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MAP Archaeological Practice

Land North of Beacon Road and West of Napier Crescent Seamer North Yorkshire

Archaeological Strip, Map and Record.

MAP 05.11.16

17/00452/FL

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Report Prepared By	Report Authorised By
Charlotte Stodart	Paula Ware
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North Yorkshire
Archaeological Strip, Map and Record
(Centred at NGR TA 01478 84206)

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Non-technical Summary

An Archaeological Strip, Map and Record was carried out by MAP Archaeological Practice Ltd on land north of Beacon Road and West of Napier Crescent, Seamer, North Yorkshire (Centred TA 01478 84206) between May and August 2019, on behalf of Linden Homes. The work was undertaken in advance of the construction of a residential development (Application Ref.17/00452/FL). The site had previously been subject to a Desk Based Assessment, Geophysical Survey and Evaluation by Trial Trenching.

A pair of large parallel ditches, which may represent part of a lowland dyke system had their origins in the late Bronze Age or early Iron Age and appeared to have ceased to be functional by the late Iron Age. It is likely that the ditches formed a boundary across the landscape that was also utilised as a trackway.

A single Group 1 square barrow was located in the north-eastern corner of the site. The barrow contained no central grave although a pit containing the remains of an infant aged between 18 months and 2 years at the time of death was located in the internal slope of the north-western corner of the barrow ditch. This interment is considered to be contemporary with the construction of the barrow.

A trackway system dated to the late Iron Age was identified in the eastern part of the site and formed a cross roads which can be identified through aerial photography continuing beyond the limits of excavation and is likely associated with a landscape containing the cropmarks of barrows and potential late prehistoric or Roman period enclosures. A single enclosure, located immediately adjacent to the crossroads, contained pits which contained a large amount of late Iron Age pottery.

A large circular feature with a 40m diameter was identified close to the western boundary of the site. This shallow feature had an entrance on its southern side although it is not clear whether an opposing entrance was present. No archaeological material was recovered to suggest a date or purpose for the feature although its diameter is comparable to prehistoric hengiform monuments in the region, albeit with any trace of a bank that may have existed been removed by later agricultural activity.

1. Introduction

1.1 This report sets out the results of an Archaeological Strip, Map and Record, carried out by MAP Archaeological Practice Ltd. Between May and August 2019, on land north of Beacon Road and West of Napier Crescent, Seamer, North Yorkshire (NGR TA 01478 84206). The work was carried out in advance of the commencement of a residential development with associated infrastructure.

1.2. Condition 22 attached to planning application 17/00452/FL states that;

Development shall not commence until a Written Scheme of Archaeological Investigation has been submitted to and approved in writing by the local planning authority. The scheme shall include an assessment of archaeological significance and research questions; and:

a) The programme and methodology of site investigation and recording

b) The programme for post investigation assessment

c) Provision to be made for analysis of the site investigation and recording

d) Provision to be made for publication and dissemination of the analysis and records of the site investigation

e) Provision to be made for archive deposition of the analysis and records of the site investigation

f) Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

The development shall be carried out in accordance with the approved Written Scheme of Investigation. Further, no dwelling shall be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the approved Written Scheme

of Investigation and provision made for analysis, publication and dissemination of results and archive deposition has been secured.

1.3. The Strip, Map and Record was the final stage in a programme of archaeological work which has included a Desk-Based Assessment (MAP 2016), Geophysical Survey (Phase Site Investigations, 2017), and Evaluation by Trial Trenching (MAP 2017).

1.4. The work was carried out in accordance with the recommendations of the National Planning Policy Framework (February 2019) on 'Archaeology and Planning' and according to a Written Scheme of Investigation (WSI) prepared by MAP (Appendix 14) and approved by the Heritage Unit at North Yorkshire County Council.

1.5. The results of the Strip, Map and Record are intended to record and advance understanding of the archaeology, in accordance with the National Planning Policy Framework (NPPF, February 2019) and policy DEP5 (historic and Built Environment) of the Scarborough Borough Local Plan which states that

'Proposals affecting archaeological sites of less than national importance should conserve those elements which contribute to their significance in line with the importance of the remains. In those cases where development affecting such sites is acceptable in principle, mitigation of damage will be ensured through preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before or during development.

1.6. MAP adhered to the general principles of both the CIfA (2014) '*Code of Conduct*' and '*Standard and Guidance for Archaeological Field Excavation*' throughout the work.

1.7. The site code for the project was MAP 05.11.2016

1.8. All work was funded by Linden Homes.

1.9. All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright, Licence No. AL 50453A or via OpenStreetMap (https://www.openstreetmap.org/copyright).

2. Site Description

2.1 The site is located to the north of the village of Seamer and east of Irton, approximately 5km south-west of Scarborough (Fig 1).

2.2 The site, which prior to the commencement of development consisted of two agricultural fields, is bound to the east by Stoney Haggs Road, to the west by Ayton Road, agricultural land to the north and predominantly housing to the south.

2.3 The site stands on soils derived from the Wick 1 Soil Association (Macney et al. 1984) which are described as 'deep well drained coarse loamy and sandy soils, locally over gravel'. The site stands at an elevation of between 32m AOD and 38m AOD.

2.4 The Archaeological Strip, Map and Record targeted four areas of the site (Fig. 2) measuring a total area of 3.22ha. The 4 areas were intended to investigate 2 separate areas of a pair of parallel ditches in the western half of the site, a large circular anomaly identified in the results of the Geophysical Survey and a large area in the eastern half of the site which targeted the main focus of activity on the site.

3. Previous Archaeological Work.

3.1 Desk-Based Assessment

3.1.1 The Desk-Based Assessment (MAP 2016) noted the presence of a large prehistoric and Romano-British settlement 1km east of the site at Crab Lane, Crossgates (MAP 2006) and suggested that similar archaeological deposits may be present within the boundaries of the site.

3.1.2 The assessment highlighted that the construction and operational phases of the development had the potential to destroy any sub-surface archaeology. It was recommended that a Geophysical Survey and Trial Trenching was carried out in order to assess the nature, date, survival and extent of any such archaeological deposits and to provide information to allow an appropriate mitigation strategy to be formulated if necessary.

3.2 Geophysical Survey

3.2.1 A geophysical Survey was carried out across the site in 2017 (Phase Site Investigations. 2017). The results of the survey provided evidence for significant archaeological activity on the site, in the form of a series of ditches which were interpreted as being related to roads or trackways as well as possible enclosures.

3.3 Evaluation by Trial Trenching

3.3.1 A programme of Evaluation by Trial Trenching took place on the site in order to assess the nature of the anomalies identified in the results of the Geophysical Survey (MAP 2017).

3.3.2 Ten Trial Trenches were excavated across the site in order to assess the Geophysical anomalies but also to investigate areas supposedly devoid of archaeological responses.

3.3.3 The Evaluation was successful in identifying anomalies highlighted in the results of the Geophysical Survey. Two areas of archaeological activity were identified including a double-ditched trackway and areas of possible domestic settlement which consisted of gullies, pits and ditches.

3.3.4 The finds assemblage suggested a predominantly Late Iron Age date for activity on the site although the presence of Samian Ware which was recovered from the upper fill of a trackway ditch, suggested possible later activity, although this may have been intrusive material.

4. Archaeological and Historical Background

4.1 Several likely prehistoric sites have been identified in the area, predominantly through cropmarks seen in aerial photography. Cropmarks of a large field system and probable settlement have been identified either side of Seamer Moor Lane, north of Stoney Haggs Road (HER reference MNY39087). The site includes a double ditched trackway with ancillary

tracks crossing it and large field systems which are associated with the trackway.

4.2 A Bronze Age and Iron Age cemetery has been identified on aerial photographs which were taken in 2001 (NRHE1431235). The site, which is located approximately 350m north of the Strip, Map and Record Site, contains at least 3 round barrows and a single square barrow in an area measuring 530m long by 365m wide.

4.3 Possible barrows have also been identified in aerial photographs which may be indicative of a funerary complex which predates the aforementioned field systems. This was the case at Crab Lane, Crossgates, where Bronze Age barrows were identified and found to pre-date a field system. In one instance the ditch of a square barrow had been incorporated into the boundary of an enclosure (MAP 2001).

4.4 An enclosure system examined at Crab Lane, Crossgates had its origins in the Iron Age and continued to be in use into the Romano-British period, although early Iron Age features were found within the enclosures but thought to pre-date them. During excavation in 1999 the interior of one such enclosure was examined and was found to contain ring gullies, pits, postholes and a probable malting kiln which was dated to the end of the 1st century BC or early 1st century AD (MAP 1999). An area of the site, which has been identified as the most important part, has been designated as a Scheduled Monument (NHLE 1020788). Some of the remains in the Scheduled area have been exposed in plan but not excavated whilst others have not been exposed yet identified through Geophysical Survey. Included in the Scheduled area are the remains of the stone footings of a building

which were exposed in plan. The building is believed to date to the 1st century AD and is thought to have gone out of use by AD 180. The building is located within an enclosure, part of which was excavated outside of the designated area and dates to the Late Iron Age and contained the remains of a post-built structure, believed to be the predecessor to the stone footed building (Historic England. 2019).

4.5 The name Seamer is recorded in the Doomsday Book as "*Semaer*" in 1086 derived from the Old English words for 'sea' or 'lake' plus 'pool' (Smith 1969).

4.6 The village of Seamer has Pre-conquest origins and, at the time of the Domesday Survey in 1086, the manor, under Carle, held 6 geld carucates. After the conquest the manor of Seamer was passed, by King William, to William Percy of Northumberland and it stayed in the Percy family until 1536 when it was passed back to the Crown. In 1555 Queen Mary gifted the Manor to Henry Gate.

4.7 A manor house was present in the village from at least 1304 when the Percy Family had a house which was used as a Dower house, a house provided to a widow. By 1547 the house, which was now under the control of the Crown, was referred to as a castle. It is not known when the manor house was abandoned or demolished, the remains of the building and the manorial complex in which it stands is designated as a Grade II Listed Building (NLHE 1015409, Historic England 2019b).

5. Aims and Objectives

5.1 Aims

5.1.1 In accordance with the '*Standard and Guidance for Archaeological Excavation*' (CIfA 2014) the aims of the Archaeological Strip and Record were to:

- Examine the archaeological resource within a given area or site within a framework of defined research objectives.
- To seek a better understanding of the resource.
- To compile a lasting record of the resource; and
- To analyse and interpret the results of the excavation and disseminate them.

5.2 Research Objectives.

5.2.1 After consideration of the results of the Geophysical Survey and Archaeological Evaluation by Trial Trenching, the following research objectives have been set.

- Determine the nature, extent and character of prehistoric activity within the site and evaluate its relationship with other nearby sites.
- Examine any evidence for prehistoric settlement within the site
- Examine evidence of land use within the site during the prehistoric periods

6. Methodology

6.1 Excavation

6.1.1 The Archaeological Strip, Map and Record targeted four areas of the site measuring a total area of 3.22ha. These areas were targeted following discussion with the Principle Archaeologist at North Yorkshire County Council in order to assess archaeological features targeted during the Evaluation by Trial Trenching and highlighted in the results of the Geophysical Survey.

6.1.2 Overburden, topsoil and subsoil were removed by a 360° tracked mechanical excavator, fitted with a toothless bucket, operating under close archaeological supervision. Machining ceased at the top of either archaeological or naturally formed deposits, depending upon which was located soonest. The exposed surfaces were cleaned by shovel, hoe or trowel as appropriate and all subsequent excavation was carried out by hand.

6.1.3 A sufficient sample of archaeological features and deposits were hand excavated, in order to address the aims of the Archaeological Strip, Map and Record. As a minimum the following samples were excavated from features.

- 50% is all discrete archaeological features (eg. pits and post-holes).
- 50% of all structural features (e.g. ring ditches, roundhouse gullies and beam slots) including all terminals and feature intersections.
- 100% of all funerary monuments
- 10% of all linear features (e.g. ditches and gullies), including all terminals and feature intersections.

6.1.4 For the purpose of finds retrieval soil from both the machine stripping and hand excavation was visually scanned.

6.1.5 All work was carried out in line with the Chartered Institute of Field Archaeologists 'Code of Conduct' (CIfA 2014) and the 'Standard and Guidance for Archaeological Excavation' (CIfA 2014)

6.1.6 All artefacts were retained for specialist analysis.

6.1.7 One Hundred soil samples were taken from ditch and pit deposits for analysis (Appendix 4)

6.2 On-site Recording

6.2.1 All archaeological deposits were recorded according to correct principles of stratigraphic excavation on MAP's *pro forma* context sheets which are compatible with the MOLA recording system. A total of 455 separate contexts were recorded (Appendix 1).

6.3 Plans and Sections

6.3.1 The full extent of all archaeological deposits was recorded in plan on drawing film at an appropriate scale (generally 1:20 or 1:50 for plans and 1:10 for sections). All drawings include an AOD height and their locations were plotted using a Trimble DGPS in order to tie to the Ordnance Survey National Grid. There were 248 drawings (Appendix 2).

6.4 Photographic Record

6.4.1 The photographic record consisted of 552 high-resolution digital images, recording all archaeological features and deposits encountered (Appendix 3).

6.5 Finds

6.5.1 Finds were processed in accordance with English Heritage Guidelines (EH 1995). All finds were cleaned, identified, assessed, dated (where possible), marked (where appropriate), and properly packed and stored according to national guidelines.

6.5.2 A total of 992 objects were recovered from the excavated features and deposits. This included 259 sherds of pottery, 10 flint artefacts and 723 fragments of animal bone (Appendices 7-9)

6.5.3 In accordance with the Burial act of 1857 a Licence for the Removal of Human Remains was obtained from the Ministry of Justice (Burial Licence no. 19-0157, Appendix. 11).

7. Results

7.1 Period 1- Late Bronze Age/ Early Iron Age (Figures 4 -10, Plates 1-11)

7.1.1 The earliest datable material recovered from the site consists of 10 pieces of flint recovered from unstratified deposits and the fills of a square barrow and large ditch. The flints date predominantly to the Neolithic period although early Bronze Age material was also present. The presence of flint within features is considered to be insufficient to securely date features.

7.1.2 The earliest datable features identified on the site consist of 2 parallel ditches, identified in the results of the Geophysical Survey running on a north to south orientation for approximately 200m before tuning and heading on a north-east to south west orientation, close to the south-western corner of the site. An area measuring approximately 180m in length was subject to the Strip, Map and Record at the point at which the ditches (Ditches A and B) ran on a north to south orientation. Ditch A represented the western most ditch. The north to south orientated section of the ditch was excavated in 7 segments (cuts 320, 332, 334, 338, 350, 359 and 387) and measured between 4.1m and 3.62m wide and between 2m and 1.52m deep. The ditch, which had a predominantly flat based 'V' shaped profile,

was filled by four deposits. The basal fill consisted of a light grey-brown sandy silt which contained occasional small and medium stones and had been interpreted as a deposit of weathered natural material into which the ditch was excavated. A dark grey-brown sandy silt with occasional clay, was identified along the length of the ditch and represented the earliest fill of the ditch following its abandonment. No material was recovered from this deposit to suggest a date for its deposition although a small amount of animal bone was recovered. The secondary fill of the ditch consisted of a mid-grey-brown sandy silt which contained a small amount of animal bone and pottery dating to the late Iron Age to the 2nd century AD. The uppermost fill consisted of a light grey-brown sandy silt which contained occasional small and medium sized stones and appears to have represented the gradual weathering of material once the ditch had almost completely silted up but was likely still visible in the landscape. The ditch contained a single sherd of Medieval pottery which is likely to be intrusive, possibly entering the ditch as a result of agricultural processes. A sample taken from the basal fill of the ditch was submitted for Optical Stimulated Luminescence (OSL) dating. This dated the deposit to 2.56 (ka) years before present day (2020) suggesting an early Iron Age date for the basal fill of the feature and implying that it had been established at some time before this, possibly in the Late Bronze Age.

7.1.3 Three segments of Ditch A were excavated through the north-east to south-west orientated portion of the ditch (cuts 402, 410 and 442). At this point the ditch measured between 3.12m and 2.8m wide and between 1.58m and 1.14m deep. The basal fill of the feature, which represented slumping of weathered natural material, consisted of a mid-grey-brown sandy silt which contained no archaeological material. A dark to mid brown

sandy silt was identified which contained a small number of undiagnostic fragments of animal bone and represented the first fill of the ditch to accumulate after the ditch fell out of use. This lay beneath deposits of a mid-grey-brown sandy silt which contained a small amount of animal bone and a mid-yellowish-brown sandy silt upper fill which contained no archaeological material.

7.1.4 Ditch B was located approximately 8m east of Ditch A. The north to south orientated section of the ditch measured between 4.2m and 1.8m wide, generally becoming narrower towards the southern boundary of the area and survived to depths of between 1.8m and 1.4m deep. The ditch was excavated in 6 segments (348 367, 372, 378, 388 and 416) and similarly to Ditch A, the 'V' shaped ditch contained 4 main fills. The basal fill consisted of a light grey-brown silty sand which contained frequent small and medium stones, representing natural weathered material. A mid-grey-brown sandy silt with some clay was identified above the weathered natural material which contained no archaeological material. A mid-reddish-brown sandy silt was identified which contained a small amount of animal bone and pottery dating to the Late Iron Age. The upper fill of the ditch consisted of a mid-reddish-brown silty sand which contained a middle Neolithic flint blade and 2 broken flakes. A sample from the basal fill of the ditch was submitted for OSL dating which dated the deposit to 2.34 (ka) years before present day (2020), also suggesting an early Iron Age establishment of the deposit.

7.1.5 The north-east to south-west length of Ditch B was excavated in 3 segments (cuts 382, 422 and 446) and measured between 4.2m and 3m wide and between 1.4m and 1.2m deep and contained three fills. The basal

fill consisted of a mid-yellowish-brown silty sand, representing weathering of the natural sandy material into which the ditch was excavated. The middle fill of the ditch consisted of a mid to dark brown silty sand which contained occasional large and medium stones although no archaeological material. The upper fill, a dark gray-brown silty sand contained no material to suggest a date for the final episode of infilling of the feature.

7.1.6 A square barrow, measuring approximately 13.2m by 13.5m was located in the north-eastern corner of the site and has been tentatively assigned to the late prehistoric period based in the form of the feature and dating of nearby features. Forthcoming Radiocarbon dates will provide a secure date for the feature.

7.1.7 The barrow, which predominantly had a flat based 'V' shaped profile, measured between 2m and 1.44m wide and survived to a depth of between 0.97m and 0.59m deep, generally narrower and shallow along the eastern side of the feature. The barrow was initially excavated in 8 segments (cuts 074, 080, 121, 138, 142, 171, 189 and 199) and was filled by three deposits. The basal fill of the barrow consisted of a light brown sandy silt which contained abundant gravel, interpreted as representing naturally weathered sands and gravel into which the barrow had been cut. The middle fill of the barrow consisted of a mid-brown sandy silt which also contained small amounts of clay, and small to medium stones. The fill appears to have entered the ditch from the inside of the barrow, suggesting that the middle fill represents material derived from the mound of the barrow. The upper-most fill of the barrow consisted of a mid-reddish-brown silty clay, which contained a small amount of cattle and horse bone and 2 pieces of flint of

probable Neolithic date, including a fine broad flake fragment and a bulb scar displaying possible heat gloss.

7.1.8 No central grave was present within the barrow although a small pit (cut 204) was identified in the internal slope of the north-western corner of the barrow ditch. The pit was positioned approximately halfway down the slope (approximately 0.5m below ground surface), which was not as steep as in at the other corners of the barrow. The pit measured 0.53m in diameter and was 0.45m deep. The fill of the pit, a mid-grey-brown sandy, silt contained the inhumation of an infant, which lay in a crouched position on its left side, on a west to east orientation with the head to the west facing north. The skeleton, which was poorly preserved has been identified of that of a child aged between 18 months and 2 years of age, who is likely to have suffered from scurvy, which had not been completely cured by the time of death.

7.1.9 The fills of the barrow ditch showed no evidence of the pit being later in date and so it is likely that the pit was excavated, and the child interred, before the ditch silted up. Forthcoming radiocarbon dates will allow for a more precise date for the interment.

7.2 Period 2. Late Iron Age (Figures 11-16, Plates 12-19)

7.2.1 A series of linear features interpreted as ditches and gullies flanking the crossroads of a trackway were identified in the north-eastern part of the site, with the features continuing beyond the limit of excavation. The features have been assigned to the late Iron-Age based on the dominance of late Iron-Age material recovered during excavation.

7.2.2 The north-eastern most ditch (Ditch C) represented the northern ditch of a north-west to south-east orientated length of drove way and the eastern ditch of a north to south orientated length which ran north beyond the limit of excavation. The ditch, which measured between 2.28m and 2m wide and between 1.06m and 0.76m deep, had a flat based 'V' shaped profile and was excavated in 7 segments (cuts 003, 010, 025, 079, 086, 088 and 153). The majority of the excavated segments contained 3 fills, a basal fill of a mid-orange brown sandy silt containing frequent gravel, representing natural weathering of the sand and gravel into which the ditch had been excavated. The upper 2 fills consisted of a mid-grey-brown silty sand, the lower deposit contained more frequent small stones and gravel from the deposit above, likely also representing natural weathering of material rather than the intentional backfill of the feature. The scarcity of artefactual and environmental evidence recovered from the feature suggests it was subject to maintenance and cleaning during its use although a small amount of animal bone and pottery dating to the late Iron Age was recovered.

7.2.3 The southern ditch of the north-west to south-east orientated length of the drove way was represented by Ditch D which also formed the eastern side of a north-to south aligned portion of the trackway. The ditch, which had a 'V' shaped profile, was excavated in 9 segments (cuts 013, 028, 041, 058, 062, 068, 094, 112 and 149) and measured between 2.29m and 0.92m wide and survived to a depth of between 1.05m and 0.49m deep. Ditch D was predominantly filled by a single deposit of mid-reddish-brown sandy silt although deposits of a mid-brown silty sand, which probably represents natural weathering of the sands and gravels into which the ditch was excavated, were identified close to where the ditch turned and ran on a north-west to south-east orientation. Pottery recovered predominantly

from the upper fill of the ditch dated to the late Iron-Age. A small amount of horse, pig and sheep or goat bone was also recovered.

7.2.4 Gully E flanked the eastern edge of Ditch D on a south to north orientation before turning to run south-east to the south of Gully B. The gully, which had a 'U' shaped profile, was excavated in 8 segments (cuts 034, 045, 060, 070, 100, 110, 122 and 146) and measured between 1.32m and 0.73m wide, surviving to a depth of between 0.41m and 0.11m deep. The fill of the gully, a mid-reddish-brown sandy silt contained a small amount of cattle bone and pottery dating to the late Iron Age.

7.2.5 Gully G was identified close to the south-eastern corner of the site and ran on a south to north orientation for approximately 20m before terminating between Gullies D and E, north of Ditch B. The gully, which measured between 0.9m and 0.2m wide and between 0.13 and 0.07m deep, was excavated in 4 segments (cuts 026, 064, 124 and 130) in order to assess the profile of the feature and its relationship with other linear features. The gully was filled by a mid-brown sandy silt and contained 39 sherds of pottery dating from the late Iron Age through to the 2nd century AD. Gully F was shown to be later in date than Ditch D and Gully E.

7.2.6 Pit 047 was located to the west of Ditch D to the east of pit 051. The oval shaped pit had a diameter of 0.99m and was 0.33m deep. The single fill of the pit, a dark-reddish-brown sandy silt contained occasional small stones and a single sherd of late Iron Age pottery. No indication of the purpose of the pit was identified.

7.2.7 Pit 051 was located to the west of pit 047 and had a diameter of 0.96m and was 0.12m deep. The single fill of the pit, a dark-reddish brown sandy silt contained a single sherd of pottery dating to the late 1st century to 2nd century AD and a flint blade flake of late Neolithic or Early Bronze Age date.

7.2.8 Ditch E represented the western most trackway ditch and ran on a south to north alignment before turning and running towards the north-west. The 'V' shaped ditch was excavated in 8 segments (cuts 157, 160, 179, 183, 193, 198, 209 and 241) and measured between 1.8m and 1.15m wide and was between 0.75m and 0.43m deep. The fill of the ditch, a mid to dark brown sandy silt contained a small amount of pottery dating to the Late Iron Age through the 2nd century AD plus a small amount of cattle bone and the fragmented skull of a dog. Cut 241 was excavated to examine the relationship between Ditch E and Enclosure A and revealed that Ditch E was later in date although the associated finds do not allow for a more precise chronology.

7.2.9 A linear feature, which has been interpreted as a hollow way, was identified running on a north to south orientation between ditches D and E. The hollow way, which measured between 6m and 5m wide and survived to between 0.45m and 0.25m deep, was excavated in 5 segments (cuts 108, 127, 129, 133 and 167). The feature was filled by a single fill, a mid-grey-brown sandy silt which contained no archaeological material. The hollow way has been assigned to the later Iron Age period because of its likely association with trackway ditches D and E.

7.2.10 Pit 277 was located approximately 25m south west of Ditch E, close to the point at which the ditch ran beyond the limit of excavation. The circular pit,

which had a diameter of 2.25m and was 0.71m deep, contained 3 fills. The basal fill, a dark orange-brown silt with clay contained pottery dating to the late Iron Age to the 2nd century AD and undiagnostic animal bone. The middle, and most substantial fill of the pit consisted of a mid-orange-brown silty gravel which contained abundant medium and large angular rocks which appear to have been intentionally deposited within the pit. Seventy-two sherds of pottery, also dating to the late Iron Age to the 2nd century AD was recovered, as was animal bone. The upper fill of the pit consisted of a mid-orange-brown silt which contained frequent small stones, late Iron Age pottery and 10 fragments of burnt cattle skull and mandible. No environmental material was recovered from the pit to suggest a purpose for the feature although it is likely that it was intentionally infilled prior to the establishment of Enclosure A, which cut the upper fill of the pit.

7.2.11 Enclosure A was positioned to the south-west of Ditch E, close to the point at which the ditch continued beyond the limit of excavation. The enclosure, of which an area of 20m by 23m was present within the excavation area, was not fully observed because of the presence of a farm track, which was maintained during excavation, however the enclosure was not present beyond the track.

7.2.12 The enclosure, which was shown to be earlier in date than Ditch C and later than Pit 277, was excavated in a total of 11 segments (cuts 229, 215, 221, 227, 239, 252, 256, 292, 294, 296 and 298). Two sides of the enclosure were present within the excavation area, the eastern length consisted of a single gully whilst the southern length was represented by 2 gullies, which merged close to Pit 277. The gullies measured between 1m and 0.4m wide and between 0.43m and 0.15m deep, filled by a dark grey brown sandy silt

which contained a single sheep or goat bone, but no material to suggest a date for the enclosure, although the presence of a significant amount of late Iron Age pottery recovered from Pit 277 suggests the enclosure cannot be any earlier than late Iron Age in date. The entrance to the enclosure was not identified within the excavation area. Environmental samples taken from the feature contained a single barley grain.

7.2.13 Three pits were identified within the enclosure, close to the entrance, and are considered to be contemporary with activity taking place within it. Pit 268 had a diameter of 1.6m and was 0.32m deep. The single fill of the pit, a dark brown sandy silt contained a small amount of animal bone and 41 sherds of pottery dating to between the late Iron Age and 2nd century AD. The quantity of finds recovered from the pit is suggestive of an episode of intentional deposition of the material to infill the pit. Pit 254 had a diameter of 0.8m and was 0.34m deep. The pit, which narrowed to an almost square flat base, was possibly intended as a large posthole. The pit contained 2 fills, a basal fill consisting of a reddish-brown sand and an upper fill of a mid-grey-brown sandy silt which contained oak and hazel charcoal and has been interpreted as dumped material (Appendix 6). Pit 263 had a diameter of 0.82m and survived to a depth of 0.12m deep. The fill of the pit, a mid-grey brown silty sand contained no archaeological material to suggest a date or purpose for the feature.

7.3 Modern feature

7.3.1 Pit 231 was located close to the eastern boundary of Enclosure A and measured 0.84m in diameter and was 0.08m deep. An environmental sample taken from the fill, a dark grey silt, contained over 50 pieces of coal and probably represents a modern industrial feature or waste dump.

7.4 Undated features. (Figures 17-22, Plate 20)

7.4.1 Several features which contained no archaeological material to suggest a date for them, were excavated during the Strip, Map and Record and have been recorded in this report as undated features.

7.4.2 Gully A was located to the south the north-east to south-west orientated section of Ditch B and was excavated in 3 segments (cuts 404, 418 and 428). The gully measured between 0.5m and 0.65m wide and was 0.23m deep. The single fill, a dark grey-brown sandy silt contained no material to suggest a date or purpose for the feature although it was established that the gully was later in date than Ditch B.

7.4.3 Pit 430 was located to the north of Ditch A, close to the south-western corner of the site. The pit had a diameter of 0.88m and was 0.30m deep. The fill of the feature, a mid-grey-brown sandy silt contained no material to suggest a date or purpose for the feature.

7.4.4 Pit 316 was located to the west of Ditch A, where it ran on a north to south orientation. The pit had a diameter of 0.66m and was 0.22m deep. the single fill, a dark grey brown silty sand contained no archaeological material.

7.4.5 A large circular enclosure (Enclosure B) was identified in the results of the Geophysical Survey, approximately 33m west of Ditch A. The feature which had a diameter of approximately 40m survived to between 0.32m and 0.09m and was between 1m and 0.4m wide. The feature was excavated in 8 segments (302, 304, 311, 313, 315, 319, 448 and 450). All segments were

filled by a dark grey brown sandy silt which contained no archaeological material to suggest a date or purpose for the feature. Environmental samples taken from the feature contained a very small amount of oak charcoal, clinker and coal. A small break in the feature, measuring 2.08m was suggestive of an entrance into the feature. The northern most portion of the enclosure fell outside of the excavation area and so it is unclear whether an opposing entrance was present. A single pit was identified within the enclosure. Pit 209 had a diameter of 0.9m and survived to a depth of 0.09m. The fill of the pit, mid-reddish-brown sand, contained no archaeological material.

7.4.6 Ten pits (cuts 245, 248, 250, 258, 265, 267, 272, 284, 286 and 288) were excavated in in the central region of the site, to the west of Enclosure A, none of which contained any archaeological material or were associated with any archaeological features. The pits ranged in size between 1.1m and 0.45m in diameter and were between 0.45m and 0.12m deep. All were filled by a mid-grey brown or a mid-yellowish-brown sandy clay. Give the linear positioning of the pits and the mixed nature of the fills it is possible that they represented a former hedge line or had possibly been utilised for small-scale clay extraction.

7.4.7 Pits 223 and 225 were located approximately 12m south of Enclosure A. The pits measured 0.75m and 0.60m wide and were 0.20m and 0.16m deep respectively. Both were filled by a mid-grey-brown sandy silt which contained no archaeological material although an environmental sample taken from pit 223 contained a small amount of coal.

7.4.8 Pits 217 and 219 were located approximately 15m south of Pits 223 and 225. The pits had diameters of 0.63m and 1m respectively and were 0.14m and 0.09m deep. They were both filled by a mid-grey-brown silty sand which contained no material to suggest a date or function for the features.

7.4.9 A small gully (Gully C) was identified which ran along the southern edge of Ditch C, though appeared not to have any discernable relationship with it. The gully, which measured between 1.72m and 0.5m wide and between 0.29m and 0.17m deep, was excavated in 6 segments (cuts 005, 012, 022, 073, 087 and 151). The gully was filled by a single deposit of mid-reddish-brown silty sand which contained no material to suggest a date or purpose for the feature.

7.4.10 Gully D was identified running along the western edge of Ditch D although no relationship was ascertained between the two features. The gully ran on a south to north orientation, to the west of Ditch B, before supposedly turning and running on a north-west to south-east orientation, to the north of the ditch. The gully was excavated in 8 segments (cuts 036, 039, 052, 056, 066, 116, 102 and 144) and measured between 1.3m and 0.4m wide and between 0.58m and 0.21m deep, generally becoming narrower and more shallow as it ran on a north-west to south-east orientation. Gully D contained a small amount of eroded animal bone though no material was present to suggest a date for the feature.

7.4.11 Gully F ran along the western edge of Ditch E although no discernible relationship was visible between the two features. The gully was excavated in 7 segments (cuts 155, 164, 175, 185, 190, 195 and 206) and measured between 2.1m and 1.02m wide and between 0.62m and 0.2m deep. The 'U'

shaped gully was filled by a single deposit of mid-reddish-brown sandy silt which contained a small amount of animal bone, though no material to suggest a date for the feature.

7.4.12 Pit 049 was located to the west of pits 047 and 051. The pit had a diameter of 0.50m and survived to a depth of 0.25m. The single fill, a dark-reddish-brown sandy silt contained no material to suggest a date or purpose for the feature.

8 Discussion

8.1 The Archaeological Strip, Map and Record on land north of Beacon Road and west of Napier Crescent, Seamer, was successful in examining and determining the nature of the archaeological deposits within the development area that had previously been identified by the Geophysical Survey and Trial Trenching. The excavated features suggest a site which was rural in character and which likely has its origin in the later Bronze Age, flourishing during the late Iron Age but which is unlikely to have continued far into the Roman Period. Although no evidence of structures was identified within the site, the large amounts of pottery recovered from pit features may indicate regular events such as feasting, particularly in the vicinity of Enclosure A. Livestock management and butchery is likely to have taken place within the site and its immediate environs, as indicated by the high amount of butchery waste and the age range of animals remains identified.

8.2 The earliest activity recorded on the site was represented by 10 pieces or worked flint, 8 of which were recovered from stratified contexts. The majority of the assemblage was of a Neolithic date although 4 pieces may

date to the early Bronze Age. Flint recovered from the fills of the square barrow and Ditch B were notably fresh although the presence of such material is not considered sufficient to date the individual features. A plano-convex knife was recovered from an unstratified context. Examples of such implements are relatively rare in the locality and are generally found in association with Peterborough and Beaker Ware pottery albeit predominantly from un-stratified fieldwalking assemblages.

8.3 A single square barrow was identified in the north-eastern corner of the site. Square barrows, which are particularly common on the Yorkshire Wolds but have also been identified on the North York Moors and Howardian Hills, have been categoried into 3 main groups (Halkon. 2013);

1. Enclosures, usually large, with no surviving central burial, occupying early positions in the cemetery.
2. Enclosures of varying size with shallow, medium depth or occasionally deep graves- early and middle stages of the cemetery.
3. Enclosures, never large and sometimes curvilinear, with deep graves (0.6m and over) - latest stages.

Based on the above groupings, the barrow within the excavation area can be considered to fall within the definitions of a Group 1 barrow. Halkon states that the majority of Group 1 barrows are between 12m and 15m square, whereas Group 2 and 3 examples are generally smaller with sharper corners and central graves. It has been suggested that there is a link between the size of square barrows and their chronology, with smaller barrows generally being later in the sequence. Group 1 barrows generally occur as single monuments or in small, loosely clustered groups (Stoertz 1997). Although only 1 barrow was identified within the site, further examples have been identified as crop marks, within a probable barrow

cemetery, to the north of the site (NRHE 1431235) given the proximity of the probably cemetery, and the distance between identified features, it is possible that the barrow on the site is part of the same cemetery, albeit possibly an early example within the cemetery given its apparent isolation.

8.4 A Group 1 square barrow was identified during excavation at Eastfield, approximately 2.75km east of the site. The barrow, which was located within a paleochannel, measured approximately 12m square, with a ditch which measured up to 2.5m wide and up to 1m deep. The barrow contained no interment. A second, slightly smaller, square barrow was identified on the site which also contained no burial. The ditch was significantly smaller measuring up to 1.45m wide and up to 0.36m deep.

8.5 A Square barrow was identified approximately 1km south-east of the site at Crab Lane, Seamer (MAP 2001). The barrow was identified during the excavation of an enclosure system which had its origins in the Late Bronze Age or Early Iron Age. The northern part of the barrow, which was approximately 12m square, had been incorporated into a later enclosure system. The barrow ditch measured 1.5m wide and was 0.5m deep. A large oval pit was identified slightly north-east of the barrow's centre. Although no human remains were recovered from the pit, its position within the barrow and the presence of a penannular copper alloy bracelet indicated that it had almost certainly been used as a grave.

8.6 The infant burial from the square barrow within the excavation area had been cut into the internal slope of the north-west corner of the barrow ditch, approximately 0.5m below ground surface and did not show any indications of having been interred as a secondary burial, placed into the

ditch once the silting of the ditch had taken place. It is considered likely that the burial is contemporary with the construction of the square barrow. This is substantiated by the fact that the fill of the grave was consistent with redeposited natural material rather than the silty fills of the barrow ditch itself.

8.7 The remains of an infant recovered from the barrow were generally in a poor state pf preservation with approximately 40% of skeletal elements being present. Analysis of the human remains has identified that the infant, which could not be sexed, was likely to have been between the age of 18 months and 2 years of age at the time of death. The remains showed evidence of both healed and ongoing inflammation at the time of death and possible scurvy being identified through porosity in the eye orbits and inner skull. Because of the age of the infant, no destructive dental diseases were identified although a pit on the enamel of a left canine suggested possible trauma occurring around the time of birth.

8.8 The burial, and indeed the square barrow, has been assigned to the late prehistoric period based on the crouched nature of the interment, which was the predominant burial position during the Bronze Age and Iron Age, although forthcoming radiocarbon dates will allow for a more precise date.

8.9 The remains of children were rarely encountered at the large barrow cemetery at Rudston (Stead 1991). Only 2 central and 2 secondary burials were found to contain children. It has been suggested (Ibid) that the scarcity of children identified on such sites may suggest that they were usually buried elsewhere or in the barrow mounds, which were subsequently destroyed. The remains of a child were recovered from a

barrow ditch at Melton (MAP 2019). The remains were located within the secondary fill of the north-western segment of the square barrow and have been interpreted as representing an Iron Age secondary burial, the fill of the grave cut contained late Iron Age and Romano-British pottery. The child, who, similarly to the infant recovered from the excavation site, also possibly suffered with scurvy, had been placed on a north to south alignment with the head to the north and facing west.

8.10 An association between square barrows and trackways has been identified at several barrow cemeteries such as Wetwang Slack, Pocklington and Rillington (Stoertz 1997). Although a single barrow was present within the site, further examples are present to the north and it is possible that the crossroads of the trackway identified on the site, formed a limit of the cemetery, which is likely to have been highly visible in the landscape.

8.11 The dating of linear features, other than Ditches A and B, which were dated using Optical Stimulated Luminescence, is based on pottery recovered from their fills. It is therefore possible that the material does not represent the establishment of the features, more its later phases of use and abandonment.

8.12 The trackway identified in the eastern area of the site is likely to be part of the same feature which is described on Pastscape (NRHE 1571261) and identified through aerial photography. The trackway is described as 'at least 2 linear trackways which, one double-ditched and the other possibly triple-ditched [which] cross one another displaying curvilinear joins at the junction'. This description is consistent with the archaeological evidence identified on the site. It is possible that the linear features identified to the

west represent continuations of the same trackway system, which, in the results of the Geophysical Survey, displays an intentional change in orientation towards the south of the site, where the ditches ran on a north to south alignment before tuning and running on a north-east to south west alignment.

8.13 It is likely, given the number of gullies associated with Ditches C-E that this apparent crossroads was subject to higher amounts of traffic which resulted in the need to maintain and re-establish the ditches and their associated gullies. The presence of a wide, shallow depression between the ditches indicate a shallow hollow way which may have been created to aid movement up slope on the natural gravel rather than using metalling.

