YORK ARCHAEOLOGICAL TRUST

ARCHAEOLOGICAL INVESTIGATIONS AT HENSALL SAND QUARRY

By Katie Smith

ASSESSMENT REPORT

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Abbreviations

ASWYAS	Archaeological Services WYAS
NYCC	North Yorkshire County Council
WSI	Written Scheme of Investigation
YAT	York Archaeological Trust

NON-TECHNICAL SUMMARY

In September 2017, York Archaeological Trust (YAT) was appointed by FCC Environment to undertake a Strip, Map and Sample programme at Hensall Sand Quarry in North Yorkshire (SE 5880 2250, Figure 1). The site works consisted of stripping topsoil to expose natural deposits prior to commercial sand extraction. The archaeological condition on this site required the monitoring of this soil strip and recording of any archaeological features and deposits revealed before further work was permitted to commence. The specification was supplied by the Principal Archaeologist of North Yorkshire County Council (NYCC), Peter Rowe.

Two areas were stripped, measuring 3,500m2 (Area 5A) and 18,462m2 (Area 5B) respectivelyArea 5A revealed evidence of Iron Age/Roman ditches or enclosures, undated gullies and two more recent ditches dating from the 17th and 20th centuries. 5B revealed evidence of ridge and furrow farming practices, a possible 19th century field boundary and a small number of undated pits. Pottery sherds and other artefacts were obtained from contexts in both areas allowing for dating of some features.

KEY PROJECT INFORMATION

Project Name	Hensall Sand Quarry Strip, Map and Sample
YAT Project No.	5996
Document Number	2017/87
Type of Project	Strip, Map and Sample
Client	FCC Environment
Planning Application No.	NY/2016/0118/ENV
NGR	SE 5880 2250
Museum Accession No.	TBC
OASIS Identifier	yorkarch1-298117

REPORT INFORMATION

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
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1 INTRODUCTION

In September 2017, York Archaeological Trust (YAT) carried out a Strip Map and Sample programme for FCC Environment at Hensall Sand Quarry (SE 5880 2250) prior to the commencement of commercial sand extraction. Archaeological work has been carried out previously on phases 1–4 of the quarry works by Archaeological Services WYAS (ASWYAS), and the findings of these investigations formed part of YAT's Written Scheme of Investigation (WSI) (Appendix 4). The work undertaken by YAT was part of the response to planning conditions regarding an extension of 14.91 hectares to the current site. All work was carried out in accordance with the WSI (Appendix 4) and the principles of the Chartered Institute for Archaeologists (CIfA).

YAT staff monitored the machine excavation of topsoil in two areas (Areas 5A and 5B, Figure 1) and investigated and recorded all archaeological features that were observed. In area 5A, a series of ditches and gullies were found, one of which was Iron Age/Roman in date and possibly formed part of a boundary or enclosure. In area 5B, several pits and a post-hole were found, although all but two pits were undated. A possible field boundary ran north-east / south-west along the southern part of this area, however finds suggest it is relatively modern in date. Evidence of ridge and furrow agriculture was also identified and recorded.

2 METHODOLOGY

The removal of topsoil was carried out with a 49tn PC490 excavator fitted with a 2.50m wide toothless ditching bucket. Spoil was stockpiled around the perimeter of the excavation areas by an articulated 30tn dumper and an 18 ton tracked bulldozer. All mechanical excavation was monitored by a YAT archaeologist.

Due to the presence of a greater-than-anticipated volume of topsoil, the stockpiled spoil covered a larger area than had been initially detailed in the WSI. The widening of the spoilheaps ensured a safe working environment and did not hinder the archaeological investigations, as no significant features were obscured by this adjustment.

Machine excavation ceased upon the discovery of natural geological deposits or significant archaeological remains, at which point features were further investigated by hand. Archaeological features were excavated and recorded in a controlled stratigraphic manner following the standard single context methodology laid out in YAT's recording manual (YAT 2009). The process for recording and excavation as set out in the WSI was adhered to, with excavation of a minimum 10% of linear features where they extended beyond 10m, and discrete features were half sectioned with a minimum 50% excavated. In area 5A it was necessary to excavate two relationship sections through the intersection of two ditches to determine their stratigraphic relationships.

In order to meet the requirement for 10% excavation of linear features over 10m in length, all relevant linear features were investigated in a series of slots measuring 2.00m in length. A single context number was assigned for each cut feature, but separate numbers were assigned to the fills of each excavated section. All discrete features were half sectioned, with the exception of two pits in Area 5B which were fully excavated in order to retrieve concentrations of animal bone (Context 2008 and Context 2018, Figure 3).

The excavation areas and all archaeological contexts were surveyed using a Leica GPS unit with an accuracy of no less than +/- 10cm, and are locatable on OS maps. There were no features requiring a 1:20 hand drawn plan, however, all sections were drawn at a scale of 1:10 and related to the Ordnance Datum. All drawings were drawn on inert materials and adhered to accepted drawing conventions. All contexts were assigned a unique number and recorded on proforma context cards. Each section was photographed with a 35mm SLR camera using black and white film and a digital camera. General area shots and working shots were also taken, and all record shots adhered to accepted photographic record guidelines. Bulk finds were collected and catalogued according to their unique context numbers; no small finds were recovered.

Due to the high amount of contamination from roots and ploughing, no environmental samples were taken. This high level of disturbance was discussed in the results of the sampling strategy undertaken by ASWYAS where it is stated, “all samples are contaminated by modern plant fibres... no further analysis is required” (Wells 2015, 4).

The NYCC Principal Archaeologist Peter Rowe was consulted regarding the findings in each area upon their completion. Following his authorisation, the areas were handed over for continuation of works relating to quarrying. Area 5A was handed over on Friday 22nd September, while Area 5B was handed over on Monday 2nd October.

3 LOCATION, GEOLOGY & TOPOGRAPHY

The site is located at Hensall Quarry in North Yorkshire (SE 5880 2250, Figure 1). The quarry site is currently being used for the extraction of sand and is operated by Darrington Quarries limited.

The site is located approximately 500m to the south of the village of Hensall and approximately 8.5km south-south- west from the town of Selby. To the north of the quarry is a railway line, to the south is the A645 (Broach Lane) carriageway. To the east and west are arable fields.

The areas of the quarry that were stripped in this phase of work included a rectangular block of land measuring 18,462m2 located in the south eastern corner of the quarry (Area 5B, Figure 1) and a smaller area measuring 3500m2 in the northern part of the quarry (Area 5A, Figure 1). The topography of the site is gently undulating land between 8m and 10m AOD.

The underlying bedrock is sandstone of the Sherwood Sandstone Group. This is a sedimentary bedrock formed approximately 237 to 272 million years ago in the Triassic and Permian periods. Across parts of the site superficial deposits of lacustrine beach deposits of sand and gravel are present formed up to 2 million years ago in the Quaternary period (BGS 2017).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Hensall lies within the area of the post-glacial Lake Humber that drained approximately 12,000 years ago. Following the silting up of the area the land became an area of marshland. The quarry site is believed to have been an area of high ground that would have formed an island within this marshland. For this reason it is probable that the area was an attractive place for prehistoric settlement.

Previously there had been little information on the archaeological and historical development of the site. However work associated with the previous phases of the enlargement of the quarry site has uncovered evidence for Romano-British/Iron Age settlement (Wells, 2015).

Crop marks are known to the east of the site, comprising an Iron Age or Roman trackway, boundary ditches and rectilinear enclosures (NMR number SE52SE15). The apparent termination of the crop marks at the quarry boundary may reflect changes in the geology as subsequent archaeological investigations have identified fairly extensive evidence for enclosures and field systems.

Excavations in phases 1-4 by ASWYAS (Wells, 2015) have confirmed that the cropmarks to the east continue into the quarry site to the west. These revealed evidence for a Romano-British/Iron Age settlement site in the form of rectilinear enclosures, boundary ditches and pits. The evidence suggests that the focus of settlement was in the northern part of the site, with agricultural field systems to the south.

5 RESULTS

The results of the excavation will be discussed in chronological order, and follow the standard hierarchical sequence of Context, Set, Group and Phase. Whilst the results are mostly discussed at Group level in this section it is occasionally necessary to discuss individual features at Context level. In these instances, they are referred to by their cut number and are clearly labelled on Figures 2 (Area 5A) and 3 (Area 5B) for reference. The Context and Group numbers consist of four and three digit numbers respectively that start with the prefix 1 in area 5A and 2 in 5B. The site is characterised at Phase level in the Discussion (Section 6).

5.1 Geological Deposits – Group 100 & 200

Natural geological deposits were exposed across the whole of both excavation areas at a depth of 300-500mm below the current ground level. No clear subsoil was observed in either area. Geological deposits were typically a mid-reddish orange sand with occasional variations in compaction, from firm to soft, although distinct variations in colour were noted in the form of bands of light yellowish grey and dark orangey brown. Extensive root and worm activity was observed across the site, which made the interface between some archaeological and natural contexts very unclear. The colour of the natural deposits and mottling from root disturbance meant that archaeological features were often more visible in plan than in section (Plate 1).

Plate 1. North-east facing view of field boundary (Group 203) cutting into natural geological deposits (Group 200).

5.2 Prehistoric Activity

No definitive evidence of prehistoric archaeology was encountered in this investigation; however ASWYAS have observed evidence of Iron Age/Romano British settlement activity in previous phases of work (Wells 2015, 5). One gully in Area 5A and several undated pits in Area 5B could potentially be of Iron Age date, although this cannot be proven. Given the similarities in colour and composition between these undated features and definitively Roman features elsewhere (Group 101, Figure 2), it is perhaps more likely that they are of Roman date.

5.3 Romano-British Activity – Groups 101, 102 & 201

5.3.1 Area 5A – Roman Ditch (Group 101)

The only conclusively Roman feature uncovered in this phase of work was a large ditch in Area 5A (Context 1005, Group 101, Figure 2, Plate 2). The ditch was aligned east/west and featured two north/south returns set at 90 degrees from the south side of the main channel. The returns were located towards the eastern and western ends of the ditch, with the easternmost measuring 12.5m in length and the westernmost return measuring 4.5m. The main channel of the ditch was exposed to a length of 78m and varied in depth from 0.60m in this main channel and 0.21m – 0.29m in the more shallow returns. The profile of the ditch varied slightly but was broadly U-shaped (Figures 5 & 6). To attain a 10% sample of the feature, a total of eleven 2.00m long slots were excavated. These included two relationship sections, one of which demonstrating that the ditch was cut by a post-medieval linear feature (Context 1022, Figure 4, Section 5.4.1) and another proving that the north/south aligned returns were contemporaneous to the main ditch (Figure 5). Single sherds of Roman greyware were

recovered from ditch fills 1041 and 1054 respectively, confirming that ditch 1005 is of 2nd-3rd century date or later. Possible evidence of a recut was observed in sections 3, 11 and 18 through ditch 1005, although this was inconclusive (Figure 6). While the re-cutting of a partially infilled feature is a possibility, the pattern of deposition could equally be explained by the collapse of a bank from the south side of the ditch. As ditch 1005 was the only securely dated Roman feature on the site, it has been assigned to Group 101, seperate from other undated but possibly contemporary features.

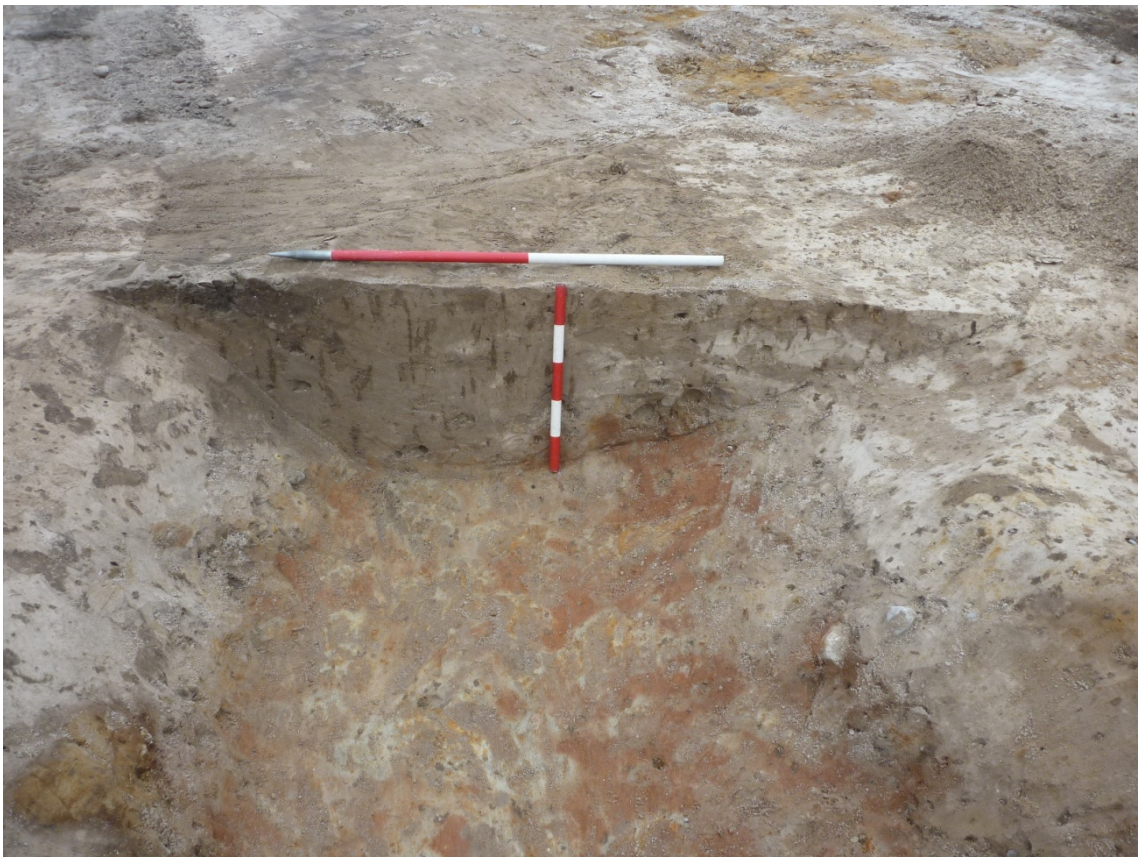

Plate 2. East facing view of Section 13 through 1005 (Group 101). One of 11 sections through 1005 (1m and 0.5m scales).

