ArcHeritage

ARCHAEOLOGICAL MITIGATION EXCAVATION ON LAND OFF SANDALL STONES ROAD, KIRK SANDALL

ARCHAEOLOGICAL ASSESSMENT REPORT

Report Number 2014/33 September 2014

ArcHeritage

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NON-TECHNICAL SUMMARY

This document is an assessment report on the results of the archaeological mitigation excavation on land off Sandall Stones Road, Kirk Sandall (NGR SE 609 070). The excavation is the final stage of a process of evaluation (geophysical survey and trial trenching) and mitigation (excavation) that has been undertaken as part of the planning process. Doncaster Metropolitan Borough Council commissioned ArcHeritage to undertake the excavation.

The excavation confirmed the presence of a ditch that had been discovered during trial trenching, and investigated it in more detail. Artefactual evidence to date the ditch was not recovered. The form and variability of the ditch was investigated and this in consideration with the soils on the site, in particular root related mineral staining, suggests the ditch may have been associated with a hedge. Although is was not possible to confirm its date it appears likely that the ditch relates to known Romano-British activity on land *c.*50m to the west of the site.

KEY PROJECT INFORMATION

Project Name	Sandall Stones Road Mitigation
ArcHeritage Project No.	4136141
Report status	Final
Type of Project	Fieldwork
Client	Doncaster Metropolitan Borough Council
NGR	SE 609 070
OASIS Identifier	archerit1-181407
Author	Glyn Davies
Illustrations	Glyn Davies
Editor	Anna Badcock
Report Number and Date	2014/33 29/09/2014

1 INTRODUCTION

This document is an assessment report on the results of archaeological mitigation excavation on land off Sandall Stones Road, Kirk Sandall (NGR SE 609 070) (Figure 1). The site has been subject to a programme of archaeological evaluation (geophysical survey and trial trenching) prior to the granting of planning consent for a new waste transfer site. The planning consent contained a condition requiring further archaeological excavation to mitigate the impact of the development on archaeological deposits on the site. Doncaster Metropolitan Borough Council (DMBC) commissioned ArcHeritage to undertake the mitigation excavation and this document reports on the results of this work.

The evaluation comprised twelve trial trenches excavated by ArcHeritage in June 2014 (ArcHeritage 2014). These were undertaken to determine if any traces of the nearby Romano-British agricultural and possible settlement landscape previously identified *c*.50m west of the site (ASWYAS 2013) continued into the site. During the evaluation three archaeological features were identified in Trench 2. These comprised part of a ditch, a small gully and a possible pit. The ditch continued beyond the bounds of the trench. No cultural material was obtained from the features, although four sherds of Romano-British pottery were recovered from the subsoil in Trenches 3 & 6. A flint scraper was also recovered from subsoil in Trench 3. The mitigation excavation was targeted at the large ditch in Trench 2 to determine its form, extent and to recover dating evidence if possible.

2 LOCATION, GEOLOGY AND TOPOGRAPHY

The site is *c*.2.8 hectares in extent, and lies to the east of Sandall Stones Road, Kirk Sandall. The majority of the site is open scrub land overlying sandstone geology. The site has not been previously developed, although much of the surrounding land has been. The site is made up of two blocks of land a western area and an eastern area. This report is concerned with the mitigation excavation undertaken in the western area.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The location of the site in Kirk Sandall is near to the location of Roman-British field ditches and possible settlement remains exposed during excavations (ASWYAS 2013). These remains are to the west of Sandall Stones Road with the majority being set back some 50m from the road.

The first stage of archaeological work undertaken as part of this project was a geophysical (GSB 2014). The geophysical survey identified a series of parallel anomalies trending NW to SE within the western area of the site. These were interpreted as reflecting ridge and furrow agriculture. There was also a single linear anomaly orientated approximately ENE to WSW (measuring *c*.40m in length) which was located north of the ridge and furrow; it was uncertain if this was archaeological in nature and there was no clear relationship between the ridge and furrow and this single linear anomaly. All other features identified by the geophysical survey were modern and the majority were related to the industrial buildings adjacent to the site.

A total of 12 trial trenches were excavated during the evaluation trial trenching (Figure 1), distributed across the two areas of the site (ArcHeritage 2014). Most of the trial trenches were archaeologically sterile with deep topsoil and subsoil. However, in the western area a large

ditch with possible associated adjacent features were encountered in Trench 2 and three (of a total of four) sherds of Roman pottery were recovered Trench 3, adjacent (Appendix 4). The large ditch in Trench 2 was on a similar alignment ENE to WSW to the single uncertain anomaly seen in the geophysical survey although slightly south of it. Trenches 2 and 3 were in the north-western portion of the site, raising the possibility that the known Roman remains to the west of the road (ASWYAS 2013) extended into the current site.

4 METHODOLOGY

4.1 Aims

The general aims of the mitigation were:

- to determine the extent of the features identified in Trench 2
- to recover secure dating evidence from these features
- to provide information that will enable the remains to be placed within their local, regional, and national context, and for an assessment to be made of the significance of the archaeology of the area

4.2 Methodology

The excavation comprised a strip, map and sample excavation of the area around evaluation Trench 2. An area extending 10m around Trench 2 was stripped of topsoil and subsoil (Figure 1); this zone was subsequently extended eastwards towards Trench 3 in order to follow the exposed ditch feature and map its extent.

The area was stripped using a machine fitted with a suitable toothless bucket to produce a clean, flat surface for archaeological inspection. The stripping activity was monitored at all times by an archaeologist. Areas with potential archaeological features were then hand cleaned by archaeologists to enable any archaeological features to be identified. The plant used for the stripping did not track across cleaned areas until they had been proven to be archaeologically sterile.

All potential archaeological features revealed were investigated in an archaeologically controlled and stratigraphic manner in order to achieve the aims of the mitigation.

4.3 Recording methodology

A written scheme of investigation (WSI) was produced, and the recording methodology is detailed in that document (Appendix 3).

5 EXCAVATION RESULTS

5.1 The soil sequence

The soils on the site are alluvial in origin, deep, sand rich, variable, mottled and heavily bioturbated. The topsoil [1001] was a brown, silty sand approximately 0.4m deep; this overlay a mottled, slightly orange brown, silty sand subsoil [1002] that was also around 0.4m deep. The subsoil was heavily bioturbated with numerous root holes visible.