8.14 Enclosure A represents the only rectilinear enclosure encountered during the Strip, Map and Record, although more are recorded within the vicinity of the site. The entrance of the enclosure was not identified within the site, nor was there any evidence of structures being present. The pits contained within the enclosure are however suggestive of a domestic or industrial focus for the enclosure. Pit 254 contained a substantial evidence for fuel waste with a mixed deposit of oak and hazel charcoal being identified. Pit 268 contained over 40 sherds of late Iron Age to 2nd century pottery which also indicates nearby settlement and regular events such as feasting.

8.15 The lack of datable material from Enclosure B and the small size of the excavation area that targeted the feature has made phasing and interpreting it difficult. It is possible that smaller or more discrete features which were not identified in the results of the Geophysical Survey may have been present nearby and may have offered some interpretation to the

feature. Similar sized circular enclosures have been identified across the north of England, particularly through aerial photography and have been interpreted as hengiform enclosures, although any evidence of an associated bank has long since been ploughed out and the gully associated with Enclosure B is shallower than what might be expected of such a feature. A Hengiform enclosure was excavated at West Hesleton, approximately 13km south-west of Seamer. The subcircular feature measured 45m by 53m and consisted of two roughly semi-circular ditches with opposing entrances to the east and west (Haughton & Powesland. 1999). The multi-phase hengiform included a palisaded trench which had been cut into the partly silted ditch. No features definitely contemporary with the feature were identified, although a pit containing Neolithic pottery was identified.

8.16 A group of 3 small oval enclosures have been identified through cropmarks in the parish of Rudston, some 18km south-east of Seamer (Stoertz, 1997). The enclosures measure approximately 40m by 30m and of the 3, 1 had opposing entrances. These monuments are located close to the Rudston long barrow and close to short linear ditches, within the Rudston ritual complex.

8.17 Ditches A and B, where thy ran on a north to south orientation, were over 3m wide and over 1.5m deep, significantly larger than those identified elsewhere on the site and no definite relationship can be ascertained between the diches and those to the east, although continuations of both sets of features can be seen to the north of the site, through aerial photography. It is possible that ditches A and B represent a short length of a lowland dyke system, a landscape boundary which may have been utilised

as a trackway, although any associated banks have since been ploughed out. Giles (2012) states that many dykes are discontinuous whilst others display evidence of entrances, or gaps, as if to guide movement towards an entrance and exit, although this was not the case in the section excavated during the Strip, Map and Record. Dent (2010) suggests that shorter, more simple lengths of dyke may have functioned as route way markers, which guided people or kept stock from straying into cultivated areas, rather than continuous landscape boundaries. Giles (2012) states that the date of construction for such linear earthworks is likely to be in the late Bronze Age or early Iron Age although Dent's work at Wetwang Slack demonstrated that linear earthworks were dug and re-dug into the late Iron Age. This is consistent with dates achieved at Seamer, through OSL dating, which dated the basal, naturally accumulated, fill of Ditch A to 540BC ±160 and Ditch B to 320BC ±120. These dates suggest an early Iron Age, or potentially Bronze Age date for the establishment of the ditches which appear to have fallen out of use by the late Iron Age, based on the presence of late Iron Age pottery in subsequent fills.

8.18 A number of dyke systems, which are common on the Yorkshire Wolds, have been identified to the north of the site and are designated as Scheduled Monuments (1008131, 1008135 and 1021236). The closest known example to the site (some 2.2km to the north) is located on Seamer Moor and consists of ditches measuring 7m wide and 1m deep, flanked by earthen banks which survive to approximately 0.3m high and 5m wide. Historic England (2020) suggest that the dykes were 'used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks.'

8.19 Environmental evidence from the site produced a small amount of carbonised plant remains which mainly consisted of charcoal fragments and cereal grain recovered from ditch features whilst the pit features produced fewer remains. Degraded grains of barley and bread wheat were probably swept into features or wind-blown from nearby corn drying or cooking. The environmental data suggests a nearby domestic settlement of Iron Age or Romano-British date.

8.20 The identifiable sherds within the pottery assemblage suggested a range of forms and has a date range of between the late Iron Age to the 2nd century AD. Given the small amount of Roman material it is likely that the site did not have much interaction with the wider Roman world and is not likely to have continued far into the Roman period. The assemblage is suggestive of a rural site although the large amount of pottery recovered from pit features may indicate regular events such as feasting, particularly in the vicinity of Enclosure A, with Pits 268 and 277 containing significant amounts of pottery compared to other features on the site (over 49% of the total pottery assemblage). The majority of the assemblage consisted of gritty wares with calcite inclusions, with colours ranging from black to red and brown as is typical of Iron Age and early Roman calcite wares.

8.21 The animal bone assemblage consisted of 723 bone fragments and included cattle, horse, pig, sheep/goat and dog bones, cattle being the most dominant identified species. The assemblage contained a disproportionate number of head and feet bones, suggesting that butchery waste was being discarded on the site. Dental data indicate sub-adult, young adult and aged cattle as well as sub-adult and adult sheep, and a

very young pig. It is likely that the younger animals were slaughtered for their meat whilst the adult animals may represent breeding stock. Most of the bones were heavily eroded and fragmented which might explain the lack of butchery or gnawing marks noted. Thirteen bones showed signs of being burnt, the majority of which were recovered from Pit 277.

9 Recommendations

9.1 The specific recommendations for finds categories are set out in the various appendices. As a general requirement, all of the finds should be retained.

9.2 No further work has been recommended regarding the carbonised plant macrofossils and charcoal (Appendix 6) although it has been suggested that hazel charcoal from Pit 254 and a hazel nutshell from Gully F would be suitable for radiocarbon dating.

9.3 The pottery assemblage (appendix 7) has the potential to shed light on the nature and supply of pottery in rural areas of Yorkshire during the Iron Age and early Roman period. The assemblage could also yield information about the nature of deposition in pit features. Should the results of the site move to publication, the proposed scope of work is outlined in Appendix 7.

9.4 Given the small size of the assemblage, no further analysis of the animal bone assemblage is recommended.

9.6 No further work is recommended for the Human remains, samples have been submitted for radiocarbon dating and results are forthcoming.

9.7 No further recording of the flint assemblage has been recommended although the Plan-convex knife is considered to be relatively rare and as such may warrant illustration should the site be taken to publication.

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11. List of Contributors.

Excavation Team: Charlotte Stodart (Project Officer), Matthew Atkinson, Robert Blackburn Rose Britton, Damien Carr, James Fish, Callan Gendall, Martyn King, Nic Parker, Charley Porter, Carl Stockill, Edward Worsley

Report Text: Charlotte Stodart

Appendices: Charlotte Stodart

Surveying and Illustrations: Max Stubbings

Editor: Mark Stephens

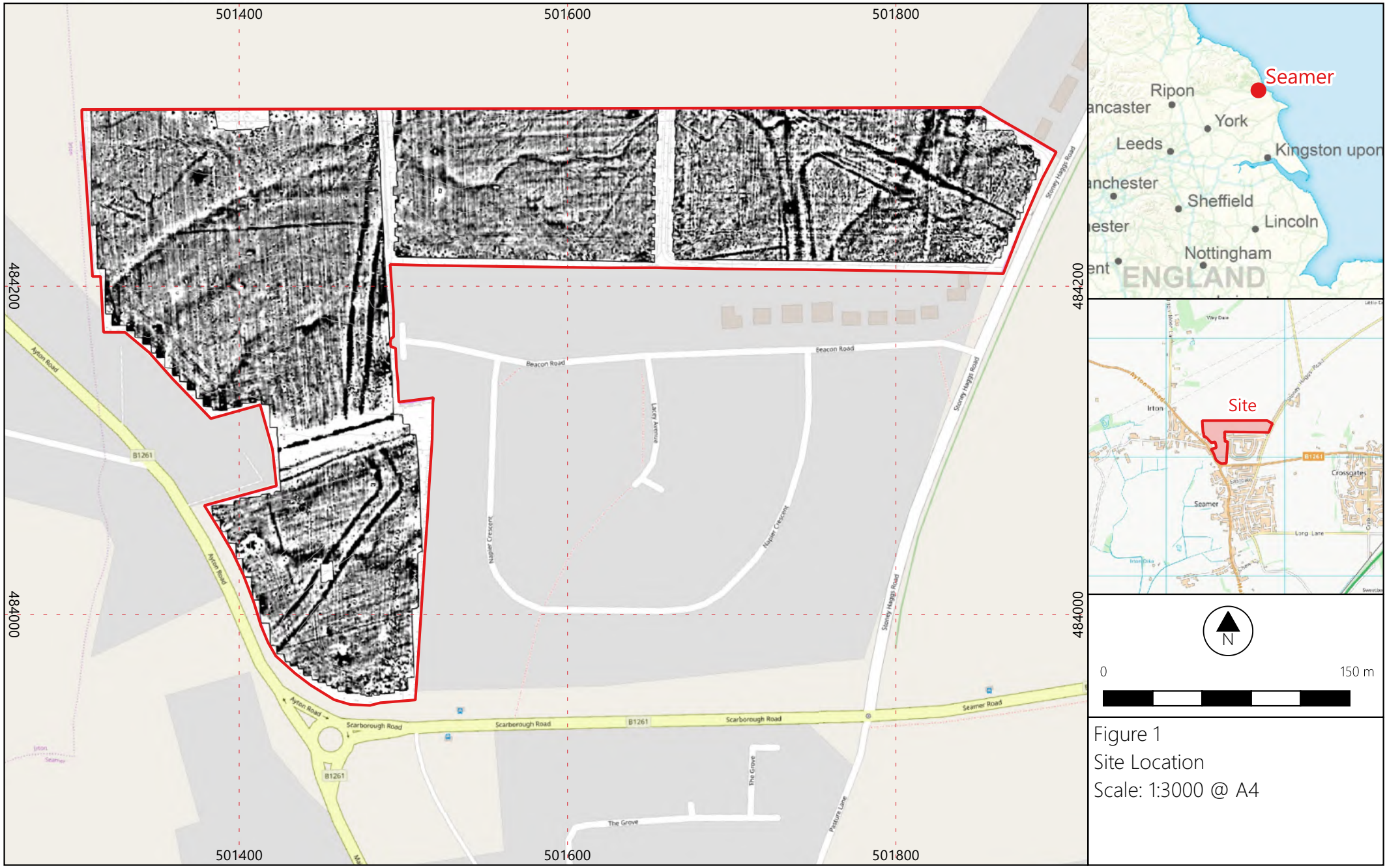


Figure 1
Site Location
Scale: 1:3000 @ A4

Period 1: Late Bronze Age/ Early Iron Age
Period 2: Late Iron Age
Period 3: Modern
Undated Features

N

0 50m

Figure 2
Phased Site Plan (West)
Scale: 1:1000 @ A3

Period 1: Late Bronze Age/ Early Iron Age

Period 2: Late Iron Age

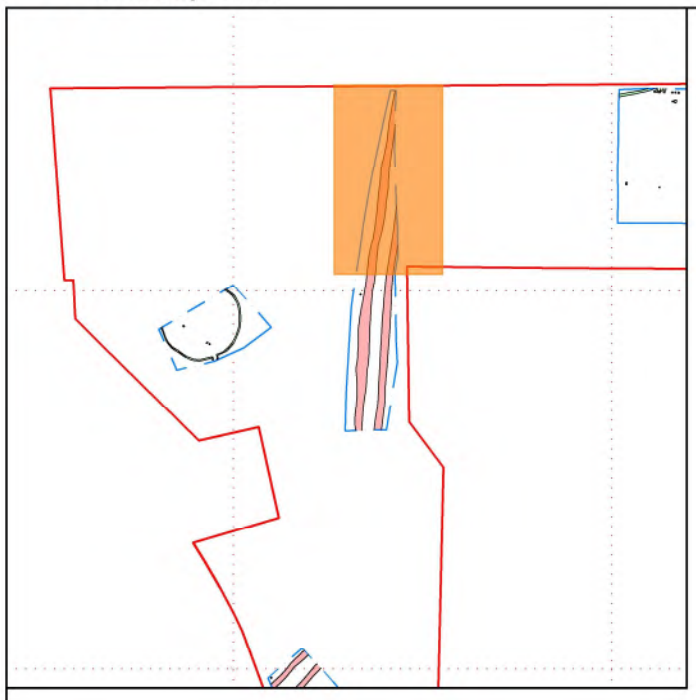
Period 3: Modern

Undated Features

N

0 75m

Figure 3
Phased Site Plan (East)
Scale: 1:1500 @ A3



S.1
[320]
[344]
S.2
Ditch A
[435]
[348]
Ditch B
[372]
[350]
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10m

Figure 4
Period 1: LBA-EIA Features
Ditches A & B (North)
Scale: 1:200 @ A3

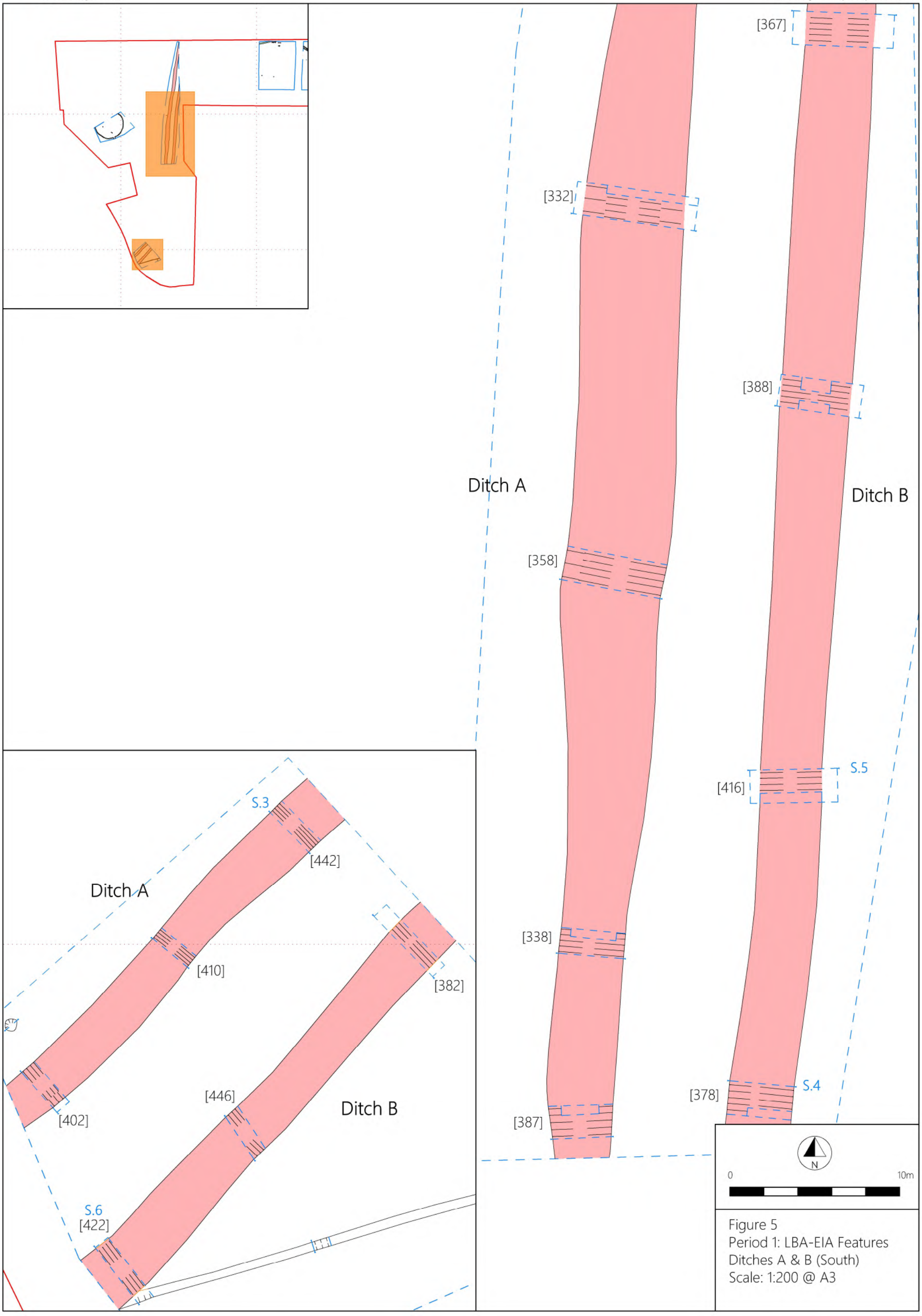
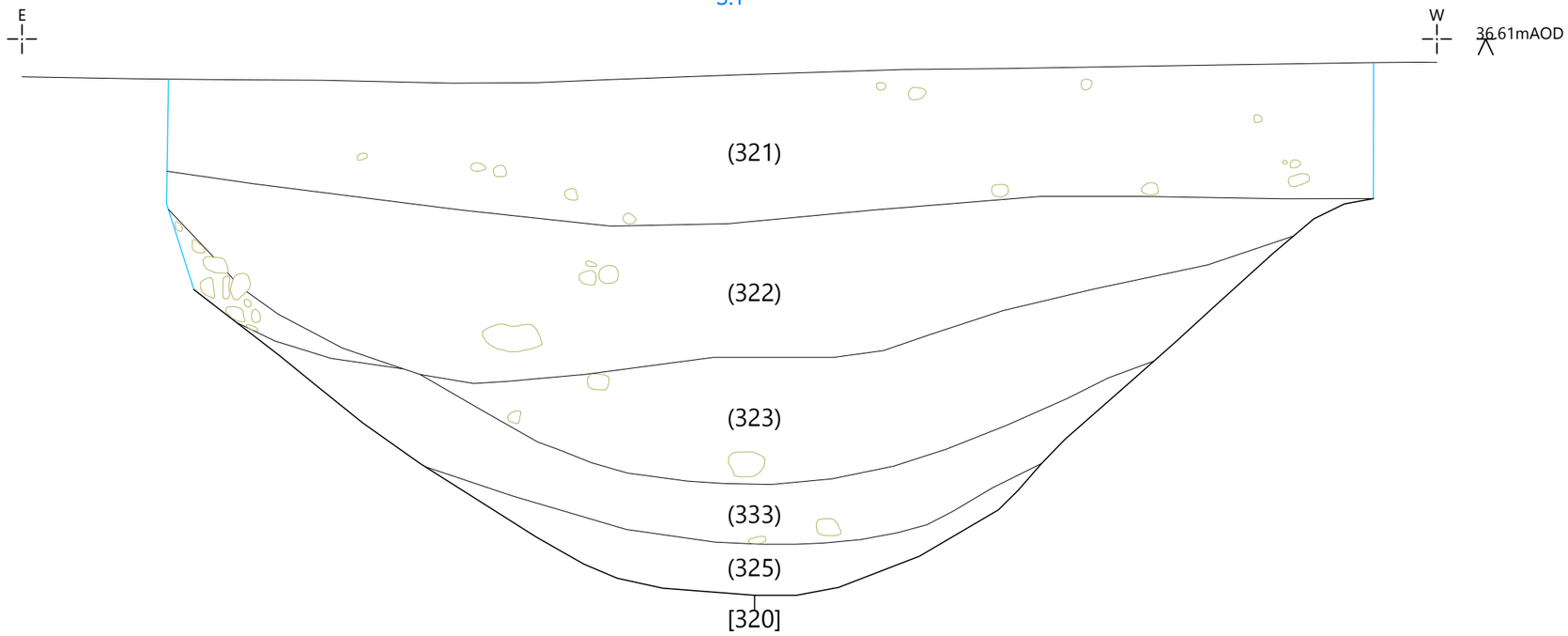


Figure 5
Period 1: LBA-EIA Features
Ditches A & B (South)
Scale: 1:200 @ A3

S.1



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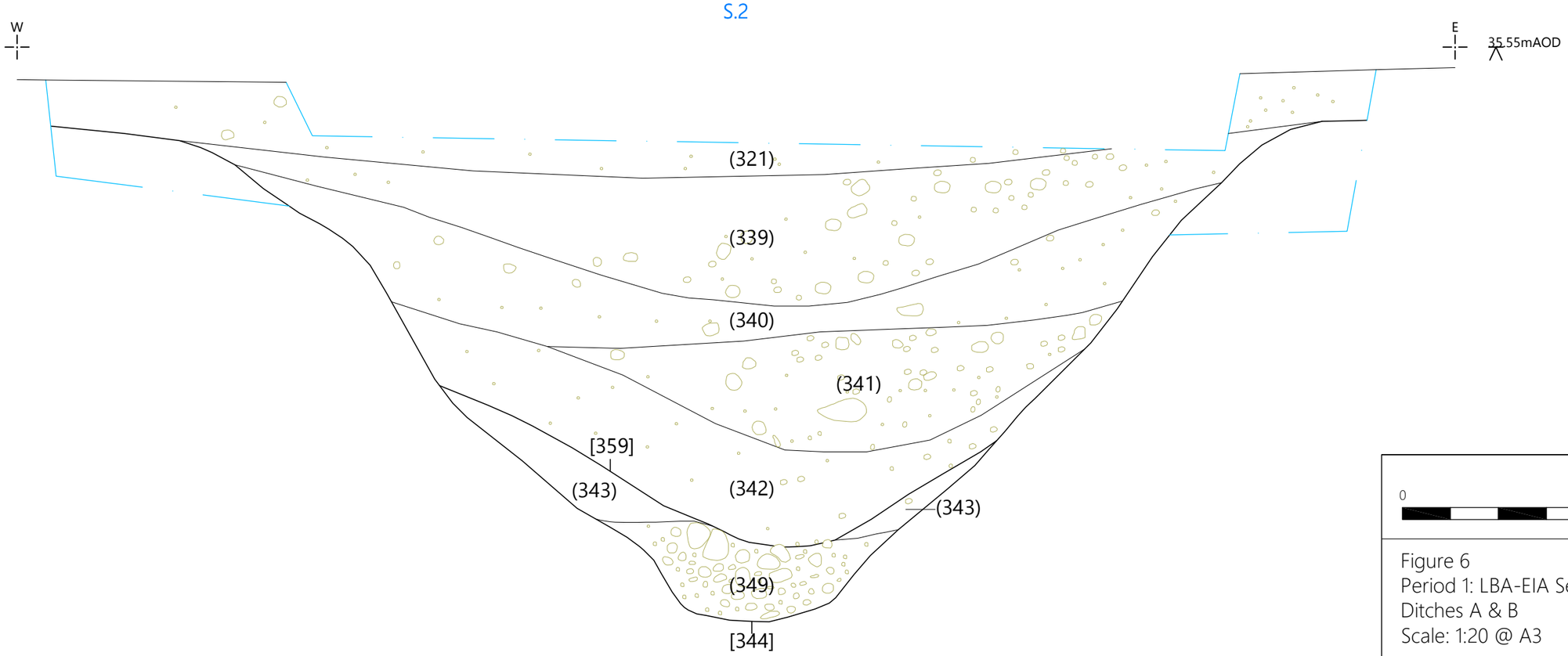

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Figure 6
Period 1: LBA-EIA Sections
Ditches A & B
Scale: 1:20 @ A3

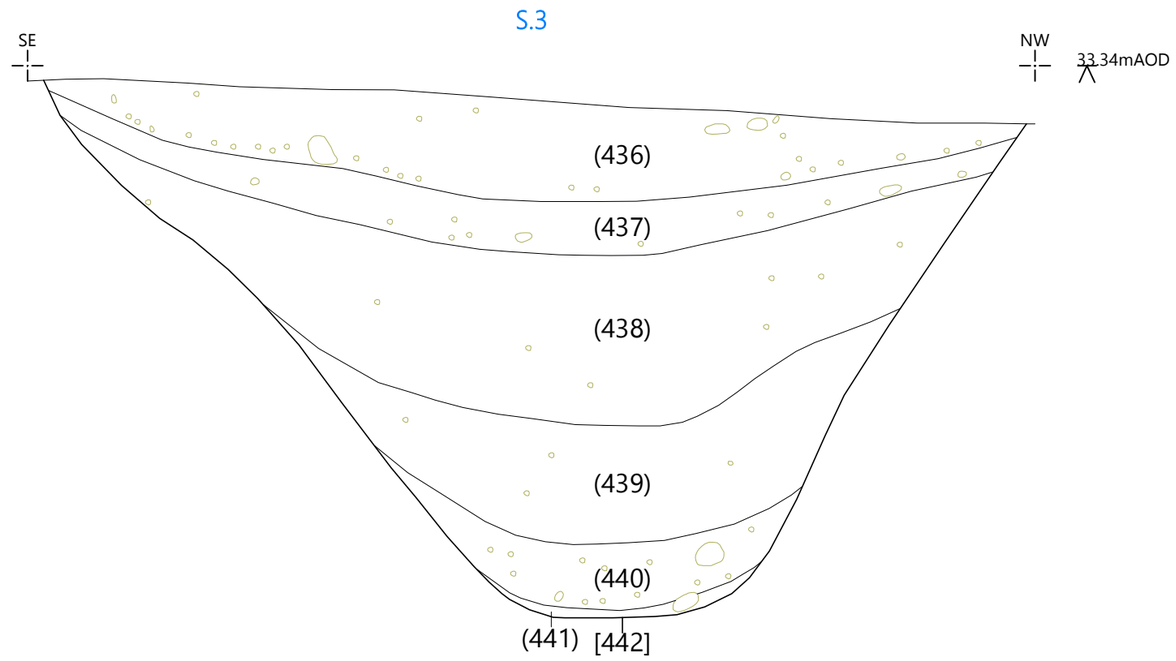
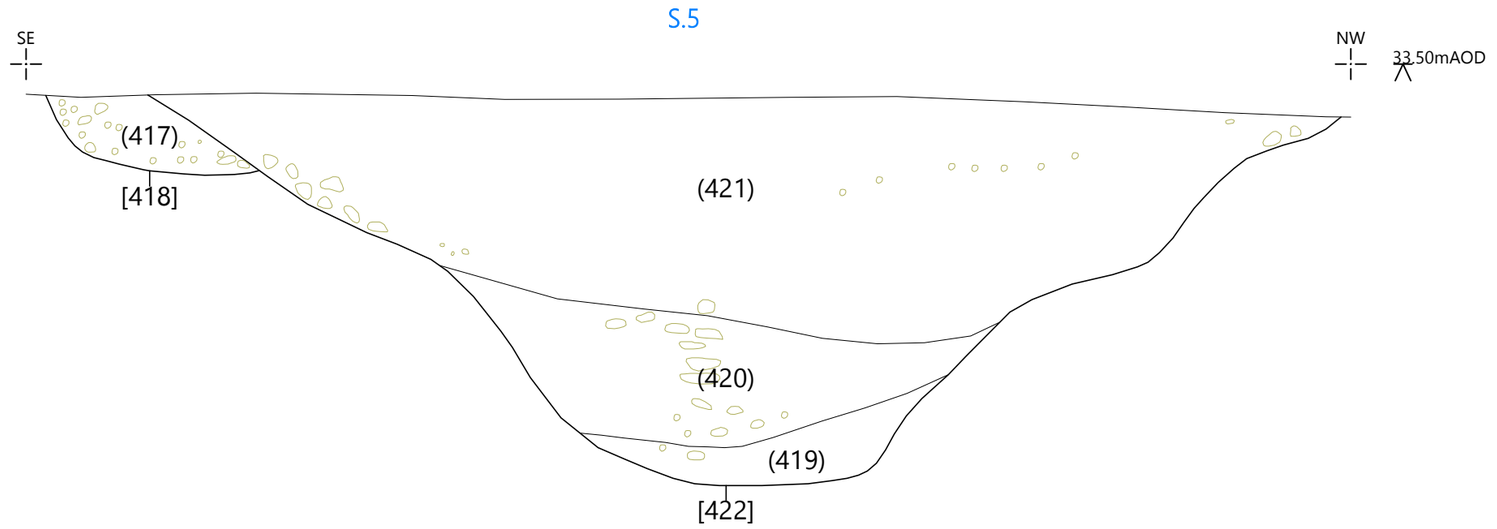


Figure 7
Period 1: LBA-EIA Sections
Ditches A & B
Scale: 1:20 @ A3



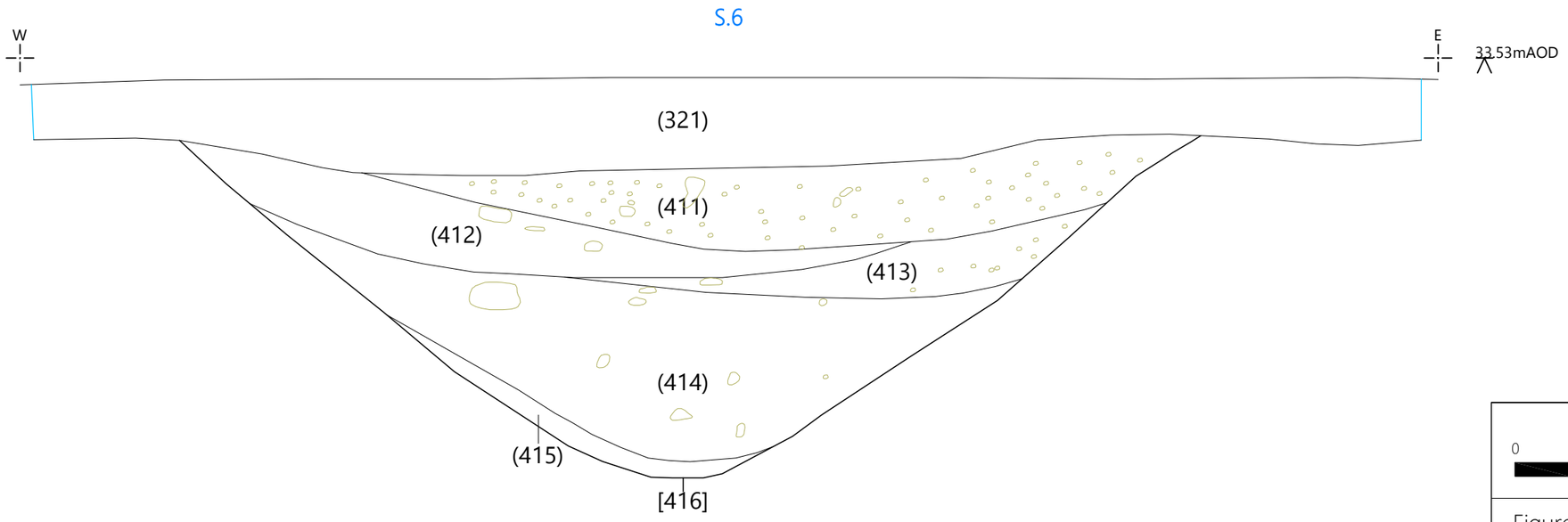


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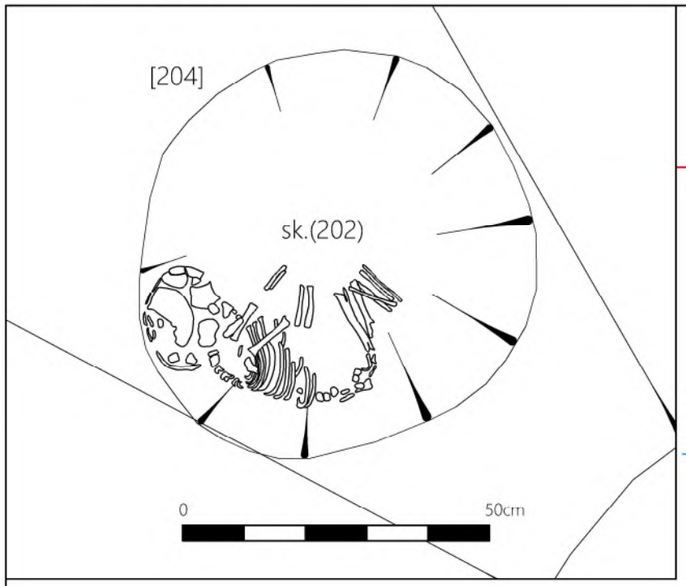
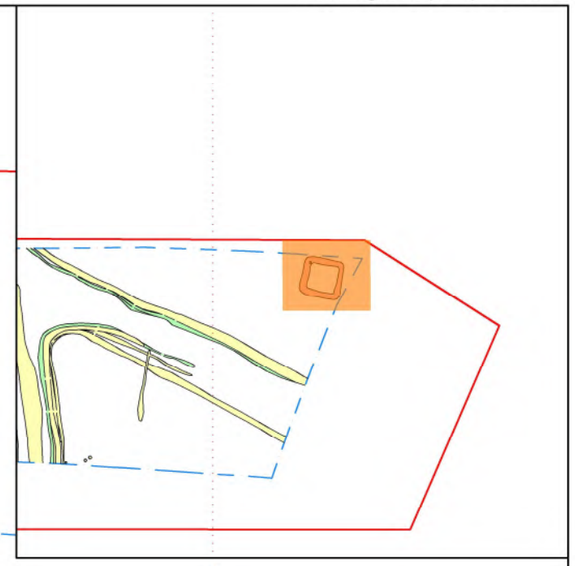
Figure 8
Period 1: LBA-EIA Sections
Ditches A & B
Scale: 1:20 @ A3





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[171]
[080]
[204]
[189]
S.9
[142]
S.10
[074]
S.7
[121]
[138]

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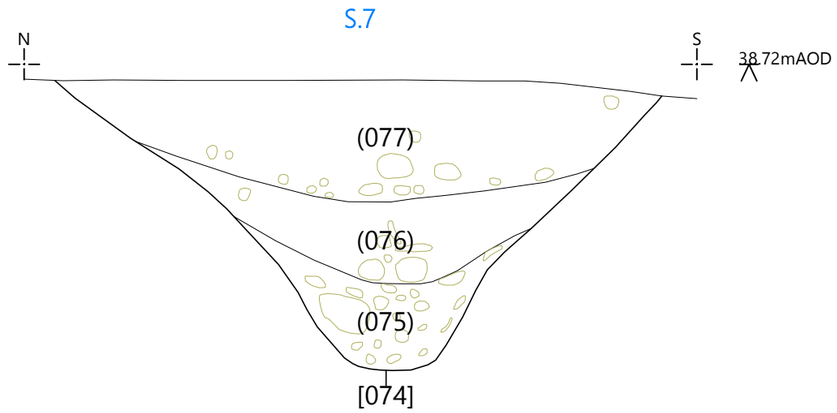
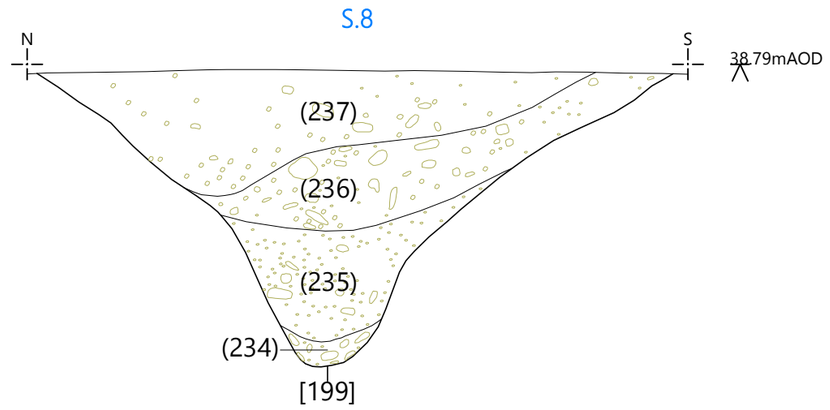
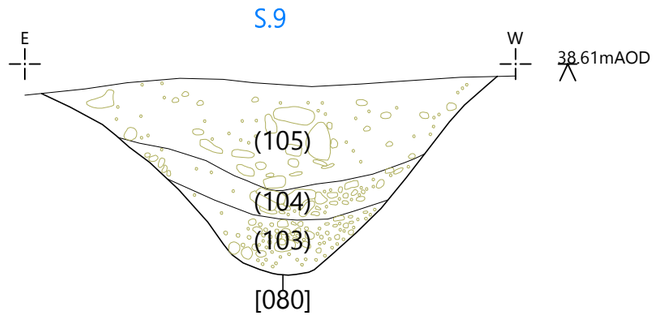
5m

Figure 9
Period 1: LBA-EIA Features
Square Barrow & Infant Burial
Scale: 1:100/1:10 @ A3







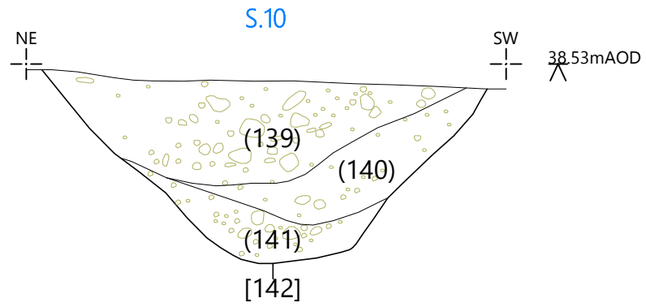
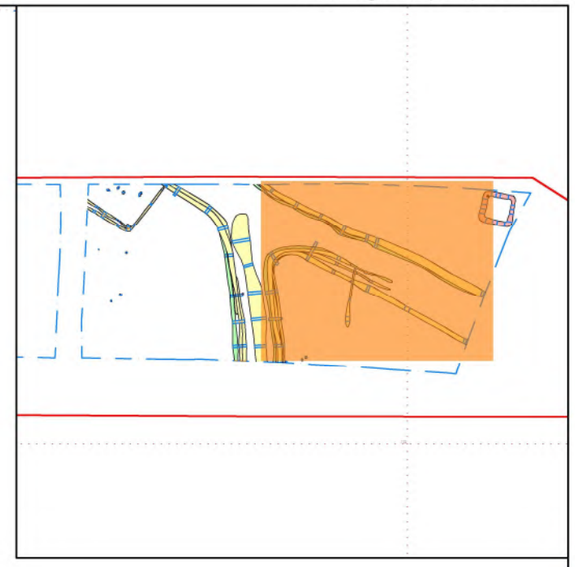


Figure 10
Period 1: LBA-EIA Sections
Square Barrow
Scale: 1:20 @ A3

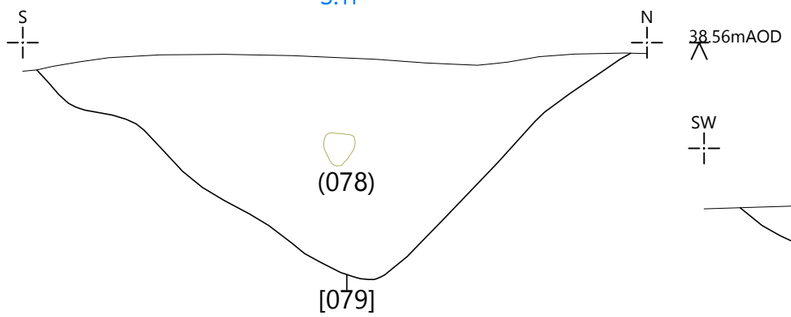
[079] S.11
[010]
[003]
[025]
Ditch C
[088]
S.12
[153]
[114]
[112]
[110]
[098]
[100]
[094]
S.15
[036] S.20
[034] S.19
[013]
[130]
[124]
[122]
S.16 [028]
[026]
[146]
[149]
S.17
Gully E
S.13
[086]
[261]
[070]
[068]
S.21 [064]
Gully G
[211]
Ditch D
[058]
[060] S.14
[056]
S.22 [201]
S.18
[062]
[043]