5.3.2 Area 5A – Undated features, Roman (Group 102)

The undated features in this area have been tentatively dated as Iron Age/Romano British, as the colour and composition of their backfills were very similar to those observed within boundary ditch 1005 (See Section 5.3.1 above). A curving gully (Context 1046, Group 102, Figure 2) was excavated and observed to have no direct stratigraphic link with any archaeological features in the area. The date and function of this gully remains ambiguous, although it is possible that it may represent the ploughed out remains of the drip gully of a roundhouse. Similar features were certainly observed in the Iron Age/Romano British habitation patterns in earlier phases of work at this site carried out by ASWYAS (see Figures 2 and 3 in Wells, 2015).

A U-shaped gully (Context 1021, Group 102, Figure 2) was observed to cut into the main Roman ditch (Context 1005, Group 101, Figure 4). While it is clearly a later addition or extension to the main Roman channel, the similarity of its backfill may suggest that it dates to the same broad period (Plate 3).

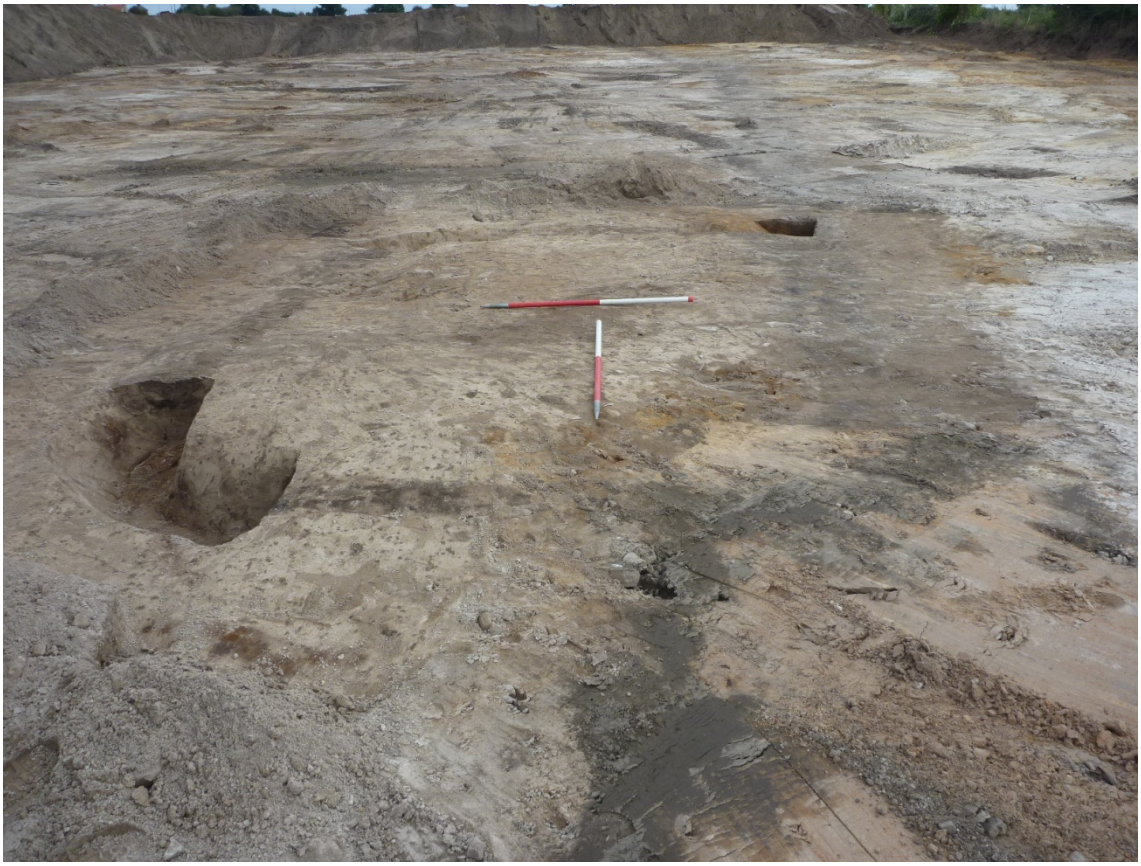

Plate 3. East facing view of gully 1021 (Group 102) and ditch 1005 (Group 101) (Scales 1m each).

5.3.3 Area 5B – Undated features, Roman (Group 201)

In Area 5B, no archaeology of a definitively Roman date was identified, however, a small number of pits were observed to contain similar backfills to those of the Roman ditch in Area 5A (Context 1005, Section 5.3.1). These four pits; Contexts 2004, 2006, 2010 and 2014, have therefore been placed in Group 201 (Figure 3) as undated features tentatively interepreted as being Romano-British in date.

Pit 2004 was very clear in plan and had a circular shape in plan with a diameter of 1.26m and a depth of 0.52m. Pit 2006 was smaller in comparison and more sub-circular in plan, with a diameter of 0.72m and a depth of 0.08m. Pit 2009 was similar to 2004 in size and clarity, and was also very circular in plan, with a diameter of 1.25m and a depth of 0.40m. Pit 2014 was sub-circular in plan and quite large with a diameter of 1.11m, however like 2004 it was very shallow; approximately 0.10m in depth. The shallow pits were not as clearly visible in plan, possibly due to more extensive plough damage, while the deeper pits 2004 and 2014 were the clearest of the four (Plate 4, Figure 5) All of the pits had a similar U-shaped/concave profile and are of unclear function as no finds were recovered from any of them. Due to their location away from the main foci of activity it could be suggested that they represent an incidental scatter of refuse/storage pits.

Plate 4. North-east facing view of pit 2004 (Group 201), one of the clearest pits in Area 5B (Scale 0.5m).

5.4 Post-Medieval Activity – Groups 103, 202 & 203

5.4.1 Area 5A – Post Medieval (Group 103)

Only one conclusively post-medieval feature was observed in Area 5A, a north/south aligned ditch close to the western limit of excavation (Context, 1022, Group 103, Figure 2). The ditch measured approximately 28m in length, 1.56m in width and survived to a depth of 0.13m. Two sections were excavated through the northern part of the feature and two were excavated through the area to the south (Plate 5) where it truncates the Roman ditch described above (Context 1005, Section 5.3.1 Figure 4). A single sherd of slipware pottery was retrieved from the ditch, providing a 17th-18th century or later date for the feature.

Plate 5. North-west facing view of relationship sections (Section 1 and 2, Figure 4) for ditch 1005 (Group 101) and ditch 1022 (Group 103) (Scale 1m).

5.4.2 Area 5B – Undated Features (Group 202)

There were two undated features in Area 5B which can be suggested to have a post-medieval date based on their colour and composition when compared to other securely dated post-medieval features at this site. These features were a small post-hole (Context 2012) and 18 furrows, which were collectively recorded as Context 2024 (Figure 3, Group 202). Although recovered from the topsoil rather than the furrows themselves, a range of pottery from the medieval and post-medieval period was found (Appendix 3), suggesting that these furrows remained in use for centuries (Plate 6).

Plate 6. North facing view of furrows (Context 2024, Group 202). Furrows are visible as faint linears along top two thirds of this area.

5.4.3 Area 5B – Late Post-Medieval (Group 203)

A shallow field boundary was observed in Area 5B, running northeast-southwest along the southern perimeter of the area (Context 2016, Group 203, Figure 3). This feature was exposed to a length of approximately 100m, varied from 2.11m-3.56m in width and measured between 0.21m-0.06m in depth (Plate 7). A total of five 2.00m long sections were excavated through the feature. Finds of fired clay tobacco pipe, purple glazed pottery and vessel glass were recovered from the backfill, suggesting a 17th-early 19th century date. The feature is not present on the 1852 Ordnance Survey map or any later editions. This factor combined with the finds would suggest that this boundary ceased to exist prior to the mid-19th century.

Plate 7. South-west facing view of the field boundary (Context 2016, Group 203) (Scale 0.5m).

5.5 Modern Activity – Groups 104, 105, 204 & 205

5.5.1 Area 5A – Modern (Group 104 & 105)

In this area, one north/south aligned ditch was observed towards the eastern limit of excavation (Context 1039, Group 104, Figure 2). Glass and plastic confectionary wrappers from the late 20th Century were recovered from the ditch backfill and were photographed but not retained (Plate 8). The ditch was exposed to a length of approximately 34m long and measured 1.64m in width and 0.81m in depth. The function of the ditch is unclear; it could perhaps be associated with recent field boundaries or drainage.

Plate 8. Modern finds indicating a recent date for ditch 1039 (Group 104).

Group 105 refers to plough soil across this area, as such it is not illustrated in Figure 2. In addition, Group 105 also includes three modern field drains and test pits; they are indicated on Figure 2. These features were not assigned context numbers as their date was known to be modern.

5.5.2 Area 5B – Undated Features, Modern (Group 204 & 205)

Group 204 consists of three pits interpreted as modern features in Area 5B, although no dateable material was recovered from them (Contexts 2002, 2008 and 2018, Figure 2). All three pits were affected by ploughing and root damage, with Context 2002 being the most heavily disturbed. While no ceramics were recovered from any of the pits, fish bone was recovered from pit 2008 and pit 2018 was found to contain chicken bone (Plates 9 and 10). Due to the acidity of the soils in the area, very few fragments of bone have been recovered from features on this site. The presence of well-preserved bone in two of these pits may suggest that they are not of great antiquity. In addition, the fills of these three pits were notably darker than those of other features in Area 5B, possibly as a result of the greater level of surviving organic material. On the basis of this evidence, the pits were tentatively dated to the 19th or 20th century. A heavily plough damaged intrusion containing late 20th century bottle glass was also assigned to Group 205. The feature was surveyed but not assigned single context numbers.

Plate 9. Fish bone in pit 2008 (Group 204) (Scale 20cm).

Plate 10. Chicken bone in pit 2018 (Group 204) (Scale 20cm).

6 DISCUSSION

Despite the archaeological potential for this site demonstrated by the findings of earlier investigations by ASWYAS, little in the way of significant archaeology was observed during this phase of works. A total of four features across both areas were securely dateable, with the majority of features being undated. The four dateable features were all linear ditches, gullies or field boundaries and ranged in date between the Iron Age/Romano British period (Context 1005, Section 5.3.1.) through to late 20th Century (Context 1039, Section 5.5.1). Four distinct phases were identified, with the earliest comprising natural geological deposits and the latest dating to the 20th century. The general dearth of datable material culture across the site means that the dating of most features can only be suggested on the basis of similarities in fills and is far from definitive.

6.1 *Phase 1 – Natural Geological Deposits*

The geological deposits that were truncated by all of the archaeological features identified during this investigation were of the same nature of those observed in all previous phases of works.

6.2 *Phase 2 – Iron Age/Romano-British Activity*

Prior to this stage of work, land use during this period had so far been characterised by a foci of activity in the north of the area with a concentration of agricultural practices towards the south (YAT 2017, 6, Appendix 4). This investigation has been successful in identifying additional ditches close to the aforementioned foci of the Iron Age and Romano British activity towards the north of the site (Area 5A). In particular, the largest ditch (Context 1005, Figure 2) may be the northernmost boundary ditch of the settlement, as its two returns run south towards the concentration of features identified by ASWYAS' work in Areas 1-4. Furthermore, this phase of works has added to the known extent of the agricultural activities in the south of the site, as a tentatively dated scatter of possibly Romano-British pits have been identified in Area 5B. Despite the scarcity of datable features, it is clearly possible that low level activity was present in this area in this period, although no further contemporaneous activity was observed to the south or east of Group 201 (Figure 3).

In summary, the work by YAT complements and supports the conclusions of previous work by ASWYAS. The findings reinforce that there was a small foci of Iron Age/Romano British habitation in the north of this site, and to the south was open land that may have been farmed by the inhabitants. As with the ASWYAS works, this stage of works has yielded very little in the way of finds; a development that is likely a result of extensive damage from later agriculture, poor preservation of organic materials in the site's acidic soil and the general nature of low impact agricultural land use during this period.

6.3 *Post-Medieval Activity*

Securely dated post-medieval features were found in both excavation areas and the comparison of these features also allowed for dates to be suggested for the an otherwise undated post hole and furrows in Area 5B (Group 202, Figure 3). On the basis of ceramic finds from the 18th century, the north-south aligned ditch in Area 5A (Group 103, Figure 2) would appear to be slightly earlier in date than the 19th century field boundary identified in Area 5B

(Group 203, Figure 3). These features suggest the post-medieval phase at Hensall appears to represent a continuation of agricultural practices and field systems.

