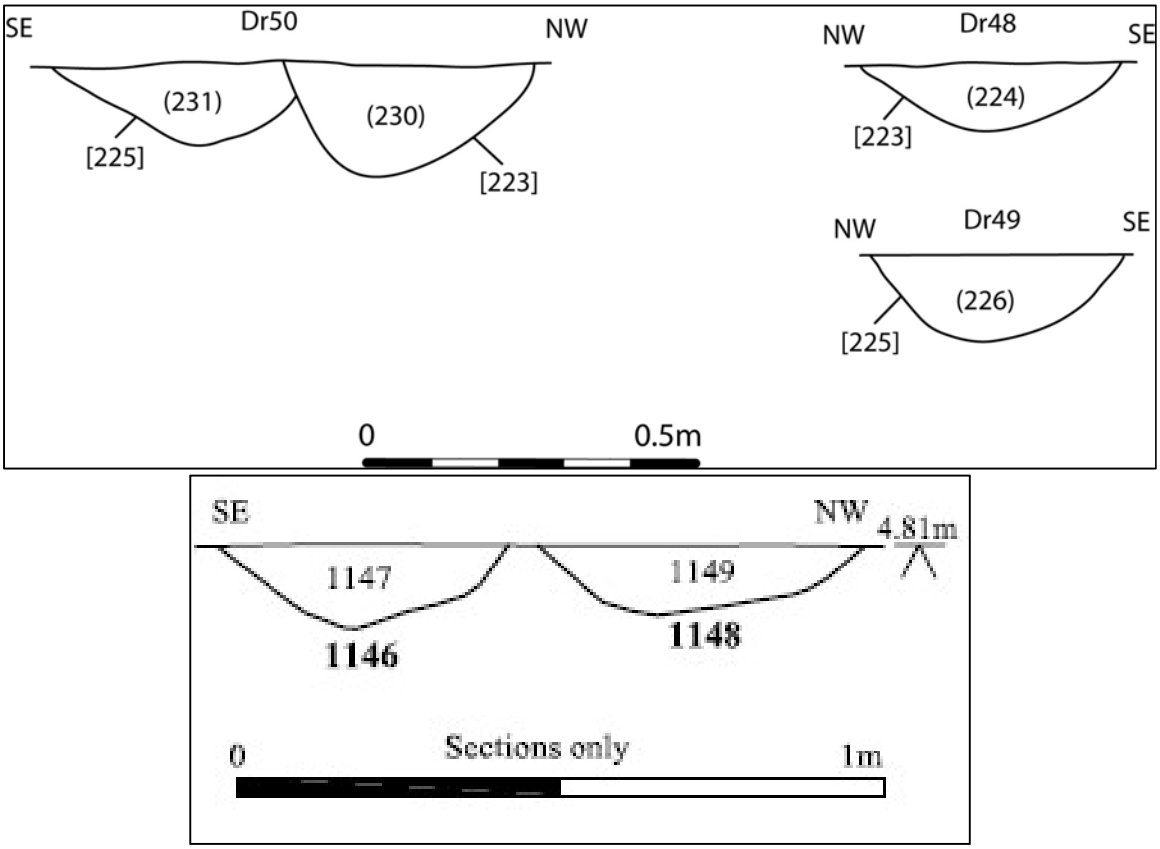


Figure 30: Area B, Group 9 section drawings

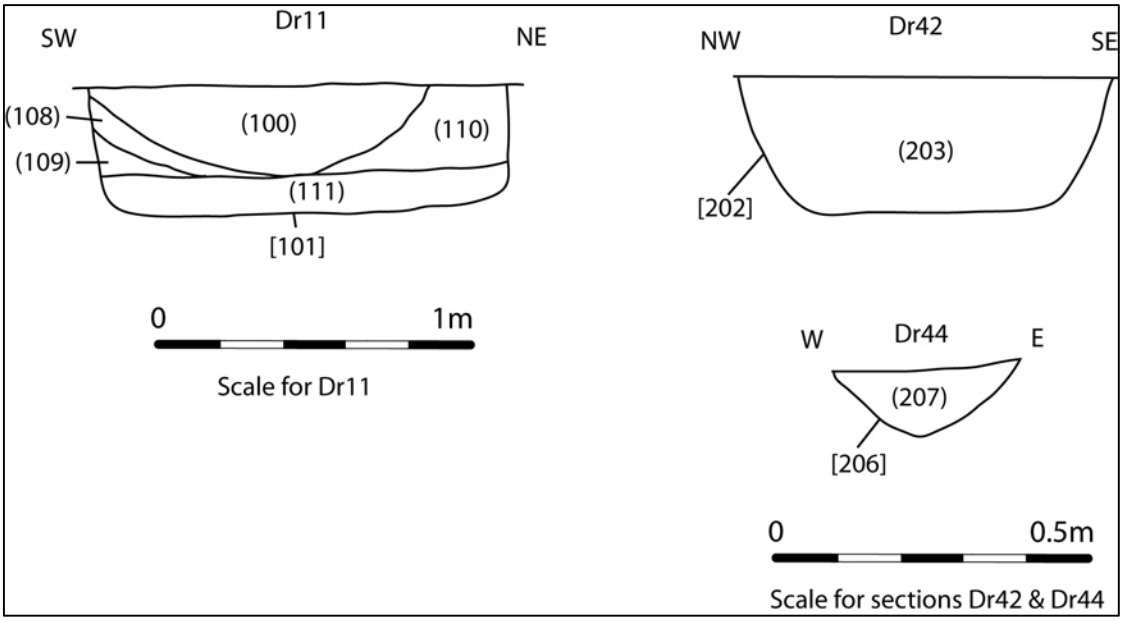


Figure 31: Area B, Group 10 section drawings

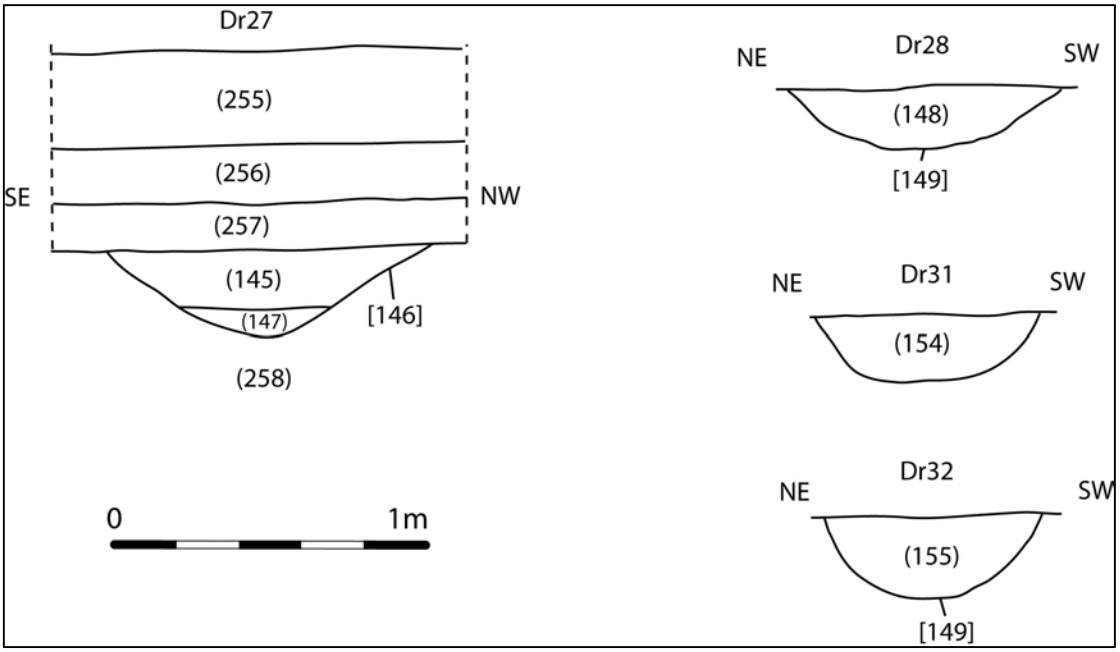


Figure 32: Area B, Group 11 section drawings

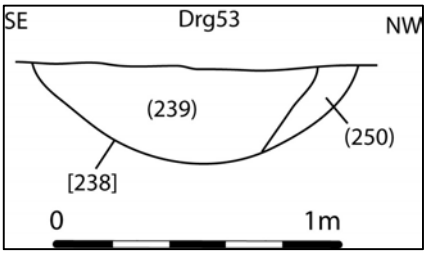


Figure 33: Area B, Group 12 section drawing

Plates

1. Area A pre-excavation looking W

2. Area A working shot looking N

3. Area A working shot looking SW

4. [001] E facing section

5. [003] E facing section

6. [001] W facing section

7. [003] W facing section

8. [009] N facing section

9. [011] E facing section


10. Area B working shot looking NW


11. Area B working shot looking SW

12. [015] E facing section

13. [102] S facing section

14. [013] S facing section

15. [007] E facing section

16. [104] S facing section

17. [106] S facing section

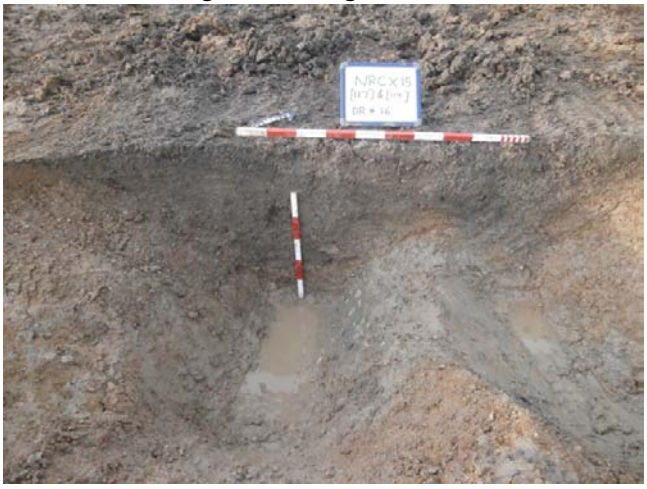
18. [101] SE facing section

19. Area B working shot looking W