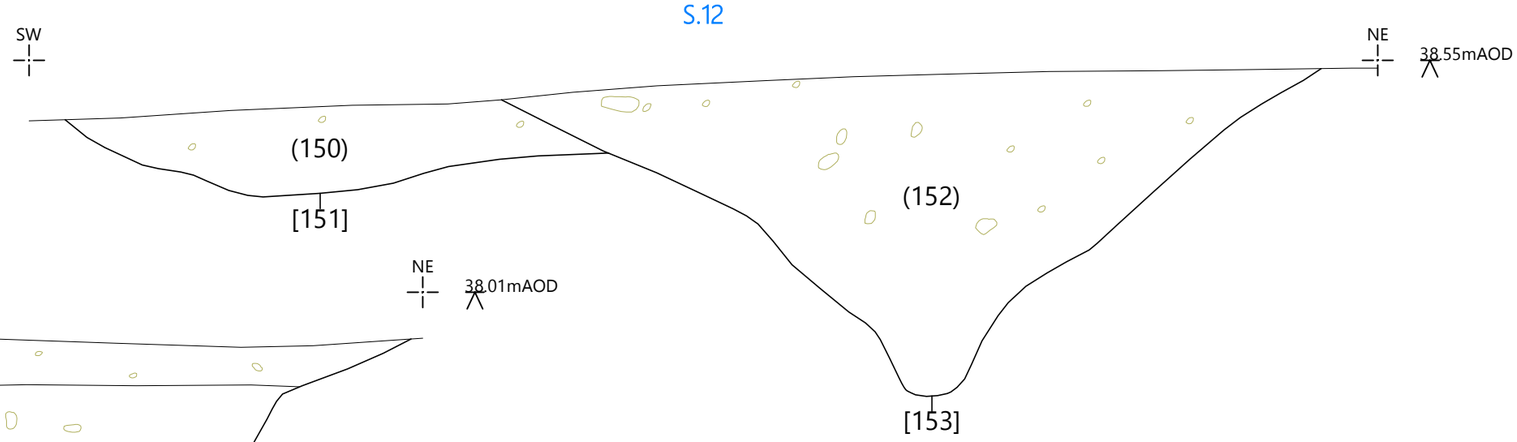
0 12.5m

Figure 11
Period 2: LIA Features
Eastern Ditches & Gullies
Scale: 1:250 @ A3

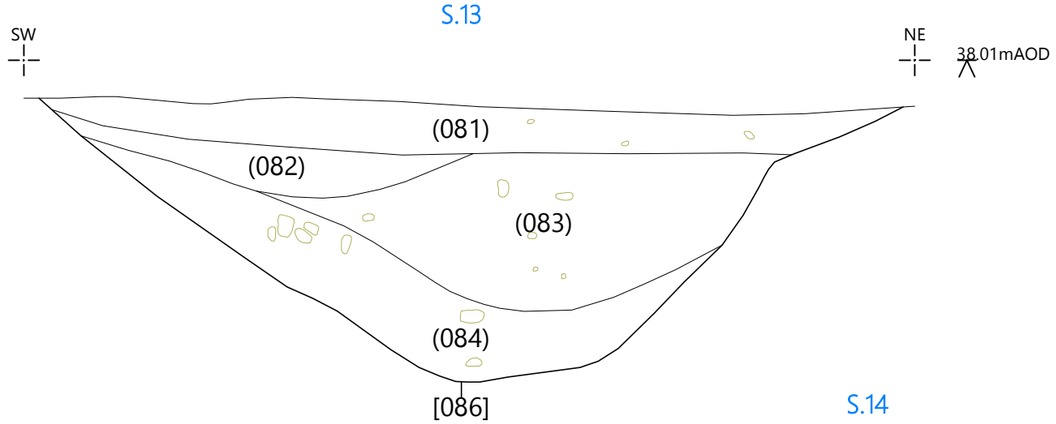
S.11



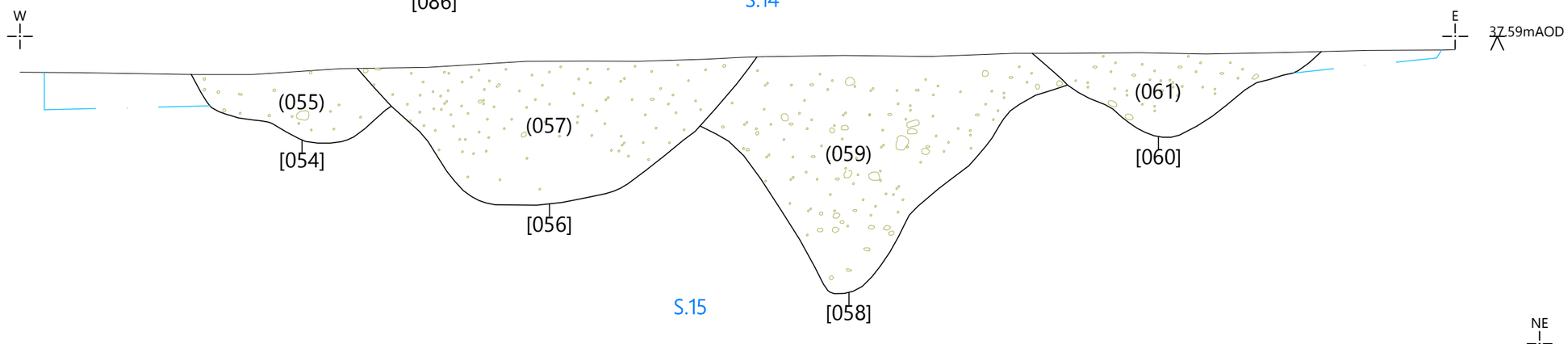
S.12



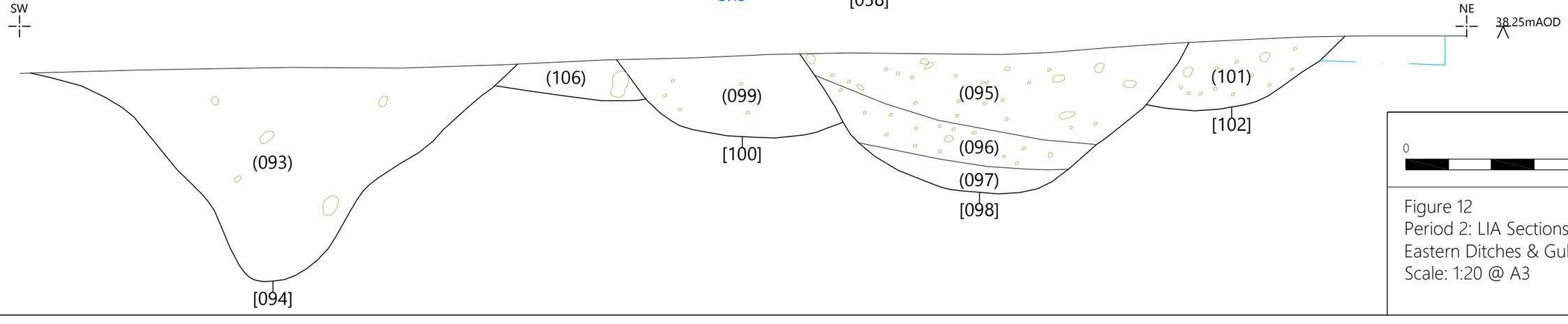
S.13



S.14



S.15



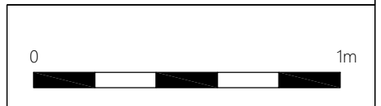
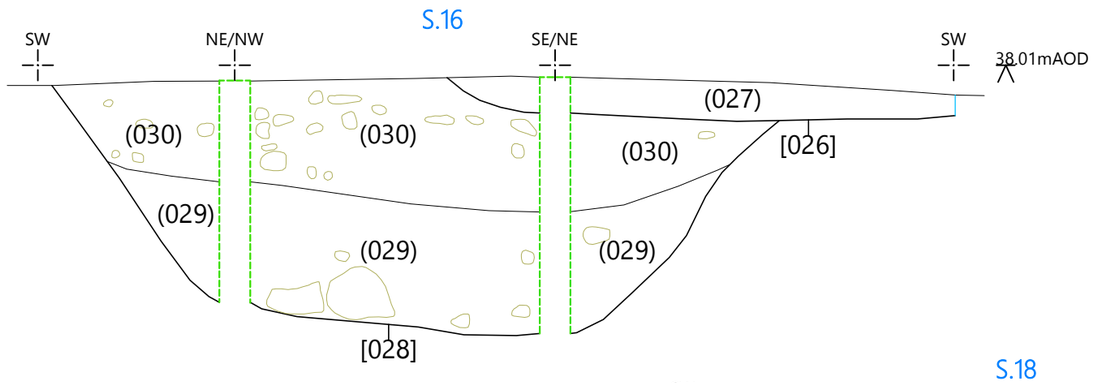
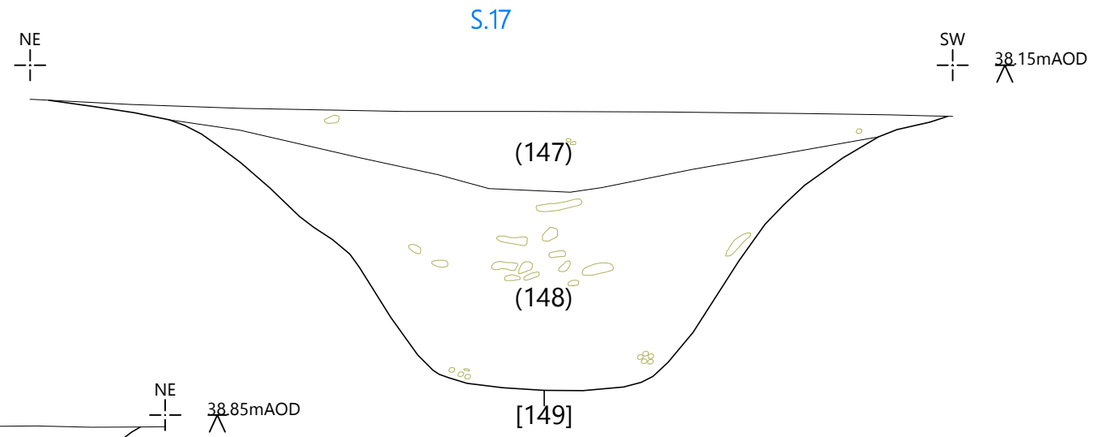
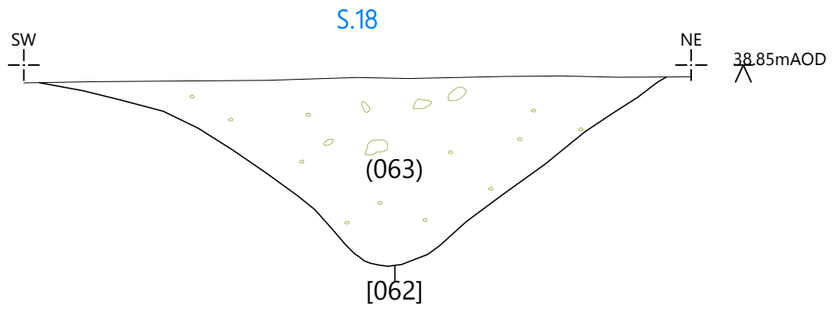
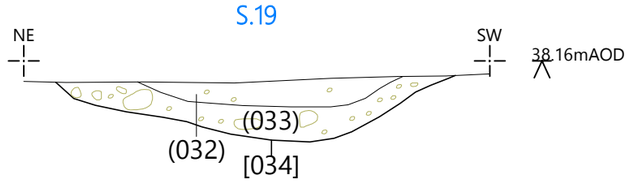


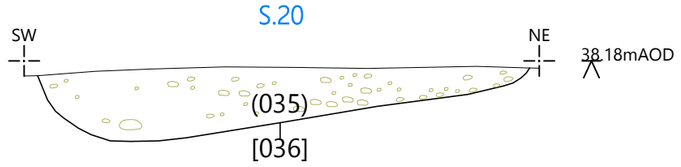
Figure 12
Period 2: LIA Sections
Eastern Ditches & Gullies
Scale: 1:20 @ A3

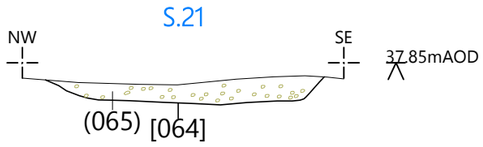












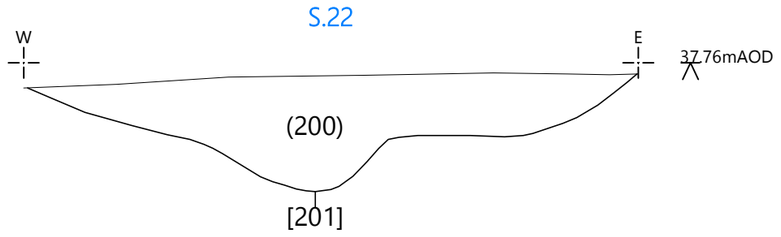


Figure 13
Period 2: LIA Sections
Eastern Ditches & Gullies
Scale: 1:20 @ A3

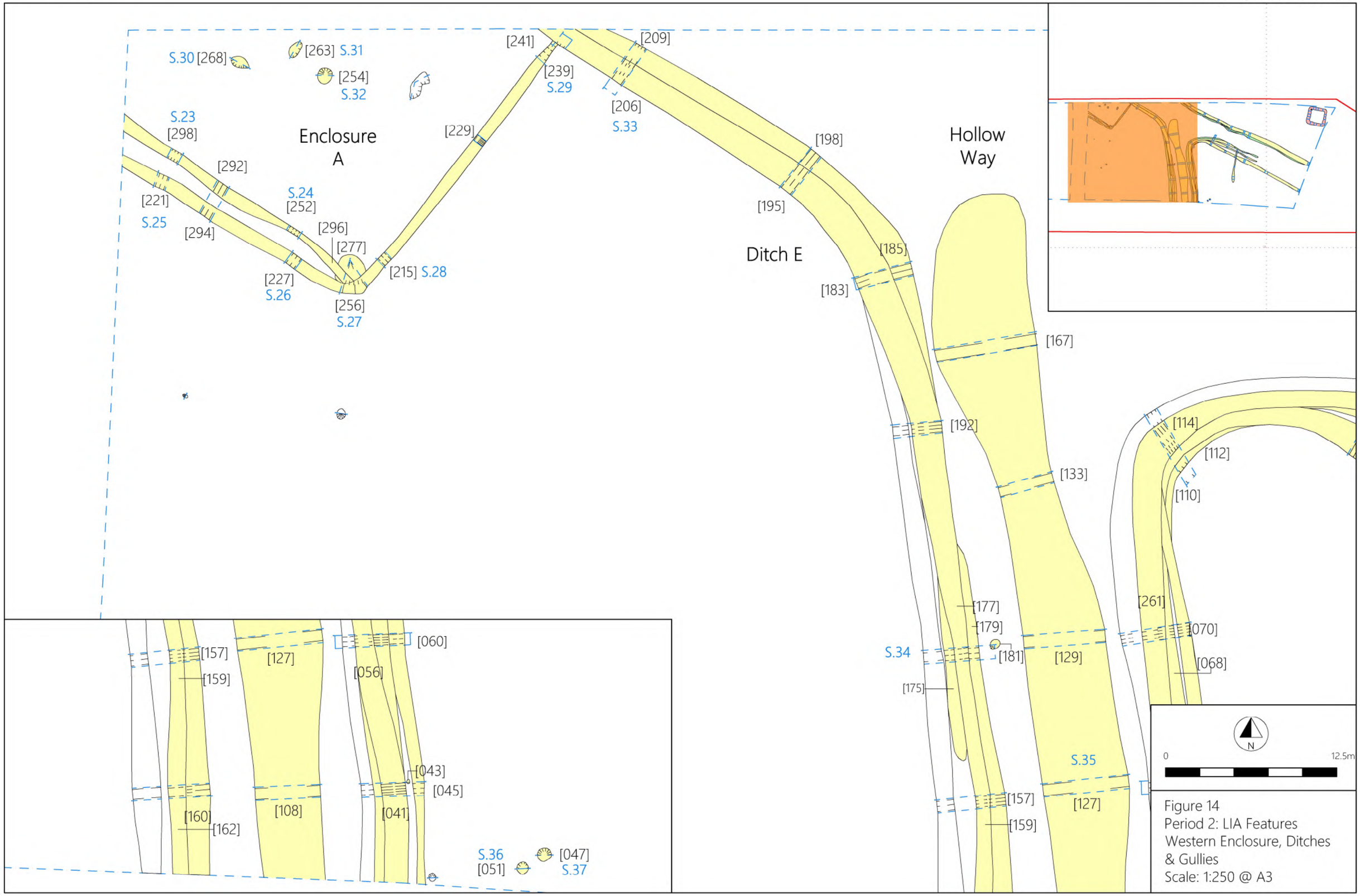
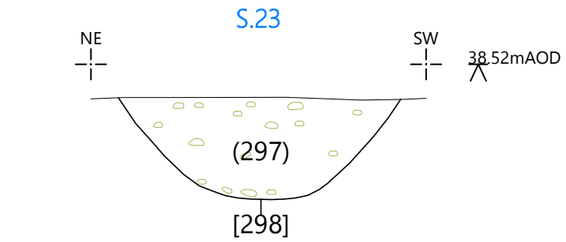
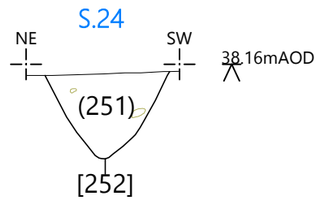
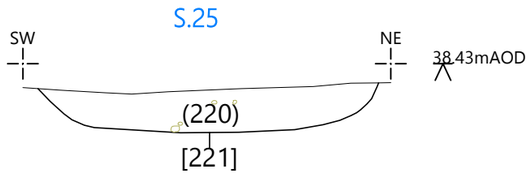
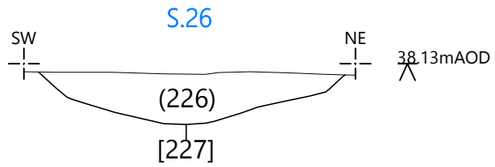


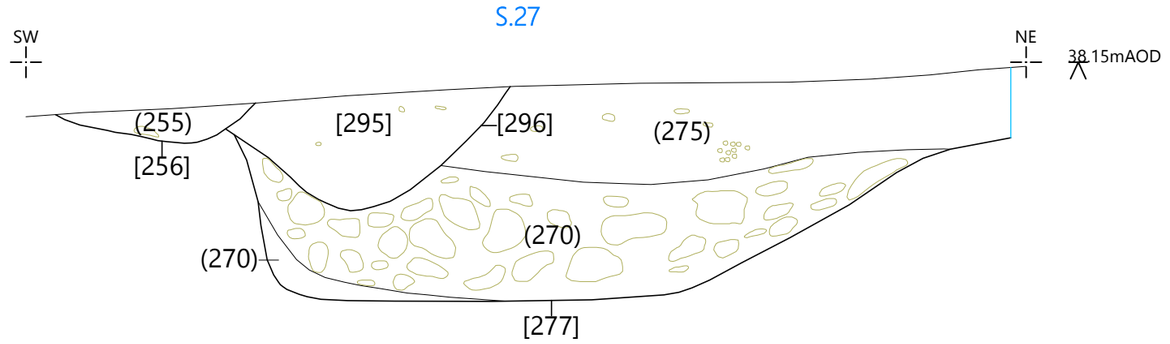
Figure 14
Period 2: LIA Features
Western Enclosure, Ditches & Gullies
Scale: 1:250 @ A3

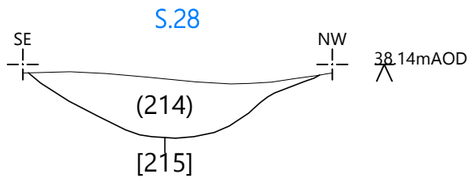


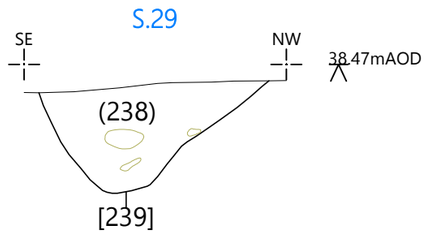


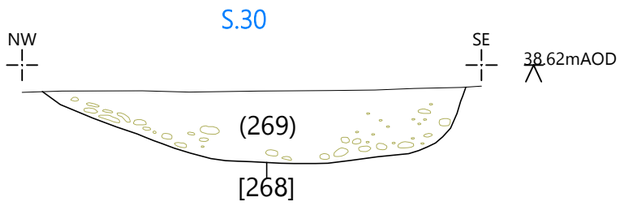


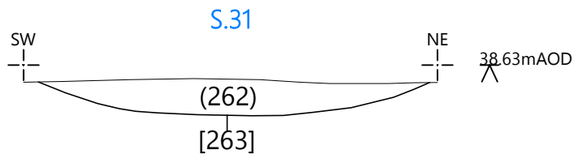












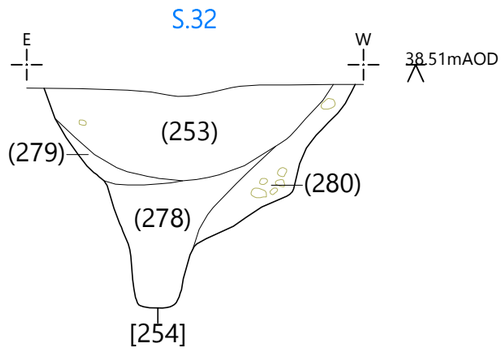


Figure 15
Period 2: LIA Sections
Western Enclosure, Ditches & Gullies
Scale: 1:20 @ A3

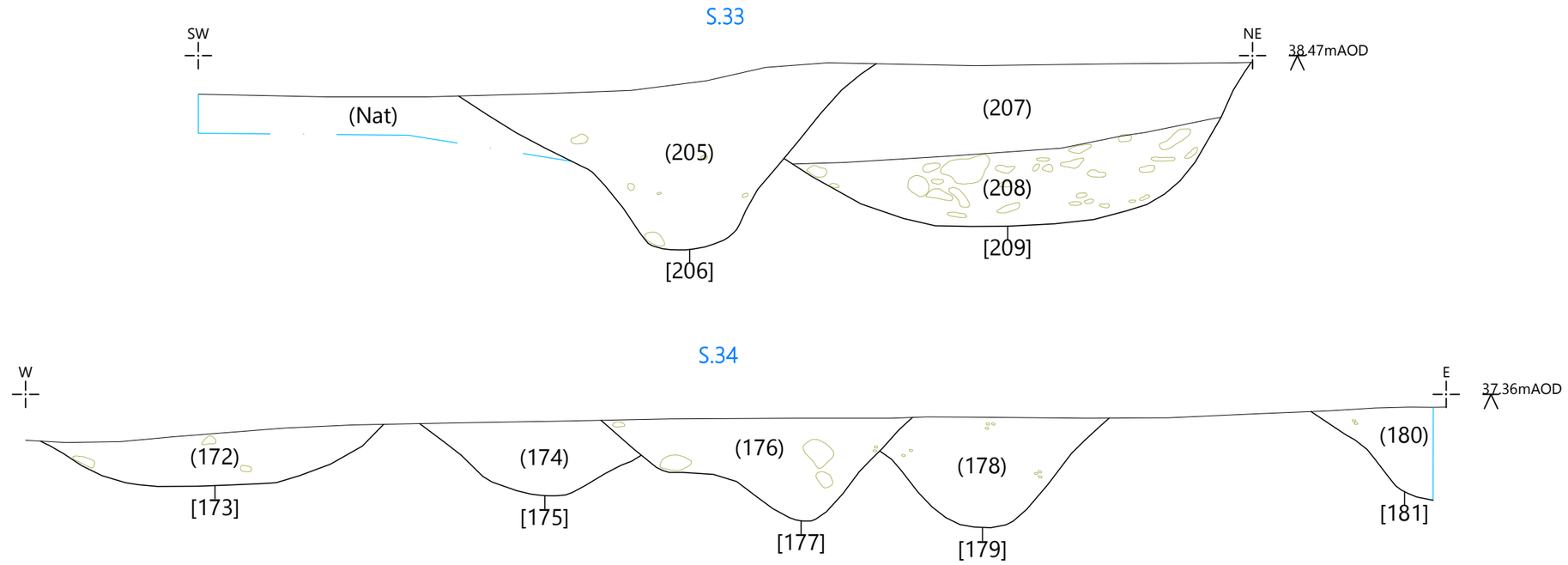


Figure 16
Period 2: LIA Sections
Western Ditches, Gullies & Pits
Scale: 1:20 @ A3

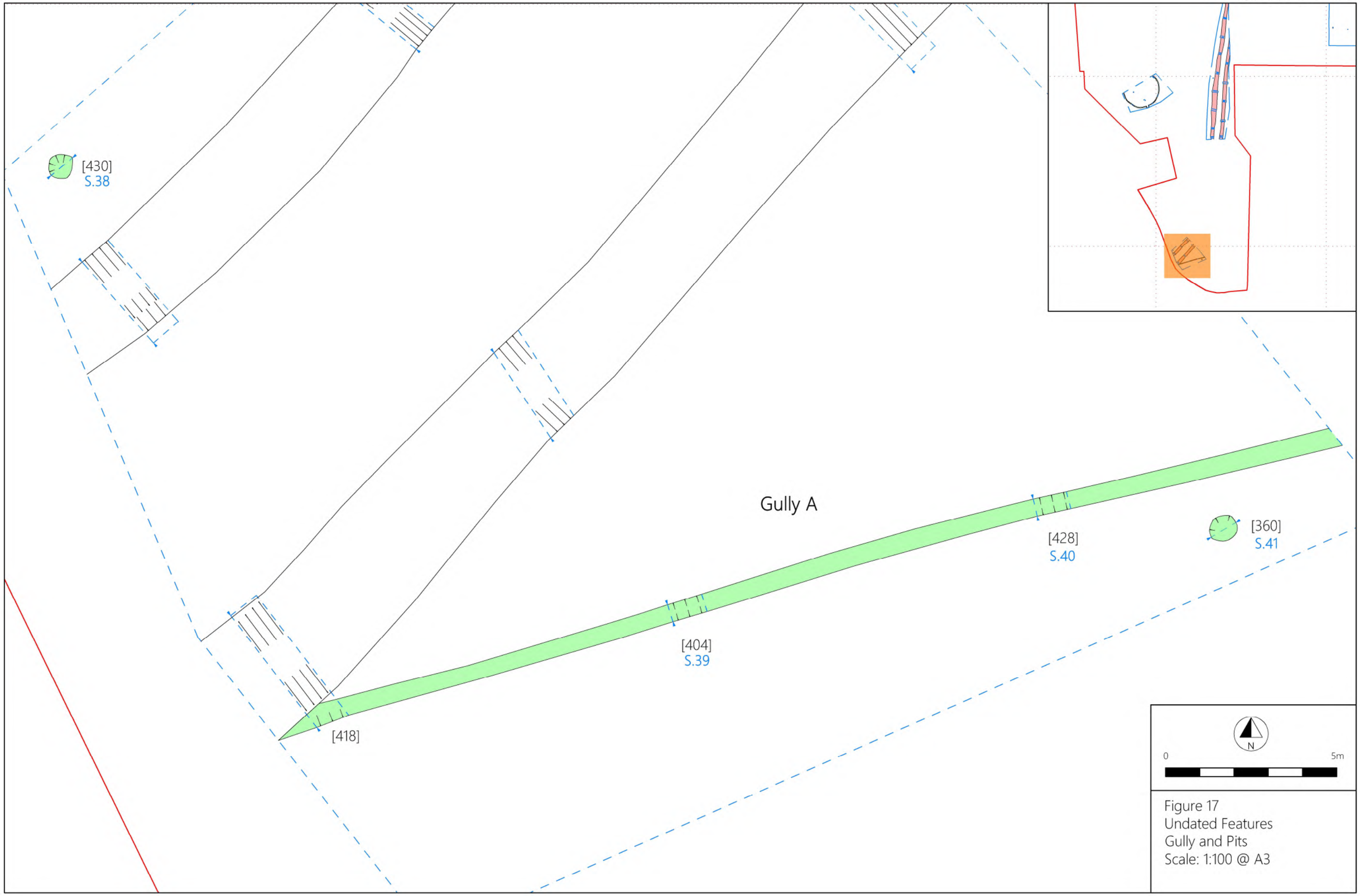


Figure 17
Undated Features
Gully and Pits
Scale: 1:100 @ A3

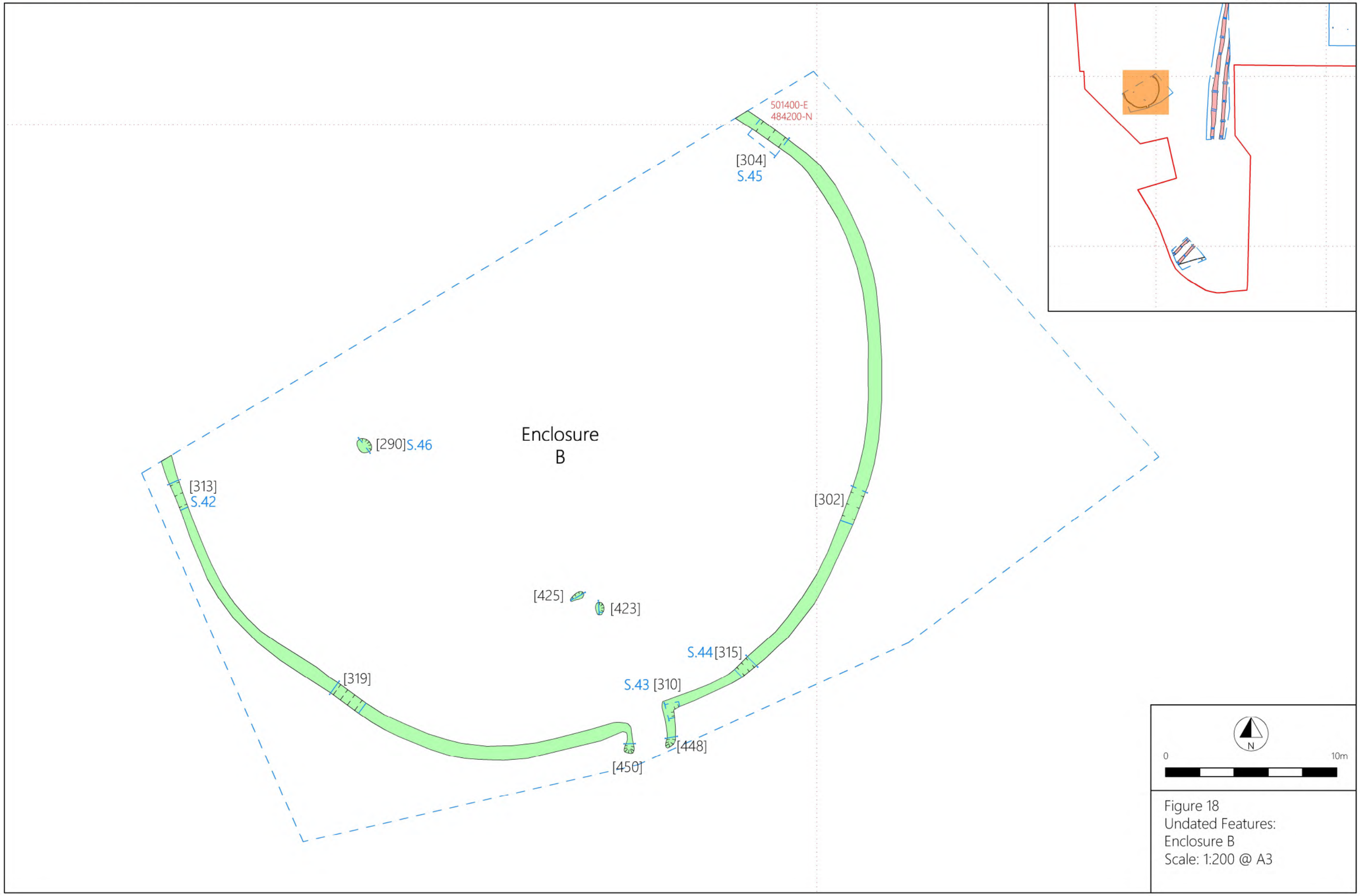


Figure 18
Undated Features:
Enclosure B
Scale: 1:200 @ A3

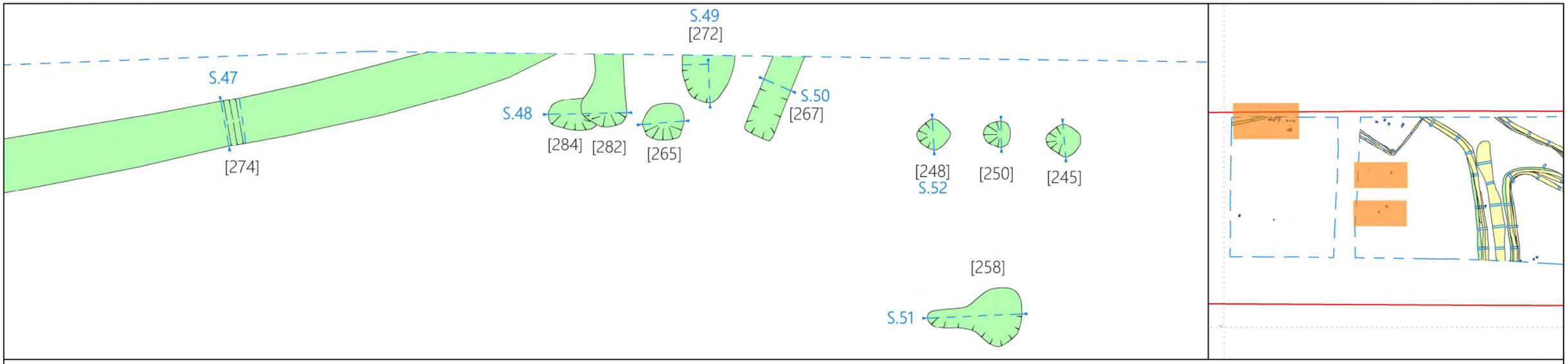


Figure 19
Undated Features:
Central Pits & Gullies
Scale: 1:100/1:50 @ A3

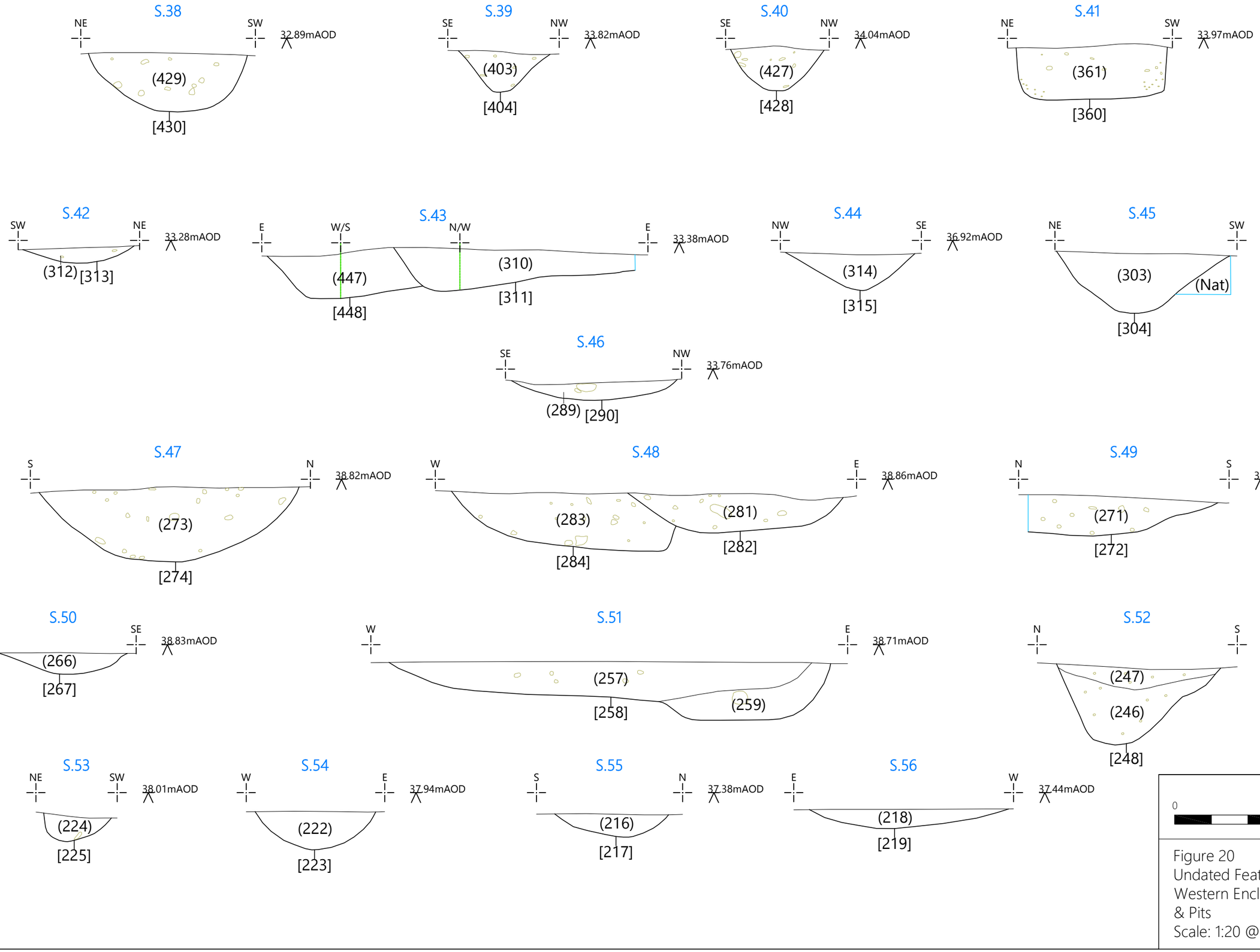


Figure 20
Undated Feature Sections
Western Enclosure, Gullies & Pits
Scale: 1:20 @ A3

S.57 [073]

[012]

[005]

Gully C

S.58

[022]

[020]

[087]

[151]

Gully D

[102]

[116]

S.59 [190]

[052]

S.62

[144]

Gully F

[066]

[173]

[155]

[054]

S.60 [164]

[039]

S.61

0

12.5m

N

Figure 21
Undated Features:
Ditches & Gullies
Scale: 1:250 @ A3

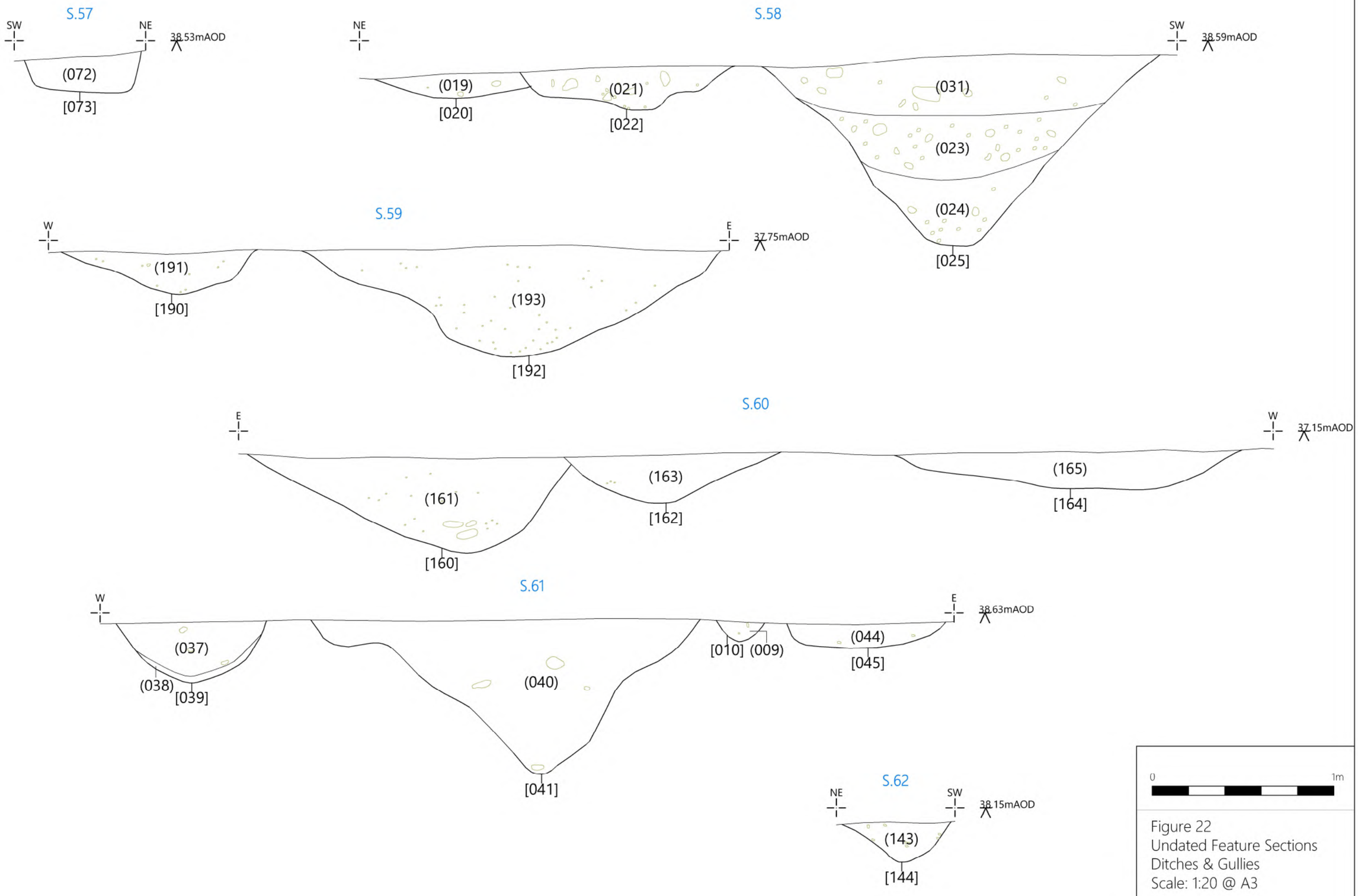


Figure 22
Undated Feature Sections
Ditches & Gullies
Scale: 1:20 @ A3

Plate 1. Ditch A Cut [334].