6.4 Phase 4 – Modern Activity

Modern activity at this site consisted of topsoil, a number of 21st century geotechnical test pits as well as rubbish pits, ditches and drains associated with present day field systems. This phase of activity is typified by features with dark fills and the survival of animal bone. This phase and those discussed above reflects the site's long-term use as arable farmland.

6.4 Conclusion

The most significant discovery during this phase of works were the Romano-British features in Area 5A. These features complement the findings of previous work in Areas 1-4 by ASWYAS, in that the main focus of activity in the Iron Age/Romano British period was concentrated to the northern area of the quarry site, with agricultural land with sporadic refuse pits to the south. As has been discussed above, the paucity of finds has limited the potential phasing of the site. While no definitively prehistoric material was unearthed, it is entirely possible that the area was occupied prior to the Roman invasion.

In the post-Roman period, it appears the focus of the entire area switched to farming, with evidence of agricultural practices in the form of boundary and drainage ditches, and ridge and furrow. Whether this activity was continuous or sporadic remains uncertain.

Contamination from roots and ploughing across both excavation areas precluded the possibility of sampling deposits for scientific dating. In spite of the limited potential for definitively dating the site's various phases of activity, it has nonetheless been possible to add more detail to a growing understanding of how successive occupants of the Hensall area have made use of the landscape.

LIST OF SOURCES

BGS, 2017, British Geological Survey website.
http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed 14/09/17)

REFERENCES

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YAT 2009. York Archaeological Trust Fieldwork Recording Manual.

ACKNOWLEDGEMENTS

Excavation team: Ben Savine, Arran Johnson, Gary Millward, Katie Smith

Site photography and survey: Arran Johnson, Katie Smith

Illustrations: Augustus Shaw, Katie Smith, Emma Boast

APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Context sheets	69
Levels register	N/A
Photographic register	2
Sample register	N/A
Drawing register	1
Original drawings	34
B/W photographs (films/contact sheets)	16
Colour slides (films)	N/A
Digital photographs	238
Written Scheme of Investigation	1
Report	1

Table 1 Index to archive

APPENDIX 2 – CONTEXT LIST

Area	Context	Description
5A	1000	Plough soil Friable, dark greyish brown, sandy silt. Moderate small to medium sized angular stones, small to medium cobbles, pebbles. Occasional flecks of charcoal.
5A	1001	Natural Friable to firm, mid reddish brown with patches of light greyish yellow and dark brownish grey sand. Moderate small to large cobbles, pebbles. Flecks to small fragments of chalk.
5A	1002	Ditch backfill Soft, mid greyish brown, sand. Occasional small stones. Fill of 1022.
5A	1003	Ditch backfill Compact, mottled mid to light brownish grey, sand. Fill of 1005.
5A	1004	Ditch backfill Compact, mid slightly orangey brown, sand. Frequent small pebbles. Fill of 1005.
5A	1005	Ditch Cut Linear, aligned E-W, moderate break of slope at top, concave sides varying from moderate to steep depending on section. Moderate break of slope at base, concave base. Length is approx. 80m, width 1.90m, depth, 600mm. Contains 1004, 1003, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1033, 1034, 1035, 1040, 1041, 1042, 1047, 1048, 1049, 1050, 1053, 1054, 1055. Possible Roman pottery recovered.
5A	1006	Ditch backfill Soft, mid greyish brown, sand. Fill of 1022.
5A	1007	Ditch backfill Soft, pale grey, sand. Fill of 1022.
5A	1008	Ditch backfill Soft, dark grey, sand. Fill of 1022.
5A	1009	Ditch backfill Compact, mid greyish brown, more mottled light and dark grey at top, sand. Lenses of brown sand. Fill of 1005.
5A	1010	Ditch backfill Compact orangey brown, sand. Frequent cobbles and pebbles. Fill of 1005.
5A	1011	Ditch backfill Soft, light to mid grey, sand. Fill of 1005.
5A	1012	Ditch backfill Compact, dark greyish brown, sand. Fill of 1005.
5A	1013	Ditch backfill Firm, mottled mid to dark brownish grey, sand. Occasional pebbles. Fill of 1005.
5A	1014	Ditch backfill Compact, orangey brown, sand. Frequent pebbles. Occasional heat fractured cobbles. Fill of 1005.
5A	1015	Ditch backfill Compact, mottled mid to light greyish brown, sand. Fill of 1005.
5A	1016	Ditch backfill Soft, light grey, sand. Fill of 1005.
5A	1017	Ditch backfill Compact, mottled mid to light brownish grey, darker towards side and base, sand. Occasional cobbles and pebbles. Fill of 1005.
5A	1018	Ditch backfill Compact, reddish brown, sand. Occasional cobbles and pebbles. Fill of 1005.
5A	1019	Gully backfill Soft, mottled mid to dark brownish grey, sand. Occasional pebbles. Fill of 1021.
5A	1020	Gully backfill Compact, mottled mid to light grey, sand. Occasional pebbles. Fill of 1021.
5A	1021	Gully cut Curving linear aligned E-W with ends curving to the south. Sharp break of slope at top, steep concave sides, sharp break of slope at base, concave base.

Area	Context	Description
		Length 5m, width 570mm, depth 300mm. Contains 1019, 1020, 1023, 1024, 1025, 1027.
5A	1022	Ditch cut Linear, aligned N-S, gradual to moderate break of slope at top, moderately steep concave sides, gradual break of slope at base, concave base. Length approx 28m, width 1.56m, depth 130mm. Truncates 1005. Contains 1002,1008,1007,1006, 1031, 1030, 1029, 1028.
5A	1023	Gully backfill Compact, mottled mid to dark brownish grey, sand. Fill of 1021.
5A	1024	Gully deposit Compact, light grey, sand. Fill of 1021.
5A	1025	Gully backfill Soft, dark greyish brown, sand. Fill of 1021.
5A	1026	Gully backfill Compact, mottled light to mid grey, sand. Fill of 1005.
5A	1027	Ditch backfill Compact, mid greyish brown, sand. Fill of 1005.
5A	1028	Ditch backfill Compact, mid greyish brown. Occasional pebbles. Fill of 1022.
5A	1029	Ditch backfill Compact, mid orangey brown, sand. Occasional pebbles. Fill of 1022.
5A	1030	Ditch backfill Soft, dark brown, sand. Occasional pebbles. Post-Med pottery recovered. Fill of 1022.
5A	1031	Ditch backfill Compact, orangey brown, sand. Occasional pebbles. Fill of 1022.
5A	1032	Ditch backfill Soft, mottled light to mid greyish brown, sand. Occasional pebbles. Fill of 1005.
5A	1033	Ditch backfill Compact, mottled dark, mid and light grey, sand. Fill of 1005.
5A	1034	Ditch backfill Compact, light grey, sand. Occasional pebbles. Fill of 1005.
5A	1035	Ditch backfill Firm, mid to light brown/grey, sand. Frequent pebbles around base. Fill of 1005.
5A	1036	Ditch backfill Soft, dark brown, sand. Occasional pebbles. Fill of 1039.
5A	1037	Ditch backfill Soft, becoming firmer towards base, mid brown grey, sand. Occasional cobbles and pebbles. Fill of 1039.
5A	1038	Ditch backfill Compact, mottled mid and light grey brown, slightly clayey sand. Fill of 1039.
5A	1039	Ditch cut Linear, aligned N-S, moderate break of slope at top, gradually sloping, to slightly moderate stepping on east and west sides, U shaped base. Length 34m, width 1.64m, depth 810mm. Truncates 1005. Contains 1036, 1037, 1038, 1051, 1052. 20th Century glass and modern plastic discovered.
5A	1040	Ditch backfill Compact, dark, mid and light grey, sand. Fill of 1005.
5A	1041	Ditch backfill Firm, mid to light brownish grey, sand. Frequent pebbles towards base. Occasional cobbles. Roman pottery recovered. Fill of 1005.
5A	1042	Ditch backfill Firm, reddish brown, compacted sand. Frequent pebbles. Occasional cobbles. Fill of 1005.
5A	1043	Curving gully backfill Soft, mid brownish grey, sand. Fill of 1046.
5A	1044	Curving gully backfill Soft, mid brownish grey, sand. Fill of 1046.
5A	1045	Curving gully backfill Soft, mid brownish grey, sand. Fill of 1046.
5A	1046	Curving gully cut Curvilinear, aligned NW-E, gradual break of slope at top, gradual concave

Area	Context	Description
		sides, U shaped base. Length 5m, width 400mm, depth 150mm. Contains 1043, 1044, 1045.
5A	1047	Ditch backfill Firm, light brown grey, sand. Moderate pebbles at base. Fill of 1005.
5A	1048	Ditch backfill Firm, mid to dark grey/brown, sand. Fill of 1005.
5A	1049	Ditch backfill Compact, light grey, sand. Occasional pebbles. Fill of 1005.
5A	1050	Ditch backfill Compact, mottled light grey, light orange, sand. Moderate pebbles. Fill of 1005.
5A	1051	Ditch backfill Soft, dark brown, slightly silty sand. Fill of 1039.
5A	1052	Ditch backfill Soft, mixed grey, brown and red, sand. Frequent dry straw at edges.20th Century glass and modern plastic discovered. Fill of 1039.
5A	1053	Ditch backfill Firm, mid to dark grey brown, sand. Fill of 1005.
5A	1054	Ditch backfill Compact, light grey, sand. Occasional pebbles. Fill of 1005.
5A	1055	Ditch backfill Compact, mid to dark orange, sand. Moderate pebbles. Fill of 1005.
5B	2000	Plough soil Friable, dark greyish brown, sandy silt. Moderate small to medium sized angular stones, small to medium cobbles, pebbles. Occasional flecks of charcoal.
5B	2001	Pit backfill Soft, dark brownish grey, silty sand. Frequent flecks to medium fragments of charcoal. Moderate small to medium stones. Occasional lenses of soft, mid brownish orange sand. Fill of 2002.
5B	2002	Pit cut Sub-circular shape in plan, moderate break of slope at top, moderate to steep sides which are uneven, moderate break of slope at base, base slopes down to the north. Width 1.03m, depth 260mm deep. Contains 2001.
5B	2003	Pit backfill Soft to friable, mid orangey brown, slightly clayey sand. Moderate small to large angular stones, small to large cobbles. Occasional flecks of charcoal. Fill of 2004.
5B	2004	Pit cut Circular shape in plan, sharp breaks of slope at top, steep sides, moderate break of slope at base, slightly uneven base. Diameter 1.26m, depth 520mm. Contains 2003.
5B	2005	Shallow pit backfill Soft to friable, mid orangey brown, slightly clayey sand. Occasional small pebbles. Fill of 2006.
5B	2006	Shallow pit cut Sub circular shape in plan, aligned N-S moderate break of slope at top, gradual sloping sides, gradual to no break of slope at base, slightly concave base. Diameter 750mm, depth 80mm. Contains 2005.
5B	2007	Pit backfill Soft to friable, dark greyish brown, slightly silty sand. Frequent fish bones. Moderate flecks of charcoal. Occasional small angular stones, pebbles. Fill of 2008.
5B	2008	Pit cut Sub circular shape in plan, aligned NW-SE, sharp break of slope at top, moderately sloping sides, concave base. Length 710mm, width 510mm, depth 150mm. Filled with degraded fish bones. Contains 2007.
5B	2009	Pit backfill Soft to friable, dark orangey brown, sand. Moderate small to medium sized angular stones, small to medium cobbles, pebbles. Occasional flecks of charcoal. Fill of 2010.
5B	2010	Pit cut Circular shape in plan, sharp break of slope at top, steep sides, vertical at SW side, sharp break of slope at SW side of base, moderate at NE side, concave base. Diameter 1.25m, depth 400mm. Contains 2009.

Area	Context	Description
5B	2011	Post hole backfill Friable, dark orangey brown, sand. Frequent flecks to small fragments of charcoal. Occasional small pebbles. Fill of 2012.
5B	2012	Post hole cut Sub circular shape in plan, aligned N-S, Sharp break of slope at top, steep sides to the west, steep to moderate on the east, sharp break of slope at base on west side, gradual on the east side, base slopes down towards west. Diameter 240mm, depth 140mm. Contains 2011.
5B	2013	Shallow pit backfill Friable, dark orangey brown, sand. Occasional flecks of charcoal and pebbles. Fill of 2014.
5B	2014	Shallow pit cut Sub circular shape in plan, moderate break in slope at top, moderate sides, very gradual break of slope at base, uneven base. Diameter 1.11m, depth 100m. Contains 2013.
5B	2015	Field boundary backfill (Slot 1) Friable, dark orangey brown, slightly silty sand. Moderate small to large cobbles, stones, pebbles. Fill of 2016.
5B	2016	Field boundary cut Rectangular/linear shape in plan, aligned NE-SW, moderate break of slope at top, gradual sides, gradual to no break of slope at base, irregular base. Length approximately 100m, width ranges from 3.56m to 2.11m, depth ranges from 210mm to 60mm. Contains 2015, 2019, 2021, 2022, 2023.
5B	2017	Small pit backfill Friable, dark brownish grey, silty sand. Moderate flecks of charcoal, pebbles. Contains chicken bone. Fill of 2018
5B	2018	Pit cut Sub circular shape in plan, aligned NW-SE, sharp break of slope at NW side, moderate sides at NW, Moderate break of slope at NW base, uneven base. Length 610mm, width 330mm, depth 50mm. Contains 2017.
5B	2019	Field boundary backfill (Slot 2) Friable, dark brownish grey, sand. Occasional small stones and pebbles. Fill of 2016.
5B	2020	Natural Friable to firm, mid reddish orange, with patches of light greyish yellow and dark brownish grey sand. Moderate small to large cobbles, pebbles, flecks to small fragments of chalk.
5B	2021	Field boundary backfill (Slot 3) Friable, dark brownish grey, sand. Occasional small stones and pebbles. Fill of 2016.
5B	2022	Field boundary backfill (Slot 4) Friable, dark brownish grey, sand. Occasional small stones and pebbles. Fill of 2016.
5B	2023	Field boundary backfill (Slot 5) Friable, dark brownish grey, sand. Occasional small stones and pebbles. Fill of 2016.
5B	2024	Furrows Soft, dark orangey brown, slightly silty sand. Occasional flecks of charcoal, flecks to medium fragments of burnt lime, small to medium cobbles, pebbles.