The depth of the topsoil [1001] and subsoil [1002] probably relates to long-term soil development processes. There may also be a component of additional alluvial or aeolian material that added to the depth of topsoil and subsoil over time. The subsoil appears to have developed *in situ* due to the extensive bioturbation, leaching and mineralisation observed.

There is therefore the possibility that these soil formation processes, particularly the extensive root bioturbation, have truncated the archaeological deposits and the identified features were originally cut from higher in the sequence than was observed but this could not be confirmed.

Underlying the subsoil was a orange to yellow brown natural sand [1003]; this was very mottled and contained numerous patches of mineralisation staining. The mineralisation patches were either black or red and were formed of numerous small concretions and stains, the colour variation probably relating to the presence of both manganese and iron minerals. The origin of the mineralisation relates to water flow, with leaching of material from higher up and deposition lower down the soil profile; water flow through this sandy soil would generally be easy, but it appears to have been enhanced by root activity as many of the mineral patches were shown, on investigation, to form vertical linear trends. Archaeological features were only visible in the top of the natural sand [1003] (Plate 1) and could not be identified in the overlying subsoil [1002]. Below sand [1003] there was a compacted concreted thin sand and gravel layer [1007]. This was highly variable in colour orange with red/pink and black flecking. This highly variable colour and nature of this deposit was probably related to leaching and mineralisation. This thin sand and gravel overlay a loose orange pink sand [1008] the base of which was not reached.

Plate 1 Excavation area showing ditch [1004] following stripping

5.2 Archaeological remains

The main archaeological feature identified within the excavation was a large ditch [1004] (Figure 2, Plate 1). This was orientated ESE to WNW and was the ditch originally identified in evaluation Trench 2. This ran for the full length of the excavated area although it was much more ephemeral at the eastern end of the excavation adjacent to evaluation Trench 3 where it

had not been visible. Nine slots were excavated across the ditch to investigate its form and to recover dateable artefacts from its fills.

The nine slots (figure 3) all showed the same sedimentological sequence; a lower pale greyish silt sand [1006] and upper light orange to yellow brown sandy fill [1005] (Plate 2). The upper fill, which was mottled and became slightly lighter with depth, was very similar to the natural sand [1003] that the ditch was cut through. This made identification of the ditch edges difficult. There was also some evidence of lenses within the upper fill but these were hard to discern (Plate 3). The upper fill was heavily root bioturbated and the lower less so. No artefacts were recovered from the ditch fills. No obvious pieces or flecks of charcoal were observed and very little charcoal was identified in the environmental sample collected and processed during the trial trenching (Appendix 5).

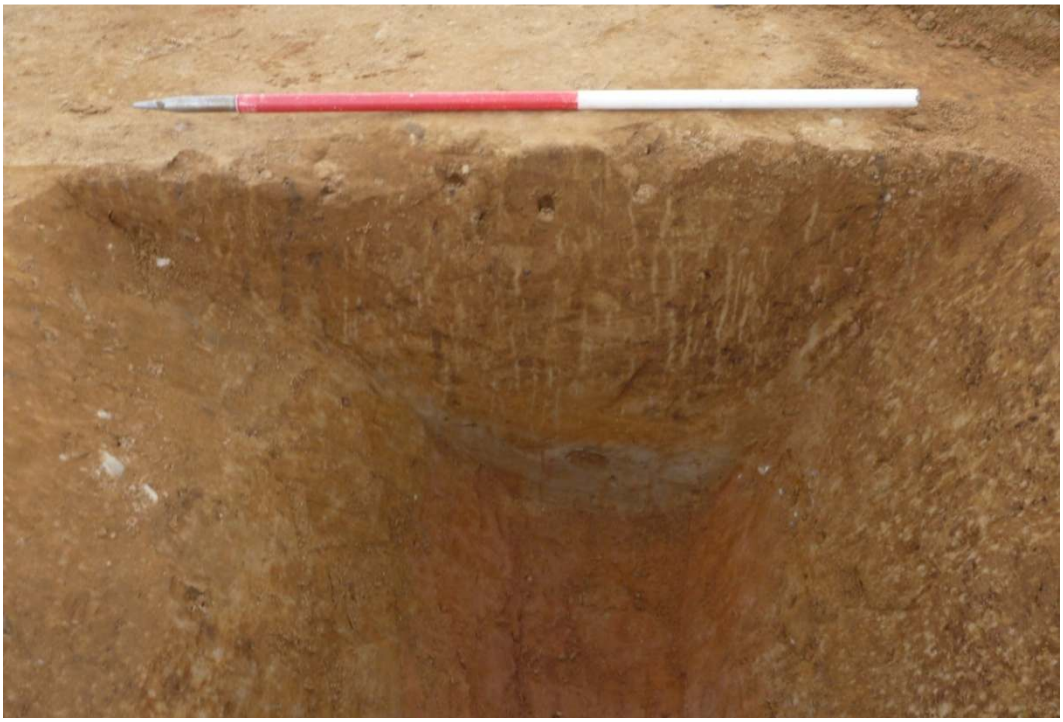

Plate 2 Slot through Ditch showing upper fill [1005] and lower fill [1006] in U shaped ditch section

The ditch cut was only 1.1m wide in slot 9 at the east end but was generally between 1.4m and 1.7m wide (Figure 3). The depth of surviving identifiable ditch varied between approximately 0.5m and 1m. The top of the surviving ditch varied between 5.60m and 5.37m AOD and the base varied between 5.12m and 4.75m AOD. The profile was generally U-shaped (Plate 2) although in slots 5 and 7 this was more of a V-shape with a rounded base (Plate 3). The rounded base of all of the slots may simply be because they all cut down into the loose orange pink sand [1020] that could not support a sharp steep cut edge. The sides of the ditch varied in steepness along its length and were not consistent within individual slots. In some cases the ditch side was steeper on one side than the other. A change in angle of slope (Plates 2 and 3) was seen on one side of the ditch in five of the slots but this was not consistent; three times it was on the north side and twice on the south. Generally the shape of the ditch was variable and the loose sandy deposits the ditch cut through may have influenced the shape and profile

of the ditch along its length. There was no evidence of recutting either from the fills or the ditch edges.

