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Land Off Sandall Stones Road, Doncaster

Archaeological Site Investigation Report

SLR Ref : 403.03044.00001

August 2013

bhenergygap

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FIGURES

APPENDICES

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	Detailed Fieldwork and Report by Archaeological Services WYAS
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ACKNOWLEDGEMENTS

SLR is grateful for the assistance of Rod Goodson (bhenergygap LLP) and David Miller (DAM; re groundworks support) during the course of the site works.

The scope of the work was designed by Gavin Kinsley (SLR); fieldwork and detailed reporting was provided by Archaeological Services WYAS (ASWYAS).

SLR and ASWYAS are Registered Organisations with the IfA, an audited status which confirms that work is carried out to the highest standards of the profession.

SLR operates a quality management system to help ensure all projects are managed in a professional and transparent manner, which enables it to qualify for ISO 9001. SLR is a member of the Federation of Archaeological Managers and Employers.

SUMMARY

SLR Consulting has been commissioned by bhenergygap LLP Limited to prepare the trench-based archaeological site investigation reported herein. It provides partial fulfilment of a planning condition imposed on consented development of Land Off Sandall Stones Road Doncaster, South Yorkshire (the 'Site'). The Site occupies approximately 1.87ha, centred on NGR 460723, 407141 (Figure 1).

The trenching results indicate the presence of at least two phases of field systems of Roman date within the Site; associated pottery suggests a date within the period late-2nd to mid-3rd centuries, possibly extending into the 4th century. They also hint at a settlement close to, or within the site, though no direct evidence of settlement features was found in the trenched areas.

The trenching results indicate that archaeological activity is concentrated in the central and western parts of the site, with the eastern part all but devoid of archaeological features.

The remains within the Site form part of a wider Roman agricultural landscape and are considered of local importance; further investigation of affected areas within the Site could provide important further evidence for the area in the Roman period.

The scheme has the potential to cause damage to, or destruction of, archaeological features where there will be ground disturbance of sufficient depth to exceed to the depth of overlying modern deposits.

Given the discovery of archaeological remains within the Site, it is likely that further mitigation of the development impact on archaeological remains will required by SYAS, in accordance with policy set out in NPPF.

This archaeological mitigation work could be incorporated into the development programme for the central and western parts of the site all areas where ground disturbance will be of sufficient depth to disturb archaeological features.

1.0 INTRODUCTION

SLR Consulting has been commissioned by bhenergygap LLP Limited to prepare the trench-based archaeological site investigation reported herein. It provides partial fulfilment of a planning condition imposed on consented development of Land Off Sandall Stones Road Doncaster, South Yorkshire.

The development site (the 'Site') occupies approximately 1.87ha, centred on NGR 460723, 407141 (Figure 1).

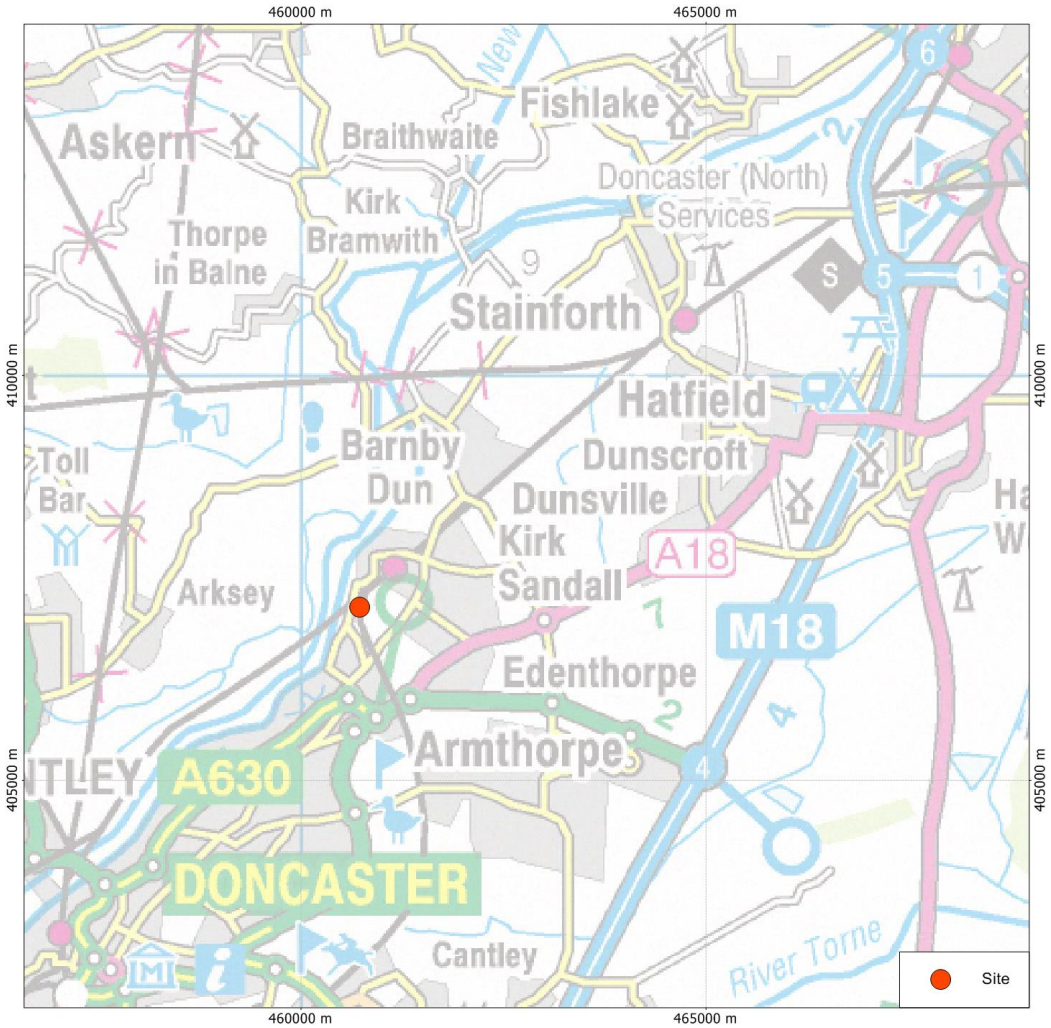

Figure 1
Site location

Contains Ordnance Survey data © Crown copyright and database right 2013

An archaeological EIA chapter prepared by SLR[1] identified the following points relevant to the design of the investigation:

[1] SLR Consulting, January 2009, *Environmental Statement for a Proposed Energy Recovery Facility, Sandall Stones Road, Doncaster. – January 2009.*

- The site is located on flat ground on the Sherwood Sandstone geological formation, overlooking the floodplain of the river Don.
- Field systems of probable Roman date and a Roman fort have been recorded from the air in the vicinity of the Site, although none are recorded within it. The Site lies in the former medieval fields of Long Sandall, and remained in agricultural use until its incorporation within the Kirk Sandall industrial estate in the 1980s.
- The Site has probably been ploughed since at least medieval times, and it is to be expected that further disturbance has been caused during the formation of the existing hard standing.
- Nevertheless the possibility of archaeological remains surviving within the Site cannot be ruled out, although the quality of their preservation is likely to be low.

A condition relating to archaeology has been placed on the planning permission[2] as follows:

> *"No development shall take place until the applicant, their agent, or their successor in title has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation that has been submitted to, and approved in writing by, the local planning authority.*
>
> *REASON*
>
> *In the interests of archaeology."*

The South Yorkshire Archaeology Service Archaeologist (SYAS) advised that in the first instance, site investigation in the form of trenching is required. This investigation has been carried out as a response to that requirement, in compliance with a Written Scheme of Investigation (WSI) prepared by SLR and approved by SYAS[3].

[2] Doncaster Metropolitan Borough Council 16th December 2010, planning permission granted for application number 09/00246/TIPA.

[3] SLR Consulting April 2013. *Land off Sandall Stones Road, Doncaster Written Scheme of Investigation for Archaeological Site Investigation (Trenching)*. SLR Ref 403. 03033.00001.

2.0 GENERAL ARRANGEMENTS, METHODS AND RESULTS

2.1 Aims

- to identify, investigate, understand, record, and report the extent, nature and significance of any surviving archaeological remains within the Site; and
- to provide sufficient information to enable SYAS to advise on any requirement for further fieldwork or reporting on the scheme.

2.2 Objectives

- to excavate the trenches and identify any archaeological features present;
- to identify areas devoid of archaeological features;
- to record a plan of any archaeological features present;
- to clean, excavate and record a sufficient portion of each archaeological feature present to place on record and understand the nature, sequence, date and significance of any archaeological remains present within the Site; and
- to provide a full report outlining the discoveries and their heritage significance.

2.3 Key Personnel and Monitoring

The archaeological regulator (SYAS) was:

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The Archaeological Consultant was:

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Associate Archaeologist
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The archaeological sub-contractor was:

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West Yorkshire LS27 0UG
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SLR and ASWYAS are both Registered Organisations with the Institute for Archaeologists. All archaeologists employed by the archaeological sub-contractor to work on the project were suitably experienced to complete the tasks required.

2.4 Methodology, Monitoring and Liaison

Briefly, in eleven trenches with a total area of 843m^2 distributed over the development area, the tarmac, roadstone and buried topsoil were removed mechanically, archaeological features within each trench were identified, recorded and investigated, finds and environmental samples recovered and assessed, a report produced and arrangements made for museum deposition.

SYAS was kept informed of the project timetable, and visited the Site on 5th and 12th June 2013. Due to site constraints some of the trench locations and dimensions were altered from the scheme set out in the WSI by agreement with SYAS. The final trench plan and excavated archaeological features ('cuts') are shown in Appendix A, Figure 2 (Trenches 1-11 as blue outline and features as solid black).

The destination museum for the archive is Doncaster Museum (awaiting accession number).

An OASIS record has been opened and will be completed along with the deposition of the archive; under number **archaeol11-154722**.

2.5 Results Summary

Trial trenching has indicated indicate the presence of field systems of Roman date within the Site, although an earlier, Iron Age, origin is also possible. The quantity of finds recovered at this evaluation stage points to a settlement close to, or within the site, though no direct evidence of settlement features was found in the trenched areas. The orientation of the ditches indicates at least two main phases, while the redefinition of many suggests the maintenance of this field system over a period of time. Associated pottery suggests a date within the period late-2nd to mid-3rd centuries, possibly extending into the 4th century. The trenching results indicate that archaeological activity is concentrated in the central and western parts of the site, with the eastern part all but devoid of archaeological features.