Table 2 Context list for Areas 5A and 5B.

APPENDIX 3 – POTTERY ASSESSMENT

By Arran Johnson and Katie Smith, York Archaeological Trust, October 2017

INTRODUCTION

Ten sherds of domestic pottery were retrieved from five Contexts across both areas (1030, 1041, 1054, 2000, and 2021).

This is a small assemblage with little residuality or intrusion with the exception of the 6 sherds recovered from Context 2000, which was the ploughed soil in area 5B.

METHODOLOGY

Visual analysis involved separating fabric and form groups by date and type. The numbers and sherd sizes are recorded below (see Table 3). This assessment was carried out by competent field archaeologists as opposed to a pottery specialist due to the relative simplicity of the assemblage.

DISCUSSION

The wares are from three time periods; Roman, Post-Medieval and Modern. They are typical examples from these periods in the North Yorkshire area. The assemblage has been useful in providing a dating framework across the site and greatly expands our understanding of the ceramic sequence at Hensall.

RECOMMENDATIONS FOR FURTHER RESEARCH

It is not anticipated any significant new knowledge would be gained from further research, although this may change in light of developments in future phases of work.

RECOMMENDATIONS FOR RETENTION/DISCARD

As this site has been so artefactually poor, it would seem appropriate to retain this assemblage until all phases of archaeological investigation are completed and the site has been fully characterised.

Table 3. Pottery by Context.

Context	Quantity	Date	Description
1030	1	Post-medieval (17th-18th Century)	1 small sherd of slipware, yellow on inside face, yellow and brown on outer face.
1041	1	Roman	1 small sherd of Roman greyware
1054	1	Roman	1 small sherd of Roman greyware, coarse/gritty fabric, badly abraded along edges.
2000	6	18th/19th Century	1 small sherd of Roman greyware with horizontal incised decoration. 1 small sherd of medieval with green splash-glazed decoration. 1 small sherd of unglazed medieval (sandy red fabric). 1 small sherd of abraded partially glazed medieval (sandy red fabric). 1 medium size partial sherd of a post-medieval vessel base and body with a brownish-green glaze on inside face. Red slip and light splash glazing on exterior. 1 small sherd of C18th/19th transfer ware with a green floral decoration. From the rim of a plate/saucer.
2021	1	Post-medieval	1 small sherd of purple glazed pottery. Glazed on both sides.

APPENDIX 4 – WRITTEN SCHEME OF INVESTIGATION AND RAMS DOCUMENT

YORK ARCHAEOLOGICAL TRUST

HENSALL SAND QUARRY:
STRIP, MAP AND SAMPLE
RISK ASSESSMENT AND METHOD STATEMENT

Document Number 2017/83 September 2017

YORK ARCHAEOLOGICAL TRUST

York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.

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CONTENTS

KEY PROJECT INFORMATION

Project Name	Hensall Sand Quarry Strip, Map and Sample
YAT Project No.	5996
Report status	RAMS
Type of Project	Strip, Map and Sample
Client	FCC Environment
Document Number and Date	2017/83 15/09/17

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
1	GL	15/09/17	IDM	15/09/17	IDM	15/09/17

1 INTRODUCTION

This Method Statement derives from the Written Scheme of Investigation by York Archaeological Trust (Appendix 1) and incorporates a Risk Assessment conducted by York Archaeological Trust (YAT) (Appendix 2). The programme of works is scheduled to commence on 18th September 2017 for up to 6 weeks.

2 METHODOLOGY

The site works consist of soil stripping to expose natural deposits prior to commercial sand extraction. The archaeological condition requires that a programme of Strip, Map and Sample be undertaken during this operation. The consists of monitoring the soil strip and excavating and recording any archaeological features and deposits exposed during this process prior to further works. The York Archaeological Trust Written Scheme of Investigation (Appendix 1) and York Archaeological Trust Risk Assessment (Appendix 2) form the bases of the Method of Works and contain relevant illustrations.

Mechanical excavation

Two areas measuring 3500m2 and 18,462m2 are to be stripped using a 49tn PC490 excavator. Two 30tn articulated dumpers will transport spoil away from the stripped area and a bulldozer will be used to form bunds around the perimeter of these areas.

Archaeological supervision shall be maintained throughout machine excavation.

All YAT staff will be inducted by the FCC Environment Site Manager. Additionally, an archaeological site induction will be provided to all YAT staff by the YAT Site Manager.

Staff shall maintain a safe distance from plant and observe safe working practices as defined in the YAT Risk Assessment (Appendix 2).

If significant archaeological deposits or features are identified, excavation shall proceed by hand in accordance with the WSI (Appendix 1).

If any below ground deposits that may be contaminated are encountered excavation of that trench will cease and the client will be contacted for further instruction. The machine bucket will be cleaned thoroughly before any further excavation takes place.

Hand excavation

Suitable PPE and lone-working practises shall be observed.

All workers must be within hearing distance of other workers.

Where excavation areas or features are greater than 0.5m in depth and are deemed by the Site Manager to be stable, no fewer than two staff shall enter and work in these areas.

General excavation practice

Excavations below 1.2m deep where the ground is deemed by the Site Manager to be unstable will be stepped or battered.

The excavation area will be inspected for stability at the beginning and end of each working day using the YAT Site Checklist (Appendix 3). If the Site Manager suspects areas are unstable no staff shall enter those areas until appropriate action had been taken.

Excavation areas or features deeper than 0.50m will be reported to the client and recommended for fencing with materials supplied by the client until they have been recorded and backfilled.

Deep excavations will be backfilled as soon as possible to minimise the risk of falls.

3 PERSONNEL

Project Manager: Ben Reeves 07908 210032

Site Manager: Ben Savine 07908 210028 / Arran Johnson 07908 210030

4 EQUIPMENT

Mechanical plant

1 x PC490 49tn tracked mechanical excavator

2 x 30tn articulated dumpers

1 x bulldozer

Site welfare facilities

YAT will use the site facilities provided by the client.

Hand tools

Shovels, mattocks, hoes, trowels, wheelbarrows

5 PERSONAL PROTECTIVE EQUIPMENT

Safety helmets

Hi-visibility vests, jackets, trousers

Gloves

Safety boots – toe and midsole protection. No rigger boots are permitted.

6 EMERGENCY PROCEDURES

In the event of an accident the emergency services (999/112), the YAT Project Manager and the Principal Contractor will be contacted immediately.

HOSPITAL: A&E

Pontefract Hospital

Friarwood Lane

Pontefract

West Yorkshire

WF8 1PL

0844 8118110

YAT PROJECT MANAGER

Ben Reeves 07908 210032

PRINCIPAL CONTRACTOR: FCC Environment

Trevor Craig 07970 456811

7 WORKING HOURS

08:00 – 16:00 Mon-Fri

8 SAFETY PROCEDURES

YAT will operate under the Safety Procedures stipulated by the client, FCC Environment, and the YAT Safety Procedures as agreed with the client.

YAT Safety Procedures are set out in the YAT Risk Assessment (Appendix 2).

The YAT risk assessment shall form the basis of the archaeological site induction that shall be undertaken by all staff. The induction for YAT staff will be provided by the Site Manager, Ben Savine/Arran Johnson

9 HAZARDS

The hazards identified below are itemised and control measures provided in the YAT Risk Assessment (Appendix 2).

- Personal Injury
- Lone Working
- Public Access
- Fall of objects from height
- Fall of person from height
- Fall on same level: Slips, trips
- Site conditions: awkward access, safe routes, housekeeping
- Manual Handling
- Excavation: Hand tools and equipment usage
- Adverse Weather
- Environmental conditions: noise, wind-blown particles, dust, fumes, poisons, lighting
- Hygiene (Weils disease, vermin)
- Vegetation
- Spillages
- Mechanical Plant
- Survey equipment: lasers
- Live services

- Pedestrians
- Transport and Driving
- Loading goods
- Vehicles on site

The risk assessment will be reviewed at the beginning and end of each working day via the YAT Site Checklist (Appendix 3) to take in to account any changes in site conditions and working, in particular in relation to interactions with other contractor activities. Variations and additions to this Risk Assessment shall be added by the Site Manager, Ben Savine/Arran Johnson and communicated to all staff immediately following the update.

APPENDIX 1 – WRITTEN SCHEME OF INVESTIGATION

Site Location: Hensall Sand Quarry

NGR: **SE 5880 2250**

Proposal: Extension to existing sand quarry site

Planning ref: NY/2016/0118/ENV

Prepared for: FCC Environment Limited by York Archaeological Trust, [Sept 2017]

Document Number: 2017/83

1 SUMMARY

1.1 Permission has been granted for a 14.91 hectare extension to the existing sand quarry for the extraction of sand over a period of approximately 6 years. The work outlined in this document forms the latest phase of archaeological work. Previous phases of work have been carried out by WYAS phases 1-4 (Wells 2015).

1.2 This document details the work that will take place to fulfill condition 5 of the Planning Decision No. C8/2016/0873/CPO, which states that:

No development shall take place until a Written Scheme of Investigation has been submitted to and approved in writing by the County Planning Authority. The scheme shall include an assessment of significance and research questions; and:

- *The programme and methodology of site investigation and recording*
- *Community involvement and/or outreach proposals*
- *The programme for post investigation assessment*
- *Provision to be made for analysis of the site investigation and recording*
- *Provision to be made for publication and dissemination of the analysis and records of the site investigation*
- *Provision to be made for archive deposition of the analysis and records of the site investigation*
- *Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation. No development shall take place other than in accordance with the Written Scheme of Investigation approved under this condition.*

1.3 This Written Scheme of Investigation (WSI) is based on the WSI produced for earlier phases of the quarry works (ASWYAS, 2016) that were prepared in response to a Specification supplied by the Principal Archaeologist of North Yorkshire County Council (NYCC), Peter Rowe. The work will be carried out in accordance with the specification and this WSI.

2 SITE LOCATION, DESCRIPTION & GEOLOGY

2.1 The proposal site is located at Hensall Quarry (Figure 1). The quarry site is for the extraction of sand and is operated by Darrington Quarries limited.

The proposed site is located approximately 500m to the south of the village of Hensall and approximately 8.5km south-south- west from the town of Selby. To the north of the quarry is a railway line, to the south is the A645 (Broach Lane) carriageway. To the east and west are arable fields.

The area of the quarry to be stripped in this phase of work is a rectangular block of land measuring 18462m2 located in the south eastern corner of the quarry (Figure 1). An additional smaller area measuring 3500m2 on the northern part of the quarry is also to be stripped. The topography of the site is gently undulating land between 8m and 10m AOD.

2.2 The underlying bedrock is sandstone of the Sherwood Sandstone Group. This is a sedimentary bedrock formed approximately 237 to 272 million years ago in the Triassic and Permian periods. Across parts of the site superficial deposits of lacustrine beach deposits of sand and gravel are present formed up to 2 million years ago in the Quaternary period (BGS 2017).

3 DESIGNATIONS & CONSTRAINTS

3.1 There are no scheduled monuments or listed buildings within the area of the proposed site. The site is not part of a conservation area and is not within the site of a registered battlefield or a registered park and garden.

4 ARCHAEOLOGICAL INTEREST

4.1 Hensall lies within the area of the post-glacial Lake Humber that drained approximately 12,000 years ago. Following the silting up of the area the land became an area of marshland. The quarry site is believed to have been an area of high ground that would have formed an island within this marshland. For this reason it is probable that the area was an attractive place for prehistoric settlement.

4.2 Previously there had been little information on the archaeological and historical development of the site. However work associated with the previous phases of the enlargement of the quarry site has uncovered evidence for Romano-British/Iron Age settlement (Wells, 2015).

4.3 Crop marks are known to the east of the site, comprising an Iron Age or Roman trackway, boundary ditches and rectilinear enclosures (NMR number SE52SE15). The apparent termination of the crop marks at the quarry boundary may reflect changes in the geology as subsequent archaeological investigations have identified fairly extensive evidence for enclosures and field systems.