Plate 3 Slot through Ditch showing upper fill [1005] and lower fill [1006] in V-shaped ditch section

In most of the slots excavated black mineralisation stains and concretions were observed in the ditch fills and continuing on into the underlying natural. These black mineralisation deposits were mainly observed on the north side of the ditch (Plate 3) although on slots 7 and 4 they were seen through out the ditch fill.

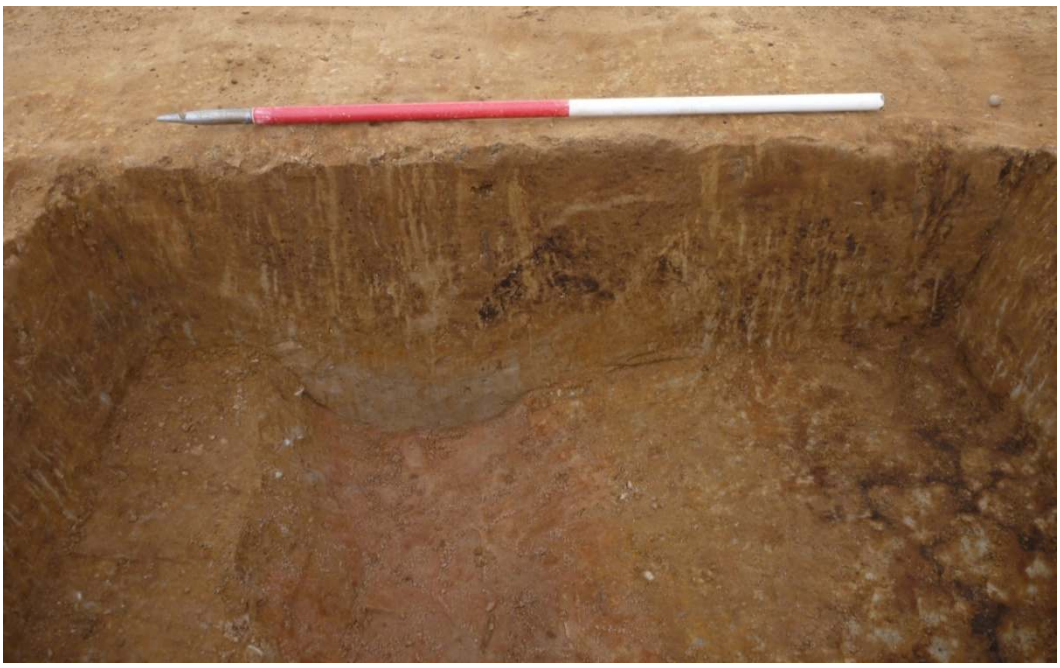

Plate 3 Slot through Ditch showing mineral staining on northern (right) side

The prevalence of manganese mineralisation in the ditch did not in general appear to relate to the cut of the ditch but to extensive root activity in the ditch, particularly on the north side. This was seen as vertical lines of black deposits running through the fill and into the natural showing this developed either during or after silting/backfilling of the ditch. If root activity was a factor in the deposition of mineral deposits this suggests that root activity on the two sides of the ditch were different and thus that the vegetation on both sides of the ditch were different. Possible explanations could include:

a) the presence of a hedge on the north side
b) different agricultural practices in the two fields, possibly pasture and arable, although this would suggest that agricultural practices either side of the ditch remained constant through its lifetime.
c) a lost bank on the south side restricting root penetration; this would this would account for the absence of mineralisation next to the ditch but not within the ditch fill as this would not be impeded by a bank.

In ditch sections 7 and 4, mineralisation appeared to relate to the ditch cut and fills. This may be a result of variable water flow at the interface of the silty sand lower fill [1006] and the sandy upper fill [1005] and the natural sands. This was most clearly seen in the distribution of mineralisation staining in the section of slot 4 (Figure 3) .

One other potential archaeological feature was investigated, a possible small gully [1015]. This was located just south of ditch [1004] aligned north-south. There was rounded terminal at the north end and the feature ran south for approximately 2.5m before petering out. The gully was U-shaped in section, 0.35m wide and 0.2m deep. The fill [1014] of this feature was a mottled brown yellow silty sand with black manganese flecking. There was an animal burrow that cut vertically through this feature. The ephemeral and disturbed nature of this possible feature made it difficult to determine its extent or function although its general appearance suggests it was archaeological rather than natural in origin.

5.3 Natural features

There were several reddish/pinkish patches in the soil background that appeared at first to be evidence of possible heating, but investigation of these 'features' showed they did not contain any charcoal. The red/pink colouration was probably due to iron staining.

North of the ditch was a tree throw (Figure 3, Plate 4), this was a semicircular arc of slightly browner material [1013] which showed extensive root activity (i.e. where the roots had been ripped out) and darker sediments from the topsoil above had been washed down (Plate 5). In the centre was a reddish patch [1012]. This was possibly related to the compression of the deposits below the fallen root bowl. The compression of sediments by the fallen root bowl may have resulted in the deposition of mineral, possibly iron, due to changed water flow or have been the result of some leaching and mineral deposition effect from the overlying rotting tree bowl.

Plate 4 Tree throw [1013]

Plate 5 Root staining in tree throw [1013]

6 DISCUSSION

The main archaeological features identified in the mitigation excavation was ditch [1004]. The absence of any evidence for settlement remains in the vicinity of the ditch suggests it is a field boundary and the absence of any dating evidence from the ditch fill means it can not be securely dated. The presence of the known Romano-British field ditches and possible settlement on the western side of Sandall Stones Road (ASWYAS 2013) suggests the ditch is potentially Romano-British as does the presence of Roman pottery recovered from subsoil in Trial Trench 3, adjacent. The orientation of the ditch does not clearly relate to any of the

ditches identified during the ASWYAS evaluation but the whole of that site has not yet been fully excavated.

If the ditch was a field boundary, as suggested, it is likely that it was associated with a feature such as a hedge bank or fence. The presence of mineral staining, related to root activity, on only one side of the ditch suggests that there may have been a hedge on the northern side. Other explanations are possible as discussed above but differential vegetation such as a hedge seems most likely.

7 CONCLUSIONS

The excavations at Sandall Stones Road have:

- determined that the ditch identified in Trench 2 of the evaluation runs for approximately 50m east-west;
- not recovered dating evidence, although as the ditch appears to be a field boundary artefacts would be rare within a ditch at some remove from settlement;
- provided information that suggests the ditch may well relate to the Romano-British fields and possible settlement on the west side of Sandall Stones Road;
- provided evidence that the ditch may have been associated with a hedge;
- provided evidence to determine that the individual ditch is of local interest but this may be part of a larger area of Roman activity which is of potential regional significance.