Plate 2. Ditch A Cut [387].

Plate 3. Ditch B Cut [388].

Plate 4. Ditch B Cut [416].

Plate 5. Square Barrow Prior to Excavation.

Plate 6. Square Barrow Cut [074].

Plate 7. Square Barrow Cut [171].

Plate 8. Square Barrow Cut [199].

Plate 9. Square Barrow Cuts [199] & [204].

Plate 10. Skeleton 202.

Plate 11. Square Barrow after Excavation.

Plate 12. Ditch C Cut [025].

Plate 13. Ditch D Cut [013].

Plate 14. Ditch D Cut [058].

Plate 15. Gully E Cut [060].

Plate 16. Hollow way Cut [108].

Plate 17. Pit [277].

Plate 18. Enclosure A Cut [239].

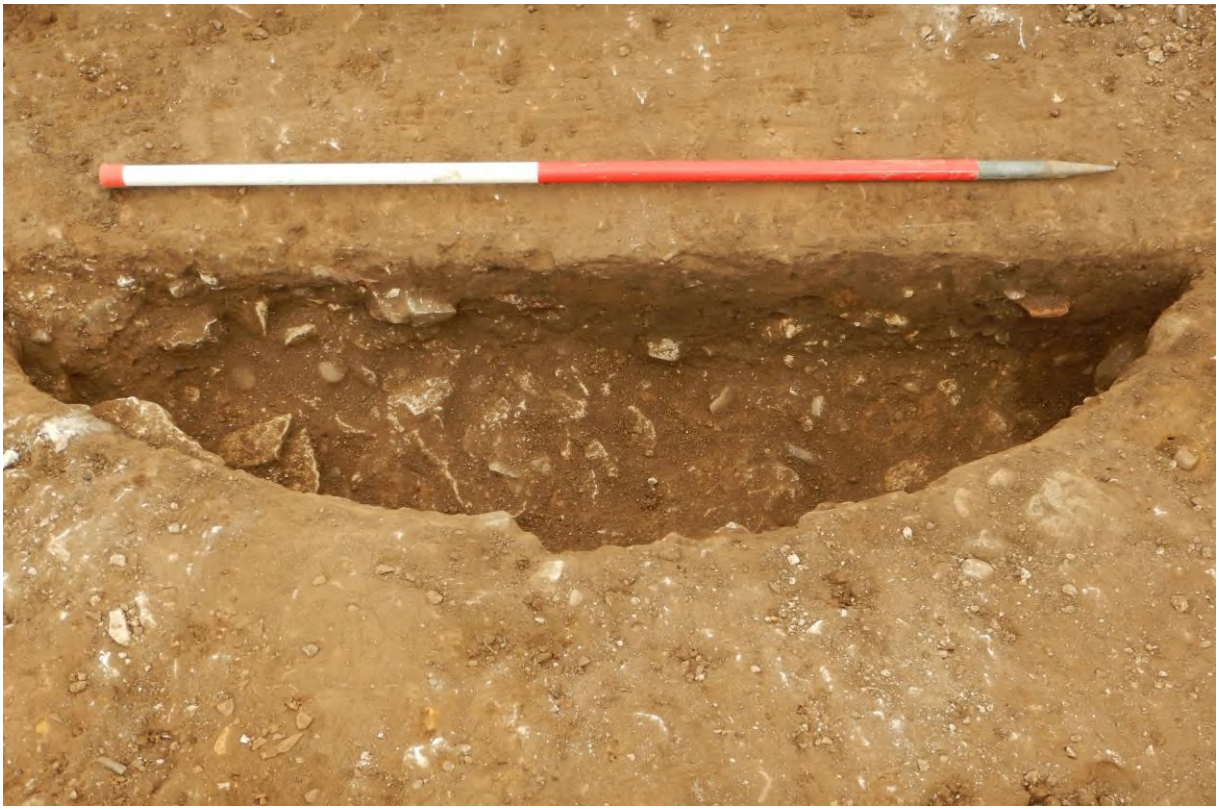


Plate 19. Enclosure A Pit [268].

Plate 20. Gully A Cut [428].

APPENDIX 1

Ayton Road, Seamer
Site Code: 05.11.2016.

Context Listing

Context No.	Type	Description
001	Deposit	Topsoil
002	Deposit	Subsoil
003	Cut	Cut of Ditch
004	Deposit	Dark Brown Silty Sand. Fill of Ditch Cut [003]
005	Cut	Cut of Ditch
006	Deposit	Mid-Brown Sand Clay. Fill of Ditch Cut [005]
007	Deposit	Mid-Brown Sandy Clay. Fill of Ditch Cut [005]
008	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [010]
009	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [010]
010	Cut	Cut of Ditch
011	Deposit	Mid-Reddish Brown Sandy Silt. Fill of Ditch Cut [012]
012	Cut	Cut of Ditch
013	Cut	Cut of Ditch
014	Deposit	Light Brown Silty Sand. Fill of Ditch Cut [013]
015	Deposit	Light Brown Silty Sand. Fill of Ditch Cut [013]
016	Deposit	Mid- Brown Silty Sand. Fill of Ditch Cut [013]
017	Deposit	Mid Brown Sandy Clay. Fill of Ditch Cut [013]
018	Deposit	Dark Brown Sandy Clay. Fill of Ditch Cut [013]
019	Deposit	Fill of Ditch Cut [020]
020	Cut	Cut of Ditch
021	Deposit	Fill of Ditch Cut [022]
022	Cut	Cut of Ditch
023	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [025]
024	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [025]
025	Cut	Cut of Ditch
026	Cut	Cut of Gully
027	Deposit	Mid-Brown Sandy Clay. Fill of Gully Cut [026]
028	Cut	Cut of Ditch
029	Deposit	Mid-Brown Sandy Clay. Fill of Ditch Cut [028]
030	Deposit	Mid-Brown Sandy Clay. Fill of Ditch Cut [028]
031	Deposit	Mid-Grey Brown Sandy Silt. Fill of Ditch Cut [025]
032	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [034]
033	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [034]

034	Cut	Cut of Ditch
035	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [036]
036	Cut	Cut of Ditch
037	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [039]
038	Deposit	Yellowish-Brown Clay Silt. Fill of Ditch Cut [039]
039	Cut	Cut of Ditch
040	Deposit	Mid-Reddish-Brown sandy Silt. Fill of Ditch Cut [041]
041	Cut	Cut of Ditch
042	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Posthole [043]
043	Cut	Cut of Posthole
044	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Gully Cut [045]
045	Cut	Cut of Gully
046	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Pit [047]
047	Cut	Cut of Pit
048	Deposit	Dark-Reddish-Brown Sandy Silt. Fill of Pit [049]
049	Cut	Cut of Pit
050	Deposit	Dark-Reddish-Brown Sandy Silt. Fill of Pit [051]
051	Cut	Cut of Pit
052	Cut	Cut of Ditch
053	Deposit	Mid-Orangey-Brown Sandy Silt. Fill of Ditch Cut [052]
054	Cut	Cut of Ditch
055	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [054]
056	Cut	Cut of Ditch
057	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [057]
058	Cut	Cut of Ditch
059	Deposit	Mid-Reddish Brown Sandy Silt. Fill of Ditch Cut [058]
060	Cut	Cut of Ditch
061	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [060]
062	Cut	Cut of Ditch
063	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [063]
064	Cut	Cut of Ditch
065	Deposit	Light Yellowish Brown Sandy Silt. Fill of Ditch Cut [064]
066	Cut	Cut of Ditch
067	Deposit	Mid-Reddish Brown Sandy Silt. Fill of Ditch Cut [066]
068	Cut	Cut of Ditch
069	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [068]
070	Cut	Cut of Ditch
071	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [070]
072	Deposit	Light Brown Silty Clay. Fill of Ditch Cut [073]
073	Cut	Cut of Ditch
074	Cut	Cut of Barrow Ditch
075	Deposit	Mid-Brown Sandy Silt. Fill of Barrow Ditch Cut [074]
076	Deposit	Mid-Brown Sandy Clay. Fill of Barrow Ditch Cut [074]

077	Deposit	Mid-Brown Clay Silt. Fill of Barrow Ditch Cut [074]
078	Deposit	Mid-Brown Silty Clay. Fill of Ditch Cut [079]
079	Cut	Cut of Ditch
080	Cut	Cut of Barrow Ditch
081	Deposit	Mid-Grey Brown Silty Sand. Fill of Ditch Cut [086]
082	Deposit	Mid-Grey Brown Silty Clay. Fill of Ditch Cut [085]
083	Deposit	Dark-Gre-Brown Silty Clay. Fill of Ditch Cut [086]
084	Deposit	Mid-Reddish-Brown Silty Sand. Fill of Ditch Cut [086]
085	Cut	Cut of Ditch
086	Cut	Cut of Ditch
087	Cut	Cut of Ditch
088	Cut	Cut of Ditch
089	Deposit	Mid-Brown Sandy Silt. Fill of Dith Cut [087]
090	Deposit	Mid-Brown Sandy Silt. Fill of Ditch [088]
091	Deposit	Mid-Grey-Brown. Sandy Silt. Fill of Ditch Cut [088]
092	Deposit	Mid-Orange-Brown Sandy Silt. Fill of Ditch Cut [088]
093	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [094]
094	Cut	Cut of Ditch
095	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [098]
096	Deposit	Mid-Yellowish-Brown Sandy Silt. Fill of Ditch Cut [098]
097	Deposit	Dark-Grey-Brown Clay Silt. Fill of Ditch Cut [098]
098	Cut	Cut of Ditch
099	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Dich Cut [100]
100	Cut	Cut of Ditch
101	Deposit	Mid-Grey Brown Sandy Silt. Fill of Ditch Cut [103]
102	Cut	Cut of Ditch
103	Deposit	Light-Grey-Brown Sandy Silt. Fill of Barrow Ditch Cut [080]
104	Deposit	Dark-Brown Silty Sand. Fill of Barrow Ditch Cut [080]
105	Deposit	Mid-Reddish-Brown Silty Sand. Fill of Barrow Ditch Cut [080]
106	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [094]
107	Deposit	Mid-Brown Silty Sand. Fill of Ditch Cut [108]
108	Cut	Cut of Ditch
109	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Gully Cut [110]
110	Cut	Cut of Gully
111	Deposit	Dark-Reddish-Brown Sandy Silt. Fill of Ditch Cut [112]
112	Cut	Cut of Ditch
113	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [114]
114	Cut	Cut of Ditch
115	Deposit	Mid-reddish-Brown Sandy Silt. Fill of Ditch Cut [116]
116	Cut	Cut of Ditch
117	Deposit	Mid-Orange-Brown Sandy Silt. Fill of Barrow Ditch Cut [121]
118	Deposit	Mid-Brown Silty Clay. Fill of Barrow Ditch Cut [121]
119	Deposit	Daek-Reddish-Brown Clay. Fill of Barrow Ditch Cut [121]

120	Deposit	Mid-Brown Sandy Silt. Fill of Barrow Ditch Cut [121]
121	Cut	Cut of Barrow Ditch
122	Cut	Cut of Ditch
123	Deposit	Mid-Brown Sandy Silt. Fill of Ditch [122]
124	Cut	Cut of Ditch
125	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Cut [124]
126	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [127]
127	Cut	Cut of Ditch
128	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditcch
129	Cut	Cut of Ditch
130	Cut	Cut of Ditch
131	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Cit [130]
132	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [133]
133	Cut	Cut of Ditch
134	Deposit	Mid-Brown Silty Clay. Fill of Barrow Ditch Cut [138]
135	Deposit	Mid-Brown Silty Clay. Fill of Barrow Ditch Cut [138]
136	Deposit	Dark-Brown Clay Silt. Fill of Barrow Ditch Cut [138]
137	Deposit	Mid-Brown Silty Sand. Fill of Barrow Ditch Cut [138]
138	Cut	Cut of Ditch
139	Deposit	Mid-Reddiish Brown Silty Sand, Fill of Barrow Ditch Cut [142]
140	Deposit	Dark-Reddish-Brown Silty Sand. Fill of Barrow Ditch Cut [142]
141	Deposit	Light-Grey-Brown Silty Sand. Fill of Barrow Ditch Cut [142]
142	Cut	Cut of Barrow Ditch
143	Deposit	Mid-Reddish- Brown Sandy Silt. Fill of Ditch Cut [144]
144	Cut	Cut of Ditch
145	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [146]
146	Cut	Cut of Ditch
147	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [149]
148	Deposit	Mid-Reddish Brown Sandy Silt. Fill of Ditch Cut [149]
149	Cut	Cut of Ditch
150	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [151]
151	Cut	Cut of Ditch
152	Deposit	Mid-Grey-Brown Clay Silt. Fill of Ditch Cut [153]
153	Cut	Cut of Ditch
154	Deposit	Mid-Grey-Brown Siilty Sand. Fill of Ditch Cut [155]
155	Cut	Cut of Ditch
156	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Cut [157]
157	Cut	Cut of Ditch
158	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Cut [159]
159	Cut	Cut of Ditch
160	Cut	Cut of Ditch
161	Deposit	Dark-Brown Sandy Silt. Fill of Ditch [160]
162	Cut	Cut of Ditch

163	Deposit	Dark-Brown Sandy Silt. Fill of Ditch Cut [162]
164	Cut	Cut of Ditch
165	Deposit	Dark-Brown Sandy Silt. Fill of Ditch Cut [164]
166	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Cut [167]
167	Cut	Cut of Ditch
168	Deposit	Mid-Brown Silty Clay. Fill of Barrow Ditch Cut [171]
169	Deposit	Mid-Brown Sandy Clay. Fill of Barrow Ditch Cut [171]
170	Deposit	Light Brown Silty Clay. Fill of Barrow Ditch Cut [171]
171	Cut	Cut of Barrow Ditch
172	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [173]
173	Cut	Cut of Ditch
174	Deposit	Mid-Reddish Brown Sandy Silt. Fill of Ditch Cut [175]
175	Cut	Cut of Ditch
176	Deposit	Dark-Reddish-Brown Sandy Silt. Fill of Ditch Cut [177]
177	Cut	Cut of Ditch
178	Deposit	Mid-Reddih-Brown Sandy Silt. Fill of Ditch
179	Cut	Cut of Ditch
180	Deposit	Dark-Reddish-Brown Sandy Silt. Fill of Posthole [181]
181	Cut	Cut of Posthole
182	Deopsit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [183]
183	Cut	Cut of Ditch
184	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [185]
185	Cut	Cut of Ditch
186	Deposit	Light-Yellowish-Brown Sandy Silt. Fill of Barrow Ditch [189]
187	Deposit	Mid-Grey-Brown Silty Sand. Fill of Barrow Ditch [189]
188	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Barrow Ditch [189]
189	Cut	Cut of Barrow Ditch
190	Cut	Cut of Ditch
191	Deposit	Dark-Brown Silty Clay. Fill of Ditch Cut [190]
192	Cut	Cut of Ditch
193	Deposit	Dark-Brown Clay Silt. Fill of Ditch Cut [192]
194	Deposit	Dark-Reddish-Brown Clay Silt. Fill of Ditch Cut [195]
195	Cut	Cut of Ditch
196	Deposit	Dark-Reddish-Brown Clay Silt. Fill of Ditch Cut [198]
197	Deposit	Dark-Reddish-Brown Clay Silt. Fill of Ditch Cut [198]
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199	Cut	Cut of Barrow Ditch
200	Deposit	Mid-Brown Sandy Silt. Fill of Ditch Ciut [201]
201	Cut	Cut of Ditch
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204	Cut	Cut of Grave Pit
205	Deposit	Dark-Reddish-Brown Clay Silt. Fill of Ditch Cut [206]

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207	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [209]
208	Deposit	Dark-Brown Clay Silt. Fill of Ditch Cut [209]
209	Cut	Cut of Ditch
210	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [211]
211	Cut	Cut of Ditch
212	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [213]
213	Cut	Cut of Ditch
214	Deposit	Dark-Grey-Brown Silty Clay. Fill of Ditch Cut [215]
215	Cut	Cut of Ditch
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217	Cut	Cut of Pit
218	Deposit	Mid-Grey-Brown Silty Sand. Fill of Pit [219]
219	Cut	Cut of Pit
220	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [221]
221	Cut	Cut of Ditch
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225	Cut	Cut of Posthole
226	Deposit	Mid Grey-Brown Sandy Silt. Fill of Ditch Cut [227]
227	Cut	Cut of Ditch
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229	Cut	Cut of Ditch
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232	Deposit	Fill of Ditch Cut [233]
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240	Deposit	Dark-Grey-Brown Ckay Silt. Fill of Ditch Cut [241]
241	Cut	Cut of Ditch
242	Deposit	Light-Yellowish-Brown Sandy Clay. Fill of Posthole [243]
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244	Deposit	Light-Yellowish-Brown Sandy Clay. Fill of Posthole [245]
245	Cut	Cut of Posthole
246	Deposit	Mid-Yellowish-Brown Clay Silt. Fill of Pit [248]
247	Deposit	Mid-Orange-Brown Silty Sand. Fill of Pit [248]
248	Cut	Cut of Pit

249	Deposit	Mid-Yellowish-Brown Silty Clay. Fill of Pit [250]
250	Cut	Cut of Pit
251	Deposit	Mid-Grey-Brown Silty Sand. Fill of Pit
252	Cut	Cut of Pit
253	Deposit	Dark-Grey-Brown Silty Sand. Fill of Pit [254]
254	Cut	Cut of Posthole
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256	Cut	Cut of Gully
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258	Cut	Cut of Pit
259	Deposit	Mid-Grey-Brown Silty Sand. Fill of Pit [258]
260	VOID	
261	VOID	
262	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Pit [263]
263	Cut	Cut of Pit
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265	Cut	Cut of Pit
266	Deposit	Light-Yellow-Brown Silty Sand. Fill of Ditch Cut [267]
267	Cut	Cut of Ditch
268	Cut	Cut of Pit
269	Deposit	Fill of Pit [269]
270	Deposit	Mid-Orange-Brown Sandy Silt. Fill of Pit [277]
271	Deposit	Mid-Grey-Brown Sandy Clay. Fill of Pit [272]
272	Cut	Cut of Pit
273	Deposit	Mid-Grey-Brown Sandy Clay. Fill of Ditch Cut [274]
274	Cut	Cut of Ditch
275	Deposit	Mid-Orangey-Brown Sandy Silt. Fill of Pit [277]
276	Deposit	Dark-Orangey-Brown Sandy Silt. Fill of Pit [277]
277	Cut	Cut of Pit
278	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Pit [254]
279	Deposit	Mid-Brown Silt. Fill of Pit [254]
280	Deposit	Mid-Brown Silt. Fill of Pit [254]
281	Deposit	Mid-Grey-Brown Sandy Clay. Fill of Pit [282]
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283	Deposit	Mid-Grey-Brown Sandy Clay. Fill of Pit [284]
284	Cut	Cut of Pit
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286	Cut	Cut of Pit
287	Deposit	Dark-Grey-Brown Silty Sand, Fill of Pit [288]
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289	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Pit [290]
290	Cut	Cut of Pit
291	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [292]

292	Cut	Cut of Ditch
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296	Cut	Cut of Gully
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299	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [302]
300	VOID	
301	Deposit	Mid-Reddish Brown Silty Sand. Fill of Ditch Cut [302]
302	Cut	Cut of Ditch
303	Deposit	Dark Brown Sandy Silt. Fill of Ditch Cut [304]
304	Cut	Cut of Ditch
305	Deposit	Light-Grey-Brown Sandy Silt. Fill of Ditch Cut [309]
306	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [309]
307	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [309]
308	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [309]
309	Cut	Cut of Ditch
310	Deposit	Dark-Reddish Brown Silty Sand. Fill of Ditch Cut [314]
311	Cut	Cut of Ditch
312	Deposit	Mid-Orange-Brown Silty Sand. Fill of Dich Cut [313]
313	Cut	Cut of Ditch
314	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [315]
315	Cut	Cut of Ditch
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317	Cut	Cut of Pit
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319	Cut	Cut of Ditch
320	Cut	Cut of Ditch
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322	Deposit	Mid-Brown Sandy Clay. Fill of Ditch Cut [320]
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324	Deposit	Mid-Brown Sandy Clay. Fill of Ditch Cut [320]
325	Deposit	Dark-Brown Sandy Clay. Fill of Ditch Cut [320]
326	Deposit	Light-Grey-Brown Sandy Sillt. Fill of Ditch Cut [331]
327	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [331]
328	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [331]
329	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [331]
330	Deposit	Dark-Grey-Brown Silty Sand. Fill of Ditch Cut [331]
331	Deposit	Dark-Grey-Brown Silty Sand. Fill of Ditch Cut [331]
332	Cut	Cut of Ditch
333	Deposit	Mid-Brown Slty Clay. Fill of Ditch Cut [320]
334	Deposit	Light-Grey-Brown Sandy Silt. Fill of Ditch Cut [338]

335	Deposit	Light-Grey-Brown Sandy Silt. Fill of Ditch Cut [338]
336	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [338]
337	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [338]
338	Cut	Cut of Ditch
339	Deposit	Light-Grey-Brown Sandy Clay. Fill of Ditch Cut [344]
340	Deposit	Dark-Grey-Brown Sand Clay. Fill of Ditch Cut [344]
341	Deposit	Mid-Grey-Brown Sandy Clay. Fill of Ditch Cut [344]
342	Deposit	Dark-Grey-Brown Sandy Clay. Fill of Ditch Cut [344]
343	Deposit	Light-Orange-Brown Sandy Clay. Fill of Ditch Cut [344]
344	Cut	Cut of Ditch
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346	Deposit	Mid-Reddish-Brown Clay Silt. Fill of Ditch Cut [348]
347	Deposit	Mid-Reddish-Brown Clay Silt. Fill of Ditch Cut [348]
348	Cut	Cut of Ditch
349	Deposit	Light-Orange-Brown Sandy Clay. Fill of Ditch Cut [344]
350	Cut	Cut of Ditch
351	Deposit	Light-Brown Sandy Clay. Fill of Ditch Cut [351]
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353	Deposit	Mid-Brown Silt. Fill of Ditch Cut [351]
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355	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [358]
356	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [358]
357	Deposit	Dark-Grey-Brown Silty Sand. Fill of Ditch Cut [358]
358	Cut	Cut of Ditch
359	Cut	Cut of Ditch (recut of [344]
360	Cut	Cut of Pit
361	Deposit	Dark Brown Sandy Silt. Fill of Pit [360]
362	Deposit	Light-Grey-Brown Silty Sand. Fill of Ditch Cut [367]
363	Deposit	Light-Grey-Brown Silty Sand. Fill of Ditch Cut [367]
364	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [367]
365	Deposit	Mid-Grey-Brown Silty Sand. Fill of Ditch Cut [367]
366	Deposit	Light-Grey-Brown Silty Sand. Fill of Ditch Cut [367]
367	Cut	Cut of Ditch
368	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [372]
369	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [372]
370	Deposit	Mid-Orange-Brown Clay Silt. Fill of Ditch Cut [372]
371	Deposit	Light-Yellow-Brown Clay Silt. Fill of Ditch Cut [372]
372	Cut	Cut of Ditch
373	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [378]
374	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [378]
375	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [378]
376	Deposit	Light-Grey-Brown Sandy Silt. Fill of Ditch Cut [378]
377	Deposit	Light-Grey-Brown Silty Sand. Fill of Ditch Cut [378]

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391	Deposit	Mid -Brown Silty Clay. Fill of Ditch Cut [388]
392	Natural	Natural Deposit- Numbered for OSL Samples
393	Natural	Natural Deposit- Numbered for OSL Samples
394	Natural	Light-Brown Silty Clay. Fill of Ditch Cut [388]
395	Deposit	Dark-Brown Sandy Clay. Fill of Ditch Cut [388]
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398	Deposit	Mid-Reddish-Brown Sandy Silt. Fill of Ditch Cut [402]
399	Deposit	Dark-Reddish-Brown Silty Sand. Fill of Ditch Cut [402]
400	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [402]
401	Deposit	Dark-Grey-Brown Clay-Silt. Fill of Ditch Cut [402]
402	Cut	Cut of Ditch
403	Deposit	Dark-Grey-Brown Sandy Silt. Fill of Ditch Cut [404]
404	Cut	Cut of Ditch
405	VOID	
406	Deposit	Light-Grey-Brown Silty Sand. Fill of Ditch Cut [410]
407	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [410]
408	Deposit	Mid-Grey-Brown Silty Clay. Fill of Ditch Cut [410]
409	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [410]
410	Cut	Cut of Ditch
411	Deposit	Light-Yellow-Brown Sandy Clay. Fill of Ditch Cut [416]
412	Deposit	Mid-Reddish-Brown Sandy Clay. Fill of Ditch Cut [416]
413	Deposit	Mid-Reddish-Brown Sandy Clay. Fill of Ditch Cut [416]
414	Deposit	Dark Brown Sandy Clay. Fill of Ditch Cut [416]
415	Deposit	Mid-Yellow-Brown Sand. Fill of Ditch Cut [416]
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420	Deposit	Dark Brown Silty Sand. Fill of Ditch Cut [422]

421	Deposit	Mid Brown Silty Clay. Fill of Ditch Cut [422]
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426	Deposit	Dark Brown Sandy Clay. Fill of Gully Cut [425]
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432	Deposit	Mid-Grey-Brown Sandy Silt. Fill of Ditch Cut [435]
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440	Deposit	Dark-Brown Sandy Silt. Fill of Ditch Cut [442]
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445	Deposit	Dark Brown Silty Sand. Fill of Ditch Cut [446]
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447	Deposit	Dark-Grey-Brown Silty Sand, Fill of Ditch Cut [448]
448	Cut	Cut of Ditch
449	Deposit	Dark-Grey-Brown Silty Sand. Fill of Ditch Cut [450]
450	Cut	Cut of Ditch
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452	Deposit	Fill of Ring Gully Cut [451]
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APPENDIX 2

Ayton Road, Seamer
Site Code: 05.11.2016.

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081	[167]	1:20	Plan of Ditch Cut [167]
082	[171]	1:20	E Facing Section of Barrow Ditch Cut [171]
083	[171]	1:20	Plan of Barrow Ditch Cut [171]
084	[173], [175], [177]	1:10	S Facing Section of Ditch Cuts [173], [175], [177]
085	[173], [175], [177]	1:20	Plan of Ditch Cuts [173], [175], [177]

086	[183], [185]	1:10	SE Facing Section of Ditch Cuts [183], [185]
087	[183], [185]	1:20	Plan of Ditch Cuts [183], [185]
088	[189]	1:10	N Facing Section of Barrow Cut [189]
089	[189]	1:20	Plan of Barrow Cut [189
090	[190], [192]	1:10	Section of Ditch Cuts [190], [192]
091	[190], [192]	1:20	Plan of Ditch Cuts [190], [192]
092	[195] & [198]	1:10	NE Section of Ditch Cuts [195] & [198]
093	[195] & [198]	1:20	Plan of Cuts [195] & [198]
094	Various	1:50	Post-Excavation Plan of Barrow
095	[201]	1:10	SE Facing Section of Ditch Cut [201]
096	[201]	1:20	Plan of Ditch Cut [201]
097	[206], [209]	1:10	Section of Ditch Cuts [206], [209]
098	[206], [209]	1:20	Plan of Ditch Slots [206], [209]
099	SK202	1:05	Plan of SK202
100	[211]	1:10	NE Facing Section of Ditch Cut [211]
101	[211]	1:20	Plan of Ditch Cut [211]
102	[204]	1:10	Plan of Grave Pit [204]
103	[204]	1:10	NE-SW Profile of Grave Pit [204]
104	[204]	1:10	NE-SE Profile of Grave Pit [204]
105	[215]	1:10	NE Facing Section of Ditch Cut [215]
106	[215]	1:20	Plan of Ditch Cut [215]
107	[217]	1:10	E Facing Section of Pit [217[]
108	[217]	1:20	Plan of Pit [217]
109	[219]	1:10	N Facing Section of Pit [219]
110	[219]	1:20	Plan of Pit [219]
111	[221]	1:10	E Facing Section of Ditch Cut [221]
112	[221]	1:20	Plan of Ditch Cut [221]
113	[223]	1:10	S Facing Section of Pit [223]
114	[223]	1:20	Plan of Pit [223]
115	[225]	1:10	NW Facing Section of Posthole [225]
116	[225]	1:20	Plan of Posthole [225]
117	[227]	1:10	SE Facing Section of Ditch Cut [227]
118	[227]	1:20	Plan of Ditch Cut [227]
119	[199]	1:10	W Facing Section of Barrow Ditch Cit [199]
120	[199]	1:10	N Facing Section of Barrow Cut [199]
121	[119], [204]	1:20	Plan of Barrow Ditch Cut [199], Grave Pit Cut [204]
122	[229]	1:10	SE Facing Section of Ditch Cut [229]
123	[229]	1:20	Plan of Ditch Cut [229]
124	[239], [241]	1:10	NE Facing Section of Ditch Cuts [239], [241]
125	[239], [241]	1:20	Plan of Ditch Cuts [239], [241]
126	[231]	1:10	E Facing Section of Pit [231]
127	[231]	1:20	Plan of Pit [231]
128	[239]	1:10	NE Facing Section of Gully Cut [239]
129	[243]	1:10	W Facing Section of Pit [243]
130	[243]	1:10	Plan of Pit [243]
131	[245]	1:10	W Facing Section of Pit [245]
132	[245]	1:10	Plan of Pit [245]
133	[248]	1:10	W Facing Section of Pit [248]

134	[248]	1:20	Plan of Pit [248]
135	[250]	1:10	W Facing Section of Pit [250]
136	[250]	1:20	Plan of Pit [250]
137	[252]	1:10	NW Facing Section of Pit [252]
138	[252]	1:20	Plan of Pit [252]
139	[243]	1:10	N Facing Section of Pit [243]
140	[243]	1:20	Plan of Pit [243]
141	[254]	1:10	SE Facing Section of Ditch Cut [254]
142	[254]	1:20	Plan of Ditch Cut [254]
143	[258]	1:10	S Facing Section of Pit [258]
144	[258]	1:20	Plan of Pit [258]
145	[263]	1:10	SE Facing Section of Pit [263]
146	[263]	1:20	Plan of Pit [263]
147	[258]	1:20	Post-Excavation Plan of 'Corn Drier'
148	[199], [204]	1:20	Profile of NW Corner of Barrow
149	[080]	1:20	Profile of NE Corner of Barrow
150	[138]	1:20	Profile of SE Corner of Barrow
151	[074]	1:20	Profile of SW Corner of Barrow
152	[265]	1:10	S Facing Section of Pit [265]
153	[265]	1:20	Plan of Pit [265]
154	[267]	1:10	SW Facing Section of Ditch Cut [267]
155	[267]	1:20	Plan of Ditch Cut [267]
156	VOID		
157	VOID		
158	[268]	1:10	NE Facing Section of Pit [268]
159	[268]	1:10	Plan of Pit [268]
160		1:50	Post-Excavation Plan of Barrow
161	[272]	1:10	W Facing Section of Pit [272]
162	[272]	1:20	Plan of Pit [272]
163	[274]	1:10	E Facing Section of Ditch Cut [274]
164	[272]	1:20	Plan of Ditch Cut [274]
165	[282],[284]	1:10	S Facing Section of Pits [282], [284]
166	[282],[284]	1:20	Plan of Pits [282], [284]
167	[286]	1:10	W Facing Section of Pit [286]
168	[286]	1:20	Plan of Pit [286]
169	[268]	1:20	Plan of Pit [268]
170	[288]	1:10	N Facing Section of Pit [288]
171	[288]	1:20	Plan of Pit [288]
172	[290]	1:10	E Facing Section of Pit [290]
173	[290]	1:20	Plan of Pit [290]
174	[292], [294]	1:10	Plan of Ditch Cut [292], Gully Cut [294]
175	[298]	1:10	W Facing Section of Ditch Cut [298]
176	[298]	1:20	Plan of Ditch Cut [298]
177	[302]	1:10	W Facing Section of Ring Ditch Cut [302]
178	[302]	1:20	Plan of Ring Ditch Cut [302]
179	[304]	1:10	NW Facing Section of Ditch Cut [304]
180	[304]	1:20	Plan of Ditch Cut [304]
181	[309]	1:20	Section of Ditch Cut [309]

182	[309]	1:50	Plan of Ditch Cut [309]
183	[311]	1:10	Section of Ring Ditch Cut [311]
184	[311]	1:20	Plan of Rinf Ditch Cut [311]
185	[313]	1:10	Section of Ring Ditch Cut [313]
186	[313]	1:20	Plan of Ring Ditch Cut [313]
187	[315]	1:10	SW Facing Section of Ring Ditch Cut [315]
188	[315]	1:20	Plan of Ring Ditch Cut [315]
189	[317]	1:10	W Facing Section of Pit [317]
190	[317]	1:20	Plan of Pit [317]
191	[319]	1:10	SE Facing Section of Ring Ditch Cut [319]
192	[319]	1:20	Plan of Ring Ditch Cut [319]
193	[320]	1:10	N Facing Section of Ditch Cut [320]
194	[320]	1:20	Plan of Ditch Cut [320]
195	[332]	1:20	N Facing Section of Ditch Cut [332]
196	[332]	1:20	Plan of Ditch Cut [332]
197	[348]	1:10	S Facing Section of Ditch Cut [348]
198	[348]	1:20	Plan of Ditch Cut [348]
199	[338]	1:10	N Facing Section of Ditch Cut [338]
200	[338]	1:20	Plan of Ditch Cut [338]
201	[344]	1:20	S Facing Section of Ditch Cut [344]
202	[344]	1:50	Plan of Ditch Cut [344]
203	[350]	1:20	N Facing Section of Ditch Cut [350]
204	[350]	1:20	Plan of Ditch Cut [350]
205	[358]	1:20	S Facing Section of Ditch Cut [358]
206	[358]	1:20	Plan of Ditch Cut [358]
207	[360]	1:10	N Facing Section of Pit [360]
208	[360]	1:20	Plan of Pit [360]
209	[367]	1:20	S Facing Section of Ditch Cut [367]
210	[367]	1:20	Plan of Ditch Cut [367]
211	[372]	1:10	N Facing Section of Ditch Cut [372]
212	[372]	1:20	Plan of Ditch Cut [372]
213	[378]	1:20	S Facing Section of Ditch Cut [378]
214	[378]	1:20	Plan of Ditch Cut [378]
215	[382]	1:20	N Facing Section of Ditch Cut [382]
216	[382]	1:20	Plan of Ditch Cut [382]
217	[387]	1:20	N Facing Section of Ditch Cut [387]
218	[387]	1:50	Plan of Ditch Cut [387]
219	[338]	1:20	N Facing Section of Ditch Cut [338]
220	[338]	1:20	Plan of Ditch Cut [338]
221	[402]	1:10	NE Facing Section of Ditch Cut [402]
222	[402]	1:20	Plan of Ditch Cut [402]
223	[404]	1:10	Section of Ditch Cut [404]
224	[404]	1:20	Plan of Ditch Cut [404]
225	[410]	1:10	E Facing Section of Ditch Cut [410]
226	[410]	1:20	Plan of Ditch Cut [410]
227	[416]	1:20	S Facing Section of Ditch Cut [416]
228	[416]	1:20	Plan of Ditch Cut [416]
229	[418], [422]	1:20	NE Facing Section of Gully Cut [418], Ditch Cut [422]

230	[418], [422]	1:20	Plan of Gully Cut [418], Ditch Cut [422]
231	[423]	1:20	NE Facing Section of Poss Natural Feature
232	[423]	1:20	Plan of Poss Natural Feature
233	[428]	1:10	Section of Gully Cut [428]
234	[428]	1:20	Plan of Gully Cut [428]
235	[430]	1:10	Section of Pit [430]
236	[430]	1:20	Plan of Pit [430]
237	[435]	1:10	SW Facing Section of Ditch Cut [435]
238	[435]	1:20	Plan of Ditch Cut [435]
239	[442]	1:20	NE Facing Section of Ditch Cut [442]
240	[442]	1:20	Plan of Ditch Cut [442]
241	[446]	1:20	NE Facing Section of Ditch Cut [442]
242	[446]	1:20	Plan of Ditch Cut [446]
243	[423]	1:20	Plan of Poss Natural Feature
244	[425]	1:20	Plan of Poss Natural Feature
245	[448]	1:20	NE Facing Section of Posthole [448]
246	[448]	1:20	Plan of Posthole [448]
247	[450]	1:20	SW Facing Section of Posthole [450]
248	[450]	1:20	Plan of Posthole [450]

APPENDIX 3

Ayton Road, Seamer
Site Code: 05.11.2016.