4.4 Excavations in phases 1-4 by ASWYAS (Wells, 2015) have confirmed that the cropmarks to the east continue into the quarry site to the west. These revealed evidence for a Romano-British/Iron Age settlement site in the form of rectilinear enclosures, boundary ditches and pits. The evidence suggests that the focus of settlement was in the northern part of the site, with agricultural field systems to the south.

5. GROUNDWORKS TO BE MONITORED

5.1 The area for investigation will be stripped of topsoil or overburden. The area must be stripped using a machine fitted with a suitable toothless bucket (e.g. ditching bucket)

to produce a clean, flat surface for archaeological inspection. The ploughsoil will be removed down to the first identified archaeological deposits or natural deposits whichever is encountered first.

The stripping activity will be monitored at all times by an archaeologist. Areas will be cleaned by the archaeologist(s) as necessary to allow any archaeological features to be identified.

6 DELAYS TO THE DEVELOPMENT SCHEDULE

6.1 All earth-moving machinery must be operated at an appropriate speed to allow the archaeologist to recognise, record and retrieve any archaeological deposits and material.

6.2 It is not intended that the archaeological monitoring should unduly delay site works. However, the archaeologist on site should be given the opportunity to observe, clean, assess and, where appropriate hand excavate, sample and record any exposed features and finds. In order to fulfil the requirements of this WSI, it may be necessary to halt the earth-moving activity to enable the archaeology to be recorded properly.

6.3 Plant or excavators shall not be operated in the immediate vicinity of archaeological remains until the remains have been recorded and the archaeologist on site has given explicit permission for operations to recommence at that location.

7 RECORDING METHODOLOGY

7.1 The areas stripped will be recorded using a Leica GPS. All measurements will be accurate to +/- 10cm and locatable on a 1:2500 OS map. This is to ensure that all areas monitored can be independently located in the event of future work.

7.2 Unique context numbers will only be assigned if artefacts are retrieved, or stratigraphic relationships between archaeological deposits are discernable. In archaeologically 'sterile' areas, soil layers will be described, but no context numbers will be assigned. Where assigned, each context will be described in full on a pro forma context record sheet in accordance with the accepted context record conventions.

7.3 Archaeological deposits will be surveyed using a Leica GPS accurate to +/- 10cm, with individual features requiring greater detail being planned at a scale of 1:20. Larger scales will be utilised as appropriate. Cross-section of features will be drawn to a basic scale of 1:10 or 1:20 depending on the size of the feature. All drawings will be related to Ordnance Datum. Where it aids interpretation, structural remains will also be recorded in elevation. All drawings will be drawn on inert materials. All drawings will adhere to accepted drawing conventions.

7.4 Archaeological features will be planned and excavated in a controlled stratigraphic manner. Features will be investigated using the following sampling strategies:

- Linear features- a minimum of 10% of the length of the feature will be excavated (minimum 1.0m if less than 10m in length). Intersections will be excavated in such a way to show stratigraphic relationships.
- Discrete features- will be half sectioned to provide a complete profile and at least 50% of the feature should be excavated. Full excavation of a feature may be appropriate, but will take place following consultation with Peter

Rowe (Principal Archaeologist NYCC).

- Structures (houses, kilns, hearths)- will be 50% excavated in the first instance. A full excavation of features may be appropriate, but will take place following consultation with Peter Rowe.

7.5 Photographs of archaeological deposits and features will be taken. This will include general views of entire features and of details such as sections as considered necessary. The photographic register will comprise 35mm format black and white prints. Digital photography may be used in addition, but will not form the primary site archive. All site photography will adhere to accepted photographic record guidelines.

7.6 Areas which are inaccessible (e.g. for health and safety reasons) will be recorded as thoroughly as possible within the site constraints. In these instances, recording may be entirely photographic, with sketch drawings only.

7.7 All finds will be collected and handled following the guidance set out in the CIfA guidance for archaeological materials. Unstratified material will not be kept unless it is of exceptional intrinsic interest. Material discarded as a consequence of this policy will be described and quantified in the field. Finds of particular interest or fragility will be retrieved as Small Finds, and located on plans. Other finds, finds within the topsoil, and dense/discrete deposits of finds will be collected as Bulk Finds, from discrete contexts, bagged by material type. Any dense/discrete deposits will have their limits defined on the appropriate plan.

7.8 All artefacts and ecofacts will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds,* and recording systems must be compatible with the recipient museum. All finds that fall within the purview of the Treasure Act (1996) will be reported to HM Coroner according to the procedures outlined in the Act, after discussion with the client and the local authority.

7.9 A soil sampling programme will be undertaken for the recovery and identification of charred and waterlogged remains where suitable deposits are identified. The collection and processing of environmental samples will be undertaken in accordance with Historic England guidelines (Campbell, Moffatt and Straker 2011). Environmental and soil specialists will be consulted during the course of the evaluation with regard to the implementation of this sampling programme. Soil samples of at least 40 litres for flotation (or 100% of the features if less than this volume) will be removed from selected contexts, using a combination of the judgement and systematic methodologies.

- **Judgement sampling** will involve the removal of samples from secure contexts which appear to present either good conditions for preservation (e.g. burning or waterlogging) or which are significant in terms of archaeological interpretation or stratigraphy.
- **Systematic sampling** will involve the sampling of all cut features and buried ground surfaces. The spatial distribution of systematic samples cannot be predetermined, given the relatively small nature of the areas available in an evaluation.

7.10 Industrial activity is unlikely to be present on site, however if present industrial samples and process residues will also be collected. Separate samples (c. 10ml) will

be collected for micro-slags (hammer-scale and spherical droplets) (English Heritage 2001).

7.11 Other samples will be taken, as appropriate, in consultation with YAT specialists and the Historic England Regional Science Advisor, as appropriate (e.g. dendrochronology, soil micromorphology, monolith samples, C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies. Material removed from site will be stored in appropriate controlled environments.

7.12 In the event of human remains being discovered during the evaluation these will be left *in-situ*, covered and protected, in the first instance. The removal of human remains will only take place in compliance with environmental health regulations and following discussions with, and with the approval of, the Ministry of Justice. If human remains are identified, the Ministry of Justice and curator will be informed immediately. An osteoarchaeologist will be available to give advice on site.

- If **disarticulated** remains are encountered, these will be identified and quantified on site. If trenches are being immediately backfilled, the remains will be left in the ground. If the excavations will remain open for any length of time, disarticulated remains will be removed and boxed, for immediate reburial by the Church.
- If **articulated** remains are encountered, these will be excavated in accordance with recognised guidelines (see 7.12) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.13 Where a licence is issued, all human skeletal remains will be properly removed in accordance with the terms of that licence. Where a licence is not issued, the treatment of human remains will be in accordance with the requirements of Civil Law, CIfA Technical Paper 13 (1993) and Historic England guidance (2005).

8 REPORT & ARCHIVE PREPARATION

8.1 Upon completion of the groundworks, a report will be prepared to include the following:

a) A non-technical summary of the results of the work.

b) An introduction which will include the planning reference number, grid reference and dates when the fieldwork took place.

c) The archaeological and historical background

d) The aims and objectives of the investigation, and a detailed account of the methodology

e) Results of the operation, describing structural data, associated finds and environmental data.

f) Statements of potential (stratigraphic, artefactual, environmental)

g) Statement regarding the importance of the results in their local, regional and national context

h) Recommendations for further reporting and publication, where applicable

i) A selection of photographs and drawings, including an overall plan of the site accurately identifying the areas monitored.

j) Specialist artefact and environmental reports as necessary.

k) Details of archive location and destination (with accession number, where known), together with a catalogue of what is contained in that archive.

l) A copy of the key OASIS form details

m) Copies of the Brief and WSI

n) Additional photographic images may be supplied on a CDROM appended to the report

8.2 Copies of the report will be submitted to the commissioning body and the HER (also in PDF format).

8.3 The requirements for archive preparation and deposition will be addressed and undertaken in a manner agreed with the recipient museum. In this instance the Yorkshire Museum is recommended and an agreed allowance should be made for the curation and storage of this material.

8.4 Provision for the publication of results, as outlined in the Brief, will be made.

8.5 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, would grant a licence to the County Council and the museum accepting the archive to use such documentation for their statutory functions and provide copies to third parties as an incidental to such functions. Under the Environmental Information Regulations (EIR), such documentation is required to be made available to enquirers if it meets the test of public interest. Any information disclosure issues would be resolved between the client and the archaeological contractor before completion of the work. EIR requirements do not affect IPR.

9 HEALTH AND SAFETY

9.1 Health and safety issues will take priority over archaeological matters and all archaeologists will comply with relevant Health and Safety Legislation.

9.2 A Risk Assessment/Method Statement (RAMS) will be prepared prior to the start of site works.

10 TIMETABLE & STAFFING

10.1 The timetable will be confirmed in consultation with the client

10.2 Specialist staff available for this work are as follows:

- Human Remains - Malin Holst (York Osteoarchaeology Ltd)
- Palaeoenvironmental remains – PRS Ltd
- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Medieval Pottery Researcher - Anne Jenner
- Finds Officers – Nienke Van Doorn

- Archaeometallurgy & Industrial Residues – Dr Rod Mackenzie & Dr Roger Doonan
- Conservation – Ian Panter

11 MONITORING OF ARCHAEOLOGICAL FIELDWORK

11.1 As a minimum requirement, the North Yorkshire County Archaeologist, Peter Rowe will be given a minimum of one week's notice of work commencing on site, and will be afforded the opportunity to visit the site during and prior to completion of the on-site works so that the general stratigraphy of the site can be assessed. York Archaeological Trust will notify the North Yorkshire County Archaeologist, Peter Rowe of any discoveries of archaeological significance so that site visits can be made, as necessary. Any changes to this agreed WSI will only be made in consultation with the North Yorkshire County Archaeologist, Peter Rowe.

12 COPYRIGHT

13 KEY REFERENCES

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https://historicengland.org.uk/advice/latest-guidance/

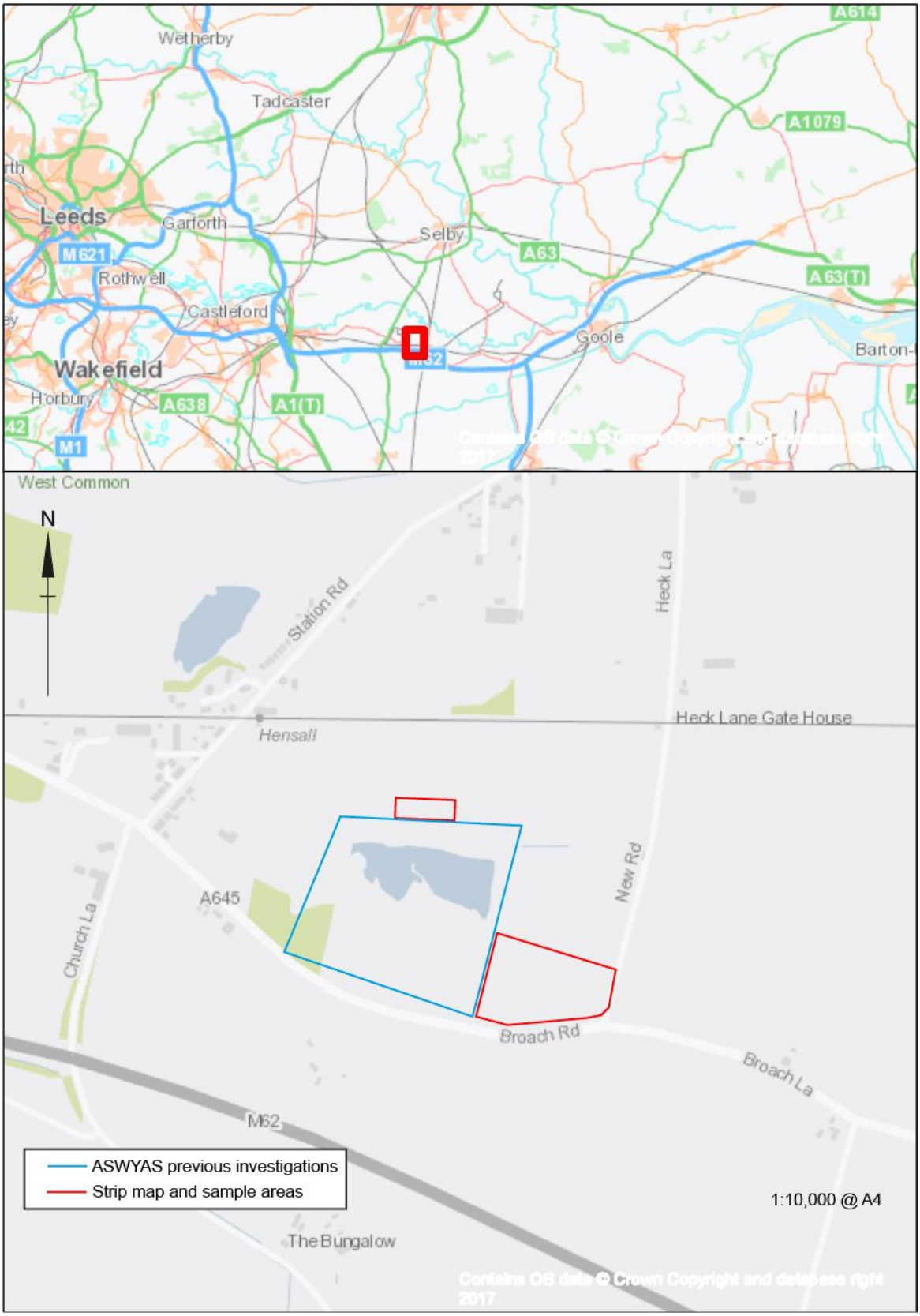

Figure 1 Location of works

APPENDIX 2 – RISK ASSESSMENT FOR HENSALL SAND QUARRY

Site Name:	Hensall Sand Quarry	Risk Assessment by:	Ian Milsted	Checked by:	B.Reeves
Grid Reference:	SE 5880 2250	Date:	15/09/17	Date:	15/09/17
Nearest A&E Department:	Pontefract Hospital Friarwood Lane Pontefract West Yorkshire WF8 1PL	Telephone:	0844 8118110	Other emergencies:	Dial 999 or 112 and ask for the appropriate service National Gas Emergency line: 0800 111 999
		Distance from site:	8.6 miles		
YAT contact details:	Cuthbert Morrell House, 47 Aldwark, York, YO1 7BX	Telephone:	01904 663000		

Duty of care	YAT staff, other workers, members of the public	1. Duty of employer to take reasonably practical steps to ensure health, safety and welfare of employees. 2. Duty of employee to take reasonable care for his/her own safety and for that of his/her co-workers. 3. A mobile phone will be on site at all times; and where multiple teams are working phones will be available for each team. 4. The wearing of appropriate personal protective equipment (PPE), such as steel-toe capped boots, safety helmets and high-visibility vest or jackets is compulsory and will minimise injuries from falling or projecting objects, moving plant or machinery. 5. Ensure all staff are issued with copies of the YAT safety manuals and this risk assessment and that they understand the requirements set out in those documents. 6. Site inductions will be provided by the Principal/Main Contractor where relevant. 7. Inexperienced staff will be closely supervised.