The remains within the Site form part of a wider Roman agricultural landscape known from cropmarks showing in air-photographs, and excavations in the locality. They have been truncated by ploughing and by a limited number of recent intrusions, and survival of environmental data is limited. They are therefore considered to be of local importance, but further investigation of affected areas within the Site has the potential to provide important further evidence for the development of the area in the Roman period.

3.0 SCHEME IMPACT AND OUTLINE MITIGATION

3.1 Impact of the Scheme

The scheme has the potential to cause damage to, or destruction of, archaeological features where there will be ground disturbance of sufficient depth to exceed to the depth of overlying modern deposits. Sources of such disturbance are likely to include excavations for construction and external surfacing, utility runs and tracking by vehicles. The archaeological features are concentrated in the central and western parts of the site. The ground disturbance associated with this development has yet to be fully identified.

Given the discovery of archaeological remains within the Site, it is likely that further mitigation of the development impact on archaeological remains will required by SYAS, in accordance with policy set out in NPPF[4].

3.2 Outline Mitigation

A programme of archaeological mitigation work could be incorporated into the development programme for the central and western parts of the site in all areas where ground disturbance will be of sufficient depth to disturb archaeological features.

This work could comprise a “strip, map and sample” operation (SMS) consisting of:

- mechanical excavation under archaeological supervision to the surface of the archaeological features beneath the modern surfacing material and buried topsoil;
- the formation of a drawn plan of all the archaeological features;
- the investigation of all potential archaeological features by hand-cleaning and sample-excavation;
- the formation of a written, drawn and photographic record of the features and deposits; and
- the deposition of a full archive report and archive of finds and excavation records and a publication report on the results of the work to an appropriate level of detail in an appropriate academic journal.

All archaeological mitigation should be carried out according to a written scheme of investigation detailing the methodology and the areas in which it should be implemented; the WSI should be approved by SYAS prior to commencement.

[4] DCLG March 2012. National Planning Policy Framework paragraph 141: *“Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible…”*

4.0 CLOSURE

This report has been prepared by SLR Consulting Limited and Archaeological Services WYAS with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of bhenergygap LLP Ltd; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

APPENDIX A

Report on Fieldwork and Finds by ASWYAS

ARCHAEOLOGICAL SERVICES WYAS

Sandall Stones Road
Kirk Sandall
South Yorkshire

Trial Trench Evaluation

Report no. 2500

August 2013

Client: SLR Consulting Ltd

REGISTERED ORGANISATION IfA

Sandall Stones Road
Kirk Sandall
South Yorkshire

Trial Trench Evaluation

Summary

Trial trench excavations, in conjunction with known cropmark data in the area, indicate the presence of field systems of Roman date within the site, although an earlier, Iron Age, origin is also possible. The quantity of finds recovered at this evaluation stage may indicate a settlement focus close to the site. The orientation of the ditches suggests at least two main phases, while the redefinition of many suggests the maintenance of this field system over a period of time. The trenching results indicate that archaeological activity is concentrated in the western half of the site, with the eastern part all but devoid of features.

ARCHAEOLOGICAL
SERVICES
WYAS

Report Information

Client:	SLR Consulting Ltd
Address:	Aspect House, Aspect Business Park, Bennerley Road, Nottingham, NG6 8WR
Report Type:	Archaeological trial trenching
Location:	Sandall Stones Road, Kirk Sandall
County:	South Yorkshire
Grid Reference:	SE 6072 0714
Period(s) of activity: represented	Iron Age/Roman
Report Number:	2500
Project Number:	4071
Site Code:	SSR13
OASIS ID:	archaeol11-154722
Planning Application No.:	09/00246/TIPA
Museum Accession No.:	Number requested from Doncaster Museum
Date of fieldwork:	June 2013
Date of report:	August 2013
Project Management:	Ian Roberts BSc MIfA FSA
Fieldwork:	Marina Rose
	Max Stubbings
	Tom Fildes
Report:	Jane Richardson BSc MSc PhD MIfA,
Illustrations:	Jon Prudhoe
Photography:	ASWYAS site staff
Specialists:	Diane Alldritt (plant macrofossils)
	Chris Cumberpatch (hand-made and early modern pottery)
	Gail Drinkall (small finds)
	Ruth Leary (Romano-British pottery)
	Zoé Horn (ceramic building material)
	Jane Richardson (bone)
Authorisation for distribution:	----------

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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by Gavin Kinsley of SLR Consulting Ltd, on behalf of bhenergygap LLP, to carry out a programme of trial trenching on land off Sandall Stones Road, Kirk Sandall, South Yorkshire (Fig. 1). The work was undertaken in accordance with a Written Scheme of Investigation (SLR Consulting Ltd 2013) and in line with current best practice. The fieldwork was carried out between 3rd June and 14th June 2013.

Site location, topography and land-use

The site is located on an industrial estate to the south-west of Kirk Sandall. It lies to the north-west of Sandall Stones Road and to the south of the railway line, centred on SE 6072 0714 (see Fig. 1). The site is currently covered with tarmac and occupies approximately 1.87 hectares, at about 6.5-7.5m above Ordnance Datum (aOD).

Geology and soils

The underlying bedrock comprises Nottingham Castle Sandstone Formation (BGS 2013) overlain by soils classified in the Newport 1 association. These are characterised as deep well drained sandy and coarse loamy soils (SSEW 1983).

2 Archaeological Background

Field systems of probable Roman date and a Roman fort have been recorded from aerial photographs in the vicinity of the site, although none are recorded within it. An Iron Age origin for the field systems is also possible as seen at the nearby sites of Balby Carr and West Moor Park (Roberts *et al*. 2010, 73). The site lies in the former medieval fields of Long Sandall, and remained in agricultural use until its incorporation within the Kirk Sandall industrial estate in the 1980s.

3 Aims and Objectives

Aims

- to identify, investigate, understand, record, and report the extent, nature and significance of any surviving archaeological remains within the Site; and
- to provide sufficient information to enable SYAS to advise on any requirement for further fieldwork or reporting on the scheme.

Objectives

- to excavate the trenches and identify any archaeological features present;
- to identify areas devoid of archaeological features;
- to record a plan of any archaeological features present;

- to clean, excavate and record a sufficient portion of each archaeological feature present to place on record and understand the nature, sequence, date and significance of any archaeological remains present within the Site; and
- to provide a full report outlining the discoveries and their heritage significance.

4 Methodology

All excavation was undertaken in accordance with IfA guidelines *Standard and Guidance for Archaeological Field Evaluation* (2008), and in compliance with English Heritage MoRPHE *PPN3: Archaeological Excavation* (2008).

A total of eleven trenches were excavated covering an area of 843m². A number of trenches needed to be moved or curtailed due to the location of existing services, dense trees and floodlight pylons. Due to constraints imposed by existing utilities, Trenches 1, 4, 5 9 and 11 were moved from their originally-proposed locations and there was a minor reduction in area; these alterations to the plan set out in the WSI were proposed by SLR Consulting Ltd (2013) and agreed with Andy Lines of the South Yorkshire Archaeology Service. The trenches were positioned to provide a representative sample (approximately 5%) of the site (Fig. 2).

The stripping of the trenches was monitored by a qualified and experienced archaeologist, and was carried out using a mechanical excavator equipped with a toothless ditching bucket. Stripping took place in level spits to the top of the first archaeological horizon or undisturbed natural. A 10% sample of all the linear features was hand excavated. No certain discrete features (such as pits or post-holes) were encountered.

All the archaeological features were fully planned and then a sample manually excavated by hand in a stratigraphic manner. A full written, drawn and photographic record of the archaeological features was made. The excavation limits and the archaeology were surveyed using electronic survey equipment with larger scale hand drawn plans of features at 1:20. Sections were drawn at 1:10. All sections, plans and elevations include spot-heights related to Ordnance Datum in metres as correct to two decimal places. Tie-in information was undertaken during the course of the evaluation and was fixed in relation to nearby permanent structures and roads and to the National Grid.

All artefacts recovered were retained and removed from the site for assessment and analysis. Non-modern artefacts were collected from the excavated topsoil and subsoil. Finds material have been stored in controlled environments, where appropriate. All artefacts recovered have been retained, cleaned, labelled and stored as detailed in the guidelines laid out in the IfA Guidelines for Finds Work. Radiography of all metal objects has been undertaken.

A soil-sampling programme was undertaken during the course of the investigation for the identification and recovery of carbonised and waterlogged remains, vertebrate remains,

molluscs and small artefactual material. A sample of at least 30 litres of soil was taken from the primary fill of each of the eighteen archaeological features selected for sampling.

The site archive contains the finds and all the information gathered during the archaeological evaluation and it is listed in Appendix 1. A concordance of contexts and associated finds and samples is given in Appendix 2. The archive is currently held at ASWYAS headquarters but archive deposition will be arranged (and an accession number provided) following the completion of the evaluation; consultation is underway with Doncaster Museum.

5 Results

A summary of the results from each trench, including trench dimensions and the archaeological features and significant finds identified, is presented in Table 1. Trenches devoid of archaeological features are briefly summarised in Table 1 but are not described further.

Tarmac (context 100 throughout) covered the site to an average depth of 0.15m. This sealed a layer of crushed limestone hard core with occasional brick rubble (101), *c.* 0.12-0.20m in depth, which in turn sealed a topsoil (102) of dark brown silty sand (0.06-0.20m in depth) and a subsoil (103) of mid-brown silt (0.13-0.22m in depth). Natural deposits consist of pale buff to red coarse sand.