Photographic Index

Frame No.	Context No.	Scales	Facing	Comments
001	[003]	1m	W	E Facing Section of Ditch Cut [003]
002	[003]	1m	W	E Facing Section of Ditch Cut [003]
003	[003]	1m	NW	SE Facing Section of Ditch Cut [003]
004	[010], [012]	2m	W	E Facing Section of Ditch Cuts [010], [012]
005	[010], [012]	2m	W	E Facing Section of Ditch Cuts [010], [012]
006	[010], [012]	2m	N	S Facing Section of Ditch Cuts [010], [012]
007	[010], [012]	2m	N	S Facing Section of Ditch Cuts [010],012]
008	[010]	1m	NW	SE Facing Section of Ditch Cut [010]
009	[010]	1m	NW	SE Facing Section of Ditch Cut [010]
010	[012]	1m	NW	SE Facing Section of Ditch Cut [012]
011	[012]	1m	NW	SE Facing Section of Ditch Cut [012]
012	[013]	1m	E	W Facing Section of Ditch Cut [013]
013	[013]	1m	E	Context Shot of Ditch Cut [013]
014	[020], [022], 025]	2m	SW	SE Facing Section of Ditch Cuts [020], [022], [025]
015	[020], [022], 025]	2m	SW	SE Facing Section of Ditch Cuts [020], [022], [025]
016	[020], [022], 025]	2m	NW	SE Facing Section of Ditch Cuts [020], [022], [025]
017	[020], [022], 025]	2m	NW	SE Facing Section of Ditch Cuts [020], [022], [025]
018	[020], [022]	1m	NW	SE Facing Section of Ditch Cuts [020], [022]
019	[020], [022]	1m	NW	SE Facing Section of Ditch Cuts [020], [022]
020	[025]	1m	NW	SE Facing Section of Ditch Cuts [025]
021	[025]	1m	NW	SE Facing Section of Ditch Cuts [025]
022	[034]	1m	SE	NW Facing Section of Ditch Cut [034]
023	[034]	1m	SE	NW Facing Section of Ditch Cut [034]
024	[039]	1m	S	N Facing Section of Ditch Cut [039]
025	[039]	1m	S	N Facing Section of Ditch Cut [039]
026	[041]	1m	S	N Facing Section of Ditch Cut [041]
027	[036]	1m	N	S Facing Section of Ditch Cut [036]
028	036]	1m	N	S Facing Section of Ditch Cut [036]
029	[047]	1m	S	N Facing Section of Pit [047]
030	[047]	1m	S	N Facing Section of Pit [047]
031	Various	2m	SW	Barrow Pre-Excavation
032	Various	2m	SW	Barrow Pre-Excavation
033	Various	2m	NE	Barrow Pre-Excavation
034	Various	2m	NE	Barrow Pre-Excavation
035	Various	2m	SE	Barrow Pre-Excavation
036	Various	2m	SE	Barrow Pre-Excavation
037	[026]	2x 1m	E	SE Facing Section of Section of Gully Cut [026] & Ditch Cut [028]

038	[026]	1m	N	SE Facing Section of Section of Gully Cut [026] & Ditch Cut [028]
039	[049]	0.3m	S	N Facing Section of Pit [049]
040	[051]	1m	S	N Facing Section of Pit [051]
041	[051]	1m	S	N Facing Section of Pit [051]
042	[052]	1m	W	E Facing Section of Ditch Cut [052]
043	[052]	1m	W	E Facing Section of Ditch Cut [052]
044	[054]	1m	N	S Facing Section of Ditch Cut [054]
045	[056]	1m	N	S Facing Section of Ditch Cut [056]
046	[058]	1m	N	S Facing Section of Ditch Cut [058]
047	[060]	1m	N	S Facing Section of Ditch Cut [060]
048	[054], [056], [058], [060]		N	Group Shot of [054], [056], [058], [060]
049	[054], [056], [058], [060]		W	Group Shot of [054], [056], [058], [060]
050	[054], [056], [058], [060]		E	Group Shot of [054], [056], [058], [060]
051	[056]			Plan Shot of [056]
052	[058]			Plan Shot of [058]
053	[054], [056], [058], [060]			Group Shot of [054], [056], [058], [060]
054	[062]	1m	W	E Facing Section of Ditch Cut [062]
055	[064]	1m	NE	SW Facing Section of Ditch Cut [064]
056	[064]	1m	NE	SW Facing Section of Ditch Cut [064]
057	[066], [068]	2m	N	S Facing Section of Ditch Cut [066], [068]
058	[070]	2m	N	S Facing Section of Ditch Cut [070]
059	[070]	2m	N	S Facing Section of Ditch Cut [070]
060	[070]	1m	N	S Facing Section of Ditch Cut [070]
061	[070]	1m	N	S Facing Section of Ditch Cut [070]
062	[070]	1m	N	S Facing Section of Ditch Cut [070]
063	[070]	1m	N	S Facing Section of Ditch Cut [070]
064	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
065	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
066	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
067	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
068	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
069	[073]	0.5m	NW	SE Facing Section of Ditch Cut [073]
070	[074]	1m	E	W Facing Section of Barrow Ditch Cut [074]
071	[074]	1m	E	W Facing Section of Barrow Ditch Cut [074]
072	[079]	1m	NW	SE Facing Section of Ditch Cut [079]
073	[079]	1m	NW	SE Facing Section of Ditch Cut [079]
074	[079]	1m	NW	SE Facing Section of Ditch Cut [079]
075	[079]	1m	NW	SE Facing Section of Ditch Cut [079]
076	[079]	1m	NW	SE Facing Section of Ditch Cut [079]
077	[080]	1m, 0.5m	W	E Facing Section of Barrow Ditch Cut [080]
078	[080]	1m, 0.5m	W	E Facing Section of Barrow Ditch Cut [080]
079	[080]	1m	W	E Facing Section of Barrow Ditch Cut [080]
080	[080]	1m	W	Area Shot of Barrow Ditch Cut [080]
081	[080]	1m	W	Area Shot of Barrow Ditch Cut [080]
082	[080]	1m	W	Area Shot of Barrow Ditch Cut [080]
083	[088]	2m	E	E Facing Section of Ditch Cut [088]
084	[088]	2m	E	E Facing Section of Ditch Cut [088]

085	[088]	2m	E	E Facing Section of Ditch Cut [088]
086	[088]	1m	E	E Facing Section of Ditch Cut [088]
087	[088]	1m	E	E Facing Section of Ditch Cut [088]
088	[088]	1m	E	E Facing Section of Ditch Cut [088]
089	[087]	1m	E	W Facing Section of Ditch Cut [087]
090	VOID			
091	VOID			
092	VOID			
093	[080]		S	N Facing Section of Barrow Ditch Cut [080]
094	[080]		S	N Facing Section of Barrow Ditch Cut [080]
095	[080]	1m, 0.5m	S	N Facing Section of Barrow Ditch Cut [080]
096	[080]	1m	S	N Facing Section of Barrow Ditch Cut [080]
097	[080]		S	N Facing Section of Barrow Ditch Cut [080]
098	[080]		S	N Facing Section of Barrow Ditch Cut [080]
099	[080]		S	N Facing Section of Barrow Ditch Cut [080]
100	[080]		S	Area Shot of Barrow Ditch Cut [080]
101	[080]		S	Barrow Ditch Cut [080]
102	[080]		W	Barrow Ditch Cut [080]
103	[080]		SW	Barrow Ditch Cut [080]
104	[094], [104]	2m	W	Area Shot of Ditch Cuts [094], [102]
105	[094]	2m	W	E Facing Section of Ditch Cut [094]
106	[098], [100], [102]	2m	W	E Facing Section of Ditch Cuts [098], [100], [102]
107	[094]	1m, 0.5m	W	E Facing Section of Ditch Cut [094]
108	[094]	1m	W	E Facing Section of Ditch Cut [094]
109	[098], [100]	2m, 0.5m	W	E Facing Section of Ditch Cuts [098], [100]
110	[098], [100], [102]	2m	W	E Facing Section of Ditch Cuts [098], [100], [102]
111	[110]	1m	SW	NE Facing Section of Ditch Cut [110]
112	[112]	1m	SW	NE Facing Section of Ditch Cut [112]
113	[114]	1m	SW	NE Facing Section of Ditch Cut [114]
114	[116]	1m	SW	NE Facing Section of Ditch Cut [116]
115	[116]	1m	SW	NE Facing Section of Ditch Cut [116]
116	[116]	1m	SW	NE Facing Section of Ditch Cut [116]
117	[116]	1m	SW	NE Facing Section of Ditch Cut [116]
118	[116]	1m	SW	NE Facing Section of Ditch Cut [116]
119	[108]	2m	N	S Facing Section of Ditch Cut [108]
120	[121]	1m	W	E Facing Section of Ditch Cut [121]
121	[122], [124]	1m	S	N Facing Section of Ditch Cuts [122], [124]
122	[122], [124]	1m	S	N Facing Section of Ditch Cuts [122], [124]
123	[127]	2m	S	N Facing Section of Ditch Cut [127]
124	[127]	2m	S	N Facing Section of Ditch Cut [127]
125	[129]	2m	N	S Facing Section of Ditch Cut
126	[130]	0.5m	N	S Facing Section of Ditch Cut [130]
127	[130]	0.5m	N	S Facing Section of Ditch Cut [130]
128	[142]		S	N Facing Section of Barrow Ditch Cut [142]
129	[142]		S	N Facing Section of Barrow Ditch Cut [142]
130	[142]	1m, 0.5m	S	N Facing Section of Barrow Ditch Cut [142]
131	[142]	1m	S	N Facing Section of Barrow Ditch Cut [142]
132	[130]	0.5m	W	E Facing Section of Ditch Cut [130]

133	[130]	0.5m	W	E Facing Section of Ditch Cut [130]
134	[133]	2m	N	S Facing Section of Ditch Cut [133]
135	[133]	2m	N	S Facing Section of Ditch Cut [133]
136	[142]		W	Plan Shot of Barrow Ditch Cut [142]
137	[142]		N	Area Shot of Barrow Ditch Cut [142]
138	[142]	1m, 0.5m	N	S Facing Section of Barrow Ditch Cut [142]
139	[142]	1m	N	S Facing Section of Barrow Ditch Cut [142]
140	[142]		N	S Facing Section of Barrow Ditch Cut [142]
141	[138]	1m	W	E Facing Section of Barrow Ditch Cut [138]
142	[138]	1m	SW	Plan Shot of Barrow Ditch Cut [138]
143	[138], [121]	1m	W	Location Shot of Barrow Ditch Cut [138]
144	[138]	1m	N	S Facing Section of Barrow Dith Cut [138] (Not Drawn)
145	[144]	0.5m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
146	[144]	0.5m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
147	[146]	1m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
148	[146]	1m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
149	[149]	1m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
150	[149]	1m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
151	[149]	1m	NE	SW Facing Section of Ditch Cuts [144], [146], [149]
152	[151], [153]	2m	W	E Facing Section of Ditch Cuts [151], [153]
153	[151], [153]	1m	W	E Facing Section of Ditch Cuts [151], [153]
154		2m	N	S Facing Section of Ditch Cut
155	[156]	2m	N	S Facing Section of Ditch Cut [156]
156	[156]	2m	N	S Facing Section of Ditch Cut [156]
157	[156]	2m	N	S Facing Section of Ditch Cut [156]
158	[156]	2m	N	S Facing Section of Ditch Cut [156]
159	[160], [162], [164]	2m	N	S Facing Section of Ditch Cuts [160], [162], [164]
160	[160], [162], [164]	2m	N	S Facing Section of Ditch Cuts [160], [162], [164]
161	[160]	2m	N	S Facing Section of Ditch Cut [160]
162	[160]	1m	N	S Facing Section of Ditch Cut [160]
163	[160]	1m	N	S Facing Section of Ditch Cut [160]
164	[162]	1m	N	S Facing Section of Ditch Cut [162]
165	[162]	1m	N	S Facing Section of Ditch Cut [162]
166	[164]	1m	N	S Facing Section of Ditch Cut [164]
167	[164]	1m	N	S Facing Section of Ditch Cut [164]
168	[171]	1m	W	E Facing Section of Barrow Ditch Cut [171]
169	[171]	1m	W	E Facing Section of Barrow Ditch Cut [171]
170	[171]	1m	W	Location Shot of Barrow Ditch Cut [171]
171		2x 1m	SW	Working Shot of Barrow
172		2x 1m	SW	Working Shot of Barrow
173		2x 1m	SW	Working Shot of Barrow
174	[173], [175], [177]	2m	N	S Facing Section of Ditch Cuts [173], [175], [177]
175	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]
176	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]
177	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]
178	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]
179	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]
180	[179], [181]	1m	N	S Facing Section of Ditch Cut [19] & Posthole [181]

181	[199]	1m, 0.5m	E	W Facing Sction of Barrow Ditch Cut [199]
182	[199]	1m, 0.5m	E	W Facing Sction of Barrow Ditch Cut [199]
183	[199]	1m, 0.5m	E	W Facing Sction of Barrow Ditch Cut [199]
184	[199]	1m, 0.5m	E	Location Shot of Barrow Ditch Cut [199]
185	[183]	2m	SE	NW Facing Section of Ditch Cut [183]
186	[183]	2m	SE	NW Facing Section of Ditch Cut [183]
187	[190], [192]	2m	S	N Facing Section of Ditch Cuts [190], [192]
188	[190], [192]	2m	S	N Facing Section of Ditch Cuts [190], [192]
189	[192]	1m	S	N Facing Section of Ditch Cut [192]
190	[192]	1m	S	N Facing Section of Ditch Cut [192]
191	[190]	1m	S	N Facing Section of Ditch Cut [190]
192	[190]	1m	S	N Facing Section of Ditch Cut [190]
193	[204]	0.5m		Pre-Excavation. Grave Pit [204]
194	[204]	0.5m		Pre-Excavation. Grave Pit [204]
195	[204]	0.5m		Pre-Excavation. Grave Pit [204]
196	[204]	0.5m	SE	Pre-Excavation. Grave Pit [204]
197	[189]	2m	N	S Facing Section of Barrow Ditch Cut [189]
198	[189]	2m	N	S Facing Section of Barrow Ditch Cut [189]
199	[195], [198]	2m	SW	NE Facing Section of Ditch Cuts [195], [198]
200	[195], [198]	2m	SW	NE Facing Section of Ditch Cuts [195], [198]
201	[195], [198]	1m	SW	NE Facing Section of Ditch Cuts [195], [198]
202	[195], [198]	1m	SW	NE Facing Section of Ditch Cuts [195], [198]
203	[195], [198]	1m	SW	NE Facing Section of Ditch Cuts [195], [198]
204	[201]	0.5m	SE	NW Facing Section of Ditch Cut [201]
205	[201]	1m	SE	NW Facing Section of Ditch Cut [201]
206	[201]	1m	SE	NW Facing Section of Ditch Cut [201]
207	[201]	1m	SE	NW Facing Section of Ditch Cut [201]
208	[201]	1m	SE	NW Facing Section of Ditch Cut [201]
209	SK 202	0.2m		SK 202
210	SK 203	0.2m		SK 203
211	SK 204			SK 204
212	SK 205			SK 205
213	SK 206			SK 206
214	SK 207			SK 207
215	SK 208			SK 208
216	SK 209			SK 209
217	SK 210			SK 210
218	SK 211			SK 211
219	SK 212			SK 212
220	SK 213			SK 213
221	SK 214			SK 214
222	SK 215			SK 215
223	[206], [209]	2m	SW	NE Facing Section of Ditch Cuts [206], [209]
224	[206], [209]	2m	SW	NE Facing Section of Ditch Cuts [206], [209]
225	[206], [209]	1m	SW	NE Facing Section of Ditch Cuts [206], [209]
226	[206], [209]	1m	SW	NE Facing Section of Ditch Cuts [206], [209]
227	[206], [209]	1m	SW	NE Facing Section of Ditch Cuts [206], [209]
228	[211]	1m	E	W Facing Section of Ditch Cut [211]

229	[211]	1m	E	W Facing Section of Ditch Cut [211]
230	[211]	1m	E	W Facing Section of Ditch Cut [211]
231	[211]	1m	E	W Facing Section of Ditch Cut [211]
232	[211]	1m	E	W Facing Section of Ditch Cut [211]
233	[211]	1m	E	W Facing Section of Ditch Cut [211]
234	[204]	0.4m	SE	Post-Excavation. Grave Pit [204
235	[204]	0.4m		Post-Excavation. Grave Pit [205
236	[204]	0.4m		Post-Excavation. Grave Pit [206
237	[204]		SE	Post-Excavation. Grave Pit [207
238	[204]		SE	Post-Excavation. Grave Pit [208
239	VOID			
240	[213]	2x 1m	N	Working Shot of Ditch Cut [213]
241	[213]	2x 1m	N	Working Shot of Ditch Cut [213]
242	[213]	2x 1m	N	Working Shot of Ditch Cut [213]
243	[213]	2x 1m	W	Working Shot of Ditch Cut [213]
244	[213]	2x 1m	E	Working Shot of Ditch Cut [213]
245	[215]	0.5m	W	E Facing Section of Ditch Cut [215]
246	[215]	0.5m	W	E Facing Section of Ditch Cut [215]
247	[217]	0.5m	W	E Facing Section of Pit [217]
248	[219]	0.5m	S	N Facing Section of Pit [219]
249	[199]	1m, 0.5m	S	N Facing Section of Barrow Ditch Cut [199]
250	[199]		S	N Facing Section of Barrow Ditch Cut [199]
251	[199]		S	N Facing Section of Barrow Ditch Cut [199]
252	[215]	0.5m	W	E Facing Section of Ditch Cut [215]
253	[215]	0.5m	W	E Facing Section of Ditch Cut [215]
254	[215]	0.5m	W	E Facing Section of Ditch Cut [215]
255	[221]	1m	W	E facing Section of Ditch Cut [221]]
256	[223]	0.5m	N	S Facing Section of Pit [223]
257	[199], [204]			Area Shot of Barrow Ditch Cut [199] & Grave Pit [204]
258	[199], [204]		E	W Facing Section of Barrow Ditch Cut [199] & Grave Pit [204]
259	[199]		E	Location Shot of Barrow Cut [199]
260	[199], [204]		S	N Facing Section of Barrow Ditch Cut [199]
261	[199]		S	N Facing Section of Barrow Ditch Cut [199]
262	[199], [204]		SE	Location Shot of Barrow Ditch Cut [199] & [204]
263	[199], [204]	2x 1m	SE	Location Shot of Barrow Ditch Cut [199] & [204]
264	[199], [204]	2x 1m	SE	Location Shot of Barrow Ditch Cut [199] & [204]
265	[199], [204]		S	Location Shot of Barrow Ditch Cut [199] & [204]
266	[199], [204]		SW	Location Shot of Barrow Ditch Cut [199] & [204]
267	[199]	2x 1m	E	W Facing Section of Barrow Ditch Cut [199]
268	[199]	1m	E	W Facing Section of Barrow Ditch Cut [199]
269	[199]		E	W Facing Section of Barrow Ditch Cut [199]
270	[199]		E	W Facing Section of Barrow Ditch Cut [199]
271	[199]		E	W Facing Section of Barrow Ditch Cut [199]
272	[227]	0.5m	NW	SE Facing Section of Ditch Cut [227]
273	[225]	0.5m	SE	NE Facing Section of Posthole [225]
274	[225]	0.5m	SE	NE Facing Section of Posthole [225]
275	[229]	0.5m	SE	NW Facing Section of Ditch Cut [229]

276	[229]	0.5m	SE	NW Facing Section of Ditch Cut [229]
277	[239], [241]	2m, 0.5m	NW	SE Facing Section of Gully Cut [239] & Ditch Cut [241]
278	[239], [241]	0.5	S	N Facing Section of Gully Cut [239] & Ditch Cut [241]
279	[239], [241]	0.5	S	N Facing Section of Gully Cut [239] & Ditch Cut [241]
280	[239], [241]	2m	NW	SE Facing Section of Gully Cut [239] & Ditch Cut [241]
281	[239], [241]	1m	NW	SE Facing Section of Gully Cut [239] & Ditch Cut [241]
282	[239], [241]	1m	S	N Facing Section of Gully Cut [239] & Ditch Cut [241]
283	[239], [241]	0.5m	SW	NE Facing Section of Gully Cut [239] & Ditch Cut [241]
284	[233]	0.5m	S	N Facing Section of Ditch Cut [233]
285	[233]	0.5m	S	N Facing Section of Ditch Cut [233]
286	[233]	0.5m	S	N Facing Section of Ditch Cut [233]
287	[231]	2x 1m	W	E Facing Section of Pit [231]
288	[231]	1m	W	E Facing Section of Pit [231]
289	[231]	1m	E	E Facing Section of Pit [231]
290	[245]	0.5m	E	W Facing Section of Posthole [245]
291	[245]	0.5m	E	W Facing Section of Posthole [245]
292	[245]	0.5m	E	W Facing Section of Posthole [245]
293	[248]	0.3m	E	W Facing Section of Pit [248]
294	[248]	0.3m	E	W Facing Section of Pit [248]
295	[250]	0.3m	E	W Facing Section of Pit [250]
296	[250]	0.3m	E	W Facing Section of Pit [250]
297	[233]	0.2m	E	W Facing Section of Gully Cut [233]
298	[233]	0.2m	E	W Facing Section of Gully Cut [233]
299	[233]	0.2m	E	W Facing Section of Gully Cut [233]
300	[233]	0.2m	E	W Facing Section of Gully Cut [233]
301	[233]	0.2m	E	W Facing Section of Gully Cut [233]
302	[233]	0.2m	E	W Facing Section of Gully Cut [233]
303	[254], [256]	1m	NW	SE Facing Section of Ditch Cuts [254], [256]
304	[254], [256]	1m	NW	SE Facing Section of Ditch Cuts [254], [256]
305	[254], [256]	1m	NW	SE Facing Section of Ditch Cuts [254], [256]
306	[254], [256]	1m	NW	SE Facing Section of Ditch Cuts [254], [256]
307	[258]	1m	S	N Facing Section of 'Corndrier' [258]
308	[245]	0.5m	E	W Facing Section of Pit [245]
309	[245]	0.5m	E	W Facing Section of Pit [245]
310	[258]	2x 1m	E	W Facing Section of 'Corndrier'
311	[258]	2x 1m	N	S Facing Section of 'Corndrier'
312	[263]	1m	S	N Facing Section of Pit [263]
313	[263]	1m	S	N Facing Section of Pit [263]
314	[263]	1m	S	N Facing Section of Pit [263]
315	Various			Post-Excavation Barrow
316	Various		SW	Post-Excavation Barrow
317	Various	2x 1m	SE	Post-Excavation Barrow
318	Various	2x 1m	SW	Post-Excavation Barrow
319	Various	2x 1m	S	Post-Excavation Barrow
320	Various	2x 1m	E	Post-Excavation Barrow
321	Various	2x 1m	NW	Post-Excavation Barrow
322	Various	2x 1m	SE	Post-Excavation Barrow
323	Various	2x 1m	S	Post-Excavation Barrow

324	Various	2x 1m	E	Post-Excavation Barrow
325	Various	2x 1m	E	Post-Excavation Barrow
326	Various	2x 1m	N	Post-Excavation Barrow
327	Various	2x 1m	E	Post-Excavation Barrow
328	Various	2x 1m	S	Post-Excavation Barrow
329	Various	2x 1m	W	Post-Excavation Barrow
330	[245]	0.5m	E	W Facing Section of Posthole [245]
331	[245]	0.5m	E	W Facing Section of Posthole [245]
332	[245]	0.5m	E	W Facing Section of Posthole [245]
333	[268]	1m	NE	SW Facing Section of Pit [268]
334	[268]	1m	NE	SW Facing Section of Pit [268]
335	[265]	1m	N	S Facing Section of Pit [265]
336	[267]	0.5m	NE	SW Section of Ditch Cut [267]
337	[267]	0.5m	NE	SW Section of Ditch Cut [267]
338	[267]	0.5m	NE	SW Section of Ditch Cut [267]
339	[254], [256]	2m	NW	Working Shot of Ditch Cuts [254], [256]
340	[254], [256]	2m	NW	Working Shot of Ditch Cuts [254], [256]
341	[272]	1m	E	W Facing Section of Pit 272]
342	[268]	1m	NE	SW Facing Section of Pit [268]
343	[274]	1m	W	E Facing Section of Ditch Cut [274]
344	[277]	2m	NW	SE Facing Section of Pit [277]
345	[277]	2m	NW	SE Facing Section of Pit [277]
346	[277]	2m	NW	SE Facing Section of Pit [277]
347	[254]	1m	S	N facing Section of Ditch Cut [254]
348	[254]	1m	S	N facing Section of Ditch Cut [254]
349	[254]	1m	S	N facing Section of Ditch Cut [254]
350	[254]	1m	S	N facing Section of Ditch Cut [254]
351	[282], [284]	1m	N	S Facing Section of Pits [282], [284]
352	[286]	1m	SE	NW Facing Section of Pit [286]
353	[286]	1m	SE	NW Facing Section of Pit [286]
354	[286]	1m	SE	NW Facing Section of Pit [286]
355	[286]	1m	SE	NW Facing Section of Pit [286]
356	[286]	1m	SE	NW Facing Section of Pit [286]
357	[286]	1m	SE	NW Facing Section of Pit [286]
358	[286]	1m	SE	NW Facing Section of Pit [286]
359	[286]	1m	SE	NW Facing Section of Pit [286]
360	[288]	1m	S	N Facing Section of Pit [288]
361	[288]	1m	S	N Facing Section of Pit [288]
362	[288]	1m	S	N Facing Section of Pit [288]
363	[288]	1m	S	N Facing Section of Pit [288]
364	[290]	0.5m	W	E Facing Secton of Pit [290]
365	[290]	0.5m	W	E Facing Secton of Pit [290]
366	[290]	0.5m	W	E Facing Secton of Pit [290]
367	[290]	0.5m	W	E Facing Secton of Pit [290]
368	[292]	1m	E	W Facing Section of Ditch Cut [292]
369	[292]	1m	E	W Facing Section of Ditch Cut [292]
370	[294]	1m	E	W Facing Section of Gully Cut [294]
371	[298]	1m	E	W Facing Section of Ditch Cut [298]

372	[298]	1m	E	W Facing Section of Ditch Cut [298]
373	[277]	1m	N	Post Excavation Shot of Pit [277]
374	[277]	1m	W	Post Excavation Shot of Pit [277]
375	[277]	1m	W	Post Excavation Shot of Pit [277]
376	[277]	1m	S	Post Excavation Shot of Pit [277]
377	[277]	1m	S	Post Excavation Shot of Pit [277]
378	[277]	1m	W	Post Excavation Shot of Pit [277]
379	[309]	2m	N	S Section of Ditch Cut [309]
380	[309]	2x 1m	N	S Section of Ditch Cut [309]
381	[302]	0.5m	NE	SW Facing Section of Ring Gully Cut [302]
382	[302]	0.5m	NE	SW Facing Section of Ring Gully Cut [302]
383	[302]	0.5m	NE	SW Facing Section of Ring Gully Cut [302]
384	[302]	0.5m	NE	SW Facing Section of Ring Gully Cut [302]
385	[302]	0.5m	NE	SW Facing Section of Ring Gully Cut [302]
386	[304]	0.5m	SE	SW Facing Section of Ring Gully Cut [302]
387	[304]	0.5m	SE	SW Facing Section of Ring Gully Cut [302]
388	[311], [313]	1m	N	S Facing Relationship of Ring Gully Cuts [311], [313]
389	[311], [313]	0.5m	W	S Facing Relationship of Ring Gully Cuts [311], [313]
390	[311], [313]	0.5m	W	S Facing Relationship of Ring Gully Cuts [311], [313]
391	[315]	0.5m	NE	SW Facing Section of Ring Gully Cut [315]
392	[315]	0.5m	NE	SW Facing Section of Ring Gully Cut [315]
393	[315]	0.5m	NE	SW Facing Section of Ring Gully Cut [315]
394	[317]	0.5m	E	W Facing Section of Pit [317]
395	[313]	0.5m	NW	SE Facing Section of Ring Gully [313]
396	[313]	0.5m	NW	SE Facing Section of Ring Gully [313]
397	[319]	0.5m	NW	SE Facing Section of Ring Gully [319]
398	[319]	0.5m	NW	SE Facing Section of Ring Gully [319]
399	[344]	2m	N	S Facing Section of Ditch Cut [344]
400	[344]	2m	N	S Facing Section of Ditch Cut [344]
401	[344]	2m	N	S Facing Section of Ditch Cut [344]
402	[344]	2m	N	S Facing Section of Ditch Cut [344]
403	[320]		N	Working Shot
404	[320]	2x 1m	SW	NE Facing Section of Ditch Cut [320]
405	[320]	2x 1m	S	NE Facing Section of Ditch Cut [320]
406	[320]		W	NE Facing Section of Ditch Cut [320]
407	[320]	0.5m	S	NE Facing Section of Ditch Cut [320]
408	[320]	2x 1m	W	NE Facing Section of Ditch Cut [320]
409	[320]	2x 1m	S	NE Facing Section of Ditch Cut [320]
410	(324)	2x 1m	SW	NE Facing Section of Ditch Cut [320]
411	[332]	1m	E	Possible Bank Material (324)
412	[332]	2x 1m	S	N Facng Section of Ditch Cut [332]
413	[332]	2x 1m	S	N Facng Section of Ditch Cut [332]
414	[332]	2x 1m	S	N Facng Section of Ditch Cut [332]
415	[332]	2x 1m	W	Oblique Shot of Ditch Cut [332]
416	[348]	2m	N	S Facing Section of Ditch Cut [348]
417	[348]	2m	N	S Facing Section of Ditch Cut [348]
418	VOID			
419	[348]	1m	N	S Facing Section of Ditch Cut [348]

420	[348]	1m	N	S Facing Section of Ditch Cut [348]
421	[348]	1m	N	S Facing Section of Ditch Cut [348]
422	[338]	2m	S	N Facing Section of Ditch Cut [338]
423	[338]	2m	S	N Facing Section of Ditch Cut [338]
424	[344]	2m	S	N Facing Section of Ditch Cut [338]
425	[344]		N	S Facing Section of Ditch Cut [344]
426	[344]		N	S Facing Section of Ditch Cut [344]
427	[344]		N	S Facing Section of Ditch Cut [344]
428	[344]		N	S Facing Section of Ditch Cut [344]
429	[344]		N	S Facing Section of Ditch Cut [344]
430	[344]		N	S Facing Section of Ditch Cut [344]
431	[344]		N	S Facing Section of Ditch Cut [344]
432	[344]		N	S Facing Section of Ditch Cut [344]
433	[344]		N	S Facing Section of Ditch Cut [344]
434	[344]	2m	N	S Facing Section of Ditch Cut [344]
435	[344]	2m	N	S Facing Section of Ditch Cut [344]
436	[344]		N	S Facing Section of Ditch Cut [344]
437	[344]	2m	N	S Facing Section of Ditch Cut [344]
438	[344]	2m	N	S Facing Section of Ditch Cut [344]
439	[344]	2m	N	S Facing Section of Ditch Cut [344]
440	[344]		E	S Facing Section of Ditch Cut [344]
441	[344]		E	S Facing Section of Ditch Cut [344]
442	[344]		E	S Facing Section of Ditch Cut [344]
443	[344]		E	S Facing Section of Ditch Cut [344]
444	[344]		W	S Facing Section of Ditch Cut [344]
445	[350]		E	S Facing Section of Ditch Cut [344]
446	[350]	2m	N	S Facing Section of Ditch Cut [350]
447	[350]	2m	N	S Facing Section of Ditch Cut [350]
448	[350]	2m	N	S Facing Section of Ditch Cut [350]
449	[350]	2m	N	S Facing Section of Ditch Cut [350]
450	[350]	1m	N	S Facing Section of Ditch Cut [350]
451	[350]	1m	N	S Facing Section of Ditch Cut [350]
452	[350]	1m	N	S Facing Section of Ditch Cut [350]
453	[350]	1m	N	S Facing Section of Ditch Cut [350]
454	[358]	1m	N	S Facing Section of Ditch Cut [350]
455	[358]	2m	N	S Facing Section of Ditch Cut [358]
456	[358]	2m	N	S Facing Section of Ditch Cut [358]
457	[360]	2m	N	S Facing Section of Ditch Cut [358]
458	[360]	0.4m	S	S Facing Section of Pit [360]
459	[367]	0.4m	S	S Facing Section of Pit [360]
460	[367]	2x 1m	N	S Facing Section of Ditch Cut [367]
461	[367]	2x 1m	N	S Facing Section of Ditch Cut [367]
462	[367]	2x 1m	W	E Facing Shot of Ditch Cut [367]
463	[367]	2x 1m	E	W Facing Shot of Ditch Cut [367]
464	[372]	2x 1m	N	S Facing Shot of Ditch Cut [367]
465	[372]	2m	S	N Facing Section of Ditch Cut [372]
466	[372]	2m	S	N Facing Section of Ditch Cut [372]
467	[372]	1m	S	N Facing Section of Ditch Cut [372]

468	[372]	1m	S	N Facing Section of Ditch Cut [372]
469	[372]	1m	E	W Facing Plan Shot of Ditch Cut [372]
470	[378]	1m	W	E Facing Plan Shot of Ditch Cut [372]
471	[378]	2x 1m	N	S Facing Section of Ditch Cut [378]
472	[378]	2x 1m	N	S Facing Section of Ditch Cut [378]
473	[378]	2x 1m	N	S Facing Section of Ditch Cut [378]
474	[378]	2x 1m	N	S Facing Section of Ditch Cut [378]
475	[382]	2x 1m	N	S Facing Section of Ditch Cut [378]
476	[382]	2x 1m	SW	NE Facing Section of Ditch Cut [382]
477	[382]	2x 1m	E	Oblique Shot of Ditch Cut [382]
478	[382]	2x 1m	SW	NE Facing Section of Ditch Cut [382]
479	[382]	2x 1m	SW	NE Facing Section of Ditch Cut [382]
480	[382]	2x 1m	SW	NE Facing Section of Ditch Cut [382]
481	[382]	2x 1m	SW	NE Facing Section of Ditch Cut [382]
482	[382]	2x 1m	E	Oblique Shot of Ditch Cut [382]
483	[382]	2x 1m		Oblique Shot of Ditch Cut [382]
484	[382]	2x 1m		Oblique Shot of Ditch Cut [382]
485	[378]	2x 1m		Oblique Shot of Ditch Cut [382]
486	[378]	2m	S	N Facing Section of Ditch Cut [387]
487	[378]	2m	S	N Facing Section of Ditch Cut [387]
488	[378]	2x 1m	S	N Facing Section of Ditch Cut [387]
489	VOID			
490	[418], [422]	2m	S	N Facing Section of Gully Cut [418] & Ditch Cut [422]
491	[418]	2m	S	N Facing Section of Gully Cut [418] & Ditch Cut [422]
492	[418]	0.4m	S	N Facing Section of Ditch Cut [422]
493	[422]	0.4m	S	N Facing Section of Ditch Cut [422]
494	[422]	1m	S	N Facing Section of Ditch Cut [422]
495	[402]	1m	S	N Facing Section of Ditch Cut [422]
496	[402]	1m	SW	NE Facing Section of Ditch Cut [402]
497	[402]	1m	SW	NE Facing Section of Ditch Cut [402]
498	[402]	1m	SW	NE Facing Section of Ditch Cut [402]
499	[402]	1m	SW	NE Facing Section of Ditch Cut [402]
500	[404]	1m	SW	NE Facing Section of Ditch Cut [402]
501	[404]	0.4m	SW	NE Facing Section of Gully Cut [404]
502	VOID	0.4m	SW	NE Facing Section of Gully Cut [404]
503	[404]			
504		0.4m	SW	NE Facing Section of Gully Cut [404]
505				
506				
507				
508				
509				
510				
511	[416]			
512	[416]	2m	N	S Facing Section of Ditch Cut [416]
513	[416]	2m	N	S Facing Section of Ditch Cut [416]
514	[416]	1m	N	S Facing Section of Ditch Cut [416]
515	[410]		N	S Facing Section of Ditch Cut [416]

516	[410]	2x 1m	SW	NE Facing Section of Ditch Cut [410]
517	[410]	2x 1m	SW	NE Facing Section of Ditch Cut [410]
518	[435]	2x 1m	NW	Oblique Shot of Ditch Cut [410]
519	[435]	2m	NE	SW Facing Section of Ditch Cut [435]
520	[435]	2m	NE	SW Facing Section of Ditch Cut [435]
521	[435]	2m	NE	SW Facing Section of Ditch Cut [435]
522	[423]	2m	NE	SW Facing Section of Ditch Cut [435]
523	[425]	1m	NW	Section of Pit [423]
524	[423],[425]	1m	E	W Facing Section of Pit [425]
525	[428]	1m		Oblique View of Pits [423] & [425]
526	[428]	0.4m	SW	NE Facing Section of [428]
527	[428]	0.4m	SW	NE Facing Section of [428]
528	[428]	0.4m	SW	NE Facing Section of [428]
529	[430]	0.4m	SW	NE Facing Section of [428]
530	[430]	0.5m	S	N Facing Section of Pit [430]
531	[446]	0.5m	S	Oblique Shot of Pit [430]
532	[446]	2m	S	NE Facing Section of Ditch Cut [446]
533	[446]	2m	S	NE Facing Section of Ditch Cut [446]
534	[446]	2m	S	NE Facing Section of Ditch Cut [446]
535	[446]	1m	S	NE Facing Section of Ditch Cut [446]
536	[442]	1m	S	NE Facing Section of Ditch Cut [446]
537	[442]	2m	SW	NE Facing Section of Ditch Cut [442]
538	[442]	2m	SW	NE Facing Section of Ditch Cut [442]
539	[442]	2m	S	Oblique Shot of Ditch Cut [442]
540	[448]	2m	N	Oblique Shot of Ditch Cut [442]
541	[448]	0.4m	NE	SW Facing Section of Ditch Cut [448]
542	[448]	0.4m	NE	SW Facing Section of Ditch Cut [448]
543	[448]	0.4m	NE	SW Facing Section of Ditch Cut [448]
544	[448]	0.4m	NE	SW Facing Section of Ditch Cut [448]
545		1m	N	S Facing Section of
546		1m	N	S Facing Section of
547	(324)	1m	E	Possible Bank Material
548	(324)	1m	SE	Possible Bank Material
549	(324)	1m	SW	Possible Bank Material
550	[450]	1m	SW	Possible Bank Material
551	[450]	0.5m	NE	SW Facing Section of Ditch Cut [450]
552	[450]	0.5m	NE	SW Facing Section of Ditch Cut [450]

APPENDIX 4

Ayton Road, Seamer
Site Code: 05.11.2016.