In the absence of any artefactual remains the potential for further analysis on the archive of this excavation is negligible and no further analysis is recommended. A note on the results of the excavation should be prepared for *Archaeology in South Yorkshire*.

8 ACKNOWLEDGEMENTS

ArcHeritage would like to thank Andrew Lines, South Yorkshire Archaeology Service, for monitoring the project. Thanks are also due to Peter Wilson of Doncaster Metropolitan Borough Council for commissioning the work and providing access to the site. The fieldwork was undertaken by Glyn Davies, Toby Pillatt and Jo Brown.

9 BIBLIOGRAPHY

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ArcHeritage. 2014. *Archaeological evaluation at Sandall Stones Road, Kirk Sandall, Doncaster*. Interim report. 2014/23.

GSB 2014. *Land off Sandall Stones Road, Kirk Sandall*. GSB Survey Report No. G1435

10 FIGURES

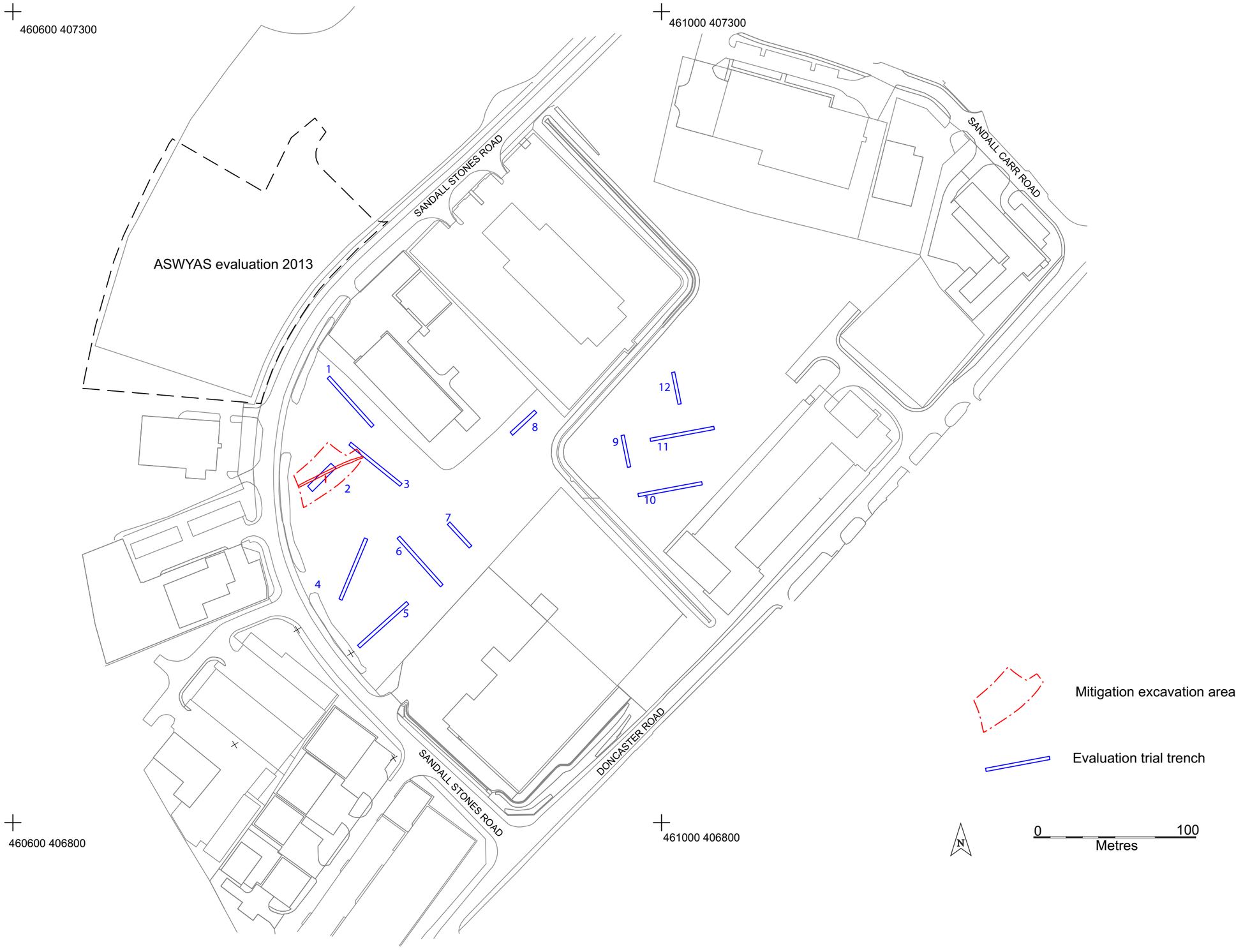

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Figure 1: Location of trial trenches and mitigation excavation area