Table 1. Summary of trenches

Trench	Dimensions	Orientation	Depth	Topsoil	Subsoil	Summary of features
1	25m by 1.8m	North-east to south-west	0.63m	0.08	0.23	Ditches. Roman pottery and other finds
2	50m by 1.8m	West-north-west to east-south-east	0.62m	0.20m	0.10m	Ditches. No finds
3	50m by 1.8m	North-west to south-east	0.78m	0.30m	0.20m	Negative
4	56m by 1.8m	North-east to south-west	0.87m	0.27m	0.27m	Negative
5	25m by 1.8m	North-north-west to south-south-east	1.14m	0.58m	0.36m	Ditches. Roman pottery
6	25m by 1.8m	North-west to south-east	1.10m	0.20m	0.40m	Ditches. Roman pottery

Trench	Dimensions	Orientation	Depth	Topsoil	Subsoil	Summary of features
7	50m by 1.8m	North-north-east to south-south-west	0.88m	0.28m	0.30m	Ditches/gullies
8	25m by 1.8m	West-north-west to east-south-east	0.90m	0.21m	0.30m	Negative
9	44m by 1.8m	North-south	0.91m	0.29m	0.29m	Gully
10	50m by 1.8m	West-north-west to east-south-east	0.96m	0.30m	0.20m	No archaeology observed but heavily disturbed by modern pit
11	68m by 1.8m	North-east to south-west	1.03m	0.26m	0.32m	Ditches. No finds

Trench 1 (Figs 2 and 3)

Three linear features were exposed crossing the trench on an approximate east-west alignment. A fourth feature, gully 171, orientated north-south, terminated within the trench. Gully 171 was U-shaped in profile, 0.7m in width and 0.40m in depth. Its single fill (170) of grey-brown silty sand contained charcoal inclusions and three sherds of pottery of mid-3rd to mid-4th-century date. Immediately to the north, a broad (1.3m wide) but shallow (0.22m deep) ditch (159) was investigated that contained a single fill (158) of red-brown sand and a sherd of early modern pottery. Any physical or stratigraphic relationship between these two features is likely to lie beyond the trench to the west. Approximately 10m further north, ditch 152 was exposed. This feature was a broad U-shape in profile, 2.6m wide and 0.48m deep (Fig. 3, S.19; Plate 1). It contained two sandy fills (151 and 150), with iron nails and pottery of mid to late 2nd-century date recovered from the primary fill (151). It was re-cut as a less regular feature (149) that was 2.68m wide and 0.46m deep. Its single fill (148) of dark brown sand produced the largest pottery assemblage from the evaluation, probably deposited in the early to mid-3rd century, as well as eight nobnails, and limited evidence of crop processing. The final feature, 2.3m to the north, was gully 157. It was U-shaped in profile, 0.68m in width and 0.31m in depth. No finds were recovered from its single fill (156).

Trench 2 (Figs 2 and 4)

Two re-cut parallel ditches, orientated north-east to south-west, were exposed towards the western end of Trench 2. Unlike the other archaeological features on the site, at least the three latest re-cuts cut through the subsoil 103. The most westerly ditch was redefined on at least two occasions, with the initial cut (114) only surviving as a shallow U-shaped scope (Fig. 4, S.1; Plate 2). Its single fill (113) of orange-brown silty sand contained no finds. The ditch was redefined as a much broader feature (112), perhaps over 2m wide, containing two fills (111 and 110) of grey-brown silty sand that were also devoid of finds. A final ditch

(106), 1.85m wide and 0.67m deep, cut through ditch 112, which was also disturbed by the cutting of a second ditch (109) to the east. Ditch 109 was 1.41m in width and 0.53m in depth. Both ditches were U-shaped in profile and contained two fills of orange-grey-brown silty sand, but again were devoid of dateable artefacts.

Trench 5 (Figs 2 and 5)

Two parallel ditches, 1.2m apart and orientated north-south, were observed crossing the trench at an oblique angle. Ditch 147 was a broad U-shape in profile, 0.29m in depth that was redefined by a slightly steeper-sided ditch (145), 0.78m in width and 0.34m in depth (Fig. 5, S.16). Both cuts contained single fills of orange-grey-brown silty sand, with the fill (144) of the recut containing pottery of likely mid to late 2nd-century date. Ditch 155 to the east was not fully exposed in profile, but was clearly steep-sided with a rounded base, and was 0.65m deep (Plate 3). It had two fills (154 and 153) of orange-grey-brown silty sand, with the primary fill (154) containing sherds of mid to late 2nd-century date, and a few cereal and weed seeds.

Trench 6 (Figs 2 and 6)

Within Trench 6, three features were observed, two of which were ditches displaying an episode of re-cutting. Ditch 121 towards the western limits of the trench and crossing it at an oblique angle, was a broad, shallow, slightly curved ditch U-shaped in section, up to 1.55m in width. It was subsequently recut (119) as a deeper (0.49m) and narrower (1.1m) feature (Plate 4). The single fill (120) of the initial ditch contained no finds, but hand-made pottery of likely Roman date was recovered from the secondary fill (117) of ditch 119, which consisted of an orange-brown silty sand. Perpendicular to the trench was ditch 134, a 2.25m wide, 0.9m deep, U-shaped feature, containing two orange-brown silty sandy fills (133 and 132) but no finds (Fig. 6, S.7). It was recut as a shallower (0.68m), narrower (1.84m) feature (131) that produced only three fragmented horse teeth from its primary fill (130). The final feature, approximately 2.5m further east, was a relatively narrow ditch (139), or alternatively a pit, that terminated within the trench. This ditch was U-shaped in profile, 0.44m in depth and 1.06m in width, and contained two orange-brown silty sandy fills. Two sherds of grey ware pottery were recovered from the primary fill (138).

Trench 7 (Figs 2 and 7)

Five features were investigated here, concentrated in the southern half of the trench. The most southerly feature was ditch 136, a V-shaped feature 0.4m in depth and 1.3m in width. It contained a single fill (135) of orange-brown sand but no finds. On a similar alignment 2.5m to the north was gully 127, a steep-sided feature, 0.38m in depth. Its fill (126) was very similar to that in ditch 136, and again no finds were recovered. This feature was cut by a much shallower gully (125), 0.16m deep and 0.75m wide, that was orientated north-west to south-east (Fig. 7, S.9). Again its single fill (124) of orange-brown sand contained no artefacts. Approximately 12m to the north, another probable gully (123) was observed terminating within the trench. This shallow U-shaped feature (0.2m in depth) was filled with

a mid-brown sand (122), but no finds were recovered. Gully 116 to the north, was also a shallow, U-shaped feature containing a single fill (115) of orange-brown sand but no finds.

Trench 9 (Figs 2 and 8)
A shallow narrow gully (143), 0.26m in depth and 0.3m in width, ran obliquely across the trench on a north-south orientation. It contained a single fill (142) of grey-yellow clay silty sand with rare charcoal flecks, but no dateable artefacts were recovered.

Trench 11 (Figs 2 and 9)
The excavation of Trench 11 revealed a probable plough furrow (165), the continuation of a modern pit identified in Trench 10 (not shown in plan), and two features that were identified as natural tree boles (not shown in plan). The pit, filled with modern construction materials, was situated immediately to the west of ditch 163 and to the north in Trench 10. A section through this feature revealed a 3.5m wide and 3.2m deep pit that cut through the burial topsoil. The tree boles, approximately 1.65m west of furrow 165, was also investigated but were identified as natural features due to their irregular form and uniform fill.

Only one archaeological feature was investigated, ditch 163, which was a broad U-shape in profile and approximately 1.45m in width and 0.49m in depth (Fig. 9, S.21). Its two grey-brown silty sand fills (162 and 173) contained no finds. This ditch, in common with many other features from the evaluation, had been re-cut (161) to a similar profile, but narrower (1.08m wide) and shallower (0.34m deep). The re-cut also contained two fills (160 and 172) of buff grey-brown silty sand but no finds. Unlike the others trenches, two distinct layers of hard core (101 and 174) were observed sealing the topsoil in Trench 11.

6 Artefact Record

Romano-British pottery by R.S. Leary
The pottery was examined in context groups and catalogued according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004). The fabrics were recorded in broad groups and source suggested where appropriate. Reference was made to the National Fabric Collection where appropriate (Tomber and Dore 1998). Details of fabric variations were recorded where appropriate, and forms described.

There are 69 sherds of Romano-British pottery (*c*. 2kg and 1.45 estimated vessel equivalents, EVES – see Table 2).

The fabrics and forms

Only a small range of fabrics are present and these are described below.

CTA2 Dales ware. Brownish grey with brown margins. Typical Dales ware fabric, Tomber and Dore 1998 DAL SH.

GRB1 Grey ware. A subgroup of GRB with moderate to abundant, medium, subrounded and subangular quartz. The rounding of some quartz inclusion is typical of the South Yorkshire potteries but some bodysherds may come from an unknown local pottery.

BB1 Dorset black burnished ware Tomber and Dore 1998 DOR BB1

MH2 Later version of the white ware fabric used for mortaria from kilns at Mancetter-Hartshill, near Coventry. Refired pottery trituration grits. Tomber and Dore 1998 MAH WH.

The majority of the sherds are in a grey ware with subrounded, rounded and subangular quartz. The fabric and forms are typical of the South Yorkshire kilns and can be readily paralleled there (the Buckland *et al*. 2001 type series codes are cited in brackets). They include simple everted-rim jars with offset necks typical of the mid-2nd to mid-3rd-century kilns (type Ea), jars with acute lattice burnish of 2nd-century type (type Ea), narrow-mouthed jars with simple everted rims of the type often found with lugs (type F), lipped rim bowls (type Ca), grooved, flat rim bowl of the late 2nd to early 3rd century (type Cb), large and small deep subconical bowls with flat and bead rims (types Hd and He), and bodysherds with combed wavy line burnish which is often found on the wide-mouthed jars and large narrow mouthed jars of the South Yorkshire industry. Fragments from a Dales ware jar, a Mancetter-Hartshill multi-reeded mortarium and two BB1 vessels are also present – a jar with obtuse lattice decoration and a bowl or dish of unknown form with burnished intersecting arcs.

Table 2. Quantification of pottery

Fabric	Count	Wt (g)	EVE
BB1	5	70.9	
CTA2	3	4.3	
GRB1	59	1912.2	1.39
MH2	2	50.4	0.6
Total	69	2037.8	1.45

Chronology

The pottery indicates activity in the late 2nd century to mid-3rd century with one vessel dating to as late as the mid-3rd to mid-4th century. The absence of South Yorkshire BB1 jars of the 2nd century and other contemporary South Yorkshire BB1 bowls and dishes suggest that most of the 2nd-century activity dates to fairly late in that period. The diagnostic pottery from ditch fills 144 and 154 in Trench 5, grey ware jars with acute lattice burnish, dates to

this period. The large group from the fill (148) of ditch re-cut 149 dates to the early to mid-3rd century. The grooved flat rim bowl dates to the late 2nd to mid-3rd century and within that formal group it is likely to be late 2nd or early 3rd century. The other grey ware forms from this context have a long date range but would all be consistent with a 3rd-century date range. The BB1 jar is of 3rd-century date. Dales ware belongs to the 3rd or early 4th century. In Lincoln, Dales ware usually occurs in layers dating to the mid-3rd century (Darling 1999, 131) but at Rossington Bridge Pumping Station, Buckland *et al*. notes Dales ware associated with a coin of Septimius Severus and occurs in 3rd-century levels which were given a terminus post quem in the first half of the 3rd century (2001, 80 and 11). Stratified groups of early 3rd-century date at York (Monaghan 1997) and also at South Shields (Miket 1983, no. 837) also include small quantities of Dales ware. The Mancetter-Hartshill mortarium from fill 170 of gully 171 belongs to the mid-3rd to mid-4th century and, given the absence of late 3rd to 4th-century types generally from the site such as the developed flanged bowl, the pottery indicates little activity after the mid-3rd century.