Environmental Listing

No.	Context	Description/ Notes	Type
1	17	Fill of Ditch Cut [013]	Bulk
2	024	Fill of Ditch Cut [025]	Bulk
3	055	Fill of Ditch Cut [054]	Bulk
4	057	Fill of Ditch Cut [[056]	Bulk
5	059	Fill of Ditch Cut [058]	Bulk
6	061	Fill of Ditch Cut [060]	Bulk
7	067	Fill of Ditch Cut [066]	Bulk
8	069	Fill of Ditch Cut [068]	Bulk
9	077	Fill of Barrow Ditch Cut [074]	Bulk
10	104	Fill of Barrow Ditch Cut [080]	Bulk
11	105	Fill of Barrow Ditch Cut [080]	Bulk
12	107	Fill of Ditch Cut [108]	Bulk
13	083	Fill of Ditch Cut [086]	Bulk
14	111	Filll of Ditch Fill [112]	Bulk
15	113	Fill of Ditch Cut [114]	Bulk
16	115	Fill of Ditch Cut [116]	Bulk
17	093	Fill of Ditch Cut [094]	Bulk
18	099	Fill of Barrow Ditch Cut [100]	Bulk
19	126	Fill of Ditch Cut [127]	Bulk
20	128	Fill of Ditch Cut [129]	Bulk
21	132	Fill of Ditch Cut [133]	Bulk
22	135	Fill of Barrow Ditch Cut [138]	Bulk
23	136	Fill of Barrow Ditch Cut [138]	Bulk
24	166	Fill of Ditch Cut [167]	Bulk
25	169	Fill of Barrow Ditch Cut [171]	Bulk
26	180	Fill of Posthole [181]	Bulk
27	182	Fill of Ditch Cut [183]	Bulk
28	191	Fill of Ditch Cut [190]	Bulk
29	193	Fill of Ditch Cut [192]	Bulk
30	197	Fill of Ditch Cut [198]	Bulk
31	205	Fill of Ditch Cut [206]	Bulk
32	207	Fill of Ditch Cut [209]	Bulk
33	208	Fill of Ditch Cut [209]	Bulk
34	203	Skull Sample From (SK202)	Bulk
35	203	Abdominal Sample From (SK202)	Bulk
36	203	Left Hand Sample From (SK202)	Bulk
37	203	Right Hand Sample From (SK202)	Bulk
38	203	Fill of Grave Cut [204]	Bulk

39	212	Fill of Ditch Cuut [213]	Bulk
40	218	Fill of Pit [219]	Bulk
41	220	Fill of Ditch Cut [221]	Bulk
42	222	Fill of Pit [223]	Bulk
43	224	Fill of Posthole [225]	Bulk
44	226	Fill of Ditch Cut [227]	Bulk
45	228	Fill of Ditch Cut [229]	Bulk
46	230	Fill of Pit [231]	Bulk
47	253	Fill of Dirch [254]	Bulk
48	251	Fill of Pit [242]	Bulk
49	141	Fill of Barrow Ditch Cut [142]	Bulk
50	235	Fill of Barrow Ditch Fill [199]	Bulk
51	247	Fill of Pit Cut [248]	Bulk
52	249	Fill of Pit [250]	Bulk
53	242	Fill of Pit [253]	Bulk
54	244	Fill of Pit [245]	Bulk
55	257	Fill of Pit [258]	Bulk
56	259	Fill of Pit [258]	Bulk
57	VOID		Bulk
58	262	Fill of Ditch Cut [263]	Bulk
59	VOID		Bulk
60	275	Fill of Pit [277]	Bulk
61	270	Fill of Pit [277]	Bulk
62	276	Fill of Pit [277]	Bulk
63	269	Fill of Pit [268]	Bulk
64	285	Fill of Pit [286]	Bulk
65	289	Fill of Pit [290]	Bulk
66	303	Fill of Ditch Cut [304]	Bulk
67	301	Fill of Ditch Cut [3022]	Bulk
68	307	Fill of Ditch Cut [309]	Bulk
69	310	Fill of Ring Gully Cut [311]	Bulk
70	308	Fill of Ditch Cut [309]	Bulk
71	314	Fill of Ring Gully Cut [315]	Bulk
72	318	Fill of Ring Gully Cut [319]	Bulk
73	325	Fill of Ditch Cut [320]	Bulk
74	326	Fll of Ditch Cut [332]	Bulk
75	328	Fill of Ditch Cut [332]	Bulk
76	337	Fill of Ditch Cut [338]	Bulk
77	347	Fill of Ditch Cut [348]	Bulk
78	342	Fill of Ditch Cut [344]	Bulk
79	355	Fill of Ditch Cut [358]	Bulk
80	356	Fill of Ditch Cut [358]	Bulk
81	357	Fill of Ditch Cut [358]	Bulk
82	353	Fill of Ditch Cut [350]	Bulk
83	352	Fill of Ditch Cut [350]	Bulk
84	361	Fil of Pit [360]	Bulk
85	370	Fill of Ditch Cut [372]	Bulk
86	373	Fill of Ditch Cut [378]	Bulk

87	375	Fill of Ditch Cut [378]	Bulk
88	377	Fill of Ditch Cut [378]	Bulk
89	389	Fill of Ditch Cut [388]	Bulk
90	398	Fill of Ditch Cut [[402]	Bulk
91	399	Fill of Ditch Cut [[402]	Bulk
92	403	Fill of Ditch Cut [404]	Bulk
93	427	Fill of Gully Cut [428]	Bulk
94	415	Fill of Ditch Cut [416]	Bulk
95	412	Fill of Ditch Cut [416]	Bulk
96	414	Fill of Ditch Cut [416]	Bulk
97	420	Fill of Ditch Cut [422]	Bulk
98	434	Fill of Ditch Cut [435]	Bulk
99	440	Fill of Ditch Cut [440]	Bulk
100	444	Fill of Ditch Cut [446]	Bulk

Appendix 5

Ayton Road, Seamer
Site Code: 05.11.2016.

Context	Material	Total	Description
U/S	Flint (SF 001)	1	1 Flint Fragment
	Flint (SF002)	1	1 Flint Fragment
002	Pottery	1	1 Body Sherd
002	Flint	1	1 Flint Fragment
008	Animal Bone	1	1 Animal Bone Fragment
017	Pottery	1	1 Body Sherd
	Animal Bone	10	10 Animal Bone Fragments
030	Pottery	3	3 Body Sherds
	Animal Bone	9	9 Animal Bone Fragments
037	Animal Bone	9	9 Animal Bone Fragments
040	Pottery	1	1 Body Sherd
	Animal Bone	3	3 Animal Bone Fragments
	Shell	3	3 Shell Fragments
046	Pottery	1	1 Body Sherd
050	Pottery	1	1 Body Sherd
	Flint	1	1 Flint Fragment
055	Animal Bone	1	1 Animal Bone Fragment
057	Animal Bone	2	2 Animal Bone Fragments
059	Pottery	3	3 Body Sherds
	Animal Bone	2	2 Animal Bone Fragments
063	Animal Bone	11	11 Animal Bone Fragments
065	Pottery	34	8 Rim Sherds 26 Body Sherds
067	Animal Bone	1	1 Animal Bone Fragments
069	Animal Bone	2	2 Animal Bone Fragments

071	Animal Bone	6	1 Mandible Fragment 5 Animal Bone Fragments
077	Animal Bone	9	9 Animal Bone Fragments
	Flint	1	1 Flint Fragment
083	Pottery	1	1 Body Sherd
	Animal Bone	15	3 Mandible Fragments 12 Animal Bone Fragments
092	Animal Bone	5	5 Animal Bone Fragments
093	Pottery	5	5 Body Sherds
	Animal Bone	12	4 Animal Teeth 8 Animal Bone Fragments
099	Animal Bone	1	1 Animal Tooth
105	Animal Bone	4	3 Animal Teeth 1 Animal Bone Fragment
	Flint	1	1 Flint Fragment
113	Animal Bone	3	1 Mandible Fragment 2 Animal Bone Fragments
	Animal Bone (Flot 015)	3	3 Animal Bone Fragments
115	Animal Bone	6	6 Animal Bone Fragments
	Animal Bone (Flot 016)	4	4 Animal Bone Fragments
117	Animal Bone	12	12 Animal Bone Fragments
126	Pottery	1	1 Body Sherd
139	Animal Bone	75	8 Animal Teeth 1 Mandible Fragment 66 Animal Bone Fragments
148	Pottery	3	3 Body Sherds
	Animal Bone	28	28 Animal Bone Fragments
152	Pottery	2	2 Body Sherds
	Animal Bone	3	3 Animal Bone Fragments
156	Animal Bone	8	3 Animal Teeth 5 Animal Bone Fragments
163	Animal Bone	34	8 Animal Teeth

			26 Animal Bone Fragments
169	Pottery	1	1 Body Sherd
174	Animal Bone	5	5 Animal Bone Fragments
184	Animal Bone	7	7 Animal Bone Fragments
191	Animal Bone	1	1 Animal Tooth
	Animal Bone (Flot 028)	10	10 Animal Bone Fragments
193	Animal Bone	17	17 Animal Bone Fragments
194	Animal Bone		1 Animal Tooth
			3 Animal Bone Fragments
197	Animal Bone	24	1 Maxilla Fragment
			2 Mandible Fragments
			21 Animal Bone Fragments
200	Pottery	23	23 Body Sherds
	Animal Bone	3	3 Animal Teeth
<202>	Human Bone	147	6 Teeth
			2 Mandible Fragments
			12 Skull? Fragments
			60 Skull Fragments
			33 Rib Fragments
			14 Vertebrae Fragments
			1 Right Humerus Fragment
			1 Right Radius Fragment
			1 Right Ulna Fragment
			1 Left Humerus Fragment
			2 Left Lower Arm Fragments
			1 Right Femur Fragment
			4 Right Tibia Fragments
			1 Right Fibula Fragment
			3 Left Tibia Fragments
			1 Left Fibula Fragment
			4 Misc Fragments
207	Animal Bone	10	2 Animal Teeth
			8 Animal Bone Fragments
208	Pottery	12	1 Rim Sherd
			11 Body Sherds
	Animal Bone	28	28 Animal Bone Fragments

210	Pottery	4	4 Body Sherds
	Animal Bone	9	2 Animal Teeth
			7 Animal Bone Fragments
212	Pottery	8	8 Body Sherds
214	Animal Bone	2	2 Animal Teeth Fragments
237	Pottery	1	1 Body Sherd
	Animal Bone	44	3 Animal Teeth
			41 Animal Bone Fragments
238	Pottery	8	8 Body Sherds
	Animal Bone	4	4 Animal Bone Fragments
251	Animal Bone	3	3 Animal Bone Fragments
253	Pottery	1	1 Body Sherd
	Animal Bone	9	9 Animal Bone Fragments
269	Pottery	38	3 Rim Sherds
			34 Body Sherds
			1 Base Sherd
	Animal Bone	9	2 Animal Teeth
			6 Animal Bone Fragments
			1 Burnt Bone Fragment
270	Pottery	71	9 Rim Sherds
			62 Body Sherds
	Animal Bone	53	11 Animal Teeth
			2 Mandible Fragments
			40 Animal Bone Fragments
	Shell	1	1 Shell
275	Pottery	9	9 Body Sherds
	Animal Bone	11	11 Animal Bone Fragments
276	Pottery	6	1 Rim Sherd
			5 Body Sherds
	Animal Bone	144	28 Animal Teeth
			1 Maxilla Fragment
			6 Mandible Fragments
			101 Animal Bone Fragments
			8 Burnt Bone Fragments
	Animal Bone (Flot 062)	18	18 Animal Bone Fragments

318	Animal Bone (Flot 072)	1	1 Animal Bone Fragment
321	Pottery	4	4 Body Sherds
322	Flint	1	1 Flint Fragment
341	Pottery	2	1 Rim Sherd 1 Body Sherd
352	Animal Bone	3	3 Animal Bone Fragments
355	Pottery	3	1 Med Rim Sherds 2 Med Body Sherds
362	Pottery	1	1 Body Sherd
364	Animal Bone	1	1 Animal Bone Fragment
373	Animal Bone (Flot 086)	1	1 Animal Bone Fragment
375	Animal Bone	8	8 Animal Bone Fragments
383	Animal Bone	5	2 Animal Teeth 3 Animal Bone Fragments
384	Animal Bone	2	2 Animal Teeth
385	Animal Bone	2	1 Mandible Fragment 1 Animal Bone Fragment
389	Animal Bone (Flot 089)	1	1 Burnt Bone Fragment
390	Flint	3	3 Flint Fragments
414	Pottery	1	1 Body Sherd
438	Animal Bone	7	7 Animal Teeth Fragments
440	Animal Bone	4	4 Animal Bone Fragments

Appendix 6

Ayton Road, Seamer, Scarborough MAP 05-11-16

Carbonised Plant Macrofossils and Charcoal

Diane Alldritt

1: Introduction

A total of twenty eight environmental sample flots taken during archaeological excavation work on land located at Ayton Road, Seamer, Scarborough (MAP 05-11-16), were examined for carbonised plant macrofossils and charcoal.

The samples were taken from a series of ditch and other linear features at the site as well as from pit and posthole features.

2: Methodology

The bulk environmental samples were processed by MAP Archaeological Practice Ltd. using a Siraf style water flotation system (French 1971). The samples varied from 5litres up to 30litres in volume. The flots were dried before examination under a low power binocular microscope typically at x10 magnification. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

3: Results

The environmental samples produced small quantities of carbonised plant remains <2.5ml up to 15ml in volume consisting mainly of charcoal fragments 0.5cm to 1.5cm in size together with occasional finds of cereal grain and hazel nutshell. Modern remains were recorded in small amounts <2.5ml consisting of root detritus, earthworm egg capsules and a few modern seeds suggesting a low degree of bioturbation was taking place throughout the deposits. Highly crushed clinker and coal together with a few larger fragments up to 2.0cm in size formed the bulk of the material recovered from the samples indicating probable Post Medieval activity in the area, with material possibly mixed through by ploughing or general disturbance.

Results are given in table 1 and discussed below.

4: Discussion

Pit Features

Pit [252] (251) contained a single poorly preserved and flattened grain of *Hordeum vulgare* sl. (barley) possibly intrusive in the deposit. Pit [286] (285) contained a trace sliver of 0.5cm *Quercus* (oak) charcoal suggesting a low degree of burning taking place.

Pit [248] (247) contained trace charred detritus with nothing identifiable.

Pit features [223] (222), [231] (230), [277] (275) were sterile. Pit [231] (230) contained a large amount of coal and was possibly a modern industrial feature or waste dump.

Posthole Features

Posthole [243] (242) contained a single fragment of 1.0cm sized indeterminate charcoal heavily damaged by iron panning in the soil suggesting this charcoal was probably washed into an empty depression or void.

Posthole [181] (180) was sterile.

Ditch Features

Ditch features [066] (067) and [304] (303) both contained single specimens of highly degraded indeterminate cereal grain, possibly barley or wheat type, and probably trace or accidental inclusions in the deposits. Ditch [108] (107) produced two cereal grains, with single finds of *Triticum aestivum* (bread wheat) and *Hordeum vulgare* sl. (barley) in quite poor condition. Ditch [388] (389) had a single bread wheat grain whilst [404] (397) had one grain of barley both poorly preserved. These were possibly wind-blown or swept into the deposits from nearby cereal drying or cooking activity, most likely intrusive given the poor condition of all the material. A single 0.5cm fragment of well-preserved *Corylus avellana* (hazel) nutshell was present in ditch [404] (403) suggesting potential use of wild food resources. The hazel nutshell could be radiocarbon dated if required.

Charcoal fragments were recovered from a couple of the ditch features with a very small <0.5cm sliver of oak found in ditch [229] (228) suggesting some possible domestic burning activity taking place in the vicinity. Ditch [254] (253) contained more substantial evidence for fuel waste with a mixed deposit of oak and *Corylus* (hazel) charcoal probably a dumped deposit of burnt rubbish. The upper fill of ditch [378] (373) also contained a small amount of oak charcoal.

Linear [056] (057) and ditch features [422] (420) and [435] (434) produced a few trace fragments of charred detritus in amongst coal and other geological material. These remains were probably not particularly significant and the features could be fairly modern field boundaries.

Ring ditch [311] (310) held a trace sliver of oak charcoal indicating a small degree of burning taking place nearby. Ring ditch [302] (301) was sterile whilst [319] (318) contained a few trace fragments of highly crushed charred detritus with nothing identifiable.

Ditch features [013] (017), [183] (182), [378] (375) and gully [428] (427) were sterile.

5: Conclusion

The environmental samples produced small amounts of carbonised plant remains consisting of charcoal fragments and cereal grain recovered primarily from the ditch features with fewer identifiable remains present in the pit fills. Occasional finds of degraded grains of bread wheat and barley were probably swept in or wind-blown from cereal drying or cooking activity taking place on nearby domestic settlement and are likely to be Iron Age or Romano-British in date. A single fragment of hazel nutshell was found in ditch [404] (403) potentially indicating some trace evidence of Prehistoric food gathering.

The charcoal was in quite poor condition but indicated the use of oak and hazel woodland for fuel resources with small amounts of identifiable fragments being recorded from the ditch and pit fills. The hazel charcoal from ditch [254] (253) and the hazel nutshell from [404] (403) could both be radiocarbon dated.

Further excavation work has a fairly low potential to produce any significant volumes of carbonised plant remains.

References

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Stace, C. 1997 *New Flora of the British Isles*. 2nd Edition Cambridge University Press.

Zohary, D. and Hopf, M. 2000 *Domestication of Plants in the Old World*. 3rd Edition Oxford University Press.

			Appendix 6											
Ayton Road, Seamer, Scarborough	**Sample**	1	4	7	12	17	26	27	42	45	46	47	48	51
MAP 05-11-16	**Context**	17	57	67	107	93	180	182	222	228	230	253	251	247
	Feature	ditch [013]	linear [056]	ditch [066]	ditch [108]	ditch [094]	PH [181]	ditch [183]	pit [223]	ditch [229]	pit [231]	pit [254]	pit [252]	pit [248]
	Sample Volume (litres)	20	20	30	20	20	5	20	10	20	40	20	20	20
	Total CV	0	<2.5ml	<2.5ml	<2.5ml	0	0	0	0	<2.5ml	0	15ml	<2.5ml	<2.5ml
	Modern	<2.5ml	<2.5ml	0	0	<2.5ml	<2.5ml	<2.5ml	0	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml
Carbonised Cereal Grain	**Common Name**													
Triticum aestivum	bread wheat				1									
Hordeum vulgare sl.	barley				1								1	
Indeterminate cereal grain (+embryo)				1										
Charcoal														
Quercus	oak									1 (<0.01g)		2 (0.16g)		
Corylus	hazel											1 (0.05g)		
Indeterminate														
Carbonised Wild Resources														
Corylus avellana nutshell	hazel nutshell													
Other Remains														
Clinker				10+	1		2	2		5+				
Coal		5+	5+	5+	2	5+		5+	2	5+	50+	1	1	1
Modern seeds														
Ayton Road, Seamer, Scarborough	**Sample**	53	60	64	66	67	69	72	86	87	89	90		
MAP 05-11-16	**Context**	242	275	285	303	301	310	318	373	375	389	397		
	Feature	PH [243]	pit [277]	pit [286]	ditch [304]	ring ditch [30	ring ditch [3	ring ditch [319	ditch [378]	ditch [378]	ditch [388]	ditch [404]		
	Sample Volume (litres)	20	20	20	20	20	20	20	20	20	20	20		
	Total CV	2.5ml	0	<2.5ml	<2.5ml	0	<2.5ml	<2.5ml	<2.5ml	0	<2.5ml	<2.5ml		
	Modern	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml		
Carbonised Cereal Grain	**Common Name**													
Triticum aestivum	bread wheat										1			
Hordeum vulgare sl.	barley											1		
Indeterminate cereal grain (+embryo)					1									
Charcoal														
Quercus	oak			1 (0.03g)			1 (<0.01g)		1 (0.08g)					
Corylus	hazel													
Indeterminate		1 (0.11g)												
Carbonised Wild Resources														
Corylus avellana nutshell	hazel nutshell													
Other Remains														
Clinker			5+		5+	5+	5+	5+						
Coal		3	2	5+	10+	10+	5+			5+				
Modern seeds			1					1	1					

Ayton Road, Seamer, Scarborough	**Sample**	92	93	97	98
MAP 05-11-16	**Context**	403	427	420	434
	Feature	ditch [404]	gully [428]	ditch [422]	ditch [435]
	Sample Volume (litres)	20	20	20	40
	Total CV	<2.5ml	0	<2.5ml	<2.5ml
	Modern	<2.5ml	<2.5ml	<2.5ml	0
Carbonised Cereal Grain	**Common Name**				
Triticum aestivum	bread wheat				
Hordeum vulgare sl.	barley				
Indeterminate cereal grain (+embryo)					
Charcoal					
Quercus	oak				
Corylus	hazel				
Indeterminate					
Carbonised Wild Resources					
Corylus avellana nutshell	hazel nutshell	1 (0.03g)			
Other Remains					
Clinker		5+	5+		
Coal		10+	5+	1	2
Modern seeds					
Earthworm egg capsules			1		

Appendix 7

The Pottery from Ayton Road, Seamer (05/11/16)

Dr Phil Mills MCIfA (February 2020)

Introduction

There were 259 sherds, weighing 4489g, presented for assessment. This included 255 sherds, 4459g from stratified contexts including 11 rims, 7 bases and 1 possible handle.

The data in this assessment are collected from a rapid scan of the material during spot dating. Pottery was recorded to ware class (following Booth 2000) with number of sherds, NoSh, weight in grams, Wt, minimum number of rims, MNR, rim diameter in cm, RD and base type, BD (using codes form Booth 2000)) being recorded. Derived figures were mean sherd weight, MSW, by Wt/NoSh, and mean percentage rim, MPR, RE/MNR.

Dating

The majority of the material were in gritty wares, mostly with coarse calcite inclusions, although examples with inclusions were also seen. with surface colours ranging from black to red and brown, typical of the late Iron age – early Roman calcite gritted ware tradition. The rim forms were typical of the range noted in the region (Evans 1995)for vessels of late iron age to 2nd century date. There were nothing which would suggest a later date.

There were a small number of Roman period body sherds – oxidised sherds from ditch (126) and pit (050) and greyware body sherds from layer (321) and the subsoil. This would suggest the site did not continue for long into the early Roman period. There was a possible medieval sherd from ditch (355).

Taphonomy

Table 1 Pottery by Context type

Context Type	No%	Wt%	MNR%	RE%	MSW	MPR
Layer	1.2%	0.4%	0.0%	0.0%	5.67	
Ditch	44.3%	32.6%	27.3%	49.3%	12.86	22.33
Gully	3.1%	1.0%	0.0%	0.0%	5.50	
Pit	51.4%	66.0%	72.7%	50.7%	22.48	8.63

N/AVG	***255***	***4459***	***11***	***136***	***17.49***	***12.36***

Table 1 shows the breakdown by context type for the stratified pottery. The majority of the material is from pits, followed by ditches and gullies. A high level of deposition in ditches and gullies indicates a rural site . Pits can indicate industrial activities, but in late Iron sites can indicate deposits after specific events, e.g. feasting. The large average sherd size of pottery from pits and the fact that 5 of the 7 bases come from pits would indicate deposition over and above utilitarian refuse disposal.

Supply

Table 2 Pottery by ware class

Class	Ware	No%	Wt%	MNR%	RE%	MSW	MPR
G	Gritted	98.4%	99.6%	100.0%	100.0%	17.69	12.36
O	Oxidised	0.8%	0.2%	0.0%	0.0%	4.50	
R	Reduced	0.8%	0.2%	0.0%	0.0%	5.50	
	N/AVG	***255***	***4459***	***11***	***136***	***17.49***	***12.36***

Table 2 shows the breakdown by ware class of the stratified pottery. The low level of Roman pottery (Class O and Class R) shows very little interaction with the Roman world and suggest that the site does not continue long into the Roman period.

Discussion

This is a moderately sized group of Pottery from East Yorkshire. The small number of identifiable pottery forms suggest a LIA to 2nd century date range. The small number of Roman sherds suggest that the site did not have much interaction with the wider Roman world and is unlikely to have continued far into the Roman period.

The site would appear to be rural in character, although the large amount of pottery from pits may indicate regular events such as feasting.

Further work

The size of the assemblage makes it amenable to further work which could help shed light on the nature of supply in rural east Yorkshire in the late Iron age – Early Roman period,

The amount of pottery rom pits means that special consideration of the pottery alongside the other finds from these pits could yield information about the nature of deposition in these features

Publication synopsis

Synopsis
Introduction

Dating
(For separate section of report)
Fabric supply & form
Occurrence
Functional analysis
Taphonomy
Use ware and deposits
Discussion
Bibliography

Appendices needed **in publication** - Fabric descriptions, Fabric and form occurrence tables

Methods

The pottery will be recorded by sherd numbers, weight, RE and minimum numbers of rims for form and fabric following. Full determination to exact fabric will be performed on all material. The material will be illustrated most economically by a fabric and form type series. The analysed data will be compared with other LIA- ER groups in East Yorkshire.

Resources and programming

Tasks

a) Code the stratified late Roman pottery on to standard recording forms, selecting potential vessels for illustration
b) Analyse data
c) Draft report & prepare text figures

Timetable

Days

* Phasing lists in context number order will be required.

a) Code coarse pottery 1

b) Analyse data 0.5
* Information on coins, animal bone, and other finds required
c) Write report & prepare text figures 2

* _ Time critical inputs

Budget

Estimates are not valid for after 1/2/21
Day rate £280

	Cost	Time in days
a) Code coarse pottery	£280	1
b) Analyse data	£140	0.5
c) Write report & prepare text figures	£560	2.0

* _ Time critical inputs

Other

Note _ the transport of the pottery to and from Leicester is the responsibility of MAP

TOTAL **£980**

Pottery drawings required

Provision for 8 drawings should be made

Bibliography

Evans, J. 1995 Later Iron Age and 'native' pottery in the north –east. In Vyner, B (Ed) **Moorland Monuments**. York: CBA research report 101, pp46-68

Appendix 1 Spot Dating

Context	Context Type	Spot Date	NoSh	Wt	MNR	RE
002	Topsoil	Roman	1	8	0	0
017	Ditch	LIA+	1	5	0	0
030	Ditch	lia+	2	34	0	0
040	Ditch	LIA+	1	11	0	0
046	Pit	LIA+	1	4	0	0
050	Pit	LC1-C2	1	6	0	0
059	Ditch	LIA+	3	27	0	0
065	Ditch	LIA-C2	39	615	1	49
083	Ditch	LIA+	1	7	0	0
093	Ditch	LIA+	5	97	0	0
126	Ditch	Roman	1	3	0	0
148	Ditch	LIA+	3	116	0	0
152	Ditch	LIA+	4	4	0	0
169	Ditch	LIA+	1	8	0	0
200	Ditch	LIA+	25	166	0	0

208	Ditch	LIA-C2	10	202	1	11
210	Ditch	LIA+	4	47	0	0
212	Ditch	LIA+	8	56	0	0
238	Gully	LIA+	8	44	0	0
253	Pit	LIA+	1	51	0	0
257	Ditch	LIA+	1	4	0	0
269	Pit	LIA-C2	41	509	2	16
270	Pit	LIA-C2	72	2037	5	46
275	Pit	LIA+	9	117	0	0
276	Pit	LIA-C2	6	221	1	7
321	Layer	Roman	3	17	0	0
341	Ditch	LIA-C2	2	22	1	7
355	Ditch	Med	3	22	0	0
362	Ditch	LIA+	1	22	0	0
414	Ditch	LIA+	1	7	0	0

Appendix 2 The full catalogue

Context	Fabric Code	Part	Function	Form Type	Confidence	NoSh	Wt	MNR	RE	RD	Base	Handle	Period	Comments
002	R00	Body				1	8	0	0					burnished surfaces
017	G00	Body				1	5	0	0					
030	G00	Body				2	34	0	0					
040	G00	Body				1	11	0	0					
046	G00	Body				1	4	0	0					flint
050	O00	Body			1	1	6	0	0					
059	G00	Body				3	27	0	0					
065	G00	Base				1	301	0	0		11			thick walls
065	G00	Body				32	225	0	0					
065	G00	Rim	J	Evans 1995 k v		6	89	1	49	16			LIA-C2	
083	G01	Body				1	7	0	0					
093	G00	Body				5	97	0	0					
126	O00	Body				1	3	0	0					
148	G00	Body				3	116	0	0					
152	G00	Body				4	4	0	0					
169	G00	Body				1	8	0	0					
200	G00	Body				25	166	0	0					brown surfaces
208	G00	Body				9	162	0	0					
208	G00	Rim	J	Evans 1995 Ki?		1	40	1	11	16			LIA-C2	

Context	Fabric Code	Part	Function	Form Type	Confidence	NoSh	Wt	MNR	RE	RD	Base	Handle	Period	Comments
210	G00	Base				1	9	0	0		11			
210	G00	Body				3	38	0	0					
212	G00	Body			2	2	13	0	0					
212	G01	Body				4	14	0	0					
212	G01	Body				1	4	0	0					
212	G01	Handle				1	25	0	0			1		poss handle or burnt clay
238	G00	Body				8	44	0	0					
253	G01	Body				1	51	0	0					
257	G00	Body				1	4	0	0					
269	G00	Base				2	42	0	0		12			
269	G00	Base				1	25	0	0		12			
269	G00	Base				1	38	0	0		10			
269	G00	Body				35	327	0	0					
269	G00	Rim	J	Evans 1995 Ei		1	23	1	7	20			LIA-C2	
269	G00	Rim	J	Evans 1995 Ei		1	54	1	9	23			LIA-C2	
270	G00	Base				1	49	0	0		11			
270	G00	Body				63	1587	0	0					
270	G00	Complete Profile	D			1	192	1	4	20	11		LIA-C2	flat based dish with slightly everted straight walls with rounded tip on simple rim
270	G00	Rim	J	Evans 1995 Kii		1	24	1	6	20			LIA-C2	
270	G00	Rim	J	Evans 1995 Kii		1	8	1	7	15			LIA-C2	
270	G00	Rim	J	Evans 1995 Kv		3	135	1	15	25			LIA-C2	
270	G00	Rim	J	Evans 1995 Kv		2	42	1	14	20			LIA-C2	
275	G00	Body				9	117	0	0					thick walls
276	G00	Body				5	192	0	0					thick
276	G00	Rim	J	Evans 1995 Kii		1	29	1	7	20			LIA-C2	
321	G00	Body				1	6	0	0					
321	R00	Body				2	11	0	0					
341	G00	Rim	J	Evans 1995 Kii		2	22	1	7	18			LIA-C2	
355	Z20	Body				3	22	0	0					black glaze?
362	G00	Body				1	22	0	0					

Context	Fabric Code	Part	Function	Form Type	Confidence	NoSh	Wt	MNR	RE	RD	Base	Handle	Period	Comments
414	G00	Body				1	7	0	0					

Appendix 8.

Animal bone and shell assessment: Ayton Road (05.11.16)

by Jane Richardson

03/03/2020

In total, 723 bone fragments and three cockle shells were recovered from hand-excavated features and the sieving of soil samples. Non-repeatable diagnostic bone zones were noted, with the remaining assemblage only rapidly quantified and scanned. Bone zones were identified to taxa wherever possible.

Diagnostic bone zones amount to just under 7% of the assemblage, as tabulated below (Table 1). Cattle, horse, pig, sheep/goat and dog are represented, with the assemblage dominated by cattle bones. Unusually, the assemblage contains a disproportionate number of head and foot bones, perhaps indicating that primary butchery waste was being deposited in the features excavated.

Table 1. Diagnostic bone zones from hand-excavated deposits and soil samples by feature

	Cattle	Horse	Pig	Sheep/goat	Dog
Ditch 041		1	1		
Ditch 070	2				
Ditch 074	1				
Ditch 094				1	
Ditch 114			1		
Ditch 142	4	1			
Ditch 149	1			1	
Ditch 153	2				
Ditch 157	1				
Ditch 162	1				
Ditch 175	1				
Ditch 192	1				
Ditch 198	1				1
Ditch 199	6	1			
Ditch 209	1				
Ditch 215				1	
Pit 277	10				
Ditch 367	1				
Ditch 387	1			2	
Total	34	3	2	5	1

The assemblage is heavily fragmented, with eroded surfaces. This poor preservation might explain why no butchered or gnawed bones were noted, while

multiple long bone fragments from a single context may represent only a single bone. Thirteen fragments have been burnt (most recovered from pit 277) although nearly all are small undiagnostic fragments.

Despite the small sample size, the dominance of head bones means that a reasonable quantity of dental wear data survives. These indicate sub-adult, young adult, and aged cattle, as well as sub-adult and adult sheep and a very young pig. The younger animals were probably slaughtered specifically for their meat, while the adult animals may represent breeding livestock.

Given the small assemblage, and the likelihood that it represents around 200 years or more of activity, no further analysis is recommended. The material reported here should be retained as part of the site archive.

Appendix 9

Seamer. Site Code: 05-11-16.
Sub Site: Ayton Road. County: North Yorkshire

Flint Assessment.

by P. Makey.

A report prepared for MAP Archaeological Practice Ltd (Last Revision 22/03/20).

Summary.

The flint assemblage totals ten pieces all of which are worked and prehistoric. Eight pieces come from stratified contexts and two are from un-stratified contexts. Overall, the state of the material is fresher than might be expected. All of the pieces have been manufactured on till flint that was probably obtained from near the site. Flint knapping was conducted by the application of hard hammer stones. Half of the material (5 pieces) is patinated; although the trait is only heavy on three pieces one of which has been burnt. The assemblage, comprises, five flakes (3 broken), two blades (1 broken), one miscellaneously retouched flake, one end scraper and a plano-convex knife. The context incidence is given below: -

Context Number	Context Type	Flint Number	Flint Type
	Unstratified	2	End Scraper x1, Plano-convex Knife x1
002	Subsoil	1	Flake x1
050	Pit 051 (fill 050)	1	Flake (broken) x1
077	Barrow Ditch Cut 074	1	Blade (broken) x 1
105	Barrow Ditch Cut 080	1	Miscellaneously Retouched Flake x1
322	Ditch 320	1	Flake x1
390	Ditch 388	3	Flakes (broken) x2, Blade x1

Pieces of Note.

Only the end scraper and plano-convex knife are of note and unfortunately these are un-stratified.

The un-stratified scraper (small find 1) is a rather crude short sub-'thumbnail' type end scraper of 'Beakerish' / Early Bronze Age aspect. Manufactured on a light olive grey coloured (Munsell, 5Y 5/2) medium grained till flint which retains a small amount of cortex. The piece possesses very heavy traces of plough damage and macroscopic traces of heavy use wear.

The plano-convex knife (small find 2) has been, manufactured on a similar piece of light olive grey coloured (Munsell, 5Y 5/2) medium grained till flint with coralline inclusions. The knife possesses post depositional damage and heavy macroscopic traces of use wear. The knife has moderately fine, invasive marginal retouch and a slightly flattened section. The piece exhibits traces of bi-polar knapping (tip and but) and dorsal blade scars. Plano-convex knives have a sporadic incidence and are relatively rare and local published parallels are scant. A Durrington Walls style Grooved Ware associated site at North Carnaby Temple (site 3) contains two double edged flake knives that have some similarity (Manby 1974, 52). Rudston Wold, 2nd field West Reservoir (Manby 1975, 39, fig11.32) produced a similar sized example that was associated with Peterborough, Beaker and Grooved Ware pottery. Nationally there appears to be a relationship between Beaker burials, food vessels and the incidence of plano-convex knives (Clarke 1932, 159). Regionally they occur predominately in un-stratified fieldwalking assemblages where Peterborough Ware and Beaker type material is predominate.

Discussion.

The size of the assemblage is too small for any major conclusions to be made, except for its inherent uniformity and the predominately Neolithic aspect of the non-retouched pieces. The flake from subsoil 002 and broken blade flake from pit 051 (fill 050) are of a later Neolithic / early Bronze Age aspect, whereas the

remaining six stratified pieces look middle to later Neolithic in aspect. Four of the pieces from the fill of features are in a very fresh state that probably indicates a degree of contemporaneity with the cutting of the features. Traces of burning are present on two of the pieces. These are the miscellaneously retouched flake from barrow ditch cut 080 (fill 105) and a broken flake (archive record number 10) from ditch cut 388 (fill 390). The flake from ditch cut 388 has been heavily burnt, whereas the retouched flake from barrow ditch cut 080 has only a slight gloss from heating.

Recommendations.

All the struck flint pieces have been examined for macro and microscopic traces of use wear and have been fully catalogued and no further recording is necessary.

Drawings.

The plan-convex knife (small find 2) is a relatively rare flint implement and as such it might warrant illustration.

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Manby, T.G., 1975. Neolithic Occupation Sites on the Yorkshire Wolds. *The Yorkshire Archaeological Journal 47:* pp. 23-59.

Manby, T.G., 1974. Grooved Ware Sites in the North of England. Oxford. British Archaeological reports, British Series 9.

Munsell Rock-Colour Chart., 1991. The Geological Society of America. Boulder Colarado, U.S.A. Munsell color.

Seamer, Ayton Rd (2020): Flint Catalogue. Site Code 05-11-16

Flint Rec No	Small Find	Context Number	Flint ID	Sub-Type	Completeness	Flint Colour	Damage	Burning	State	Termination	Use Wear	Colour	Weight	Length	Width
1	1		Scraper	End	Complete	L Olive Grey	VH Plough		Residual		Heavy		10.0	38.7	21.7
2	2		Knife	Plano-convex	Complete	L Olive Grey	VH		Residual		Heavy	Mot Grey	4.4	51	20.3
3		002	Flake	Trimmed	Complete	L Olive Grey			Moderate				3.6	26	31.3
4		050	Flake / Br	Blade Flake	Prox / Medial				Sharp	Snap		Mot Grey	5.0	0:34	20.3
5		077	Blade / Br	Double Crested	Medial	Olive Grey	Heavy		Very Fresh	Snap	H-VT/LS-RS		4.1	0:22	30
6		105	Misc Ret	Flake. Vent RHS	Complete	L Olive Grey		Gloss?	Very Fresh		H-VT/RS		15.1	43	29.9
7		322	Flake	Flaked	Complete	Olive Grey			Very Fresh	Feather		L Grey	2.0	32	17.4
8		390	Flake / Br	(Blade like)	Dist / Med	L Olive Grey			Moderate	Step		Mot Grey	2.2	0:21	22
9		390	Blade	Double Crested	Complete	L Brownish Grey			Very Fresh	Hinged			2.8	41.3	16.6
10		390	Flake / Br		Medial	L Olive Grey	V Heavy	Heavy	Residual	Snap		L Grey	2.5	0:15	25
Rec No	**SF**	**Context**	**Flint ID**	**Sub-Type**	**Completeness**	**Colour**	**Damage**	**Burning**	**State**	**Termination**	**Use Wear**	**Colour**	**Weight**	**Length**	**Width**

Flint Rec No	Thickn'ss	Platform	Scars B	Flint Grain	Angle of Retouch	Retouch Length	Draw
1	10.3	Cortical		Medium	47	24	
2	7.3	Linear	1	Medium	18/1 16/2	47/1 52/2	Y
3	5.9	Linear		Medium			
4	7.8	Facetted	1	Medium			
5	5.6		2	V Fine			
6	11.3	Linear	1	Fine	13	16	
7	3.4	Linear	1	V Fine			
8	3.2	Core Face		Medium			
9	32	Linear	3	Medium			
10	5.9			Medium			
Rec No	**Thickn'ss**	**Platform**	**B Scar**	**Grain**	**Retouch**	**Ret L**	**Draw**

Osteological Analysis

Ayton Road

Seamer

Scarborough

North Yorkshire

Site Code: 5:11:16

NGR: TA 014 839

Report No 0720

March 2020

Prepared for

MAP Archaeological Practice
Showfield Lane
Malton
North Yorkshire
YO17 6BT

Prepared by

Elina Petersone-Gordina and Malin Holst
York Osteoarchaeology Ltd
Ivy Cottage
75 Main Street
Bishop Wilton
York YO42 1SR

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Summary

York Osteoarchaeology Ltd was commissioned by MAP Archaeological Practice to carry out the osteological analysis of a single inhumation burial discovered ahead of residential development in Ayton Road, Seamer, Scarborough (NGR TA 014 839).