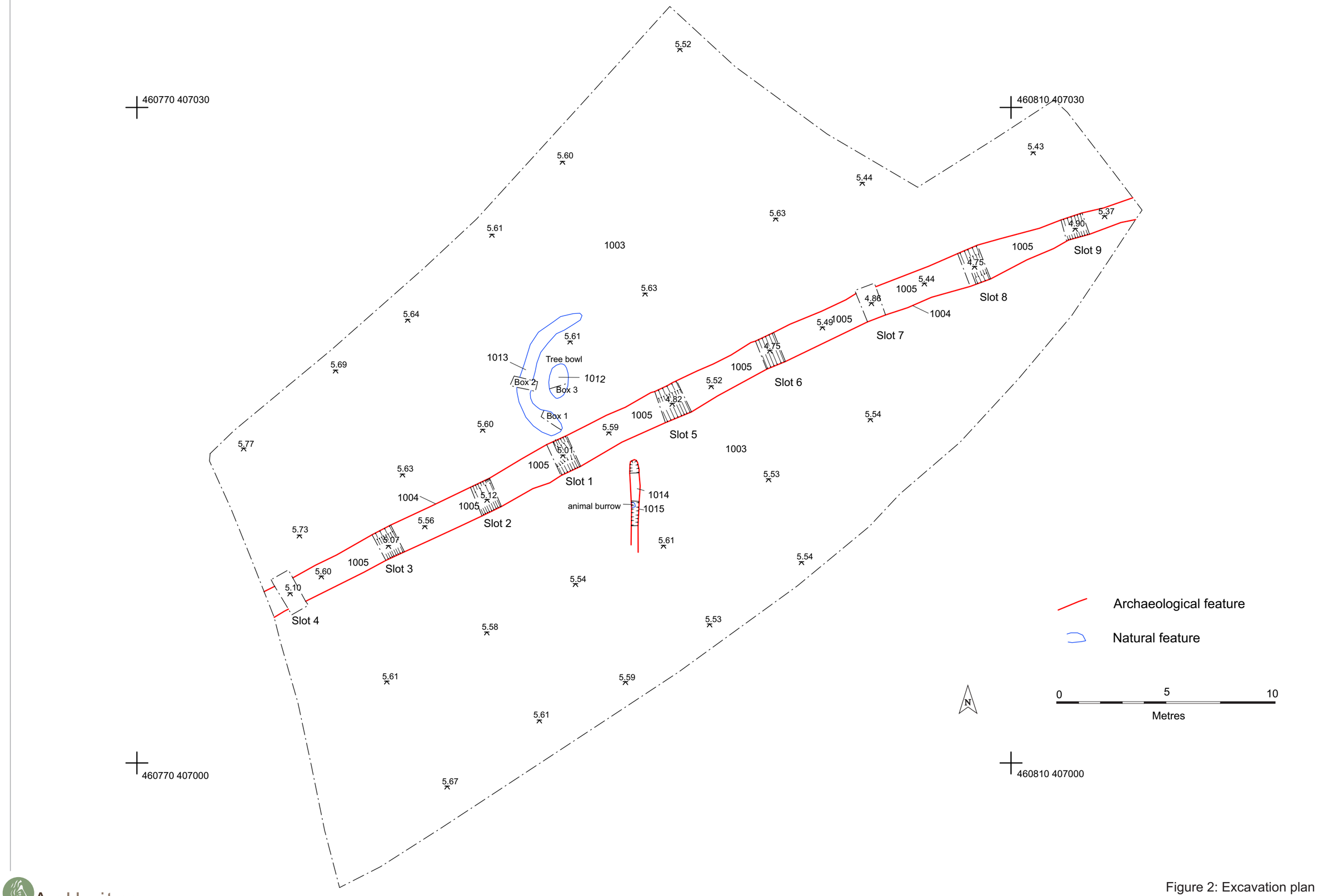

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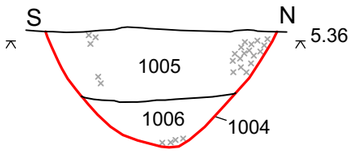
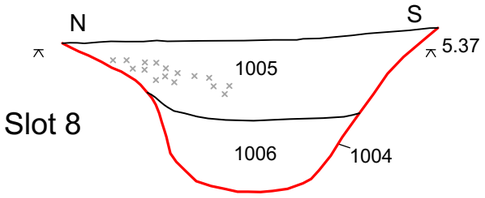
Figure 2: Excavation plan



Slot 9



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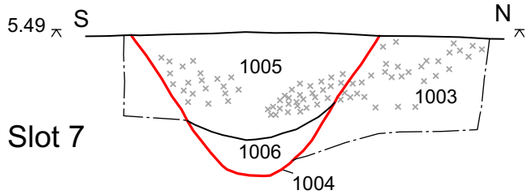

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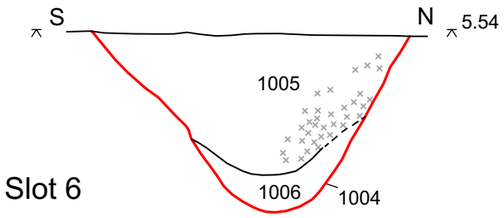

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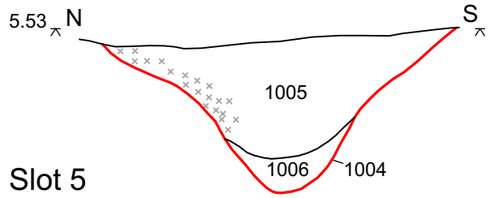

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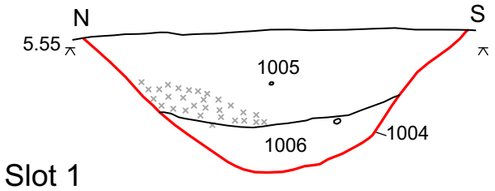

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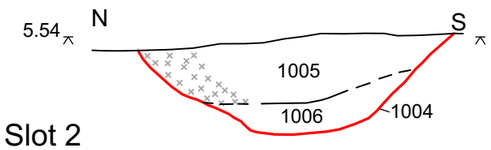

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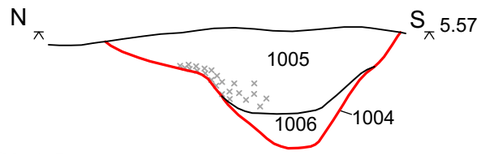

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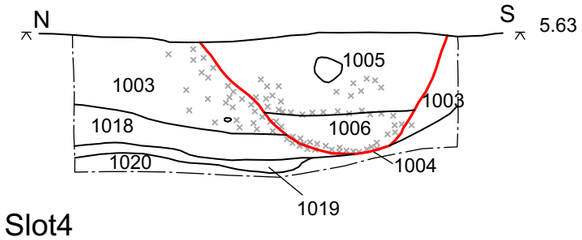

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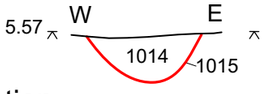

Gully section

cut

mineral staining

0 1 2

Metres

Figure 3: Ditch sections

APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Context register	1
Context sheets	14
Levels register	2
Photographic register	2
Drawing register	1
Original drawings	7
B/W photographs (films/contact sheets)	2
Digital photographs	49
Finds register	0
Sample register	1
Sample sheets	2
Written Scheme of Investigation	1
Report	1

Table 1: List of archive contents

APPENDIX 2 – CONTEXT LIST

Area	Context no	Description
1	1001	Silty sand topsoil
1	1002	Orange brown silty sand subsoil
1	1003	Orange brown mottled silty sand natural
1	1004	Ditch cut
1	1005	Orange brown silty sand secondary fill of ditch 1004
1	1006	Light grey silty sand primary fill of ditch 1004
1	1007	Concreted sand and gravel layer
1	1008	Loose orange pink sand
1	1009	Discarded
1	1010	Discarded
1	1011	Discarded
1	1012	Red stained oval patch, part of tree throw
1	1013	Brown tree throw arc
1	1014	Mottled brown yellow fill of gully 1015

Table 2: List of contexts

APPENDIX 3 – WRITTEN SCHEME OF INVESTIGATION

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL MITIGATION OF LAND OFF SANDALL STONES ROAD, KIRK SANDALL.