20. Area B working shot looking NW

21. Area B working shot looking SW

22. [112] [116] W facing section



23. [117] [119] SE facing section

24. [122] SE facing section

25. [112] SW facing section

26. [112] [125] looking SE


27. [126] SW facing section

28. [102] N facing section


29. Area B working shot looking N

30. [102] W facing section

31. [102] S facing section

32. [102] NW facing section

33. [134] NW facing section

34. [146] NE facing section

35. [149] NW facing section

36. [143] looking SE

37. Area B working shot looking E

38. [152] [153] looking SW

39. Area B working shot looking NW

40. Area B working shot looking NW

41. [149] [154] NW facing section

42. [149] [155] SE facing section

43. [150] [151] S facing section


44. [157] [158] SE facing section

45. [170] [172] SE facing section

46. [172] [174] SE facing section


47. [158] NE facing section

48. [179] SW facing section

49. [180] SW facing section

50. [157] [182] looking SE

51. [180] NW facing section

52. [196] [197] looking SW

53. [202] SW facing section

54. Area B working shot looking W

55. [204] SW facing section

56. Area B working shot looking NW

57. [206] S facing section

58. [221] SW facing section

59. [210] [212] [214] looking NW

60. [223] SW facing section

61. [225] SW facing section

62. [223] [225] looking SW


63. Area B working shot looking NW

64. [232] NW facing section

65. [235] [236] [237] looking W

66. [235] [236] [237] looking SW

67. [235] [236] [237] looking S

68. [235] [236] [237] looking SW

69. [126] pre-excavation looking NE

70. [238] NE facing section

71. [245] NE facing section

72. [216] [218] [220] looking NE

73. [220] NW facing section

74. [248] NE facing section


75. [126] looking N


76. [249] SE facing section


77. Area B post-excavation looking N


78. Area B post-excavation looking NW

79. Area B post-excavation looking NE

80. Area B post-excavation looking SE

81. Area B post-excavation looking E