Skeleton 202 was poorly preserved and incomplete, with moderate fragmentation. Although the eroded bone surface prevented a comprehensive pathological analysis of some bones, some information was obtained. The skeleton was a younger juvenile and had been buried in a crouched position on the left side, in a west to east orientation, with the head to the west, facing north. Osteological analysis revealed that the child had several pathological lesions, including evidence for inflammation on the inner surface of the skull and pitting in the eye orbits indicative of some form of anaemia. No dental pathological conditions were observed, although several teeth were present.

The child had been buried in a square barrow, and both the nearby features and the position of the skeleton suggest that it is probably late prehistoric in date, but the absence of grave goods or any associated archaeological features prevents linking this burial to a certain period.

AMS dating of the remains is recommended to accurately assign the burial from Ayton Road, Seamer to a time period.

Acknowledgements

York Osteoarchaeology Ltd would like to thank Max Greaves of the MAP Archaeological Practice for his help and support.

1.0 INTRODUCTION

In February 2020 York Osteoarchaeology Ltd was commissioned by MAP Archaeological Practice to carry out the osteological analysis of one inhumation burial discovered ahead of residential development in Ayton Road, Seamer, Scarborough, North Yorkshire in the summer 2019 (NGR TA 014 839).

A single inhumation burial was interred in the north-western corner of a square barrow, which appeared to be the only one in which there was sufficient space for a burial, i.e., this space was left deliberately. The skeleton lay in a crouched position on the left side, in west to east orientation, with the head to the west, facing north. The grave cut was rounded, and no artefacts were found in the grave, but the provisional period to which this burial belongs is thought to be late prehistoric, possibly Iron Age. Other possibly related archaeological features located nearby include ditches (Table 1).

Table 1 Summary of the burial

Context No	Burial Position	Orientation	Date	Artefacts	Notes
202	Crouched on L side, facing N	W-E	Iron Age?	-	Single inhumation burial in the NW corner of a square barrow

1.1 AIMS AND OBJECTIVES

The aim of the skeletal analysis was to determine the age, sex and stature of the skeleton, as well as to record and diagnose any skeletal manifestations of disease and trauma.

1.2 METHODOLOGY

The skeleton was analysed in detail, assessing the preservation and completeness, as well as determining the age, sex and stature of the individual. All pathological lesions were recorded and described.

2.0 OSTEOLOGICAL ANALYSIS

Osteological analysis is concerned with the determination of the demographic profile of the assemblage based on the assessment of sex, age and non-metric traits. This information is essential in order to determine the prevalence of disease types and age-related changes. It is also crucial for identifying sex dimorphism in occupation, lifestyle and diet, as well as the role of different age groups in society. A summary of the osteological and palaeopathological data for Skeleton 202 is given in Table 2, with a detailed catalogue provided in Appendix A.

Table 2 Summary of osteological and palaeopathological data

Sk No	C (%)	SP	F	Age	Age Group	Sex	Stature (cm)	Dental Pathology	Pathology
202	40	4-5	mod	1.5-2	YJ	-	-	DEH in the left deciduous mandibular canine	*Cribra orbitalia*, porosity in the wings of sphenoid, endocranial new bone

									formation, lamellar bone on the left lower leg

SP = Surface preservation: grades 0 (excellent), 1 (very good), 2 (good), 3 (moderate), 4 (poor), 5 (very poor), 5+ (extremely poor) after McKinley (2004)

C = Completeness

F = Fragmentation: min (minimal), slight, mod (moderate), sev (severe), ext (extreme)

Non-adult age categories: f (foetus, <38weeks *in utero*), p (perinate, c. birth), n (neonate, 0-1m), i (infant, 1-12m), yj (young juvenile, 1-5 years), oj (older juvenile, 6-11 years), j (juvenile, 1-11y), ad (adolescent 12-17y)

Adult age categories: ya (young adult, 18-25y), yma (young middle adult, 26-35y), oma (old middle adult, 36-45y), ma (mature adult, 46+y), a (adult, 18+y)

2.1 PRESERVATION

Skeletal preservation depends upon a number of factors, including the age and sex of the individual as well as the size, shape and robusticity of the bone. Burial environment, post-depositional disturbance and treatment following excavation can also have a considerable impact on bone condition. Preservation of human skeletal remains is assessed subjectively, depending upon the severity of bone surface erosion and post-mortem breaks, but disregarding completeness. Preservation is important, as it can have a large impact on the quantity and quality of information that it is possible to obtain from the skeletal remains.

Surface preservation, concerning the condition of the bone cortex, was assessed using the seven-category grading system defined by McKinley (2004), ranging from 0 (excellent) to 5+ (extremely poor). Excellent preservation implied no bone surface erosion and a clear surface morphology, whereas extremely poor preservation indicated heavy and penetrating erosion of the bone surface resulting in complete loss of surface morphology and modification of the bone profile. The degree of fragmentation was recorded, using categories ranging from 'minimal' (little or no fragmentation of bones) to 'extreme' (extensive fragmentation with bones in multiple small fragments). Finally, the completeness of the skeletons was assessed and expressed as a percentage: the higher the percentage, the more complete the skeleton.

Skeleton 202 was poorly preserved, with only around 40% of skeletal elements present. These included fragmented, but mostly complete cranium and mandible, partial right and left arms, fragmentary ribs and vertebrae, part of the right ilium and partial right and left legs. The skeleton had experienced moderate fragmentation, but the surface preservation was poor, thus preventing a thorough observation of the surface of the bones, especially in the legs.

2.3 MINIMUM NUMBER OF INDIVIDUALS

A count of the 'minimum number of individuals' (MNI) recovered from a cemetery is carried out as standard procedure in osteological reports on inhumations in order to establish how many individuals are represented by the articulated and disarticulated human bones (without taking the archaeologically defined graves into account). The MNI is calculated by counting all long bone ends, as well as other larger skeletal elements recovered. The largest number of these is then taken as the MNI. The MNI is likely to be lower than the actual number of skeletons which would have been interred on the site but represents the minimum number of individuals which can be scientifically proven to be present.

The inhumed skeletal remains represented the remains of a minimum of one non-adult individual, based

on the presence of single left and right skeletal elements, including the mandible, the right distal humerus and the right proximal radius and ulna, the right proximal femur, and a mostly complete left fibula.

2.4 ASSESSMENT OF AGE

Age was determined using standard ageing techniques, as specified in Scheuer and Black (2000a; 2000b) and Cox (2000). For non-adults age was estimated using the stage of dental development (Moorrees *et al.* 1963a; 1963b), dental eruption (Ubelaker 1989), measurements of long bones and other appropriate elements and the development and fusion of bones (Scheuer and Black 2000b). In adults, age was estimated from stages of bone development and degeneration in the pelvis (Brooks and Suchey 1990, Lovejoy *et al.* 1985) and ribs (modified version of methods developed by İşcan *et al.* 1984; 1985 and İşcan and Loth 1986 provided in Ubelaker 1989), supplemented through examination of patterns of dental wear (Brothwell 1981). Age is split into a number of categories. Non-adults are subdivided into 'foetus' (f: where the age estimate clearly falls below 38-40 *weeks in utero*), 'perinate' (p: where the age estimates converge around birth), 'neonate' (n: where the age estimate suggests 0-1 month), 'infant' (i; 1-12 months), juvenile (j; 1-12 years) and adolescent (ad; 13-17 years). Adults are divided into 'young adult' (ya; 18-25 years), young middle adult (yma; 26-35 years), old middle adult (oma; 36-45 years) and mature adult (46+ years). A category of 'adult' (a) is used to designate those individuals whose age could not be determined beyond the fact that they are eighteen or older.

The age of Skeleton 202 could be determined by using the stages of dental development. Nine deciduous teeth, and two permanent tooth crowns in different stages of development were present; in particular, the presence of three quarters of the crown of the right mandibular first molar suggested that the age of the child was between eighteen months and two years.

2.5 SEX DETERMINATION

Sex determination was carried out using standard osteological techniques, such as those described by Mays and Cox (2000). Assessment of sex involves examination of the shape of the skull and the pelvis and can only be carried out once sexual characteristics have developed, during late puberty and early adulthood. Evidence from the pelvis was favoured as its shape is directly linked to biological sex (the requirements of childbirth in females) whereas the shape of the skull can be influenced by factors such as age (Walker 1995). Measurements of certain bones were used to supplement the morphological assessment (Bass 1987). As with estimation of age, sex estimation in disarticulated remains could only be carried out where appropriate bones were preserved (i.e. pelvis and skull). Metrics alone are an unreliable method for estimating sex.

It is not possible to estimate sex in non-adult individuals, unless ancient DNA analysis is carried out.

2.6 METRIC ANALYSIS

No measurements were taken of this skeleton due to its fragmentary nature and thus, the absence of any complete and intact long bones. In non-adult remains, measurements are mostly taken for age assessment

purposes, and to compare skeletal and dental development.

Stature depends on two main factors, heredity and environment; it can also fluctuate between chronological periods. Stature can only be established in skeletons if at least one complete and fully fused long bone is present, but preferably using the combined femur and tibia. Knowing the sex of the individual is also necessary, which is an issue with disarticulated long bones where sex cannot be determined. The bone is measured on an osteometric board and stature is then calculated using a regression formula developed upon individuals of known stature (Trotter 1970). Where possible, bones from the legs were used in preference to those of the upper limb as these carry the lowest error margin (*ibid*).

Stature cannot be established in non-adult individuals, since their bones have not finished development and are still growing.

2.7 NON-METRIC TRAITS

Non-metric traits are additional sutures, facets, bony processes, canals and foramina, which occur in a minority of skeletons and are believed to suggest hereditary affiliation between skeletons (Saunders 1989). The origins of non-metric traits have been extensively discussed in the osteological literature and it is now thought that while most non-metric traits have genetic origins, some can be produced by factors such as mechanical stress (Kennedy 1989) or environment (Trinkhaus 1978). A total of thirty cranial (skull) and thirty post-cranial (bones of the body and limbs) non-metric traits were selected from the osteological literature (Buikstra and Ubelaker 1994; Finnegan 1978; Berry and Berry 1967) and recorded.

Most cranial and post-cranial non-metric traits in Skeleton 202 were not observable due to poor preservation. In total, ten cranial and two post-cranial locations for non-metric traits could be observed in this skeleton, but none was present.

2.8 CONCLUSION

Preservation of Skeleton 202 from Seamer, Scarborough was poor, with only 40% of skeletal elements present. Osteological analysis established that the child was aged between eighteen months and two years at death (young juvenile). Measurements could not be taken due to the fragmentary nature of the skeleton, and non-metric traits were non present in the observable elements.

3.0 PATHOLOGICAL ANALYSIS

Pathological conditions (disease) can manifest themselves on the skeleton, especially when these are chronic conditions or the result of trauma to the bone. The bone elements to which muscles attach can also provide information on muscle trauma and excessive use of muscles. All bones were examined macroscopically for evidence of pathological changes.

3.1 METABOLIC CONDITIONS

3.1.1 *Cribra Orbitalia*

Cribra orbitalia is a term used to describe fine pitting in the orbital roof which develops during childhood and often recedes during adolescence or early adulthood. Until recently, iron deficiency anaemia was the accepted cause of these lesions (Stuart-Macadam 1992), but a strong case has been made by Walker *et al.* (2009) for different types of anaemia as the causative factor. These include megaloblastic anaemia in the New World, suggesting a diet deficient in Vitamin B_{12} (i.e. plant-based and lacking in animal products) and/or folic acid. Such dietary deficiency could have been exacerbated through poor sanitation leading to infection and infestation with gut parasites (*ibid*). In malarious areas of the Old World, haemolytic anaemia (e.g. sickle cell anaemia and thalassemia) may be important in the development of *cribra orbitalia* (*ibid*). However, for areas such as northern Europe they have proposed that *cribra orbitalia* may be more likely related to conditions such as scurvy (Vitamin C deficiency) or chronic infections (*ibid*). *Cribra orbitalia* is often used as an indicator of general stress (Lewis 2000, Roberts and Manchester 2005) and is often found associated with agricultural economies (Roberts and Cox 2003). *Cribra orbitalia* affected both orbits of this individual (Plate 1).

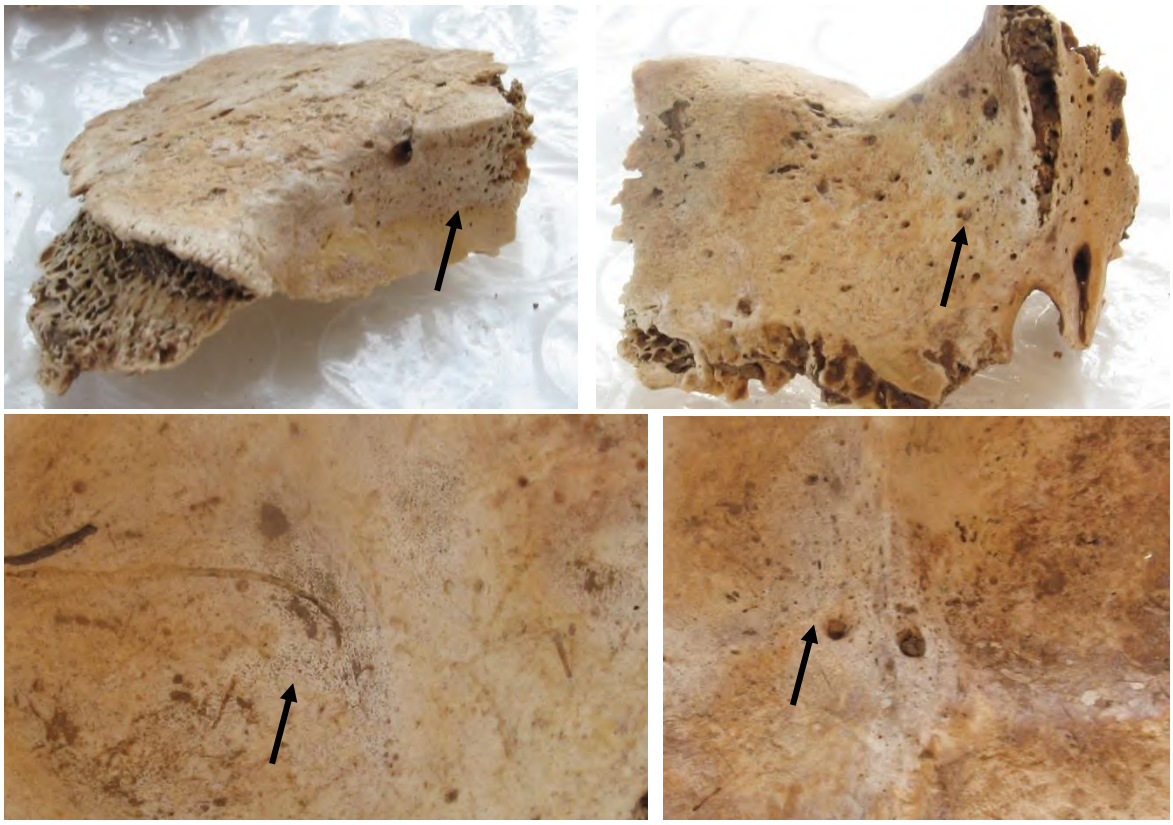

Plate 1 Clockwise from top left: porosity and new woven bone in the left orbit; porosity on the right wing of sphenoid; endocranial new bone formation in the frontal bone; and in the occipital bone

3.1.2 Possible Scurvy

Vitamin C is mainly present in vegetables, fruit and berries (Kiple and Ornelas, 2000: 231-358, Weinstein et al., 2001), but its role in diet only became to be understood by the end of the 18th century (Hughes, 1990: 53). Before then, the disease commonly affected populations where foods containing vitamin C, were not

available due to famines or conflict, as well as environmental conditions, such as prolonged winters (Carpenter 1986, 1987, Crellin 2000, Ortner 2003: 384).

A variety of lesions have been reported in non-adults who have scurvy, and these are mainly associated with weakened blood vessels and subsequent bleeding, which causes bone reaction and which occurs mainly in the skull and the appendicular skeleton, according to clinical (Barlow 1883: 168, Melikian and Waldron 2003) and palaeopathological observations (Brickley and Ives 2006, Lewis 2004, Ortner and Ericksen 1997).

Apart from porosity in both orbits, which has various possible causes (see Section 3.1.1 above), Individual 202 also had fine porosity at the base of both wings of sphenoid, new woven bone in the left orbit and endocranially in the frontal and occipital bone (see Plate 1)s, and lamellar bone on the left tibia. All, or at least some of these lesions might have been caused by scurvy; presence of woven bone in one of the orbits suggests that the condition which caused the lesions was still active at the time of death.

3.2 INFECTIOUS DISEASE

3.2.1 Periosteal Reactions

New bone deposits on the surfaces of the bones can indicate inflammation of a sheath of tissue (the periosteum) which surrounds all bones (Ortner 2003, 206-207). Inflammation may be due to infection, but low-grade trauma and chronic ulceration can also lead to new bone formation (Roberts and Manchester 2005; Ortner 2003, 206-207). Periosteal reactions are commonly observed in archaeological populations, particularly on the tibiae, and their prevalence has been used as a general measure of stress in past populations (Ortner 2003, 209). Woven bone deposits are indicative of inflammation that was active at the time of death, while lamellar bone indicates that the inflammation was healing.

As already discussed above, Skeleton 202 also had lamellar bone deposits on the left tibia, while the right tibia and both femora were unobservable due to surface erosion. The lesions were slight and had healed at the time of death. While it is possible that a specific condition like scurvy had caused these deposits, it is also possible that the cause was a non-specific inflammation.

3.2.2 Endocranial Bone Formation

Bone formation on the internal surfaces of the cranium is more commonly seen in infants and young children rather than in adults. It has been associated with inflammation or haemorrhage of the meningeal blood vessels, but the potential causes of these lesions are not clear at present. In children, possible causes identified include chronic meningitis, trauma, anaemia, neoplastic disease, metabolic diseases (scurvy and rickets), venous drainage disorders and tuberculosis (Lewis 2007; 2004). Less information is available concerning the aetiology of these lesions in adults.

In skeleton 202, deposits of woven bone were observed on the endocranial surface of the frontal and occipital bones. As with periosteal reaction on this child's left tibia, it is possible that the endocranial lesions

were caused by a specific condition, such as scurvy, especially because other characteristic lesions were also present (see Section 3.1.2 above). Unlike the lesions on the tibia, however, the inflammation in the skull was still active at the time of death.

3.3 CONCLUSION

A variety of pathological lesions was observed in this young child, including *cribra orbitalia* and woven bone formation in the left orbit and inner skull surface on the frontal and occipital bones, porosity in the wings of sphenoid, and lamellar bone on the left tibia. All these lesions might have been caused by a specific condition, Vitamin C deficiency (scurvy). Alternatively, the lesions have various possible aetiologies, and each might have been caused by a different condition, as described above. The presence of woven new bone in the skull suggests that the inflammation in the skull was still active at the time of the child's death.

4.0 DENTAL HEALTH

Analysis of the teeth from archaeological populations provides vital clues about health, diet and oral hygiene, as well as information about environmental and congenital conditions (Roberts and Manchester 2005). All teeth and jaws were examined macroscopically for evidence of pathological changes.

The dentition of Skeleton 202 was relatively well preserved, with nine deciduous teeth of various development and eruption stages, and the right upper and lower permanent first molar crowns with approximately three quarters of the crown developed, which was very useful for the determination of the age of the child. Due to partial preservation of the mandible and maxilla, however, only ninteen tooth positions were observable, and eight teeth were lost post-mortem. Although the teeth survived in a good condition, no dental pathologies were observed, apart from a small pit in the enamel in the left deciduous mandibular canine, which might have been traumatic. This is discussed in more detail below. The lack of other dental diseases is probably due to the fact that all deciduous teeth had only recently erupted and thus had not been exposed to a harmful environment (such as cariogenic food) for long enough.

4.1 DENTAL ENAMEL HYPOPLASIA

Dental enamel hypoplasia (DEH) is the presence of lines, grooves or pits on the surface of the tooth crown, and occurs as a result of defective formation of tooth enamel during growth (Hillson 1996). Essentially, they represent a period when the crown formation is halted, and they are caused by periods of severe stress, such as episodes of malnutrition or disease, during the first seven years of childhood. Involvement of the deciduous (milk) teeth can indicate pre-natal stress (Lewis 2007). Trauma can also cause DEH formation, usually in single teeth.

In Skeleton 202, only one tooth had evidence for disruption in enamel formation: a pit in enamel appeared in the left deciduous mandibular canine (Plate 2). This tooth begins development in utero, but the crown is complete at approximately seven months of age (Moorrees *et al.* 1963a). The location of the dent in the

middle of the crown might suggest that it occurred around birth, of soon afterwards, and might have been due to localised trauma.

4.3 DENTAL CONCLUSIONS

Due to relatively good preservation of teeth in Skeleton 202, oral health could be assessed and discussed for this individual. Only the left deciduous mandibular canine had possible evidence of dental enamel hypoplasia, and because it only affected one tooth, it is likely that this occurred as a result of localised trauma around birth. No pathological lesions were observed in any of the other teeth, probably because they all had only recently erupted.

Plate 2 A pit in the enamel of the left deciduous mandibular canine

5.0 MORTUARY PRACTICE

The individual from Ayton Road, Seamer, Scarborough had been buried in a west-east orientation, crouched on the left side, and facing north. Although the date of the burial is not known, it is thought it probably dates to the Iron Age, on the basis of it being located in the corner of a square barrow.

The grave had been cut into the north-western corner of the square barrow, and the construction of the barrow indicates that the position of the burial in this particular corner was deliberate – there was no space for a burial in the other corners of this feature. No other burials have so far been found on the site, although there was evidence for other possibly contemporary features, such as ditches.

Crouched burial positions were common in the Iron Age between the fourth century BC and the early first century AD (O'Brien 1999, 1). Crouched and flexed burials were also the predominant burial positions among the Iron Age individuals from Melton and Wattle Syke, consistent with the typical burial position during the Iron Age in Yorkshire (Caffell and Holst 2008; Caffell and Holst 2010, 78).

Burials were found in the ditches of square barrows at other sites in Yorkshire, including at Nosterfield Quarry, North Yorkshire, where a male adult was interred in a flexed position on his left side in the partially backfilled ditch of a square barrow (Holst 2004).

6.0 DISCUSSION AND SUMMARY

Osteological analysis of the human remains from Seamer, Scarborough, North Yorkshire was somewhat compromised by poor preservation, but the bone was sufficiently preserved to enable determination of age, as well as reveal several pathological lesions. It is thought that the burial was late prehistoric in date, and indeed crouched burials were the predominant burial positions in the Bronze Age and Iron Age, but AMS dating of the skeleton is highly recommended to confirm this.

The skeleton was a young juvenile aged between eighteen months and two years (Skeleton 202) who had been buried on the left side, in a crouched burial position, orientated from west to east. The burial was placed in the north-western corner of a square barrow. The remains were incomplete (around 40% of skeletal elements present), the skeleton was moderately fragmented and bone surface preservation was mostly poor. Despite these limitations, osteological and palaeopathological analysis yielded ample information about the individual. The skeleton showed evidence for both, healed and ongoing inflammation at the time of death. Due to porosity in the eye orbits and new woven bone formation in the left orbit and the skull, as well as porosity on the inner skull (wings of sphenoid), and lamellar bone deposits on the left lower leg, it was suggested that the child might have had vitamin C deficiency scurvy, which had not completely healed at the time of death. Alternatively, each of these lesions might have had different causes.

With regards to dental health, due to all teeth having erupted not long before death, no destructive dental diseases, such a caries, were observed. However, there was a single enamel defect in the form of a pit on the crown of the left deciduous mandibular canine, and the position of the defect, coupled with information about the development of the crown of this tooth, suggested that the defect likely occurred around the time of birth, and might have been the result of a localised trauma.

7.0 FUTURE RECOMMENDATIONS

Obtaining AMS dates for skeletal remains from Ayton Road, Seamer, is highly recommended to better understand the significance of the funerary, osteological and palaeopathological data presented in this report.

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APPENDIX A: OSTEOLOGICAL AND PALAEOPATHOLOGICAL CATALOGUE

Skeleton Number	**202**											
Preservation	Poor (4)											
Completeness	40% Fragmentary cranium, mandible; fragments of C2-5; T1; L4-5; S1-2; 9 right and 3 left ribs (fragmentary); fragmentary right and left humerus, radius, ulna; fragmentary right ilium; fragmentary right and left femora; fragmentary right tibia and fibula; left fibula											
Age	1.5-2 years (young juvenile)											
Sex	-											
Stature	-											
Non-Metric Traits	-											
Pathology	Porosity on the right wing of sphenoid; endocranial new bone formation on the frontal and occipital bones, and in the left orbit; cribra orbitalia in both orbits; slight lamellar bone on the left tibia											
Dental Health	19 tooth positions, 11 teeth present, including developing crowns of right mandibular M1 and right maxillary M1; 8 teeth lost post-mortem; DEH in left deciduous mandibular canine											
	Right Dentition						Left Dentition					
Present	U	PM	E	PM	P	P	PM	PM	-	-	-	-
Calculus	-	-	-	-	-	-	-	-	-	-	-	-
DEH	-	-	-	-	-	-	-	-	-	-	-	-
Caries	-	-	-	-	-	-	-	-	-	-	-	-
Wear	-	-	-	-	-	-	-	-	-	-	-	-
Maxilla	**6**	**e**	**d**	**c**	**b**	**a**	**a**	**b**	**c**	**d**	**e**	**6**
Mandible	**6**	**e**	**d**	**c**	**b**	**a**	**a**	**b**	**c**	**d**	**e**	**6**
Present	U	U	E	PM	P	P	PM	PM	U	E	P	PM
Calculus	-	-	-	-	-	-	-	-	-	-	-	-
DEH	-	-	-	-	-	-	-	-	p	-	-	-
Caries	-	-	-	-	-	-	-	-	-	-	-	-
Wear	-	-	-	-	-	-	-	-	-	-	-	-

KEY:
Present - Tooth presence; am - ante-mortem tooth loss; pm - post-mortem tooth loss; p - tooth present; - - jaw not present; e – erupting; u-unerupted; (l) – loose, i.e. socket not present; n/o – not observable
Caries, Calculus; F - flecks of calculus; S - slight calculus; M - moderate calculus; H - heavy calculus; a - all surfaces; b - buccal surface; d - distal surface; m - mesial surface; l - lingual surface; o - occlusal surface
DEH - dental enamel hypoplasia; l - lines; g - grooves; p - pits
Caries; S - small lesions; M - moderate lesions; L - large lesions
Wear - dental wear; numbers from 1-8 - slight to severe wear

LICENCE FOR THE REMOVAL OF HUMAN REMAINS

The Secretary of State, in exercise of the power vested in him by section 25 of the Burial Act 1857 (20 & 21 Vic., cap.81), grants a licence for the removal of the remains of **persons unknown** from or within the place in which they are now interred at the **Stoney Haggs Road, Ayton Road, Seamer, Scarborough, North Yorkshire, Grid Ref: TA 01478 84206.**

2. It is a condition of this licence that the following precautions shall be observed:

   (a) Any removal or disturbance of the remains shall be affected with due care and attention to decency;

   (b) The ground in which the remains are interred shall be screened from the public gaze while the work is in progress;

   (c) The remains shall, no later than 02 July 2024, be deposited within the museum. In the meantime, shall be kept safely, privately and decently by MAP Archaeological Practice Ltd under the control of a competent member of staff.

3. This licence merely exempts those from the penalties, which would be incurred if the removal took place without a licence. It does not in any way alter civil rights. It does not confer the right to bury the remains in any place where such right does not already exist.

4. This licence expires on **02 July 2024.**

Dipal Patel
On behalf of the Secretary of State for Justice

Ministry of Justice

Licence Number: **19-0157**
Date: **03 July 2019**

Quartz Optical Dating Report
Beacon Rd, Seamer, East Yorkshire, UK

Abstract: Optically stimulated luminescence (OSL) dating was applied to coarse quartz grains extracted from four samples taken from the Beacon road site, Seamer, UK. Samples responded well to OSL measurement. Samples measured showed reasonable reproducibility for three of the samples with mostly normally distributed De data and reasonably low overdispersion. One sample appears to have suffered from either post-depositional disturbance by bioturbation or partial bleaching. Steps were taken to mitigate the effects of this. Ages range from 16.44 ± 1.35 to 2.34 ± 0.16 ka and appear to be in stratigraphically consistent and with some consistency between ditch fills.

Introduction

A total of four samples from the Beacon road site, Seamer, UK were submitted for luminescence dating by Charlie Stodat (MAP Archaeological). The samples were assumed not to have been exposed to sunlight during sampling or transportation. All luminescence work was carried out at the Sheffield Luminescence Laboratory (SLL). Upon arrival at SLL, the samples were allocated Sheffield lab numbers (Table 1), which are used throughout this report. This report provides a brief summary of the procedures employed and results obtained for the samples.

Table 1. *Sample descriptive data.*

Lab No.	**Field Reference**	**Latitude** (° N)	**Longitude** (° W)	**Altitude** (m)	**Sampling Depth** (m below present-day surface)
Shfd19176	333	54°14'	0°26'	35	2.0
Shfd19177	392	54°14'	0°26'	35	2.3
Shfd19178	393	54°14'	0°26'	35	1.6
Shfd19179	395	54°14'	0°26'	35	1.7

In order to derive an optically stimulated luminescence (OSL) age both the palaeodose (De - the amount of absorbed dose since the sample was buried) and the dose rate (the estimated radiation flux for the sedimentary bodies) have to be determined. Bateman (2019) gives a detailed explanation of both these parameters. To calculate an age, the palaeodose (expressed in Grays) is divided by the annual dose rate (Grays/yr). An inherent assumption in these age calculations is that the sediment was fully reset or 'bleached' by exposure to sunlight during the last transport event or whilst *in situ* prior to burial and that no post-depositional sediment disturbance has occurred.

As part of this investigation, efforts have been taken to establish if these sediments have been bleached prior to burial or disturbed by, for example, bioturbation be measuring up to 24 replicates of each sample. As the OSL signal measured at the small single aliquot level is an average of ~900 grains, the true distribution of De values may be masked. Further measurements at the single grain level would have to be made to check if this is an issue or not.

1. Dose Rate Analysis

Naturally occurring potassium (K), thorium (Th), uranium (U) are the main contributors of dose to sedimentary quartz.. The concentrations of these elements were determined by inductively coupled plasma mass spectrometry (ICP) at SGS laboratories Ontario Canada (Table 2). Elemental concentrations were converted to annual dose rates using data from Adamiec and Aitken (1998), Marsh *et al.* (2002), and Aitken (1998). Calculations took into account attenuation factors relating to sediment grain sizes used, density and palaeomoisture (Table 2). Attenuation of dose by moisture used present-day values with a ± 3 % error to incorporate fluctuations through time (Table 2).

Table 2. *Summary of dosimetry related data.*

Lab Code	U (PPM)	Th (PPM)	K (%)	D_{cosmic}[+] (µGy/a^{-1})	Moisture (%)	Dose rate[†] (µGy/a^{-1})
Shfd19176	1.94	6.7	1.1	161 ± 8	17	1804 ± 86
Shfd19177	1.63	6.6	1.1	155 ± 8	17	1737 ± 83
Shfd19178	1.90	7.0	0.8	170 ± 8	10	1729 ± 78
Shfd19179	1.94	7.3	1.0	168 ± 8	16	1787 ± 83

[+] Cosmic dose is calculated as a linear decay curve at depths below 50 cm. Above this depth, errors in calculation may lead to an underestimation of the cosmic dose contribution.

[†] Total dose is attenuated for grain size, density and moisture.

The contribution to dose rates from cosmic sources was calculated using the expression published in Prescott and Hutton (1994; Table 2). The Prescott and Hutton (1994) algorithm was used to calculated the cosmogenic derived dose rate. The dose rates calculated are based on analyses of the sediment sampled at the present day. This assumption is only valid if no movement and/or re-precipitation of the four key elements has taken place since sediment burial and the adjacent sediments to those sampled had similar dose rates. Further analysis would have to be undertaken to establish whether radioactive disequilibrium is present in the dose rate and whether this has cause errors in age determination.

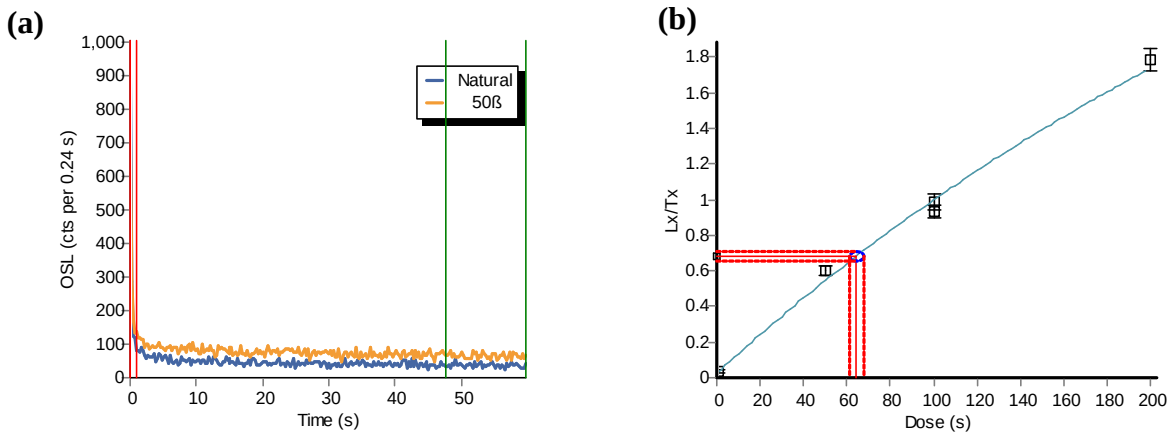

Figure 1 Examples of small aliquot OSL data for sample Shfd19176: (a) OSL decay of naturally acquired signal; (b) SAR growth curve. The red lines in (a) indicate the integration limits for signal measurement, and the green lines background measurement once the signal has been zeroed. In (b) the luminescence response (Lx) to a series of known doses is normalised by test dose response (Tx) and plotted against dose. The red line represents interpolation of the natural dose (De).

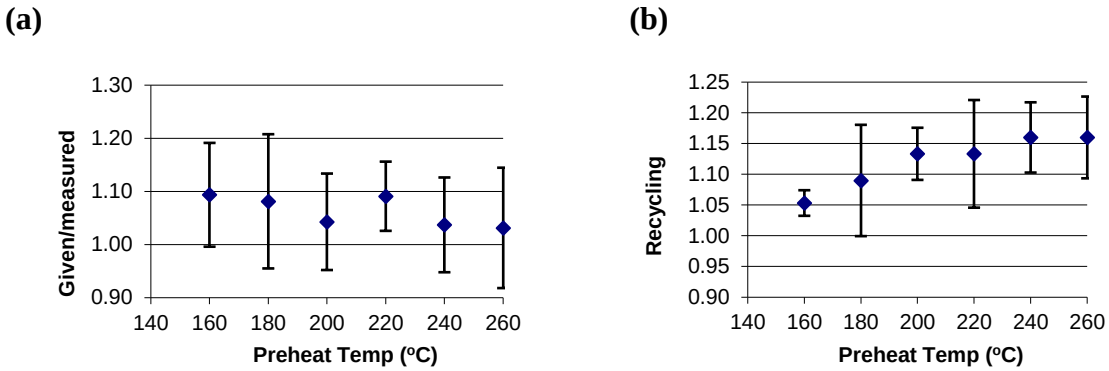

Figure 2. Results of different preheat temperatures in recovering a ~20 Gy beta radiation dose from sample Shfd19176 (a) Given to recovered dose ratio at different preheat temperatures. (b) recycling ratio (ratio between the first and last dose point) at the different preheat temperatures. Data points in both plots are the averages of three measurements performed for each preheat temperature.

2. Palaeodose Determination

Samples were prepared under subdued red lighting following the procedure to extract and clean quartz outlined in Bateman and Catt (1996). Material for dating was taken from prepared quartz isolated to a size range of 90-180 μm. The samples underwent measurement using a Risø DA-20 luminescence reader with radiation doses administered using a calibrated ^{90}strontium beta source. Grains were mounted as a 5 mm diameter monolayer on 9.6 mm diameter stainless still disks using silkospray. Stimulation was with blue/green LEDs and luminescence detection was through a Hoya U-340 filter. Samples were analysed using the single aliquot regenerative (SAR) approach (Murray & Wintle, 2000; Murray & Wintle, 2003), in which an interpolative growth curve is constructed using data derived from repeated measurements of a single aliquot which has been given various laboratory irradiations (Figure 1a and 1b). Five regeneration points were used to characterise growth curves, with the first regeneration point being identical to the last in order to check if sensitivity changes caused by repeated measurement of the same grains are correctly monitored and corrected for by the SAR protocol (known as the “recycling ratio”). The most appropriate preheat temperature for the samples was selected using a dose recovery preheat plateau test (Figure 2). This resulted in selection of preheat temperatures of 180 °C for 10 seconds which was applied to prior to each OSL measurement to remove unstable signal generated by laboratory irradiation. As feldspar contamination was detected using IRSL prior to each SAR OSL measurements aliquots were subjected to an IRSL wash to remove feldspar derived signal. De values from individual aliquots were only accepted if they exhibited an OSL signal measurable above background, good growth with dose, recycling values within ± 20 % of unity, and the error on the test dose used within the SAR protocol was less than 20 %. The samples possessed good luminescence characteristics with a rapid decay of OSL with stimulation and OSL signals dominated by a fast component (e.g. Fig. 1a). Within the SAR protocol results which grew well with laboratory dose (e.g. Fig. 1b).

3. Sedimentary bleaching behaviour and sample saturation

The effects of incomplete bleaching of the sediment during the last period of transport or exposure *in situ* can be profound. Typically, poorly bleached sediments retain a significant level of residual signal from previous phases of sedimentary cycling, leading to inherent inaccuracies in the calculation of a palaeodose value. By plotting the replicate De data for the sample as a probability density function (Figure 3) some assessment of whether older or younger material has been included in the sample measurements can be made. In principle a well-bleached sample that has not been subjected to

post-depositional disturbance should have replicate De data which is normally distributed and highly reproducible (see Bateman *et al.*, 2003, Figure 3; Bateman *et al.*, 2007a). Where post-depositional disturbance or incomplete bleaching prior to sample burial has occurred skewing of this distribution may occur and/or replicate reproducibility may be lower (Bateman *et al.*, 2007a; Bateman *et al.*, 2007b). In the case of poorly bleached material skewing should be evident with a high De tail (e.g. Olley *et al.*, 2004). High De tails may also be indicative of saturated samples and interpolation of the De values from the upper, low gradient part of the growth curve (Murray & Funder, 2003).