Site Location: **Land adjacent to Sandall Stones Road, Kirk Sandall**

NGR: **SE 609070**

Planning ref: **14/00790/TIP (permission has been granted)**

Prepared for: **Doncaster Metropolitan Borough Council**

Status of WSI: **Incorporates comments from SYAS. FINAL 24/7/14**

1 SUMMARY

1.1 Doncaster Metropolitan Borough Council (DMBC) have commissioned an archaeological evaluation of land adjacent to Sandall Stones Road, Kirk Sandall. This is being undertaken in order to assess the archaeological potential of the site. Planning consent has been given for the construction of a new waste transfer site here.

1.2 This Written Scheme of Investigation (WSI) has been prepared following consultation with the South Yorkshire Archaeology Service. The work will be carried out in accordance with National Planning Policy Framework (DCLG 2012) and this WSI, and according to the principles of the Institute for Archaeology (IfA) Code of Conduct and all relevant standards and guidance.

2 SITE LOCATION & DESCRIPTION

2.1 The site measures c. 2.8 hectares, and lies to the east of Sandall Stones Road, Kirk Sandall (Illustration 1).

2.2 The majority of the site is open scrub land overlying sandstone geology. The site has not been previously developed, although much of the surrounding land has been.

3 DESIGNATIONS & CONSTRAINTS

3.1 There are no known designations or constraints at the site. Horses have recently been kept on some of the site, but the client will make arrangements for these to be moved prior to the mitigation works taking place, if they are still present.

4 ARCHAEOLOGICAL INTEREST

4.1 Twelve evaluation trial trenches were excavated by ArcHeritage in June 2014 (ArcHeritage 2104) to determine if any traces of the nearby Romano-British agricultural and possible settlement landscape previously identified in a desk-based assessment (Atkins 2014) and another nearby evaluation (ASWYAS 2013) continued into the site.

4.2 Three archaeological features were identified in Trench 2. These comprised part of a ditch, a small gully and a possible pit. The ditch continued beyond the bounds of the trench. No cultural material was obtained from the features, although four sherds of Roman-British pottery were recovered from the subsoil in Trenches 3 & 6. A flint scraper was also recovered from Trench 3. Sample processing showed that palaeoenvironmental potential of the ditch fill was poor.

5 AIMS

5.1 The general aims of the mitigation are:

to determine the extent of the features identified in Trench 2

to recover secure dating evidence from these features

to provide information that will enable the remains to be placed within their local, regional, and national context, and for an assessment to be made of the significance of the archaeology of the area;

6 EXCAVATION METHODOLOGY

6.1 The evaluation will comprise the following elements:

Strip, mapping and recording

Reporting & archiving

Publication/dissemination at a level appropriate to the significance of the findings

6.2 The area for investigation will be stripped of topsoil and subsoil by machine (Figure 1). This comprises a minimum strip zone extending 10m around Trench 2. The strip zone will be extended until a zone of 5m clear ground around archaeological features is exposed (containing no archaeological features). The limit of the maximum strip area will be defined by the locations of Trenches 1, 3 & 4.

6.3 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 stripping activity will be monitored at all times by an archaeologist. Areas will then be hand cleaned by the archaeologist(s) to allow any archaeological features to be identified. Topsoil will be stored separately from subsoil. The plant used for the stripping must not track across cleaned areas until they have been proven to be archaeologically sterile.

6.4 All potential archaeological features revealed will be investigated in an archaeologically controlled and stratigraphic manner in order to establish the aims of the mitigation.

Discrete features will be half-sectioned in the first instance, then fully excavated.

Linear features will be sample excavated (to a minimum of 25% of their length) with each sample being not less than 1m in length

Deposits at junctions or interruptions in linear features will be sufficiently excavated to allow relationships to be determined.

Structures will be sample excavated to a degree whereby their extent nature, form, date, function and relationships to other features and deposits can be established.

6.5 An environmental 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 English Heritage guidelines (English Heritage 2011). Environmental and soil specialists (to be discussed and agreed with SYAS) will be consulted during the course of the excavation with regard to the implementation of this sampling programme.

The sampling regime will include samples of the four types of deposit sample as appropriate. These are described below:

- Bulk-sieved Sample (BS). Sample size will depend upon the context/feature size, but should be up to 40-60 litres in size (if the context size allows). They are taken for the recovery of charcoal, burnt seeds, bone and artefacts. The samples will be processed (flotation) on site where possible with 1mm

and 500micron sieves on a rack to collect the carbonised washover. The retents and flots will then be dried, sorted and assessed to advise the potential for further analysis.

• General Biological Sample (GBA): These are only taken if a deposit is waterlogged. A 10 litre sample size will be used (if the context size allows). These samples will be processed in the laboratory, to recover macrofossils and microscopic remains such as pollen and insects.

• Column monolith: Kubiena tin samples may be taken for soils and pollen analysis and to determine soil accumulation processes.

• Spot samples: these samples are taken as required. they may be contexts or material not suited to sieving, such as caches of seeds, pieces of eggshell or any specific finds of organic material. They may also be specialist samples (e.g. charcoal for radiocarbon dating).

7 HUMAN REMAINS

7.1 Human remains are unlikely to be encountered. In the event of human remains being discovered during the works these will be left *in-situ*, covered and protected. Human remains will not be removed unless absolutely necessary. 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 the South Yorkshire Archaeology Service will be informed immediately. An osteoarchaeologist will be available to give advice on site.

7.2 Where a licence is issued, all human skeletal remains must 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, IfA Technical Paper 13 (1993) and English Heritage guidance (2005).

8 RECORDING METHODOLOGY FOR EXCAVATION

8.1 All archaeological features will be recorded using standardised *pro forma* record sheets. Plans, sections and elevations will be drawn as appropriate and a comprehensive photographic record will be made where archaeological features are encountered.