Site status and regional comparisons

Most of the pottery was obtained locally from kilns in the Doncaster area with two vessels from Dorset, one from north Lincolnshire and one from Mancetter-Hartshill near Coventry. Such items could be readily obtained at Doncaster and are commonly found on rural sites in South Yorkshire. The functional make-up of the group is typical of rural settlements in this region, with jars being dominant (nearly 80%). Tablewares and imported ceramics such as samian and amphorae are absent although coarse ware bowls and dishes (*c*. 17% of the assemblage) were represented. No flasks, cups or beakers are present.

This Romano-British site is one of several known rural sites with similar pottery assemblages around Doncaster such as the extensively excavated site at Armthorpe (Leary 2008). The pottery from such sites is characterised by large amounts of coarse wares, mostly from the South Yorkshire industries, with small amounts of traded wares including imports. At Armthorpe, traded wares are most common during the mid/late 2nd to 3rd century and tableware is also relatively common at this date. The group from Sandall Stones Road is of relatively low status either because the implied nearby settlement was perhaps poorer or less Romanised or because the pottery assemblage came from rubbish which did not include much of the domestic dining ceramics. This area of the site may contain pottery used primarily for cooking so any ceramic debris would tend to include more jars and cooking pots than dishes and beakers for eating and drinking. Although the Romano-British assemblage from the excavations is too small for firm interpretations, the characteristics of the group fit these overall trends for rural settlement in the region.

Hand-made later prehistoric and later pottery by C.G. Cumberpatch

The pottery assemblage examined by the author consists of two elements; a small group of hand-made wares of late prehistoric or Roman-period type and a smaller number of sherds of 19th century date. The details of this assemblage are summarised in Table 3.

The recent pottery

Fill 158 (ditch 159) and fill 102 (topsoil) produced pottery of recent and 19th to early 20th-century date respectively. The flake from context 158 is not closely datable (and may even be a piece of fine brick or tile) but appears to be of recent (post-1840) date. In contrast, the sherd of Cane Coloured ware from the topsoil is of a very familiar type which was manufactured widely throughout the country and was generally used for utilitarian and cooking vessels.

The hand-made pottery

The hand-made pottery assemblage consists of eight sherds of pottery weighing 127g representing a maximum of six vessels. Three fabrics are identifiable, although the distinctions between them are relatively slight. The classification of the pottery is fully described elsewhere (Cumberpatch 2013, table 2) and all the sherds are of the H2 type tempered with quartz and, in the case of a sherd from fill 117, fine rock fragments. All of the sherds from fill 148 share a similar fabric and it is possible (although not demonstrable) that they came from a single vessel. In contrast, the sherds from fill 117 are of different types and most probably represent three vessels. The smallest sherd shows some sign of impressed lines externally, although the sherd is too small for any pattern or regularity to be determined.

Hand-made pottery of these types is extremely difficult to date, having remained typologically stable from the early pre-Roman Iron Age until the late Roman period and possibly beyond. The dating of the two contexts in question is therefore dependent upon the wheel-thrown pottery as discussed by Leary above. The presence of the hand-made wares does not contradict her dating.

The question of the origin of the pottery is perhaps of more concern than the date range. As has been discussed fully elsewhere (Cumberpatch 2013), pottery is extremely rare in southern Yorkshire in the pre-Roman Iron Age and in many cases appears to have been imported from either Lincolnshire or East Yorkshire rather than having been manufactured locally. As with the question of the dating, this observation is not contradicted by the assemblage considered here.

No further analysis is required.

Table 3. Handmade later prehistoric and later pottery

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
117	H2 Fine quartz & rock	1	92	1	BS	Hollow ware	Smoothed int & ext; turned finish?	LPRIA – Roman	A fine dense black fabric w/ sparse, well-sorted angular quartz & rock grains up to 0,5mm but mainly finer
117	H2 Quartz	1	3	1	BS	Hollow ware	Smoothed w/ possible grooves ext	LPRIA – Roman	Black fabric w/ a slightly vesicular, laminated fabric w/ sub-rounded quartz up to 0.5mm
117	H2 Quartz	1	6	1	BS	Hollow ware	Smoothed int & ext	LPRIA – Roman	Black fabric w/ a rough fracture w/ surface vesicles; sparse to moderate well-sorted sub-rounded quartz up to 1mm but mainly finer
148	H2 Fine quartz	2	17	1	BS	Hollow ware	Smoothed surfaces int & ext	LPRIA – Roman	A soft brown to black fabric w/ abundant fine rounded quartz up to 0.5mm; some fine vesicles but no evidence of calcareous incs
148	H2 Fine quartz	2	3	1	BS	Hollow ware	Smoothed surfaces int & ext	LPRIA – Roman	A soft brown to black fabric w/ abundant fine rounded quartz up to 0.5mm; some fine vesicles but no evidence of calcareous incs
148	H2 Fine quartz	1	6	1	BS	Hollow ware	Smoothed surface ext , flaked ext	LPRIA – Roman	A soft brown to black fabric w/ abundant fine rounded quartz up to 0.5mm; some fine vesicles but no evidence of calcareous incs
	Total	**8**	**127**	**6**					
158	Orange earthenware	1	3	1	Flake	U/ID	U/ID	C19th – C20th	Bright orange sandy earthenware; no surfaces surviving
102	Cane Coloured ware	2	10	1	Rim	Pie dish	U/Dec	C19th - EC20th	Not abraded
	Total	**3**	**13**	**2**					

Ceramic building material by Z. Horn

Two fragments of ceramic building material, a fragment of orange tile (218g) from fill 148 of recut 149 and a fragment of a buff-coloured tile (71g) from fill 144 of recut 145, were recovered. Whilst neither fragment has any diagnostic features, they are likely to be of Roman date due to the thickness of the tile, and the association of Roman-period pottery. No further analysis is required.

Small finds by G. Drinkall

An assemblage of eleven iron objects was examined by visual inspection and a radiograph, and an analysis report and detailed catalogue prepared following MAP 2 guidelines (English Heritage 1991). The items consist of two nails, eight hobnails and a possible fitting. They derive from two ditch fills dated by pottery to the Romano-British period (Table 4).

A nail shank (RF1) and a complete nail (RF2) both came from the primary fill (151) of ditch 152. Although RF2 was highly corroded, it was possible to determine that it was of

Manning's Type 1b (Manning 1985, 134, fig. 32), with a flat, circular head, and characteristic of the vast majority of nails from Roman sites.

Fill 148 of ditch re-cut 149 contained an incomplete fitting (RF3) of uncertain function, and eight hobnails. No leather work was retrieved from this context and no mineralised organic material was identified on the hobnails themselves. The fact that they are few in number, suggests that their presence was a result of casual loss rather than deposition of a complete shoe. Two of the nails had pyramid shaped heads, three were dome-headed, and two were uncertain due to their condition. Corrosion products masked the form of the shanks, though these are usually square in section. All the complete examples end in a sharp point and have an overall length of between 11mm and 14mm. The thickness of the leather they would have gripped was between 7mm and 8mm. The typical nailed shoe would have a bottom unit made up of three layers of leather: the outer sole, the middle sole and the insole (Hooley 2002, 324-335) with all three layers being clenched with hobnails, often arranged in patterns (Bishop and Coulston 2006, 112, fig. 64). Each nail would be driven in from the outside, through the layers of leather, until it met an iron tool held against the insole in order to bend over the tip (Hooley 2002, 324-335). The type of shoe from which these hobnails derive is unknown but the thickness suggests substantial footwear, though not necessarily of a military nature.

No further work is recommended on the assemblage, but if more investigations are to be carried out at the site, the finds should be retained until the results of both phases of work are combined into a report for publication. Following on from this, the finds can be discarded.

Table 4. Small finds

Context	RF	Material	ID	Description	Date
151	1	Fe	Nail	Shank, rectangular in section. L 48mm, W 5mm	RB context
151	2	Fe	Nail	Near complete, tip missing; rectangular sectioned shank; roughly circular, flat head. Manning Type 1b. L 65mm, W 7mm, Th 5mm. Head: D 20mm.	RB
148	3	Fe	Strip	Possible fitting, incomplete. Rectangular sectioned strip with two narrow, broken, projections at either end. L 45mm, W 6mm, Th 4mm. L of projections *c.* 6mm+	RB context
148	4	Fe	Hobnail	Near complete. Domed head D 8mm, H 3mm; bent shank, tip missing. Overall L 11mm	RB
148	5	Fe	Hobnail	Complete. Domed head D 6mm, H 4mm; bent shank. Overall L 14mm	RB
148	6	Fe	Hobnail	Form of head uncertain W 6mm; detached shank fragment L 4mm	RB
148	7	Fe	Hobnail	Complete. Pyramidal head W 7mm, H 5mm; bent shank. Overall L 17mm	RB

Context	RF	Material	ID	Description	Date
148	8	Fe	Hobnail	Complete. Pyramidal head W 6mm, H 5mm; bent shank. Overall L 14mm	RB
148	9	Fe	Hobnail	Incomplete. Form of head uncertain W 5mm; bent shank, tip missing L 7mm	RB
148	10	Fe	Hobnail	Complete. Domed head D 7mm, H 4mm; bent shank. Overall L 11mm	RB
148	11	Fe	Hobnail	Head detached from shank, form of uncertain D 6mm; bent shank L 12mm.	RB

RF = recorded find

7 Environmental Record

Carbonised plant macrofossils and charcoal by D. Alldritt

Bulk environmental samples were processed by ASWYAS using a Siraf-style water flotation system (French 1971) using a 1mm mesh and 300 micron sieve. All material was dried prior to examination under a low powered binocular microscope. Eighteen environmental sample flots were examined for carbonised plant macrofossils and charcoal, of which nine contain carbonised remains (Table 5).