Risks identified prior to work commencing

Likelihood of occurrence	Probably severity before control measures
L: Low M: Medium H: High N/A: Not assessable	L: No or only slight injury M: Moderate injury H: Severe injury/Possible fatality N/A: Not assessable

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
General site safety					
Accidents, near misses and reportable occurrences	YAT staff, other workers	N/A	N/AL	1. All accidents however minor will be reported and recorded in the site accident book. 2. Near misses will be recorded on the risk assessment and new control measures list at the end of the risk assessment and control measures identified. 3. Any RIDDOR reportable occurrences must be recorded in the accident book and reported to the YAT Project Manager and RIDDOR forms completed and submitted.	Project Officer to update the risk assessment and report to the Project Manager
Personal Injury	YAT staff	M	L	1. YAT staff to wear appropriate PPE, normally as a minimum steel-toe capped boots, safety helmet and high-visibility vest or jacket; gloves and protective goggles as appropriate. 2. An appropriate first aid kit will be present on site during all working hours. 3. An appropriately qualified first aider will be present on site at all times.	
Lone working	YAT staff	L	H	1. No one will work on the site unaccompanied. 2. All workers must be within hearing distance of other workers. 3. No one will enter or work in a trench deeper than 0.5m in depth unaccompanied. 4. No one will enter a confined space unaccompanied and without confined spaces training.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Fire	YAT staff, other workers and members of the public	L	H	1. No naked flames will be used during fieldwork.	
Public Access	YAT staff, members of the public	M	M	1. There is no public access to the fieldwork areas; access will only be with prior agreement of the client/site agent or main/principal contractor. 2. Authorised visitors will be accompanied at all times by a member of staff unless suitably briefed and will have read and signed this risk assessment. 3. Visitors will be required to wear appropriate PPE. 4. If members of the public are encountered during fieldwork who do not have access to the site, staff must assess the situation and will ask them to leave if appropriate. If their behaviour is perceived to be threatening or aggressive in any way staff will withdraw if necessary; contact senior YAT staff, the site agent, and the Police.	Staff to monitor frequency of public accessing the site. If it is regular and threatening then site security measures will be considered.
Potential dangers	YAT staff, other workers, members of the public	L	H	1. The project officer responsible for the site (or other appropriate member of staff) will inspect the site at the beginning and end of each working day and record the inspection using the YAT Site Checklist. 2. This risk assessment will be updated with any new identified risks and work will not proceed until appropriate control measures have been put in place.	Project Officer to inspect the site daily.
Staff access	YAT Staff	L	M	1. YAT staff to adhere to Principal Contractor's instructions for access and egress from the working areas 2. If access is awkward, alternative routes should be explored. If none are available, then the access should be separately risk assessed and added to this document.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Slips and trips, uneven ground; falls from same level	YAT staff, other workers, members of the public	M	L	1. Site is to be maintained in a tidy and workmanlike fashion at all times, adhering to the Principal Contractors requirements for housekeeping. 2. All survey grid pegs will be brightly coloured or have a coloured cap, and all personnel will be notified of their location. 3. Trip hazards in the form of upstanding machine anchors, stands, or open gullies will be noted when entering each area of the site and safe routes of access established. These will be noted by all staff and observed at all times. 4. Staff to wear footwear with ankle support.	Project Officer to inspect the site daily.
Falls from Height	YAT staff, other workers	L	M	1. Staff will not climb on structures, walls or trees or enter unstable buildings. 2. Deep excavations will be fenced and signed. 3. It is not anticipated that there will be any requirement to work at height during the Hensall Quarry works. If it becomes necessary, this will be discussed with the client and appropriate equipment will be sourced. This will be subject to a new risk assessment. 4. Ladders will only be used when other options are not possible. Staff will not carry heavy loads up ladders. Ladders will be tied off and a will not be used alone.	Project officer to ensure that all staff adhere to control measures.
Manual Handling	YAT staff	L	L	1. Care will be taken to lift and carry all equipment properly. 2. If loads are deemed too heavy additional trips will be made to carry the equipment and/or loads will be spread between staff.	Project officer to ensure that all staff adhere to control measures.

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Hand tools and equipment	YAT staff	L	L	1. Tools will be maintained in suitable working order. 2. Tools will not be used if partially broken or damaged. 3. Workers should maintain a safe working distance from each other to avoid danger of injury to co-workers. 4. Risk from slight injuries will be minimised by the maintenance of a first-aid kit on site. 5. The wearing of appropriate PPE is mandatory, safety helmet, safety boots and hi-visibility vest/jacket as a minimum.	Project officer to check condition of tools daily and update risk assessment if new tools are introduced to site (e.g. hand auger, wheel barrow).
Environmental Hazards					
Weather	YAT staff	M	M	1. In wet conditions suitable waterproof clothing and footwear will be worn. 2. In hot/sunny conditions suitable protection for the skin and head will be worn on site. This will include appropriate sun screen/block products. Water will be readily available on site at all times. 3. In cold/snowy weather appropriate warm clothing will be worn on site. 4. In all cases PPE requirements will be adhered to.	Staff to note weather and ground conditions and notify supervising archaeologist if they think it is unsafe to work.
Weils disease (Leptospirosis)	YAT staff	M	H	1. Rats and cows carry Weils disease in their urine. Staff will practice good hygiene at all times. 2. Staff will pay particular care when working next to water. 3. Staff will be made aware of the symptoms of Weils disease.	Staff will be aware of and will note the evidence for the presence of rats, cows on site.

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Vermin Traps and Poison	YAT staff	M	M	1. If vermin traps, or substances suspected to be rat poison are encountered during the work then care will be taken to avoid disturbing them. 2. If traps or exposed trays of poison come in to contact with bare skin the affected areas will be thoroughly washed and monitored over the following days to ensure that no risk to personal health has occurred.	
Sharps	YAT staff	M	H	1. To minimise the risk from discarded hypodermic needles staff must be alert at all times when entering working areas. Safety boots with steel midsoles will be worn at all times. Gloves will be worn if the risk is deemed to be high. 2. Removal of needles from site must only be undertaken by a designated member of staff using pliers and placed within an approved medical 'sharps' container. Advice may be sought from local council staff or the HSE executive if the quantity of needles is deemed to be excessive and unsafe for YAT staff to remove.	To minimise the risk from discarded hypodermic needles staff must be alert at all times when entering working areas.
Vegetation	YAT staff	L	M	1. Care must be taken when accessing areas of dense vegetation and where there are overhanging trees. Loose rubble, voids, machinery and other hazards may be obscured. If surfaces are covered by fungal or algae growth the likelihood of slippage is high and spores may be released on contact. Masks will be worn as required and care taken to reduce slippage by provision of duckboards or temporary floors coverings as appropriate. 2. Trees are present on site. If it is suspected that they may be unstable at any point during the works, works in the area will cease and a suitable exclusion zone around the tree established. This will remain in force until the trees stability has been assessed and suitable action taken.	
Wildlife/ livestock	YAT staff	M	M	1. Staff will avoid contact and remain at a safe distance from wildlife and livestock. 2. If livestock are encountered unexpectedly the client/agent should be informed and no work take place until permission has been given and appropriate measures agreed and auctioned.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Asphyxiation	YAT staff	L	H	1. Check previous use of site and ground investigation report where available for potential heavy gas presence. 2. Internal combustion engines will be kept away from excavation wherever possible. 3. Where necessary an appropriate air quality monitor will be used.	
Infection from human remains	YAT staff	L	L	1. Gloves will be worn when excavating human remains. 2. Good hygiene practice will be exercised at all times.	
Falling debris	YAT staff	L	H	1. Hard hats will be worn within all working areas. Additional care will be taken where there is a perceived risk of falling debris. 2. When working adjacent walls staff will be aware that walls may be unstable. If the wall is believed to be unstable work in that area will cease and the Project officer informed. No work will commence until appropriate action has been taken.	
Ground contamination	YAT staff, other workers	M	M	1. Existing ground contamination surveys will be examined to assess the potential for hazardous materials to be present. 2. Appropriate gloves will be worn during all excavation activities. 3. Staff will implement good hygiene practice. 4. Protective clothing will be provided when necessary. 5. Upon entering a survey or excavation site a visual inspection will be made to identify if any potential contaminants, including asbestos and chemical refuse, are present. If potential sources are identified senior YAT staff will be informed and no work will commence until appropriate action has been taken. 6. If potential sources of asbestos are encountered during excavation work in the area will cease and senior YAT staff informed. Work will only recommence when appropriate action has been taken.	All staff will be alert to the possibility of encountering potential contamination, including asbestos, during excavation.

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Chemical, hazardous substances and radioactive material	YAT staff	L	H	1. Care must be taken to avoid contact with drums or containers of known, or unknown chemicals, oils or other hazardous materials. If contact is made then medical advice should be sought immediately. If potential radioactive material is identified staff should leave the site immediately and seek professional advice from the HSE.	All staff will be alert to the possibility of encountering unknown substances during excavation.
Spillages	YAT staff, other workers	M	L	1. YAT will not use hazardous chemicals on site	
Dust, wind-blown particles	YAT staff, other workers	M	L	1. YAT staff to ensure they have access to appropriate PPE to prevent injury 2. Work should be suspended or re-located if conditions become hazardous	
Light conditions	YAT staff, other workers	M	L	1. If light conditions deteriorate the YAT Project Officer should review the working conditions and suspend them if safety cannot be maintained.	
Excavation					
Deep excavations	YAT staff, other workers and members of the public	M	H	1. Trenches over 1.2m in depth or those less than 1.2m deep where the ground is deemed by the Project Officer/supervisor to be unstable will be stepped or battered. 2. Where stepping or battering is not possible appropriate shoring will be used. 3. Trenches will be inspected for stability at the beginning and end of each working day. If staff suspect a trench is unstable they will leave the area and inform the Project officer/senior YAT management as appropriate. Staff will not enter the trench deemed to be unstable until appropriate action has been taken. 4. Fencing / barriers / warning signs will be erected to clearly define archaeological excavation areas using materials supplied by the client	Project Officer to inspect trenches each day before work commences.

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Mechanical plant: 49tn PC490, 2 x articulated dumpers, 1 x bulldozer	YAT staff	M	H	1. Minimal risk to YAT staff maintaining a safe distance from plant. The Principal Contractor shall ensure that such plant will be routinely checked for its safety before operation, and will be operated by suitably experienced personnel. 2. Appropriate PPE to be worn in working areas at all times. 3. Any staff working with plant must stay in the operator's field of view and establish and maintain good communication with the operator at all times. 4. Staff will not enter the arc of the acting arm of any mechanical excavator until such time as the driver has been informed and the bucket is grounded.	Principal Contractor to check plant safety certificate and drivers qualification certificate before mechanical excavation starts.
Presence of services	YAT staff, other workers	L	L	1. Check with Principal Contractor, Gas and Water companies for the presence of services within the area of the works. 2. If services are encountered during archaeological ground investigations these will be investigated to confirm they have been disconnected before work continues. 3. No mechanical excavation will be carried out below overhead services. If overhead services are present and restrict mechanical excavation the Project Manager will liaise with the employer to establish suitable safe working practices.	Project officer supervising machine excavation to be alert to the potential presence of unknown services.
Survey					
Lasers	YAT staff, other workers, member of the public	L	M	1. The survey may involve the use of equipment fitted with Class II lasers. Care will be taken when using the equipment not to point the laser beam towards people's faces. If the beam is accidentally shone into an eye then the survey will cease and medical advice will be sought.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Transport and Traffic					
Driving	YAT staff, members of the public	L	H	1. Never drive if tired; alternative arrangements for accommodation close to the site can be made. 2. Speed limits to be adhered to, and to be adjusted appropriately according to weather conditions 3. Drive in a courteous and considerate manner; avoid confrontation and potential 'road rage' incidents.	Project officer and driver to consider if alternative arrangements are required.
Loading of equipment and goods	YAT staff	L	M	1. Project officers and drivers will ensure vehicles are not overloaded. 2. Equipment and goods will be loaded in an appropriate manner; two people will carry out the task if required. 3. Equipment and goods will be properly secured as appropriate.	
Transport of passengers	YAT staff	L	H	1. Supervisors and drivers will ensure that the passenger capacity of a vehicle is not exceeded. 2. All passengers and driver will use the safety restraints (seat belts) fitted to the vehicle.	
Use of vehicles on site	YAT staff, other workers	L	H	1. Where present, properly marked routes must be used at all times. 2. All attempts will be made to minimise vehicle – pedestrian interaction. 3. Where marked routes are not present machine operators will be informed of access routes and will only move machinery via agreed routes. 4. Vehicles will be parked in designated parking areas.	
Live traffic	YAT staff	L	H	1. Staff will maintain a safe working distance from live carriageways at all times.	