8.2 Archaeological deposits will be planned at a basic scale of 1:50, with individual features requiring greater detail being planned at a scale of 1:20. Larger scales will be utilised as appropriate. Cross-sections 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.

8.3 Each context will be described in full on a *pro forma* context record sheet in accordance with the accepted context record conventions. Each context will be given a unique number. These field records will be checked and indexes compiled.

8.4 Photographs of work in progress and post-excavation of individual and groups of features will be taken. This will include general views of entire features and of details such as sections as considered necessary. The photographic record will comprise 35mm format black and white film and colour slides and. Digital photography may be used in addition, but will not form any part of the formal site archive. All site photography will adhere to accepted photographic record guidelines.

8.5 Areas which do not contain any archaeological deposits will be photographed and recorded as being archaeologically sterile. The natural stratigraphic sequence within these areas will be recorded.

8.6 All finds will be collected and handled following the guidance set out in the IfA guidance for archaeological materials. Unstratified material will not be kept unless it is of 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.

8.7 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.

8.8 Other samples will be taken, as appropriate, in consultation with ArcHeritage specialists (to be discussed and agreed with SYAS) and the regional English Heritage Science Advisor, as appropriate (e.g. dendrochronology, C14, etc.). Material removed from site will be stored in appropriate controlled environments.

9 SPECIALIST ASSESSMENT

9.1 The stratigraphic information, artefacts, soil samples, and residues will be assessed as to their potential and significance for further analysis and study. The material will be quantified (counted and weighted). Specialists will undertake a rapid scan of all excavated material. Ceramic spot dates will be given. All specialist reports will be included in the Assessment Report.

9.2 Materials considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration must be given to possible investigative procedures (e.g. glass composition studies, residues on or in pottery, and mineral-preserved organic material). Allowance will be made for preliminary conservation and stabilization of all objects and a written assessment of long-term conservation and storage needs will be produced. Once assessed, all material will be packed and stored in optimum conditions, in accordance with Watkinson and Neal (1998), IfA (2007) and Museums and Galleries (1992).

9.3 All finds will be cleaned, marked and labelled as appropriate, prior to assessment. For ceramic assemblages, any recognised local pottery reference collections and relevant fabric codes will be used.

9.4 Allowance will be made for the recovery of material suitable for scientific dating and contingency sums will be made available to undertake such dating, if necessary. This will be decided in consultation with the South Yorkshire Archaeology Service.

10 ASSESSMENT REPORT PREPARATION

10.1 Upon completion of the site work, a concise assessment report will be prepared to include the following:

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

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

c) An account of the methodology and overview of results, describing structural data, archaeological features, associated artefacts and environmental data, and a conclusion and discussion;

d) Specialist artefact and environmental assessment reports including recommendations for further work (and discard/retention) and a context list/index;

e) A plan of the site accurately identifying the excavation areas, provisional phasing and features, and a selection of photographs for features and significant artefacts;

f) Recommendations for analysis and publication;

g) A copy of the key OASIS form details;

h) A copy of the WSI;

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

10.2 A draft report (digital copy) will be issued to SYAS for comment. Three copies of the finished report will be submitted to the commissioning body. A bound and digital copy of the report will be submitted to SYAS for inclusion into the SMR/HER.

11 POST-EXCAVATION ANALYSIS & PUBLICATION

11.1 Depending upon the results of the assessment report a full programme of post excavation analysis and publication of artefactual and scientific material from the evaluation *and* mitigation may be required by South Yorkshire Archaeology Service. An updated project design will be produced that defines the scope of the analysis and publication required, for agreement with SYAS. Where this is required, this work will be a new piece of work to be commissioned separately from the excavation and assessment phase.

11.2 The contents of the final report will depend on the results of the assessment report and subsequent analysis and will be agreed with SYAS. The final report is likely 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) An account of the excavation methodology;

d) Description of the site including stratigraphy, matrices, full phasing, structural remains, features and layout;

e) Full analysis of finds, industrial residues and environmental data;

f) A discussion of the site in its historical, archaeological and local context and a conclusion;

g) A selection of photographs and drawings, including a detailed plan of the site accurately identifying the excavation area and features within these, feature drawings, and selected artefacts, and phased feature plans;

h) Details of archive location and destination, together with a context list and catalogue of what is contained in that archive;

i) A copy of the key OASIS form details;

j) A copy of the WSI;

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

11.3 A draft report (digital copy) will be issued to SYAS for comment. Three bound copies of the finished report will be submitted to the commissioning body. A bound and digital copy of the report will be submitted direct to SYAS for inclusion into the SMR/HER.

11.4 The results of the work will be publicised locally e.g. by presenting a paper at the South Yorkshire Archaeology Day and talking to local societies, as appropriate.

11.5 A summary accompanied by illustrations will be presented in digital format for publication in the appropriate volume of *Archaeology in South Yorkshire*.

11.6 Upon completion of the reporting an OASIS form will be completed at http://ads.ahds.ac.uk/project/oasis/.

12 ARCHIVE PREPARATION

12.1 On complete of the assessment report and any final report, the site archive will be prepared and deposited with Doncaster Museum Service.

12.2 The field archive will consist of all primary written documents, plans, sections and photographs. Catalogues of contexts, finds, soil samples, plans, sections and photographs will be produced. The archaeological contractor will liaise with the Archaeology Curator at Doncaster Museum prior to the commencement of fieldwork to establish the detailed curatorial requirements of the museum and discuss archive transfer and to complete the relevant museum forms. A Project Initiation Form (PIF) will be completed and sent to the museum curator and SYAS prior to commencement of fieldwork. This can be downloaded at https://www.sheffield.gov.uk/planning-and-city-development/urban-design--conservation/archaeology/tech.html. At appropriate stages, the mid-point review and completion forms will also be completed and sent to the museum.

12.3 The museum curator will be afforded access to visit the site and will be invited to discuss the project results and archiving requirements during the life of the project.

12.4 The archaeological contractor will arrange to licence the archive repository to use the material, in perpetuity; this licence will allow the archive repository to reproduce material, including for use by third parties, with the copyright owner and author(s) suitably acknowledged.

13 HEALTH AND SAFETY

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

13.2 A Risk Assessment will be prepared prior to the start of site works.

13.3 A cable detector (CAT scanner) will be used to search for cables prior to excavation.

14 PRE-START REQUIREMENTS

14.1 The client will be responsible for ensuring site access has been secured prior to the commencement of site works, and that the perimeter of the site is secure.