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

The evaluation samples produced extremely small, often only trace or residual quantities of carbonised plant remains, and preservation overall was quite poor.

Nevertheless, identification of the carbonised grain revealed barley, bread and spelt wheat. Scarce amounts of agricultural indicator weeds and a very rare find of spelt wheat chaff, indicated that cereal processing such as drying was probably occurring in the vicinity of the features. The poor condition of the remains and generally trace quantities suggested this was probably windblown or accidental inclusion from nearby activity rather than deliberate dumping of waste material. Small amounts of charcoal indicated that oak was being used as fuel.

Table 5. Carbonised plant remains and charcoal

	Sample	2	6	15	16	17	19	21	26	28
	Context	111	122	133	118	120	144	154	148	170
	Trench	2	7	6	6	6	5	5	1	1
	Total CV	<2.5ml	2.5ml	<2.5ml	<2.5ml	2.5ml	2.5ml	2.5ml	5ml	2.5ml
	Modern	2.5ml	<2.5ml	2.5ml	2.5ml	5ml	10ml	5ml	<2.5ml	5ml
Carbonised cereal grain and chaff	**Common name**									
Triticum aestivum	bread wheat			1						
Triticum spelta	spelt wheat							4		
Triticum spelta glume bases	spelt wheat chaff								1	
Hordeum vulgare sl.	barley									1
Indeterminate cereal grain (+embryo)		1		1		2		4	5	1
Charcoal										
Quercus	oak						1	1		
Carbonised weeds										
Spergula arvensis	corn spurrey							2	1	
Polygonum sp.	knotgrasses							1		
Fallopia convolvulus	black bindweed		1						1	
Silene sp.	campions				1					
Small Poaceae	grass family				1					

Flots from fills 105, 108, 130, 138, 142, 146, 151, 158 and 162 were also analysed but contained no carbonised plant remains and are not tabulated here.

Animal bone by J. Richardson

Fragments of three horse teeth were recovered from the primary fill (130) of the recut (131) of ditch 134. They may represent a single jaw bone, and probably survived as teeth are typically more robust than other bones. No other bones were encountered during the excavations, and no further analysis is required.

8 Recommendations

The archaeological features investigated have been fully reported here, as have the assemblages of hand-made later prehistoric, Romano-British and early modern pottery, ceramic building material, small finds, animal bones and charred plant remains.

Should additional archaeological investigations be undertaken at the site, certain finds groups reported here may be required for further quantification and/or comparative purposes, but no further analysis of this material is recommended.

9 Conclusions

The nature of the archaeological features and finds investigated, in conjunction with known cropmark data in the area, indicate the presence of field systems of likely late 2nd to mid-3rd-century date within the Site, although earlier Iron Age origins are also possible, as seen at the nearby sites of Balby Carr and West Moor Park (Roberts *et al*. 2010, 73). The quantity of finds recovered at this evaluation stage was greater than anticipated and this may indicate a settlement focus close to the Site, while the varying orientations and redefinition of many of the ditches suggest the development and maintenance of this field system over a long period of time.

The trenching results indicate that archaeological activity is concentrated in the western half of the Site, with the eastern part all but devoid of features. Gully 143 in Trench 9 to the south-east of the Site differed from the other features exposed in containing a grey-yellow clay silty sand, compared to the brown sandy fills seen elsewhere. This may indicate a different date for this feature, although no dateable artefacts were recovered from the trench to confirm this.

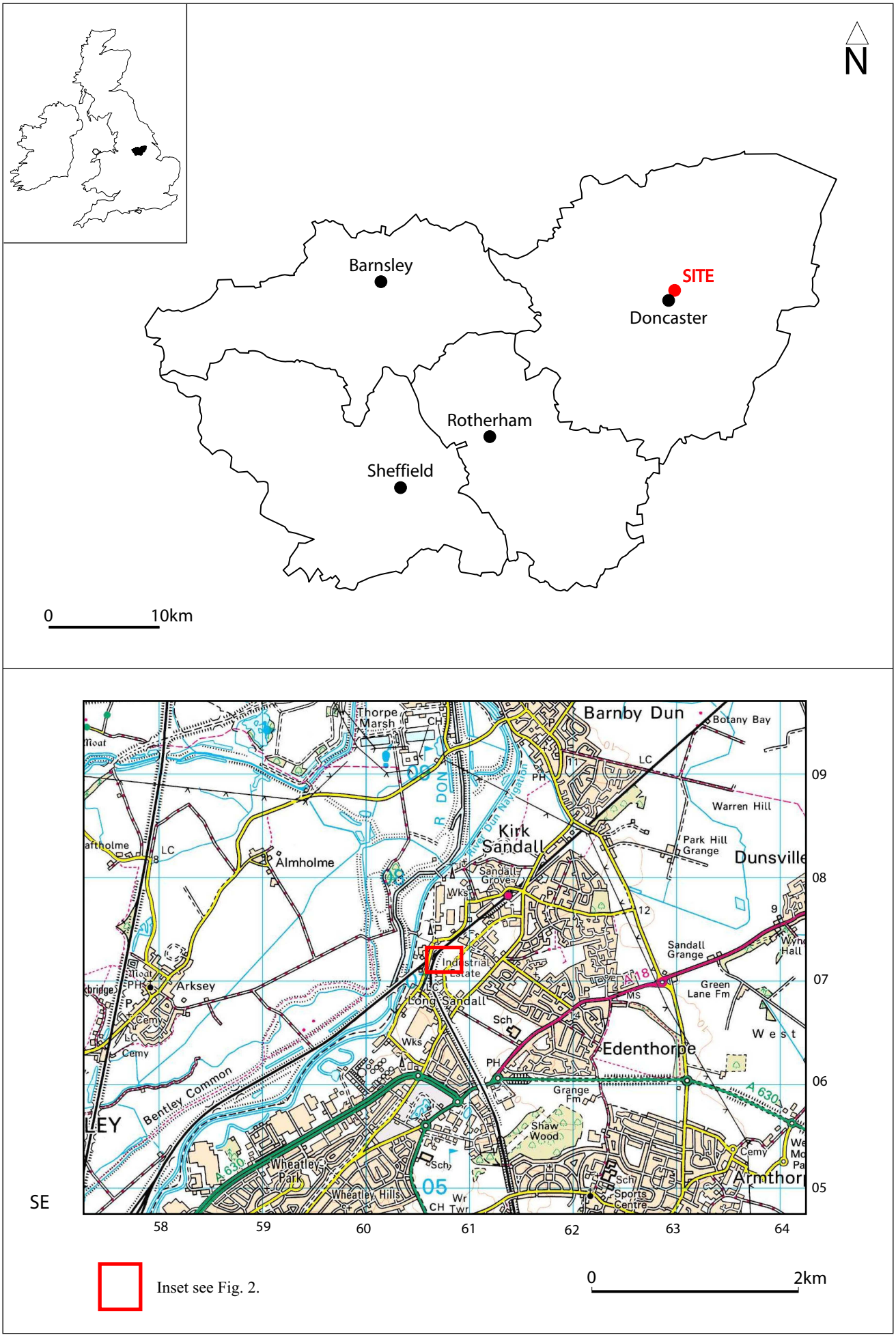

Fig. 1. Site location

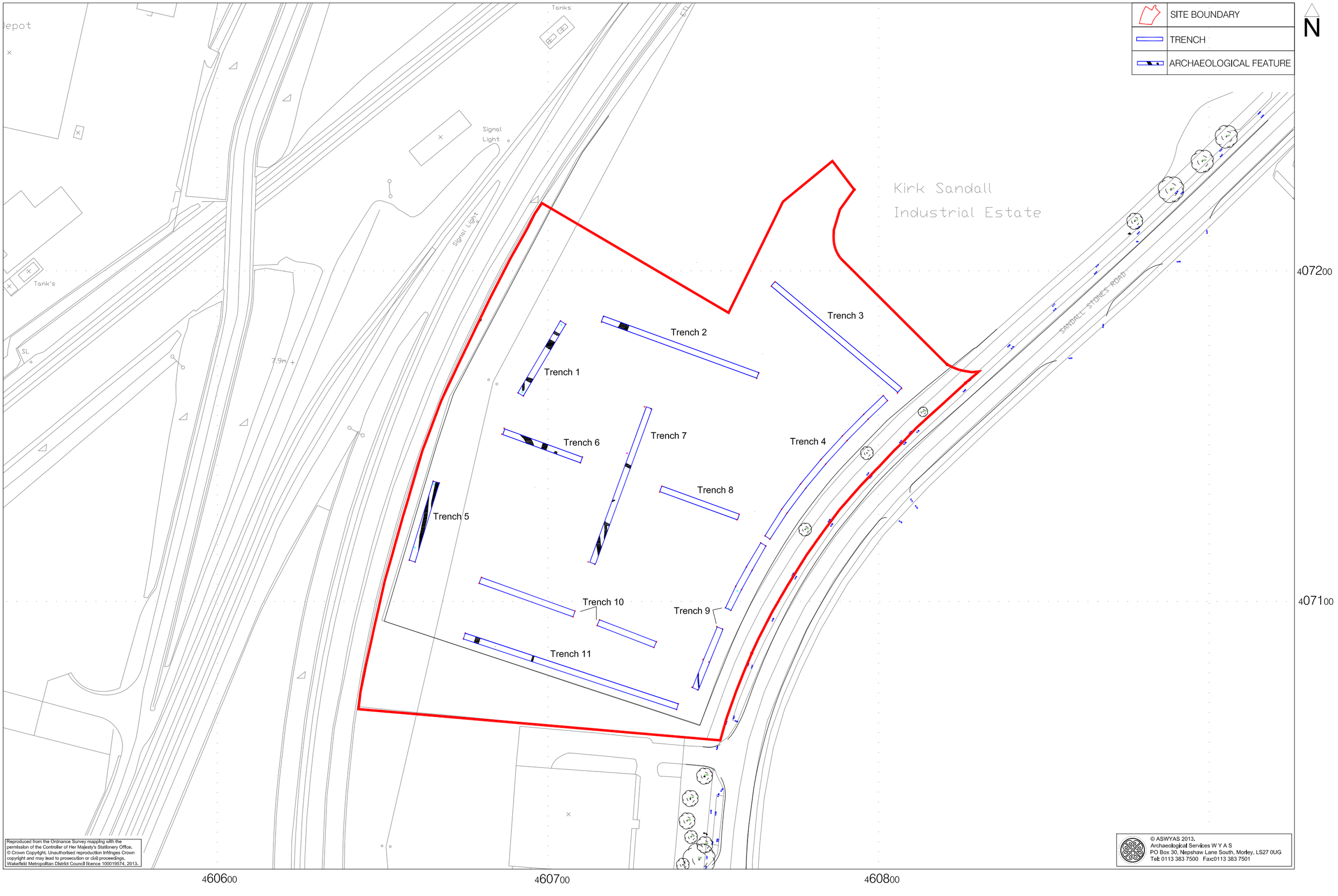

Fig. 2. Trench locations (1:1000 @ A3)