Additional risks and/or control measures identified during works

Hazard/near misses	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Residual risk

I confirm that I have read and understood the nature of the potential risks on this site and the control measures needed to mitigate them.		
Print Name	Signature	Date

APPENDIX 3 – YAT SITE CHECKLIST

York Archaeological Trust Site Checklist

To be completed by the field officer responsible for the site

Project Name:

Project Code:

Type of Fieldwork:

Week beginning:

Note: All site staff should read, understand and sign the risk assessment before starting work on site. If the risk assessment is amended all site staff should be made aware of any changes and initial the risk assessment.

	Frequency	Monday	Tuesday	Wednesday	Thursday	Friday
First Aid kit	At start of works and at beginning of each day					
Tools	Daily before start of work					
Fencing	Daily prior to leaving site					
Trench stability	Daily Morning					
	Afternoon					
Main contractor briefing received (if working under main contractor)	Daily before start of work					
Valid permit to dig (if required)	Daily before start of work					
Mechanical plant safety certificate	On delivery of mechanical plant					
Mechanical plant (walk around with driver)	Daily before start of work					
Presence of sharps in working areas	Daily before start of work					

FIGURES

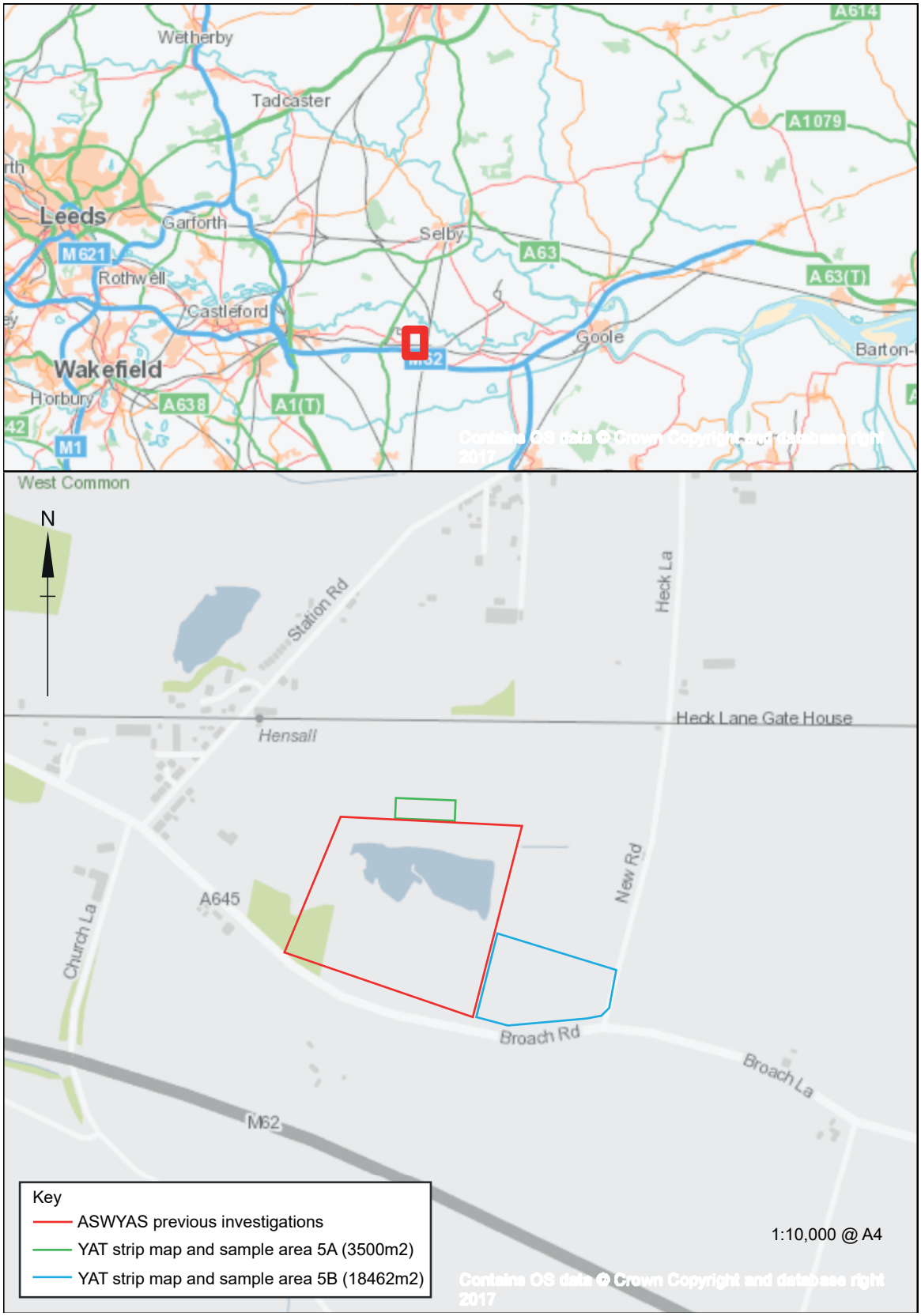

Fig. 01 Regional and site location maps with outline of excavated areas by ASWYAS and YAT.

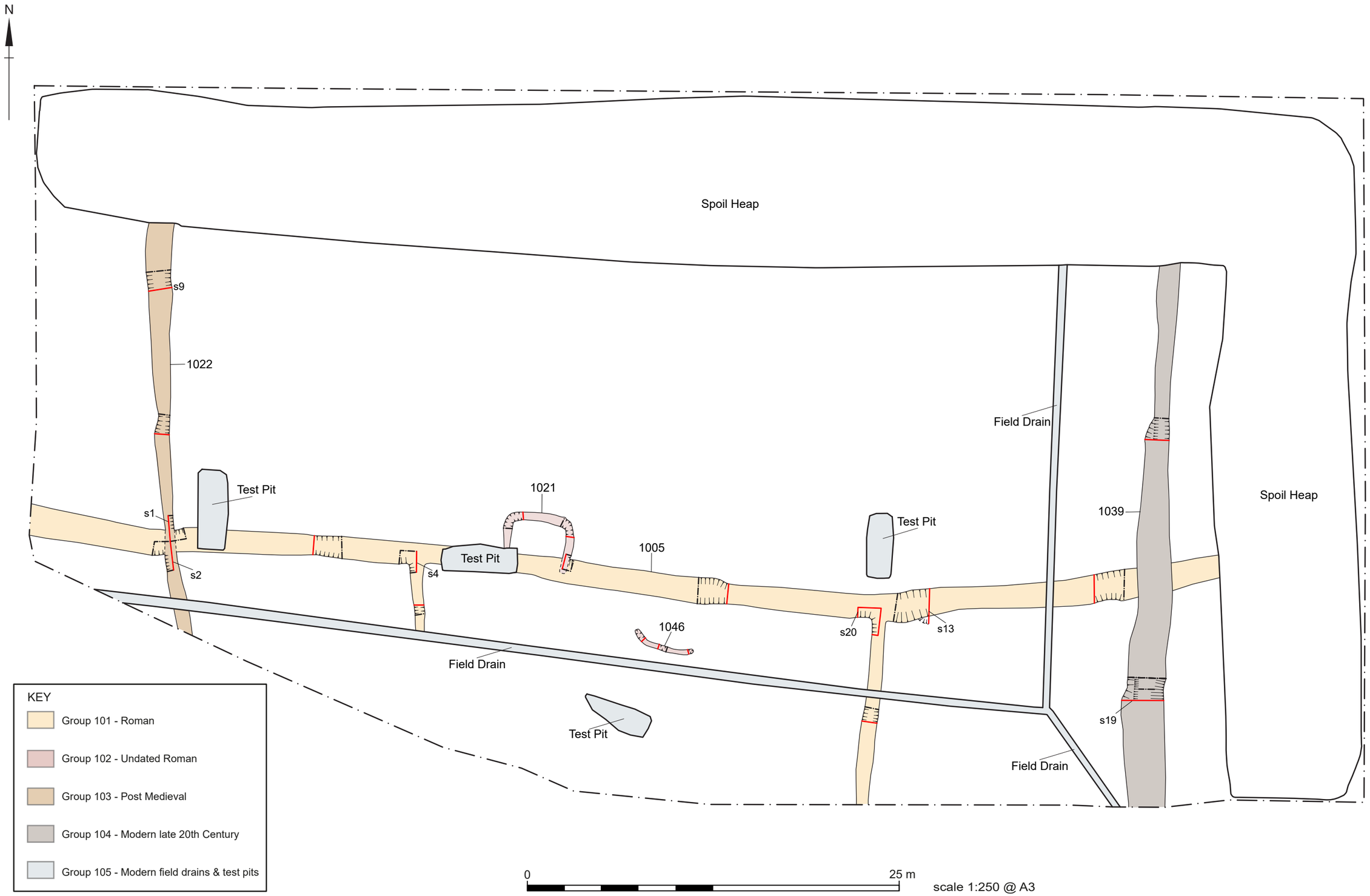

Fig. 02 Hensall Area 5A Plan showing Contexts and Groups.

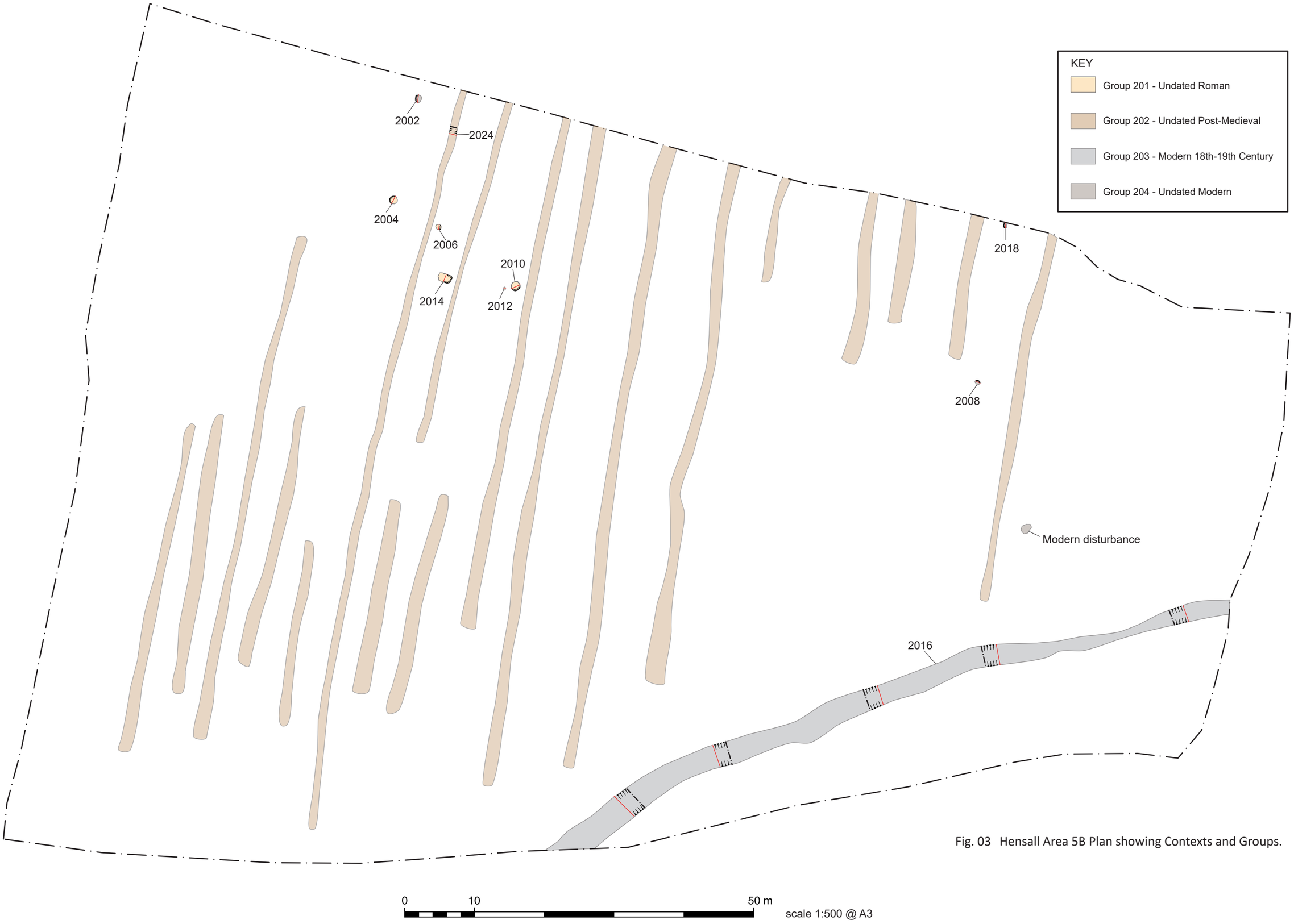

Fig. 03 Hensall Area 5B Plan showing Contexts and Groups.