Table 3. *Summary of single grain palaeodose data and ages for Hatfield Road, Doncaster*

Lab Code	Field Ref.	Depth (m)	De (Gy)	Overdispersion (%)	Dose rate (μGy/a^{-1})	Age (ka)
Shfd19176	333	2.0	4.61 ± 0.18	29	1804 ± 86	**2.56 ± 0.16**
Shfd19177	392	2.3	8.2 ± 1.33*	52	1737 ± 83	4.70± 0.79**
			17.88 ± 1.87*			**10.3 ± 1.18**
Shfd19178	393	1.6	28.42 ± 1.95	26	1729 ± 78	**16.44 ± 1.35**
Shfd19179	395	1.7	4.19 ± 0.09	6	1787 ± 83	**2.34 ± 0.12**

* De components extracted using Finite Mixture model due to high overdispersion and bimodality of De replicate data (See Figure 3).

** interpreted as disturbed and representing only 16% of measured replicates so other age of sample suggested.

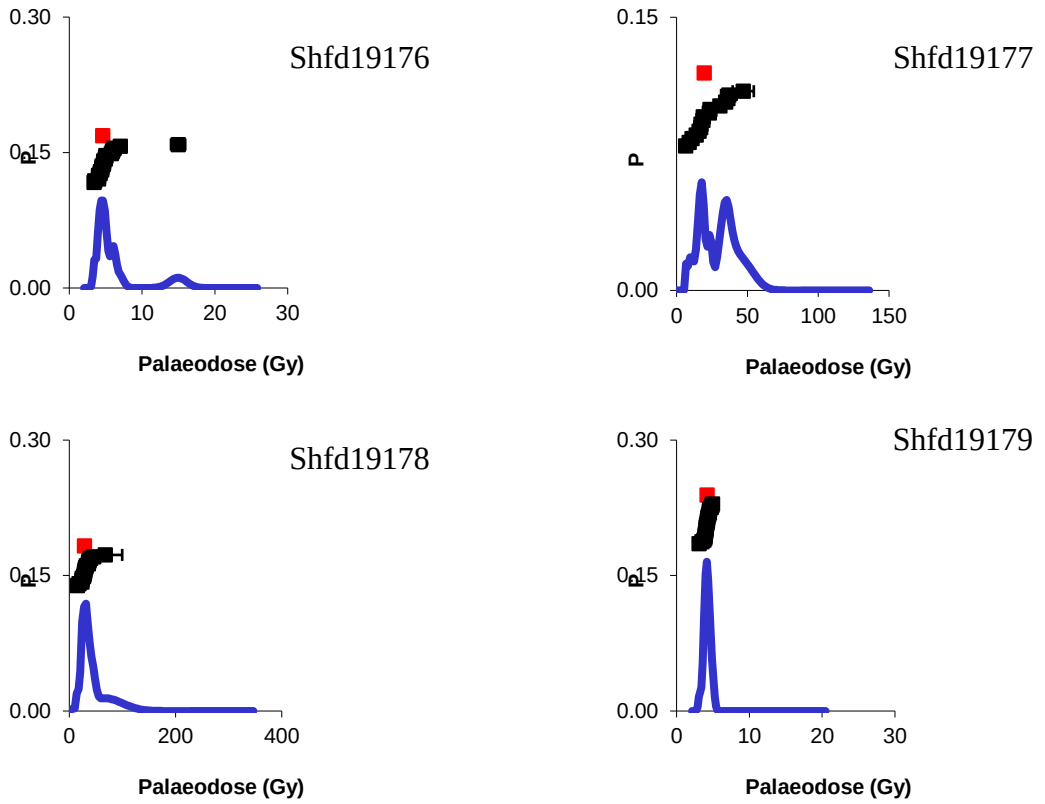

Figure 3 De distribution plots for samples. Blue line is combined probability density for all grains. Black points are results from individual grains. Note dose is scaled as appropriate for data.

As Figure 3 demonstrates (see also Appendix 1), the De replicate distributions for samples Shfd19176, Shfd19178 and Shfd19179 are broadly normally distributed (especially after outliers are removed) with low levels of De replicate scatter (OD <30%; values given in Table 3). This data shows no indication that either partial bleaching or post-depositional disturbance. De values for age calculation purposes have been extracted using the Central Age Models (CAM) of Galbraith and Green (1990). Sample Shfd19177 has very scattered De replicates and 5 saturated (unreset) aliquots were measured. This sample therefore is interpreted has having incomplete resetting on burial and/or post-depositional disturbance. To mitigate against the effects of this De values for age calculation purposes were extracted using the Finite Mixture Model (Galbraith and Green 1990). For this sample three components were extracted. The one selected for age calculation purposes is the second lowest which represents 50% of the data. Whilst the youngest component might represent the most reset, it only represented 16% of the data and might reflect post-depositional disturbance. Ages for both are shown in Table 3

5. Age Calculation and Conclusions

Ages are quoted in years from the present day (2020) and are presented with one sigma confidence intervals which incorporate systematic uncertainties with the dosimetry data, uncertainties with the palaeomoisture content and errors associated with the De determination. Table 3 shows the final OSL age estimates. Aliquot-specific data for each sample is included in Appendix 1. Whilst steps to mitigate against identified bioturbation/partial bleaching problems have been taken some caution should be made with the ages derived from the sample affected. Ages range from 16.44 $\pm$ 1.35 to 2.34 $\pm$ 0.16 ka and appear to be in stratigraphically consistent and with some consistency between ditch fills.

Prof Mark D. Bateman

6. References

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Appendix 1

OSL data and plots for the Beacon Road, Seamer site

Sample specific data including:-

- list of De values derived from individual aliquots
- calculated means based on a range of statistical models
- histogram plot of distribution of De within a sample
- probability density plot (curve) with ranked De data (black points) and probability mean (uppermost red point).

Field Code:	**333**		**Seamer**
Lab Code:	**Shfd19176**		**UK**
Aliquot Size:	**5 mm**		

Aliquot	Palaeodose (Gy)	error
1	4.700	0.301
2	5.025	0.242
3	4.728	0.471
4	3.987	0.139
5	5.917	0.532
6	6.987	0.420
7	6.005	0.207
8	6.164	0.356
9	14.945	0.976
10	3.411	0.094
11	4.246	0.168
12	4.273	0.233
13	4.929	0.188
14	4.489	0.284
15	4.001	0.407
16	4.437	0.280
17	5.757	0.398
18	4.974	0.178
19	4.458	0.198
20	3.464	0.146
21	4.021	0.187
22	4.661	0.155

	De (Gy)	error
Minimum	3.41	0.09
Maximum	14.94	0.98
N	22	

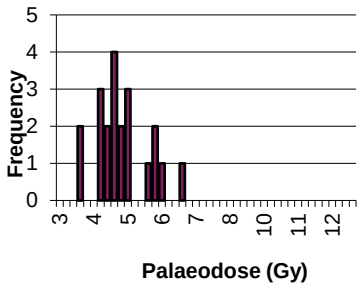
Unweighted	All Data	Minus Outliers
Mean (Gy)	5.25	4.68
SD	2.34	0.79
SE	0.50	0.17
N	22	20

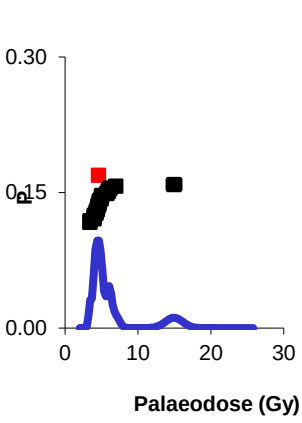
Weighted	All Data	Minus Outliers
Mean (Gy)	4.32	4.27
SD	0.92	0.75
SE	0.20	0.17
N	22	20

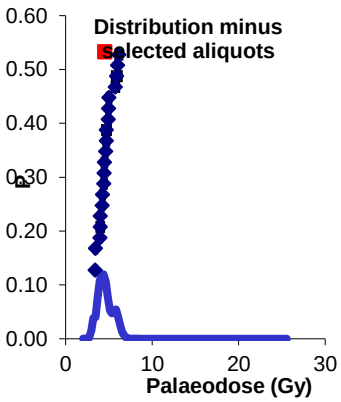
Probability	All Data	Minus Outliers
Mean (Gy)	4.59	4.54
SD	0.78	0.60
SE	0.17	0.13
N	22	20

Central Age Model	All Data	Minus Outliers
Mean (Gy)	4.96	4.61
SD	0.32	0.18
OD (all data)	29.22%	15.56%
N	22	20

De Distribution	**All Data**	**Minus Outliers**
Skewness	2.32	-0.09
Kurtosis	15.15	-0.38
Median	4.68	4.57
Sorting	0.19	0.16







Field Code:	**392**		**Seamer**
Lab Code:	**Shfd19177**		**UK**
Aliquot Size:	**5 mm**		

Aliquot	Palaeodose (Gy)	error
1	6.368	0.190
2	8.861	0.634
3	36.218	2.609
4	11.067	0.787
5	23.715	1.192
6	17.372	1.384
7	15.849	1.327
8	13.931	1.332
9	23.098	1.335
10	47.066	7.475
11	18.618	1.272
12	18.935	1.428
13	34.669	1.843
14	30.744	2.219
15	36.928	5.481
16	17.122	1.417
Saturated aliquots	5	

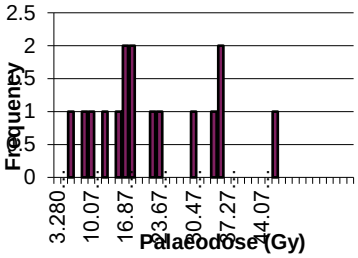
	De (Gy)	error
Minimum	6.37	0.19
Maximum	47.07	7.47
N	16	

Unweighted	All Data	Minus Outliers
Mean (Gy)	22.53	20.90
SD	11.53	9.83
SE	2.88	2.46
N	16	15

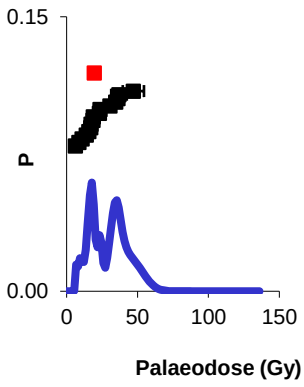
Weighted	All Data	Minus Outliers
Mean (Gy)	8.78	8.77
SD	5.52	5.46
SE	1.38	1.41
N	16	15

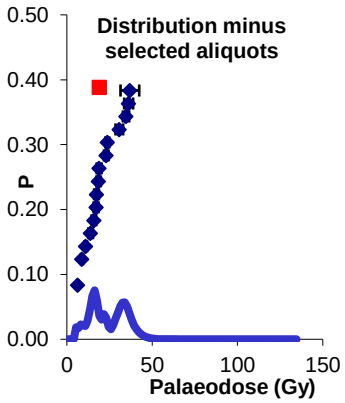
Probability	All Data	Minus Outliers
Mean (Gy)	19.52	19.06
SD	8.01	7.45
SE	2.00	1.92
N	16	15

Central Age Model	All Data	Minus Outliers
Mean (Gy)	19.62	18.57
SD	2.61	2.40
OD (all data)	52.47%	49.50%
N	16	15



De Distribution	**All Data**	**Minus Outliers**
Skewness	-0.07	-0.33
Kurtosis	-0.35	-0.89
Median	18.78	18.62
Sorting	0.47	0.43
MAM	8.75	1.65





FMM		
8.2	1.330	16%
17.88	1.87	50%
34.65	4.33	33%

Field Code:	**393**		**Seamer**
Lab Code:	**Shfd19178**		**UK**
Aliquot Size:	**5 mm**		

Aliquot	Palaeodose (Gy)	error
1	37.394	6.587
2	27.803	2.691
3	24.430	1.373
4	26.579	2.700
5	18.404	1.794
6	28.406	3.872
7	32.281	4.025
8	28.846	3.789
9	23.815	2.378
10	31.076	2.077
11	35.582	3.271
12	14.930	0.964
13	36.429	4.580
14	29.873	4.066
15	40.135	6.155
16	46.105	3.659
17	67.813	31.766
18	23.576	2.187

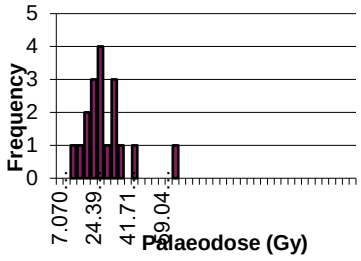
	De (Gy)	error
Minimum	14.93	0.96
Maximum	67.81	31.77
N	18	

Unweighted	All Data	Minus Outliers
Mean (Gy)	31.86	29.74
SD	11.77	7.85
SE	2.77	1.85
N	18	17

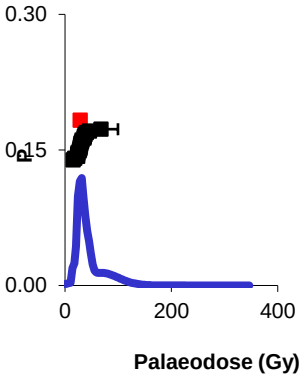
Weighted	All Data	Minus Outliers
Mean (Gy)	23.02	23.01
SD	7.51	7.48
SE	1.77	1.81
N	18	17

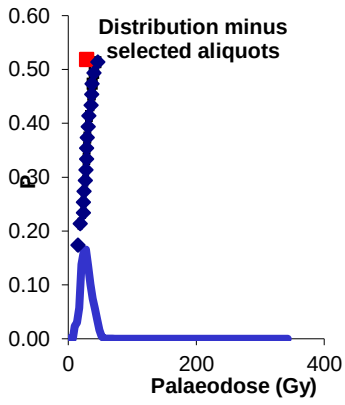
Probability	All Data	Minus Outliers
Mean (Gy)	28.62	28.51
SD	6.15	5.91
SE	1.45	1.43
N	18	17

Central Age Model	All Data	Minus Outliers
Mean (Gy)	28.83	28.42
SD	2.00	1.95
OD (all data)	26.59%	26.13%
N	18	17



De Distribution	**All Data**	**Minus Outliers**
Skewness	0.07	-0.28
Kurtosis	4.45	0.13
Median	29.36	28.85
Sorting	0.26	0.22





Field Code:	**395**	**Seamer**
Lab Code:	**Shfd19179**	**UK**
Aliquot Size:	**5 mm**	

Aliquot	Palaeodose (Gy)	error
1	4.246	0.216
2	4.418	0.244
3	4.244	0.155
4	3.519	0.221
5	3.961	0.150
6	4.314	0.263
7	4.564	0.255
8	4.144	0.159
9	3.123	0.106
10	4.501	0.171
11	3.971	0.242
12	4.054	0.128
13	4.117	0.183
14	3.892	0.203
15	4.757	0.216
16	4.022	0.123
17	4.874	0.190
18	3.920	0.164
19	4.934	0.200
20	4.504	0.167
21	3.752	0.151
22	4.303	0.164
23	4.062	0.249

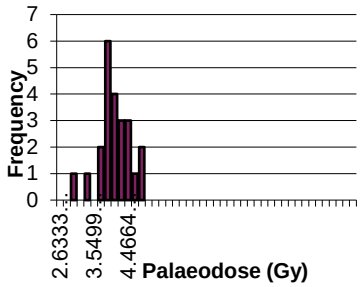
	De (Gy)	error
Minimum	3.12	0.11
Maximum	4.93	0.20
N	23	

Unweighted	All Data	Minus Outliers
Mean (Gy)	4.18	4.20
SD	0.42	0.33
SE	0.09	0.07
N	23	21

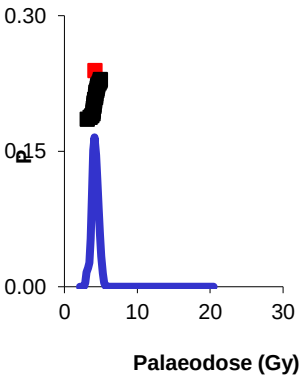
Weighted	All Data	Minus Outliers
Mean (Gy)	4.07	4.16
SD	0.46	0.30
SE	0.10	0.07
N	23	21

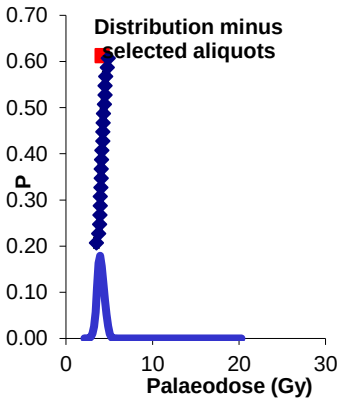
Probability	All Data	Minus Outliers
Mean (Gy)	4.18	4.17
SD	0.33	0.29
SE	0.07	0.06
N	23	21

Central Age Model	All Data	Minus Outliers
Mean (Gy)	4.16	4.19
SD	0.11	0.09
OD (all data)	9.36%	5.95%
N	23	21



De Distribution	**All Data**	**Minus Outliers**
Skewness	-0.43	0.19
Kurtosis	0.79	0.00
Median	4.14	4.14
Sorting	0.09	0.07





mapparch
MAP Archaeological Practice

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL STRIP AND RECORD

Land to the North of Beacon Road and West of Napier Crescent,
Seamer, Scarborough, North Yorkshire

TA 01478 84206

MAP 05.11.2016

Application Number: 17/00452/FL

Prepared for Linden Homes

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Seamer, Scarborough, North Yorkshire
TA 01478 84206

MAP 05.11.2016

Application Number: 17/00452/FL

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL STRIP AND RECORD

1. Summary

1.1 This WSI relates to the archaeological mitigation required on the development at Land to the North of Beacon Road and West of Napier Crescent, Seamer, Scarborough (Planning App 17/00452/FL) to discharge Condition. Archaeological recording is to take place over 3.5 hectares of the 9 Hectare site.

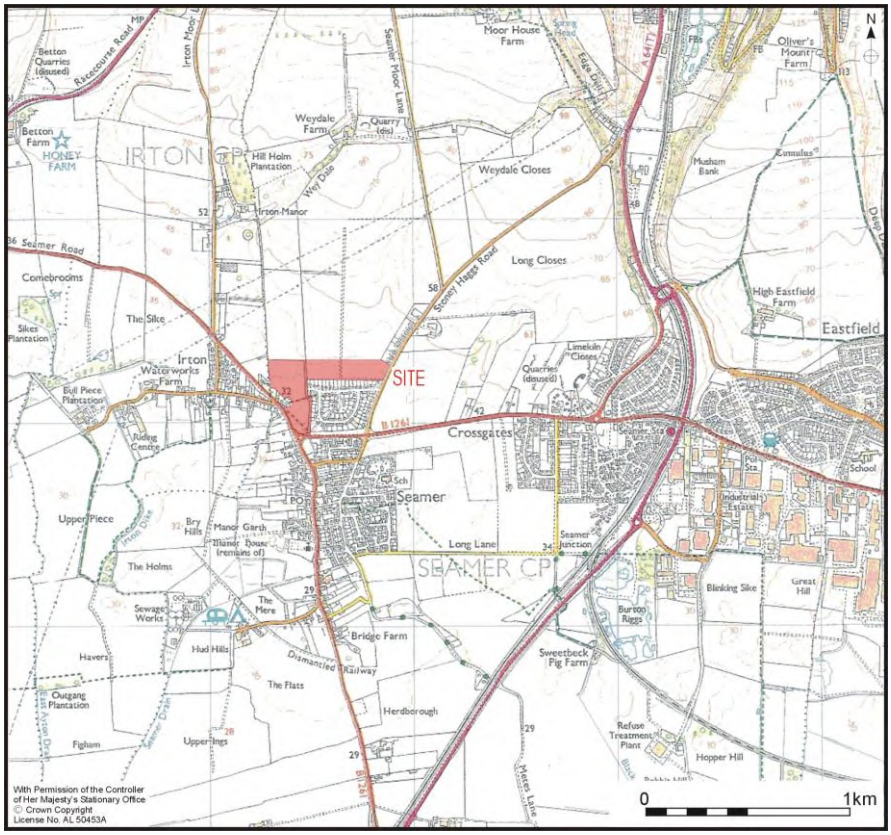
2. Purpose

2.1 This written scheme of investigation (WSI) represents a summary of the broad archaeological requirements to mitigate the impact of development proposals upon the archaeological resource and to comply with the archaeological planning condition. This is in accordance with the National Planning Policy Framework (March 2012).

3. Location and Description

3.1 The proposed development is situated on the Northern edge of Seamer, located at Land North of Beacon Road and West of Napier Crescent, Seamer, North Yorkshire and is 9 hectares in size (Fig 1).

3.2 The geology of the site consists of sandstone of the Upper Calcareous Grit Formation in the south and west of the site and limestone of the Malton Oolite Member and Coral Rag Member also overlain by sand and gravel in the north and east overlain by sand and gravel of uncertain age and origin (British Geological Survey, 2017). The soils of the site are described as freely draining slightly acid loamy soils (Soilscapes, 2017).



4. Archaeological and Historical Background

4.1 MAP Archaeological Practice Ltd have undertaken a Desk Based Assessment for the site.

4.2 Phase Site Investigation undertook a Geophysical Survey in April 2017. The survey has provided evidence for significant archaeological activity, in the

form of Several series of ditches that are related to archaeological trackways / roads as well as several probable and possible archaeological enclosures / parts of enclosures and what appear to be the remains of a sub-circular archaeological feature. There are numerous anomalies relating to modern material / objects, agricultural activity (including ridge and furrow) and geological / pedological variations but there are also a large number of linear / curvi-linear anomalies of uncertain origin.

4.3 The reliable interpretation of many responses has been hampered by the presence of anomalies that are suggestive of natural features / variations, as well as relatively strong responses from agricultural activity. In some instances it is not certain whether an anomaly is caused by a natural feature /variation, agricultural activity or potentially an archaeological feature. This includes a circular response and part of an adjoining circular response in the east of the site which could be related to archaeological features but could possibly be caused by recent vehicle tracks.

4.4 There are several areas where very strong responses or magnetic disturbance from modern features / material dominate the surrounding data. It should be recognised that the strength of the strong responses could mask anomalies from other sub-surface features in the area. Some of the responses associated with probable and possible archaeological features are fragmented or discontinuous. This may indicate that the archaeological features have been differentially truncated and in places may no longer be present as a physical feature or only the faint remnants of a feature. It is worth noting that the presence of strong responses related to infilled archaeological features and relatively strong, anomalies associated with ridge and furrow, modern ploughing activity and natural

features / variations indicate that the soil has a magnetic susceptibility that is sufficiently high to produce measureable magnetic responses when enhanced. This suggests that all significant (in terms of size / depth) infilled archaeological features would also produce measureable magnetic responses and that it is unlikely that any additional features of this type would be present, other than those that have been identified.

4.5 An Archaeological Evaluation by Trial Trenching was carried out by MAP Archaeological Practice Ltd in May 2017. The work was undertaken as part of a programme of archaeological evaluation to assess the impact of proposed residential development on site. Ten Trial Trenches, measuring various sizes, were excavated to establish the nature, location, extent and state of preservation of any archaeological deposits. Trenches 1, 5, 8 and 9 were staggered and altered in size to accommodate for existing tramlines in the crop. Two areas of archaeological activity were identified by the Geophysical Survey and Trial Trenching: including the double ditched trackway aligned north-northeast by south-south-west crossing the eastern side of Area 1 and into the western part of Area 2. A second trackway was identified on the edge of Area 3 and comprised a cobbled surface with associated ditch. A series of pits, ditches and gullies within Trenches 2, 3 and 4 produced pottery and concentrations of carbonised remains indicative of Late Iron Age/ Romano-British settlement. No archaeological features were revealed in Trenches 5, 7 and 9.

5. Objectives

5.1 The objectives of the archaeological work are to :

1. to determine by means of targeted archaeological excavation the character, extent and nature of the archaeological remains within the development area,

2. to locate, recover, identify, assess and conserve (as appropriate) any archaeological artefacts exposed during the course of the excavation,

3. where appropriate, to undertake a post-excavation assessment after completion of fieldwork and site archive to assess the potential for further analysis and publication, and to undertake such analysis and publication as appropriate,

4. to prepare and submit a suitable archive to the appropriate museum.

6. Access, Safety and Monitoring

6.1 Access to the site should be arranged through the commissioning body.

6.2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled. Necessary precautions should be taken near underground services and overhead lines. A risk assessment should be provided to the commissioning body before the commencement of works.

6.3 The project will be monitored by the Historic Environment Team, NYCC, to whom written documentation should be sent ten days before the start of the excavation including:

1. the date of commencement,

2. an opportunity to monitor the works.

6.4 Where appropriate, the advice of the Historic England Science Advisor for Yorkshire may be called upon to monitor the archaeological science components of the project. Archaeological contractors may wish to contact him to discuss the science components of the project before submission of tenders.

6.5 It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows:

1. a preliminary meeting or discussion at the commencement of the contract.
2. progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed.
3. a meeting during the post-fieldwork phase to discuss the draft report and archive before completion.

6.6 It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Historic Environment Team, NYCC, Scarborough Borough Council; and the commissioning body as soon as is practically possible. This is particularly important where there is any likelihood of contingency arrangements being required.

7. Brief

7.1 The archaeological contractor should be informed in advance of the correct timing and schedule of site preparation and preliminary excavation works associated with the construction of the proposed development. A specified

timetable should be agreed within which the archaeological excavation may be carried out prior to further construction commencing.

7.2 All excavations within the proposed development area should be observed by an archaeologist to record any archaeological deposits, features or finds.

7.3 Archaeological work within the area of proposed development should include the initial supervision of the preliminary site/topsoil strip areas down to the top of archaeological deposits. Overburden such as turf, topsoil, made ground, rubble or other superficial fill materials may be removed by machine using a back-acting excavator which should be fitted with a toothless or ditching bucket. Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil (C Horizon or soil parent material), whichever appears first. Bulldozers or wheeled scraper buckets

should not be used to remove overburden above archaeological deposits. Topsoil should be kept separate from subsoil or fill materials.

7.4 Using the information and artefacts collected to this stage, all features and deposits should be assessed as to their origin or function, probable date, and importance for further recording. Features and layers identified as having potential for further recording should be excavated by hand, sampled, and recorded as set out below. This is in order to fulfil Objectives 5.1.1 and 5.1.2 above and in order to understand the full stratigraphic sequence.

7.5 The character, information content and stratigraphic relationships of features and deposits should be determined. All linear features, such as ditches, should have their shape, character, and depth determined by hand excavation of sections. A minimum sample of 20% of each linear feature of less than 5m in length and a minimum sample of 10% of each linear feature greater than 5m in length (each section will be not less than 1m wide) should be excavated. All junctions of linear features should have their stratigraphic relationships determined, if necessary using box sections. A 100% sample of all stake-holes should be excavated, and all pits, post-holes and other discrete features should be half-sectioned by hand to record a minimum of 50% of their fills, and their shape. Any other unknown or enigmatic features should be investigated similarly. Large pits, post-holes or deposits of over 1.5m diameter should be excavated sufficiently to define their extent and to achieve the objectives of the investigation, but should not be less than 25%. All intersections should be investigated to determine the relationship(s) between features.

7.6 The project should be undertaken in a manner consistent with the guidance of MoRPHE and professional standards and guidance (English Heritage 2006). Scientific investigations should be undertaken in a manner consistent with the Institute for Archaeologists best-practice guidelines (2008). An outline strategy of sampling for scientific dating, geoarchaeology and soil science (English Heritage 2007), biological analysis (English Heritage 2011), artefact conservation and analysis (Watkinson and Neal 1998), and analysis of technological residues (English Heritage 2008), ceramics, and stone should be agreed with the Local Authority, in consultation with the Historic England Science Advisor for Yorkshire before commencement of site work. This strategy should be based on the results of previous archaeological work in the area. The strategy will be subject to variation as appears necessary during the excavation, following consultation with the Local Authority and the RA.

7.7 All specialists in Archaeological Science (both those employed in-house by the archaeological contractor or those sub-contracted) should be named in project documents. Agreement of specialists must always be obtained before their names are listed. Their competence to undertake proposed investigations, and the availability of adequate laboratory facilities and reference collections should be demonstrated. There should be agreement in writing on timetables and deadlines for all stages of work.

7.8 All deposits should be fully recorded on standard context sheets, photographs and conventionally-scaled plans and sections. Each excavation area should be recorded to show the horizontal and vertical distribution of contexts. The elevation of the underlying natural subsoil where encountered should be recorded. The limits of excavation should be shown

in all plans and sections, including where these limits are coterminous with context boundaries.

7.9 Any significant unstratified artefacts or small finds should be collected. Metal detecting, including the scanning of topsoil and spoil heaps, should only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved.

7.10 Using the information and artefacts collected to this stage, all features and deposits should be assessed as to their origin or function, probable date, and importance for further excavation. Features and layers identified as having potential for further recording should be fully excavated, sampled, and recorded. Full excavation should be carried out on features and deposits of limited potential where the stratigraphic relationships, phasing or origin of these are still unclear. Further excavation may also be needed to expose the full stratigraphic sequence across the site.

7.11 All artefacts and ecofacts visible during excavation should be collected and processed. In some cases, sampling may be most appropriate. Finds should be appropriately packaged and stored under optimum conditions, as detailed in *First Aid for Finds* (Watkinson & Neal, 1998). A regular transfer of finds from the site to the conservation laboratory is desirable, particularly in the case of long term excavations (English Heritage 2008).

7.12 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (*c.* 10ml) should be collected for micro-slags hammer-scale and

spherical droplets). In these instances, the guidance of English Heritage (2001) should be followed.

7.13 Samples should be collected for scientific dating (radiocarbon, dendrochronology, luminescence dating, archaeomagnetism and/or other techniques as appropriate) (English Heritage 1998, English Heritage 2006 and English Heritage 2008). For this excavation, tenders should allow provision for a minimum of four dates using scientific techniques.

7.14 Buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Samples may be collected for analysis of chemistry, magnetic susceptibility, particle size, micromorphology and/or other techniques as appropriate, following the outline strategy presented in the Project Design, and in consultation with the geoarchaeologist. The guidance of English Heritage (2007) should be followed.

7.15 All securely stratified deposits should be sampled, from a range of representative features, including pit and ditch fills, postholes, floor deposits, ring gullies and other negative features. Positive features should also be sampled. Sampling should also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Bulk samples should be collected from contexts containing a high density of bones. Spot finds of other material should be recovered where applicable.

7.16 Coarse sieved samples for the recovery of animal bones and other artefact/ecofact categories should be 100 litres plus. Flotation samples, for

the recovery of charred plant remains, charcoal, small animal bones and mineralised plant remains, should be between 40 and 60 litres in size, although this will be dependent upon the volume of the context. Entire contexts should be sampled if the volume is low. Whenever possible, coarse sieved samples (wet or dry) and flotation samples should be processed during fieldwork to allow the continuous reassessment and refinement of sampling strategies. Samples from waterlogged and anoxic deposits, which might contain plant macros and entomological evidence, taken for General Biological Analysis (GBA), should normally be 20 litres in size. The English Heritage guidance (2011) should be consulted for details of sample size for other specialist samples that may be required. Allowance should be made for a site visit from the contractor's environmental specialists/consultants where appropriate.

7.17 In the event that any human remains are encountered, they must be treated at all stages with care and respect. Excavators must be aware of, and comply with, the relevant legislation and the Ministry of Justice Exhumation Licence and local environmental health concerns. Burials should be recorded *in situ* and subsequently lifted, washed in water (without additives), marked and packed to standards compatible with McKinley and Roberts (1993)., Brickley & McKinley 2004 and English Heritage 2013. Site inspection by a recognised specialist is desirable in the case of isolated burials, and necessary for cemeteries. Proposals for the final placing of human remains following study and analysis will be required in the Updated Project Design. For this excavation, tenders should allow provision for any human remains to be subject to carbon and nitrogen isotope study.

Post-Excavation Assessment

7.18 Upon completion of archaeological fieldwork, where appropriate, a post-excavation assessment should be undertaken and an assessment report produced in accordance with the guidance of MoRPHE (English Heritage 2006). The assessment report should summarise the evidence recovered and should consider its potential for further analysis, review the programme of archaeological science, update the project design as necessary and provide costings for the post-excavation analysis stage of work, with proposals for the production of a final report and/or publication. The site assessment report should include reports on all aspects of Archaeological Science investigated, and include assessment of their suitability for analysis, so as to inform the updated project design.

7.19 Assessment of artefacts should include x-radiography of all iron objects (Fell, Mould & White 2006), after initial screening to separate obviously modern debris, and a selection of non-ferrous artefacts (including all coins and a sample of any industrial debris relating to metallurgy). An assessment of all excavated material should be undertaken by conservators and finds researchers in collaboration English Heritage, 2008). Where necessary, active stabilisation/consolidation will be carried out, to ensure long term survival of the material, but with due consideration to possible future investigations. Once assessed, all material should be packed and stored in optimum conditions, as described in Watkinson and Neal (2001).

7.20 Assessment of any technological residues should be undertaken. Processing of all samples collected for biological assessment, or sub-samples of them, should be completed. Assessment will include recording the preservation state, density and significance of material retrieved, to inform up-dated

project designs. Methods presented in English Heritage (2011) should be followed. Unprocessed sub-samples should be stored in conditions specified by the appropriate specialists.

7.21 Samples collected for geoarchaeological assessment should be processed as deemed necessary by the specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment should be undertaken (see English Heritage 2007, English Heritage 2011). Animal bone assemblages, or sub-samples of them, should be assessed by a recognised specialist (English Heritage 2011). Assessment of human remains should be undertaken by a recognised specialist (English Heritage 2004).

Analysis

7.22 A timetable for post-excavation work should be produced, following consultation (including team meetings for larger-scale sites), with all specialists involved in the project. Agreement of timetables should be made in writing with external specialists.

7.23 A detailed and cost-effective strategy for scientific dating should be prepared, in consultation with appropriate specialists. Samples for dating should be submitted to promptly, and prior agreement should be made with the laboratory on turn-around time and report production.

7.24 All artefacts should be conserved and stored in accordance with Watkinson and Neal (1998). Investigative conservation should be undertaken on those objects selected during the assessment phase, with the aim of maximising information whilst minimising intervention (English Heritage 2008). Where

necessary, active stabilisation/consolidation will be carried out, to ensure long-term survival of the material, but with due consideration to possible future investigations. Proposals for ultimate storage should follow Walker (1990).

7.25 Appropriate analysis of technological residues should be undertaken, as outlined in English Heritage (2001). Samples or sub-samples collected for all types of biological and geoarchaeological analysis should be processed, and material retrieved analysed by recognised specialists. Any unprocessed sub-samples should be stored in conditions specified by the specialists, or a reasoned discard policy should be developed (English Heritage 2011).

7.26 Analysis of animal bones should be undertaken by a recognised specialist, as specified in the updated project design. Analysis of human remains should be undertaken by a recognised specialist, as specified in the up-dated project design.

8. Archive

8.1 A field archive should be compiled consisting of all primary written documents, plans, sections and photographs should be produced and cross-referenced (Brown 2007, CIfA 2014, CIfA 2014).

8.2 The archaeological contractor should liase with an appropriate museum to establish the detailed requirements of the museum and discuss archive transfer in advance of fieldwork commencing. The relevant museum curator should be afforded to visit the site and discuss the project results. In this instance, the Yorkshire Museum is suggested.

8.3 The archiving of any digital data arising from the project should be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson, 2000; ADS 2011). The archaeological contractor should liaise with an appropriate digital archive repository to establish their requirements and discuss the transfer of the digital archive.

8.4 The archaeological contractor should also liaise with the HER Officer, North Yorkshire County Council, to make arrangements for digital information arising from the project to be submitted to the North Yorkshire Historic Environment Record for HER enhancement purposes. The North Yorkshire HER is not an appropriate repository for digital archives arising from projects.

9. Copyright

9.1 Copyright in the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of an additional licence in favour of the museum accepting the archive to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions.

9.2 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'. Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements, and ensure that any information

disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

10. Report

10.1 Following post-excavation assessment and analysis as appropriate, a report should be prepared following the Chartered Institute for Archaeologists Standard and Guidance for Archaeological Excavation (2008, updated 2014). The report should set out the aims of the work and the results as achieved, including photographs of operations, description of the remains including all relevant plans and sections, interpretation and assessment of the significance of the remains. The report should also include a listing of contexts, finds, plans and sections, and photographs.

10.2 The results from investigations in Archaeological Science, *including negative results*, should be included in the Site Archive and reported to the HER.

10.3 A timetable for completion of reports should be agreed with all specialists, and agreements in writing with sub-contracted external specialists are desirable. The time-table should allow for adequate provision by the excavator of contextual information, provisional dating and stratigraphic relationships of contexts. Reports should include clear statements of methodology. The results from scientific analysis should be clearly distinguished from their interpretation. Non-technical summaries of results should be included. Reports on Archaeological Science should be published fully, in the text of printed reports or in the main body of reports disseminated by electronic means, wherever the results merit it.

10.4 At least six copies of the report should be produced and submitted to the commissioning body, the Local Planning Authority, the museum accepting the archive, the Historic England Science Advisor for Yorkshire and, under separate cover, Historic Environment Team at North Yorkshire County Council.

10.5 If the archaeological fieldwork produces results of sufficient significance to merit publication in their own right, allowance should be made for the preparation and publication of a summary in a local journal, such as the *Yorkshire Archaeological Journal*. This should comprise, as a minimum, a brief note on the results and a summary of the material held within the site archive, and its location.

10.6 Upon completion of the work, the archaeological contractor should make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (http://ads.ahds.ac.uk/project/oasis/). Submission of data to OASIS does not discharge the planning requirements for the archaeological contractor to notify the Historic Environment Team Leader, NYCC of the details of the work and to provide the Historic Environment Record (HER) with a report on the work.

11. Further Information

11.1 Further information or clarification of any aspects of this brief may be obtained from:

MAP Archaeological Practice Ltd

Tel. 01653 697752

11.2 This written scheme of investigation is valid for a period of six months from the date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques. In addition, depending upon the final design of development, the methodology of the archaeological excavation may need to be modified accordingly.

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APPENDIX 1- SPECIALISTS

Conservation	Ian Panter	YAT	01904 663036
Prehistoric Pottery	Terry Manby		01430 873147
Roman Pottery	Paula Ware	MAP	01653 697752
Pre-conquest Pottery	Mark Stephens	MAP	01653 697752
Medieval Pottery	Mark Stephens	MAP	01653 697752
Post Medieval Pottery	Mark Stephens	MAP	01653 697752
Clay Tobacco Pipe	Mark Stephens	MAP	01653 697752
CBM	Dr P Mills		01904 621339
Animal Bone		WYAS	0113 3837517
Small Finds	Hilary Cool		0116 9819065
Textile	Penelope Walton Rogers		01904 634585
Slag/Hearths	Rod Mackenzie		0114 235 2028
Flint	Pete Makey		01377 253695
Environmental Sampling		Diane Alldritt	0141 649 877
Human Remains	Malin Holst	York Osteology	01904 737509
Radiocarbon/C14 Dating		SUERAC	0141 270136
Dendrochronology		Sheffield University	0114 2220123
Archaeomagnetic	Mark Noel	Geoquest Associates	01624819364

APPENDIX 2
Conservation Strategy By Ian Panter of York Archaeological Trust

Artefacts from all categories and all periods will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with First Aid for Finds. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and structural timbers from the ground.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with First Aid for Finds and Guidelines for the Preparation of Excavation Archives for Long-Term Storage (Walker, 1990).

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, Waterlogged wood: sampling, conservation and curation of structural wood (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

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Environmental Strategy By Diane Alldrit

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 28litre of sediment (where possible) should be taken from **every stratigraphically secure and archaeologically significant context**. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be

stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods, and once processed kept wet. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool conditions. Where large waterlogged timbers are recovered these should be stored under refrigerated conditions and an appropriate conservator consulted.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

References

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