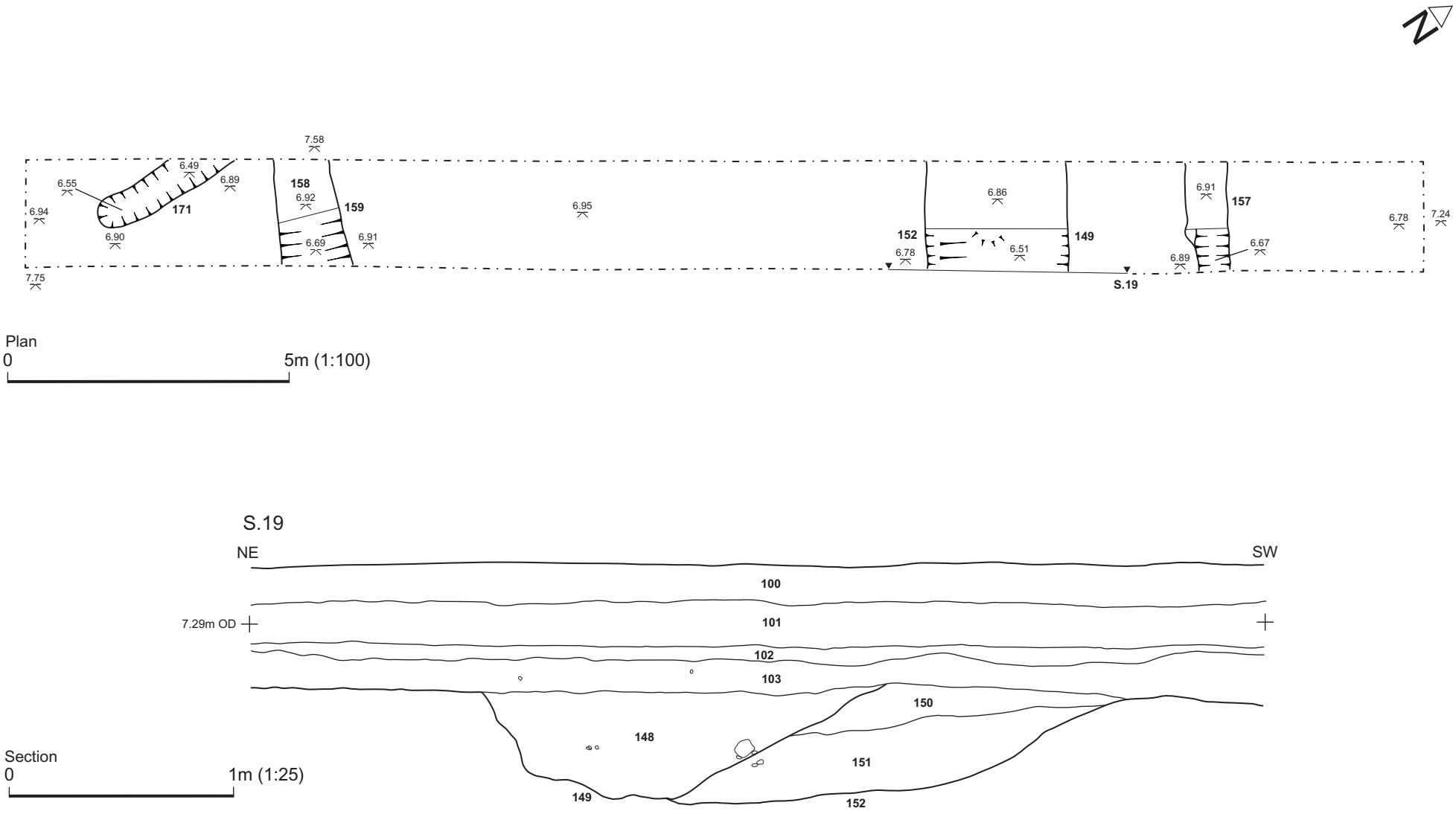

Fig. 3. Trench 1 plan and section

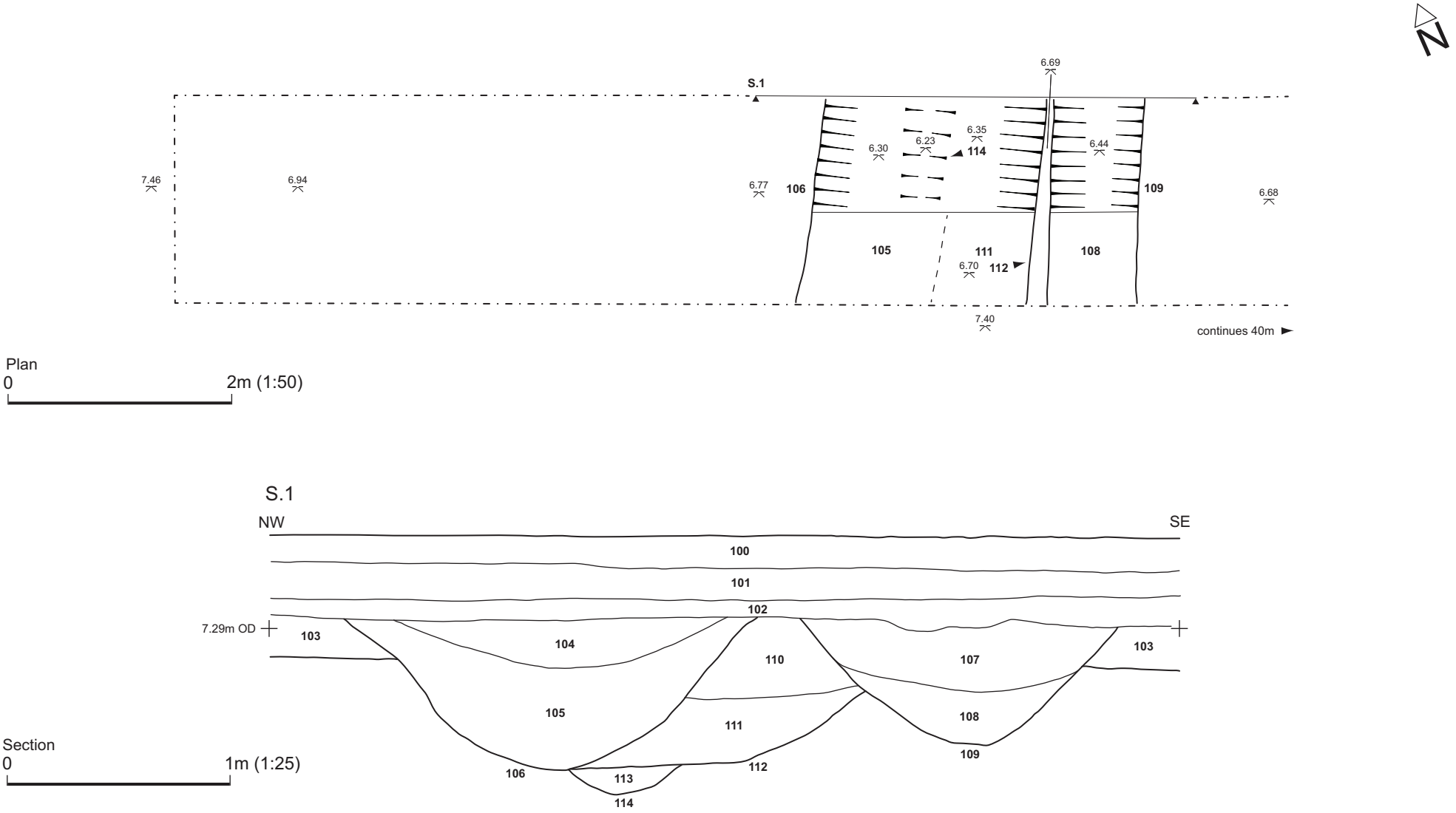

Fig. 4. Trench 2 plan and section

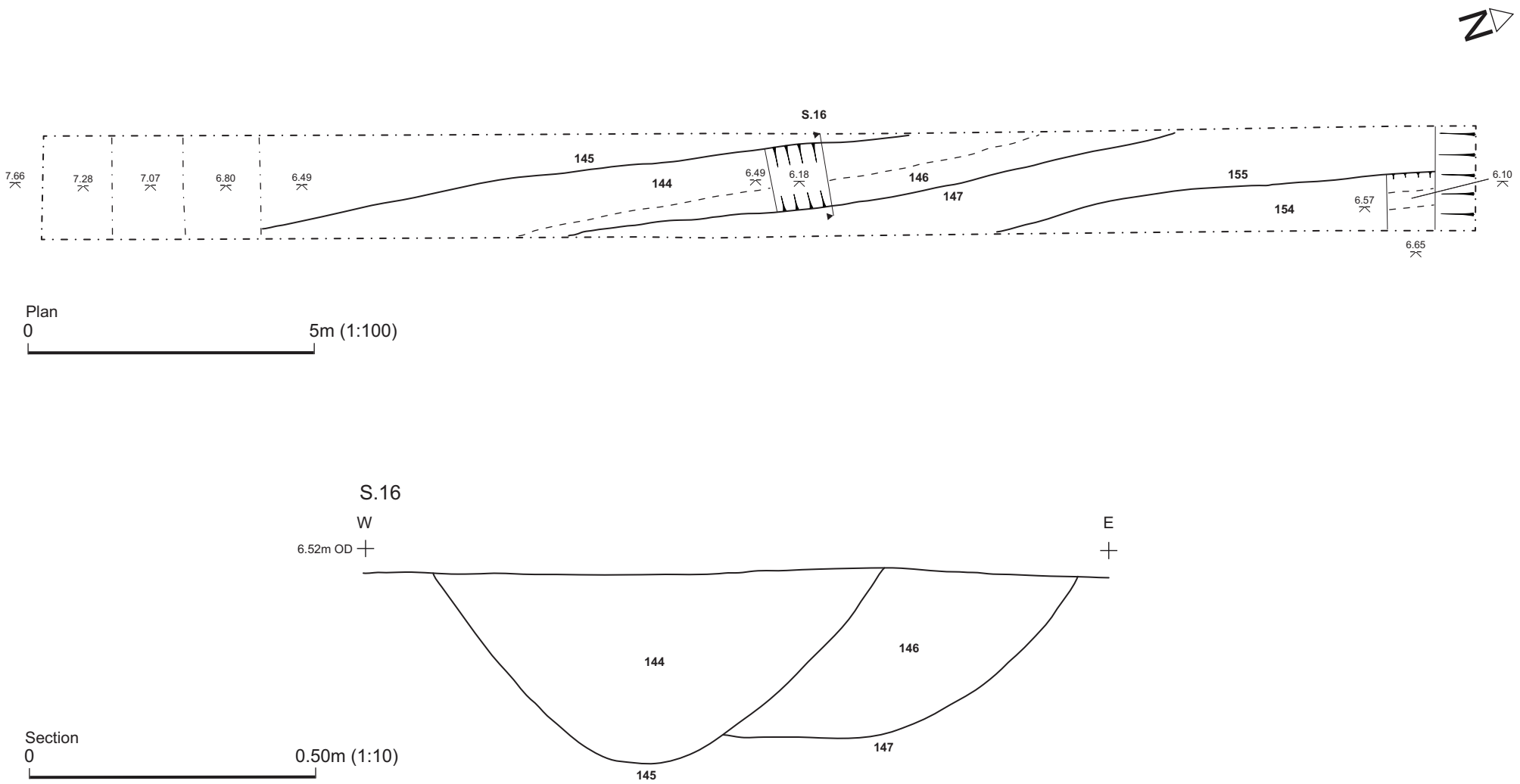

Fig. 5. Trench 5 plan and section

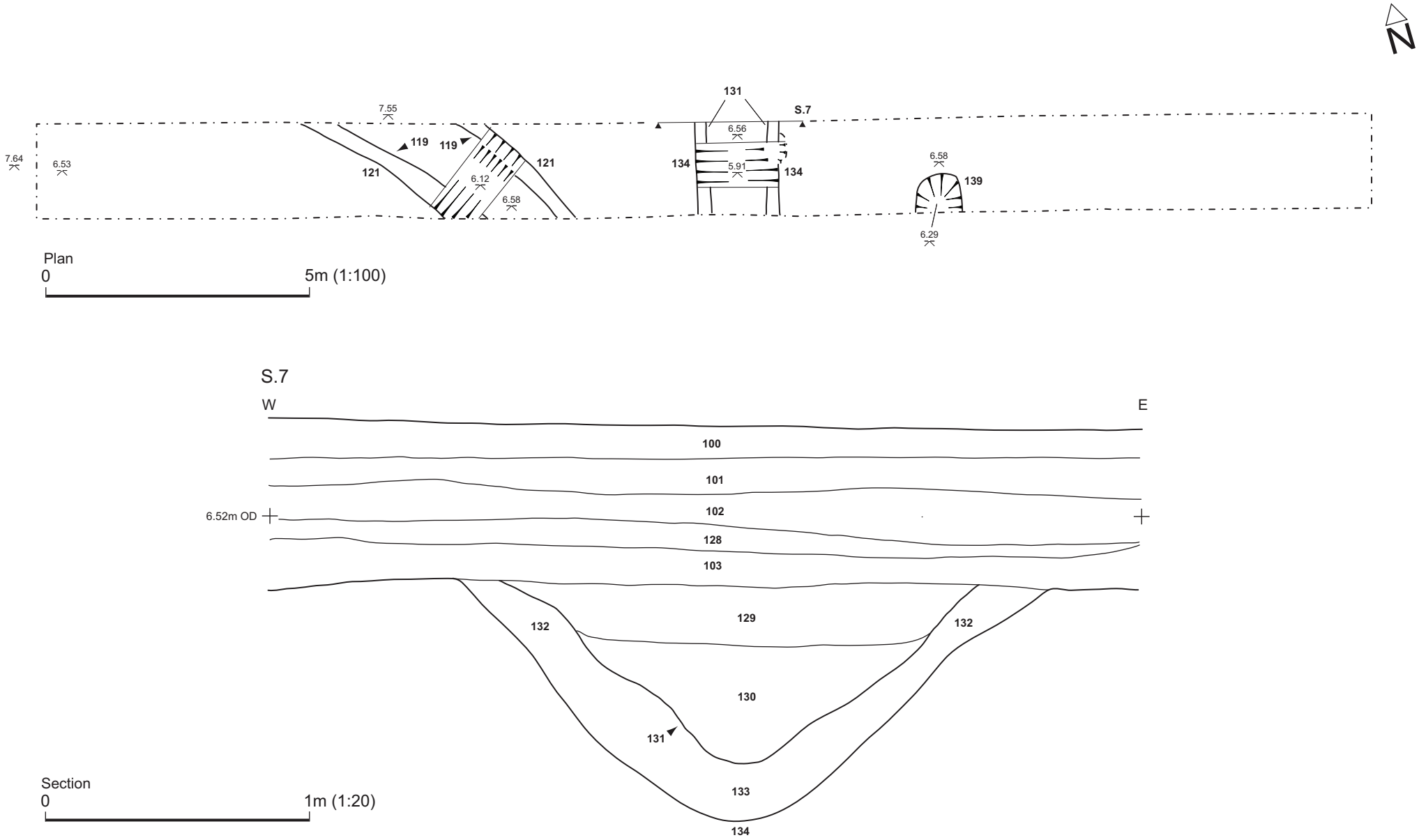

Fig. 6. Trench 6 plan and section

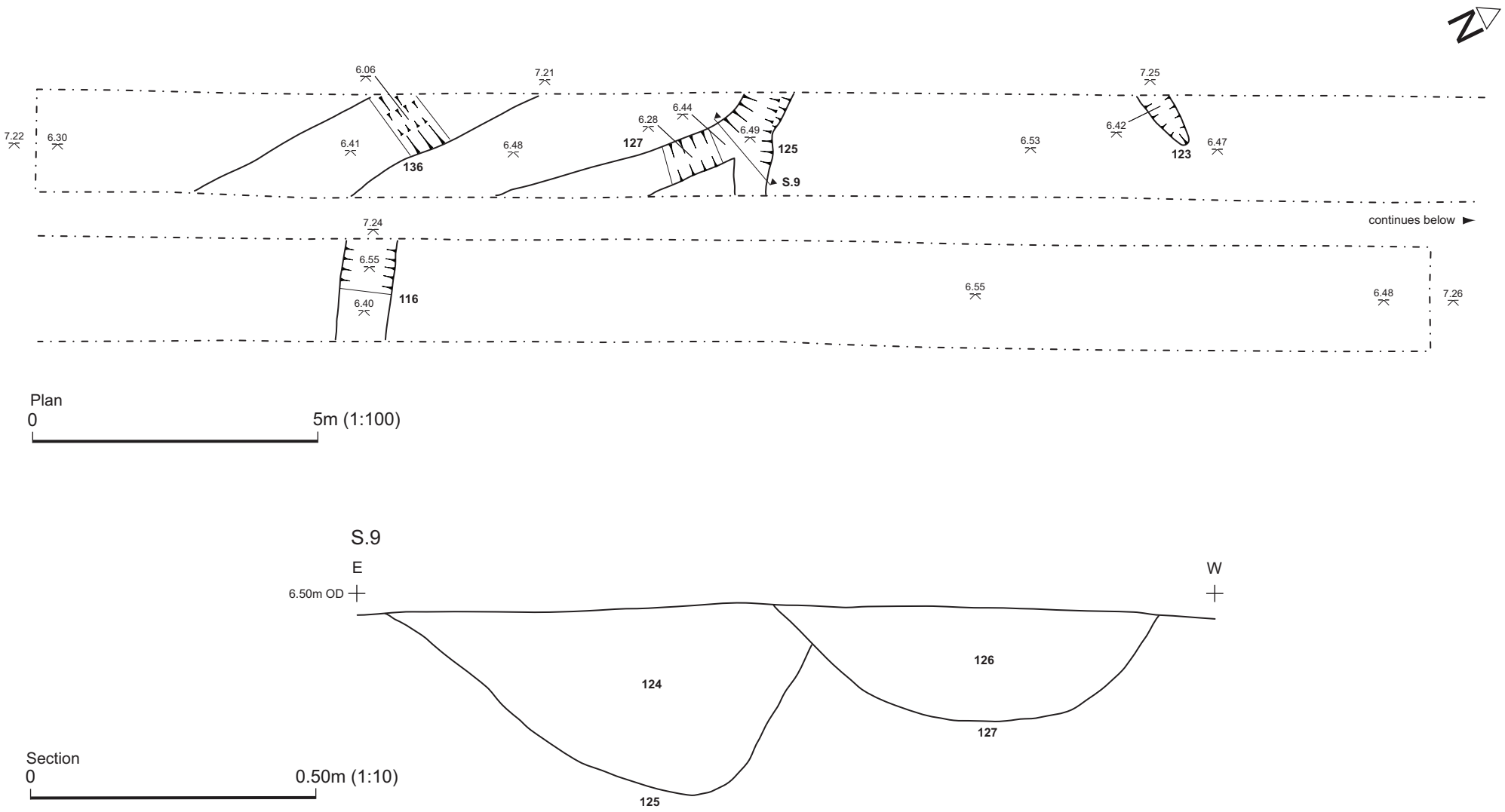

Fig. 7. Trench 7 plan and section

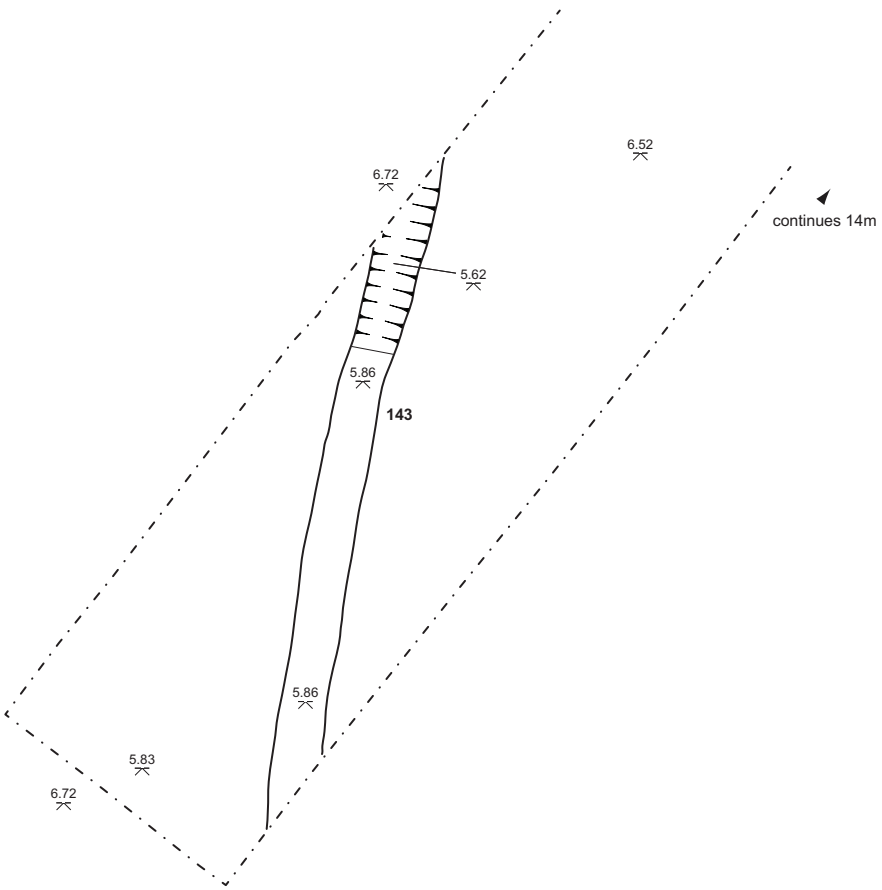

Fig. 8. Trench 9 plan

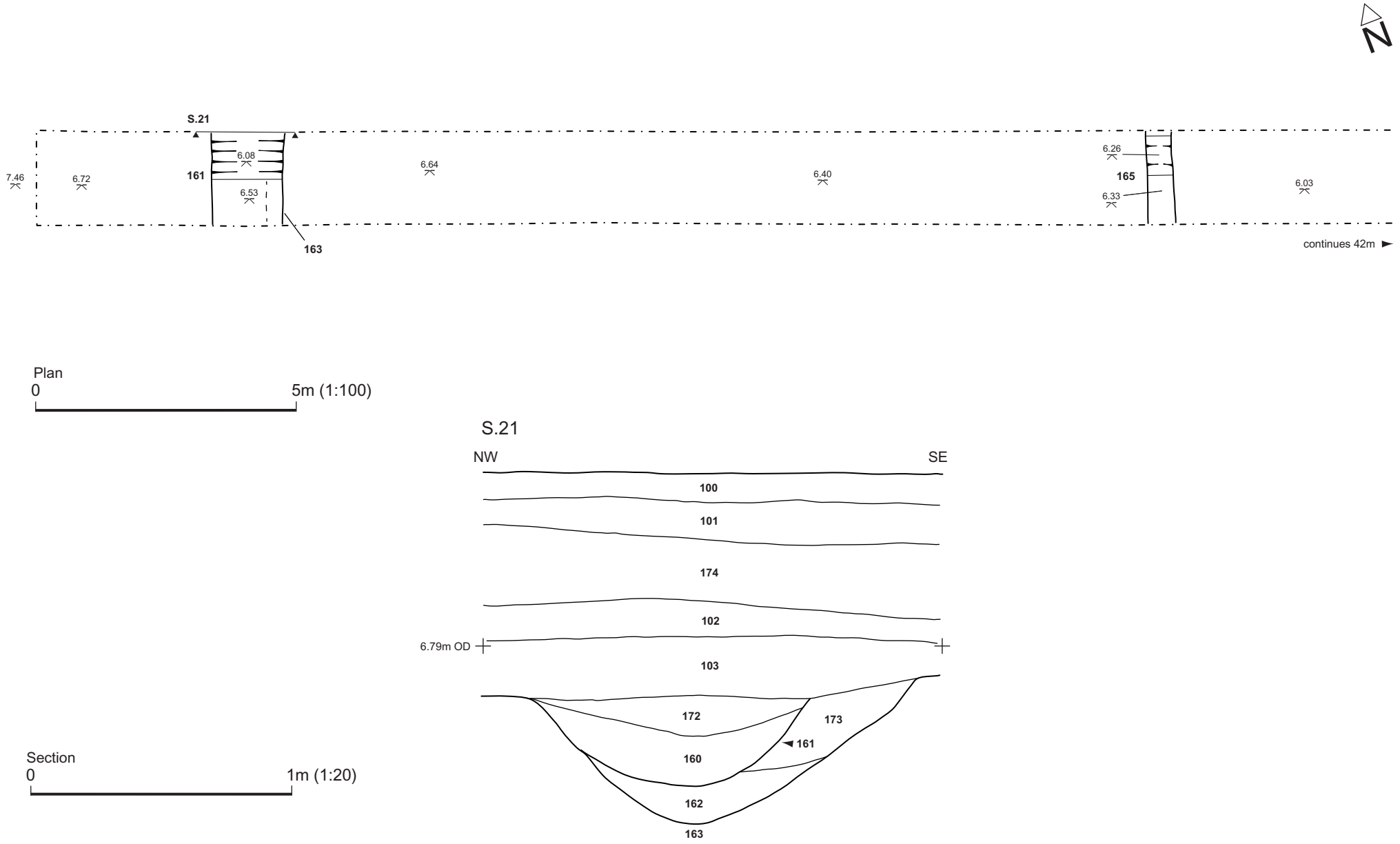

Fig. 9. Trench 11 plan and section

Plate 1. Trench 1, ditches 152 and 149, looking east

Plate 2. Trench 2, ditches 114, 112, 106 and 109, looking north

Plate 3. Trench 5, ditch 155, looking north

Plate 4. Trench 6, ditches 121 and 119, looking north-west

Appendix 1: Inventory of primary archive

Phase	File/Box No	Description	Quantity
Evaluation	File no.1	Daily site recording forms	8
	File no.1	Context register	3
	File no. 2	Context cards	75
	File no.1	Drawing sheet register	1
	File no.1	Drawing register	2
	File no.1	Levels sheets	6
	File no.1	Permatrace sheets	17
	File no.1	Sample register	1
	File no.1	Small find register	1
	File no.1	Photograph record sheets	2
	File no. 1	B&W negatives and contacts (films 9129 and 9130)	2
	File no.1	Digital photograph record sheets	2
	File no.1	Trench record sheets	2

Appendix 2: Concordance of contexts, artefacts and environmental remains