York Archaeological Trust

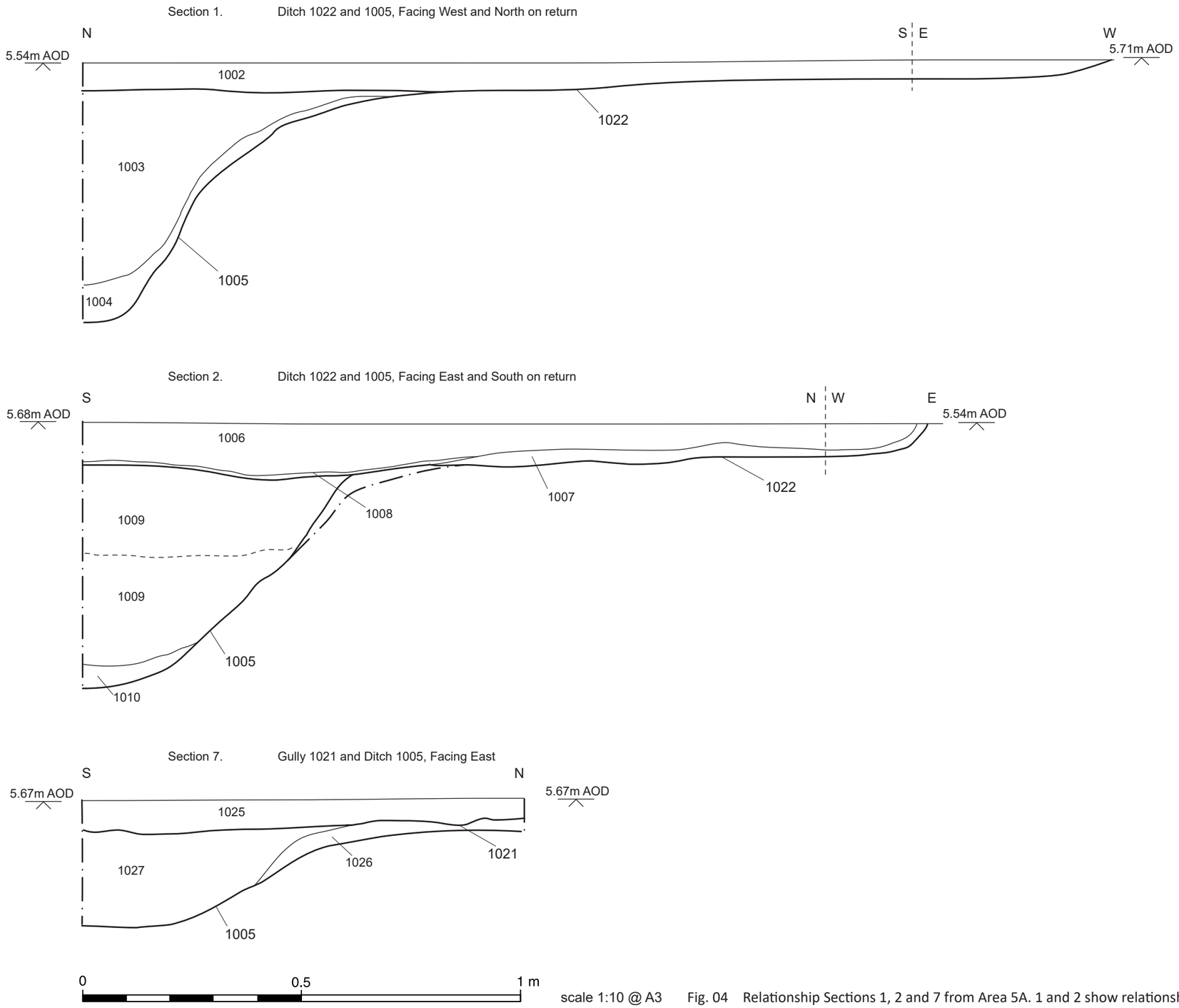

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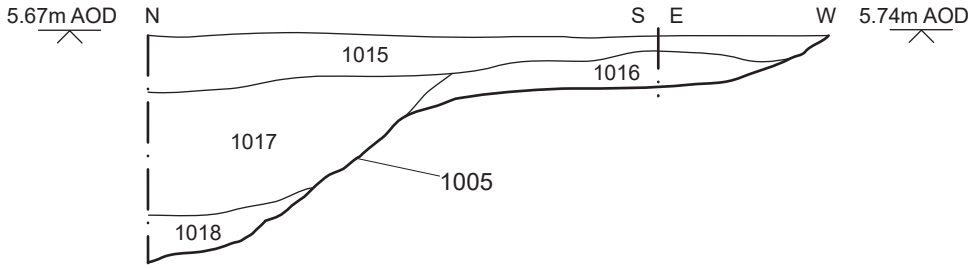
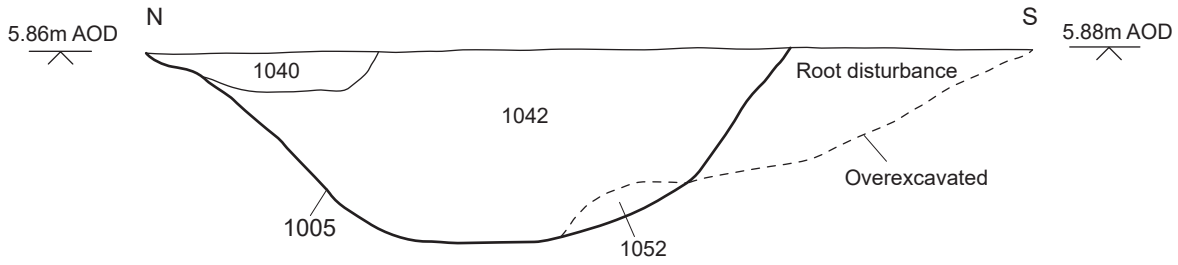
Fig. 04 Relationship Sections 1, 2 and 7 from Area 5A. 1 and 2 show relationship between 1005 and 1022; 7 shows relationship between 1005 and 1021.

Section 4. Ditch 1005 Relationship slot. Facing West.



Section 13. Ditch 1005. Facing East.



Section 20. Ditch 1005 Relationship slot. Facing west.

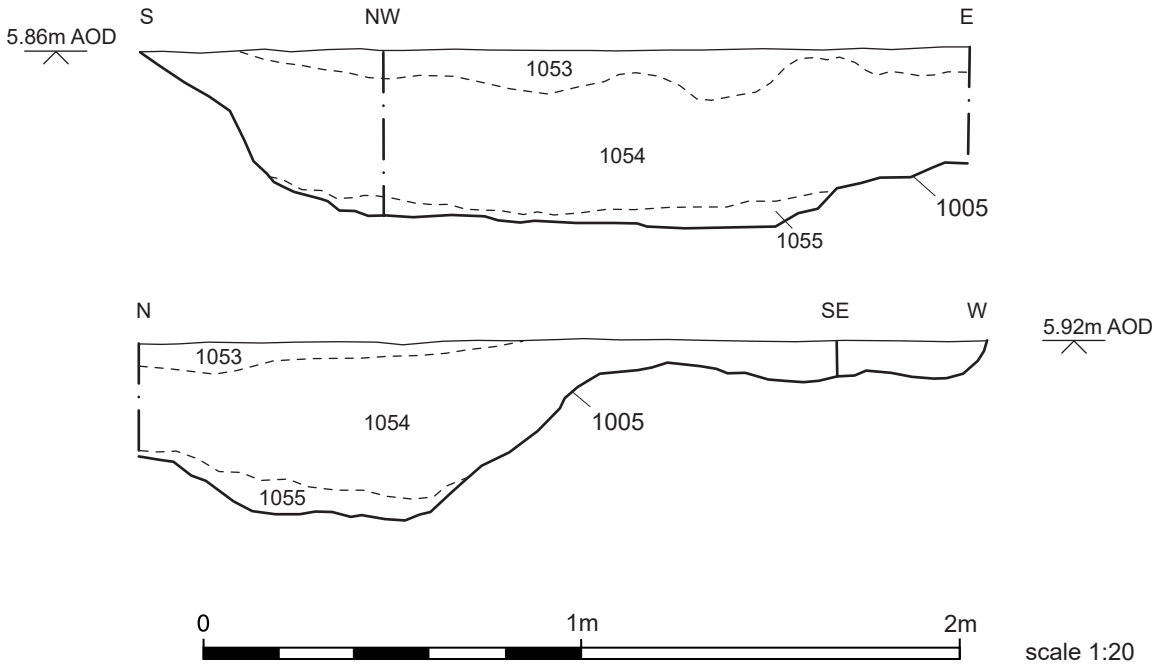


Fig. 05 Sections 4, 13 and 20. Sections 4 and 20 include returns on 1005.

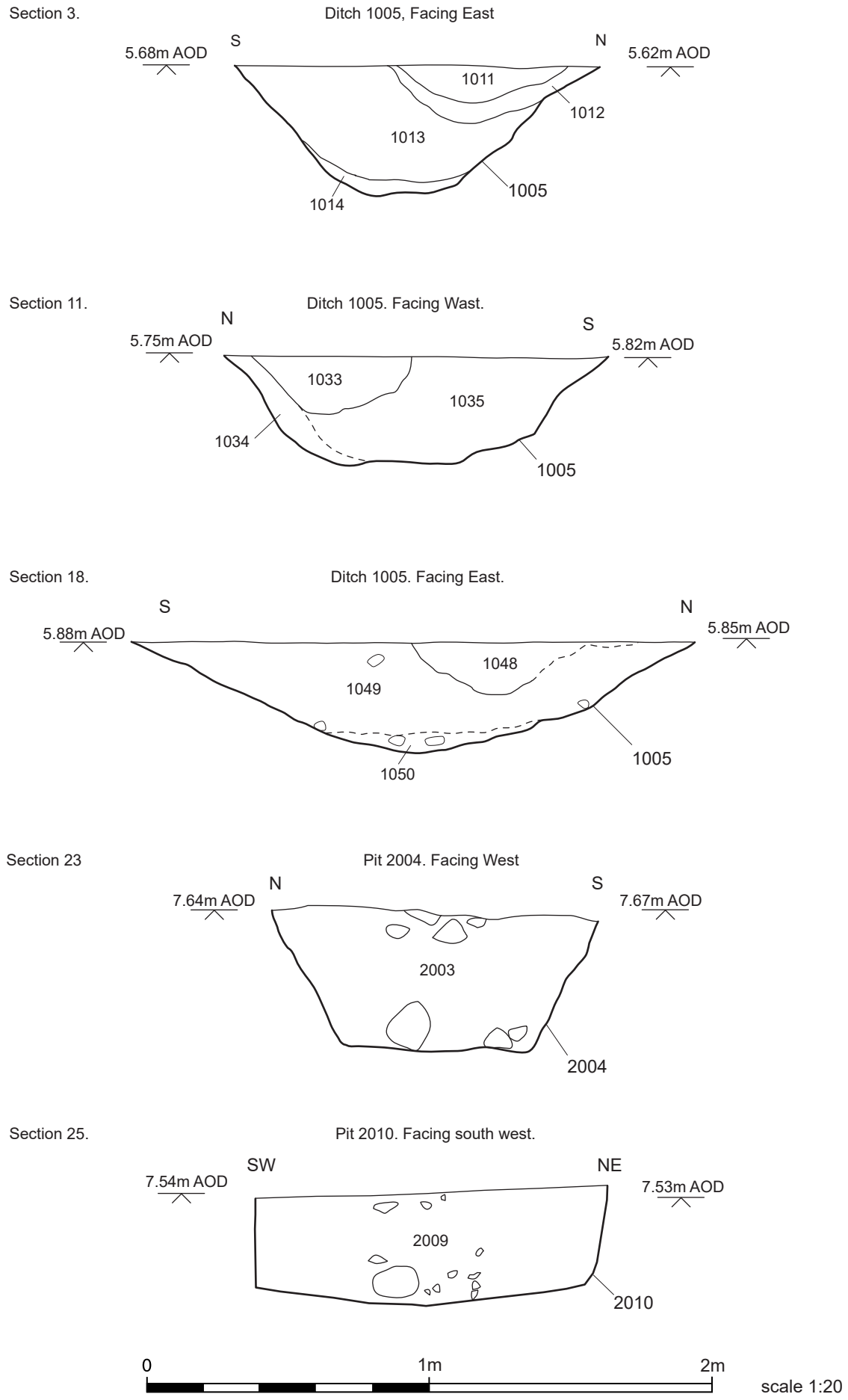


Fig. 06 Sections 3, 11 and 18 showing possible recuts in ditch 1005 in area 5A. Sections 23 and 25 show two of four pits from Group 201 in area 5B.