14.2 The client will provide ArcHeritage with up to date service plans and will be responsible for ensuring services have been disconnected, where appropriate.

15 REINSTATEMENT

15.1 Following excavation and recording the spoil will remain stockpiled. All excavated sections through features (e.g. ditches) will be backfilled with arisings but no further reinstatement will take place.

16 TIMETABLE & STAFFING

16.1 The project will be managed by Dr. Glyn Davies, ArcHeritage Project Manager. The timetable will be determined following discussions with the client and submitted to SYAS separately.

16.2 Specialist staff available for this work are as follows:

Head of Curatorial Services - Christine McDonnell

Human Remains - Malin Holst (York Osteoarchaeology Ltd) & Rebecca Storm (University of Bradford)

Palaeoenvironmental remains – Northlight Heritage

Finds Researcher - Nicky Rogers

Lithics – Dr Hugo Anderson-Whymark

Roman pottery - David Griffiths/Ruth Leary

Post-medieval Pottery – Dr David Barker

Medieval Pottery Researcher - Anne Jenner

Finds Officers - Geoffrey Krause & Rachel Cubitt

Archaeometallurgy & Industrial Residues - Dr Rod Mackenzie

Conservation - Ian Panter

17 MONITORING OF ARCHAEOLOGICAL FIELDWORK

17.1 As a minimum requirement, the curator 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 and to discuss the requirement any further phases of archaeological work. ArcHeritage will notify the curator 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 curator.

17.2 With the client's agreement illustrated notices will be displayed on site to explain the nature of the works, with font reproduced at not less than 16 point.

18 COPYRIGHT

18.1 ArcHeritage retain the copyright on this document. It has been prepared expressly for the named client, and may not be passed to third parties for use or for the purpose of gathering quotations.

18.2 The archaeological contractor will give permission for the material presented within the assessment and any final report to be used by the client, in perpetuity, although the contractor will retain the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will also allow South Yorkshire Archaeology Service to reproduce material, including for non-commercial use by third parties, with the copyright owner suitably acknowledged.

19 KEY REFERENCES

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See also the HELM website for a full list of English Heritage Guidance documents.

http://www.helm.org.uk/server/show/nav.19701

APPENDIX 4 – POTTERY FROM THE EVALUATION TRIAL TRENCHES

by David Griffiths

The four pottery sherds from Sandall Stones Road certainly date to the Roman period, with the mortaria rim providing the clearest indication. One may tentatively suggest that the three oxidised pot sherds were local products (i.e. produced in Yorkshire), as examples of similar fabrics were present at Castleford (Rush 2000, 167-8). The mortaria sherd was possibly produced at York, as the fabric is similar to Tomber and Dore's (1998, 199) Eboracum Oxidised ware, which dates broadly from the late 1st century to at least the 3rd century AD. Due to the lack of diagnostic features it is difficult to gain much information from the material regarding vessel form and function (except for the mortaria).

The Roman pottery from Sandall Stones Road should be retained while further archaeological mitigation works are undertaken and reassessed in light of any further finds recovered.

Catalogue

Abbreviations: a = abundant, c = common, s = sparse

Trench 3; 302
4126141
Undiagnostic body sherd; dark brown-orange slip to outer-surface. **Fabric** Oxidised, hard, course, with abundant inclusions (a: orange, a: grey, s: quartz, s: black); **Mansell** 5YR 6/6 to 6/8 reddish yellow. **Wt.** 7g; **Count** 1.

Trench 3; 302
4161141
Undiagnostic body sherd from large vessel; heavily eroded, but possible evidence of slip on inner- and outer-surfaces. **Fabric** Oxidised, hard, coarse, with abundant inclusions (a: black-grey (including rounded, large, c. 2-3mm), a: quartz, c: red-orange (some rounded, c. 1-2mm); **Munsell** 7.5YR 5/6 strong brown. **Wt.** 20g; **Count** 1.

Trench 3; 302
4161141
Undiagnostic grey ware; flat base sherd. **Fabric** Reduced, hard, fine, inclusions (c: brown-red (iron-rich), c: grey (small, c. 0.2-0.5mm); **Munsell** 5Y 4/2 olive gray to 4/3 olive. **Wt.** 21g; **Count** 1.

Trench 6; 602
4126141
Small mortaria sherd with hooked rim. **Fabric** Oxidised, soft, coarse, with abundant (mostly large, c. 1-3 mm) inclusions (a: black, c: red-brown, c: quartz); **Munsell** 2.5YR 4/8 red. **Wt.** 5g; **Count** 1.

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APPENDIX 5 – ASSESSMENT OF EVALUATION ENVIRONMENTAL SAMPLES

by Sharon Carson (Northlight Heritage)

The submitted sample was floated using standard flotation methods and the retents and flots were air dried before analysis. A brief assessment of the remaining material was undertaken to establish the presence or absence of artefacts and ecofacts and assess the potential for further analysis.

Context (204) Sample <1>

The sample was composed of frequent rounded pebbles with a greater abundance of smaller orange brown gravel sized stones, possibly a type of iron stone. A significant amount of highly magnetic material/stone was present, implying that the material may have been subject to high temperature. Further evidence to suggest this is the fact that some of the stones appeared heat fractured. This could be indicative of industrial processes, or may just be the result of the local geology consisting of highly magnetic iron stone. However, occasional small fragments of slag were noted, which may be supportive of metalworking, if contemporaneous with the deposit. One body shard of light grey pottery was present, but no other artefacts were observed.

The sample was not particularly organic rich and very few botanical remains were noted, although occasional charcoal fragments (all less than 4mm in size) were observed, together with occasional uncarbonised seeds including fat hen (*Chenopodium album*), common fumitory (*Fumaria officinalis*), ivy-leaved speedwell (*Veronica hederifolia*) and bugloss (*Anchusa arvensis*), all of which are common arable weeds. The abundance of modern roots and presence of invertebrate eggs and body fragments indicates that the potential for botanical contamination is high and supports the interpretation that these are relatively modern seeds, introduced through bioturbation or other post depositional processes. Due to the lack of contemporaneous botanical remains, the sample does not appear to exhibit potential for future botanical analysis. No bone or other ecofactual remains were recorded.

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