Context	Trench	Description	Artefacts and environmental samples
100	All	Tarmac	
101	All	Hard core	
102	All	Buried topsoil	Early modern pot (2)
103	All	Subsoil	
104	2	Secondary fill of ditch recut 106	
105	2	Primary fill of ditch recut 106	GBA 1
106	2	Cut of ditch recut	
107	2	Secondary fill of ditch recut 109	
108	2	Primary fill of ditch recut 109	GBA 3
109	2	Cut of ditch recut	
110	2	Secondary fill of ditch recut 112	GBA 5
111	2	Primary fill of ditch recut 112	GBA 2
112	2	Cut of ditch recut	
113	2	Only fill of ditch 114	
114	2	Cut of ditch	
115	7	Only fill of gully 116	GBA 9
116	7	Cut of gully	
117	6	Secondary fill of ditch recut 119	Hand-made pot (3)
118	6	Primary fill of ditch recut 119	GBA 4, GBA 16
119	6	Cut of ditch recut	
120	6	Only fill of ditch 121	GBA 17
121	6	Cut of ditch	
122	7	Only fill of gully 123	GBA 6
123	7	Cut of gully	
124	7	Only fill of gully 125	GBA 10
125	7	Cut of gully	
126	7	Only fill of gully 127	GBA 11
127	7	Cut of gully	
128	6	Buried topsoil/subsoil horizon	
129	6	Secondary fill of ditch recut 131	
130	6	Primary fill of ditch recut 131	Bone (3), GBA 7, GBA 14
131	6	Cut of ditch recut	
132	6	Secondary fill of ditch 134	
133	6	Primary fill of ditch 134	GBA 8, GBA 15
134	6	Cut of ditch	
135	7	Only fill of ditch 136	GBA 12
136	7	Cut of ditch	
137	6	Secondary fill of ditch 139	
138	6	Primary fill of ditch 139	RB pot (2), GBA 13
139	6	Cut of ditch	
140	10/11	Only fill of substantial modern pit 141	
141	10/11	Cut of substantial modern pit	
142	9	Only fill of gully 143	GBA 18

Context	Trench	Description	Artefacts and environmental samples
143	9	Cut of gully	
144	5	Only fill of ditch recut 145	RB pot (8), CBM (1), GBA 19
145	5	Cut of ditch recut	
146	5	Only fill of ditch 147	GBA 20
147	5	Cut of ditch	
148	1	Only fill of ditch recut 149	Hand-made pot (5), RB pot (47), Fe nobnail (8), Fe object (1), CBM (1), GBA 26
149	1	Cut of ditch recut	
150	1	Secondary fill of ditch 152	
151	1	Primary fill of ditch 152	RB pot (4), Fe nail (2), GBA 27
152	1	Cut of ditch	
153	5	Secondary fill of ditch 155	
154	5	Primary fill of ditch 155	RB pot (4), GBA 21
155	5	Cut of ditch	
156	1	Only fill of gully 157	GBA 25
157	1	Cut of gully	
158	1	Only fill of ditch 159	Early modern pot (1), GBA 22
159	1	Cut of ditch	
160	11	Primary fill of ditch recut 161	GBA 23
161	11	Cut of ditch recut	
162	11	Primary fill of ditch 163	GBA 24
163	11	Cut of ditch	
164	11	Only fill of possible plough furrow 165	
165	11	Cut of possible plough furrow	
166	11	Only fill of natural feature 167	
167	11	Cut of natural feature	
168	11	Only fill of natural feature 169	
169	11	Cut of natural feature	
170	1	Only fill of gully 171	RB pot (3), GBA 28
171	1	Cut of gully	
172	11	Secondary fill of ditch recut 161	
173	11	Secondary fill of ditch 163	
174	11	Hard core	

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