

ARCHAEOLOGICAL EVALUATION REPORT:

TRIAL TRENCHING ON LAND OFF HEATH ROAD, HOCKERING, NORFOLK

Planning Reference: 3PL/2017/0600/O

NGR: TG 0772 1346

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Report prepared for D R Builders

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Cover image: General view of site looking north-northeast

Executive Summary

- Allen Archaeology Limited was commissioned by D R Builders to undertake an archaeological evaluation by trial trenching on land of Heath Road, Hockering, Norfolk, as a condition of planning consent for a residential development.
- The site lies in an area of some archaeological potential, with quantities of finds of mixed dates, ranging from prehistoric to post-medieval having been found by metal detecting in the wider area. Medieval activity is represented by a moated enclosure to the north and a possible deer park to the northeast.
- The fieldwork was undertaken over a period of three days from the 11th to the 13th December 2017. Five trenches were excavated, each measuring 30m long by 1.8m wide.
- The trenching revealed archaeological activity in four of the five trenches, with only Trench 3 being sterile. Trenches 1 and 2, in the north of the site, contained a number of pits and ditches, some of which were undated, and some producing small groups of medieval pottery, hinting at domestic activity in the vicinity.
- A large linear ditch, orientated northeast to southwest, was identified in Trenches 4 and 5, and contained medieval to post-medieval finds. The feature may correspond to a large, curving boundary ditch seen on LiDAR data extending to the north and south of the site.

1.0 Introduction

- 1.1 Allen Archaeology Limited was commissioned by D R Builders to undertake an archaeological evaluation by trial trenching on land off Heath Road, Hockering, Norfolk, as a condition of planning consent for a residential development.
- 1.2 The evaluation, recording and reporting conformed to current national guidelines, as set out in the Chartered Institute for Archaeologists '*Standard and guidance for an archaeological field evaluation*' (CIfA 2014), the Historic England document '*Management of research Projects in the Historic Environment*' (Historic England 2015) and the regional research aims set out in '*Research and Archaeology Revisited: a revised framework for the East of England*' (Medlycott 2011) and in response to brief provided by Norfolk County Council (Hickling 2017).

2.0 Site Location and Description

- 2.1 Hockering is located in the administrative district of Breckland District Council, approximately 16km west-northwest of central Norwich. The proposed development area is situated to the north of the village, on the west side of the Heath Road. The site is a broadly rectangular block of agricultural land of 0.52ha, centered on NGR TG 0772 1346 (Figure 1).
- 2.2 The local bedrock comprises undifferentiated Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation, with overlying superficial deposits of Lowestoft Formation diamiction (glacial till) (<http://mapapps.bgs.ac.uk/geologyofbritain/home/html.>)

3.0 Planning Background

- 3.1 Outline planning consent has been granted for '*4 four-bedroom houses and 4 three bedroom bungalows with associated parking and gardens*' (Planning Reference 3PL/2017/0600/O). Planning consent was granted subject to conditions, including for a programme of archaeological investigation. In the first instance trial trenching is required to provide further detailed information that will allow the planning authority to make an informed decision as to whether further archaeological investigations will be required as mitigation for the potential impacts of the proposed development.
- 3.2 The approach adopted is consistent with the guidelines set out in the National Planning Policy Framework (NPPF) (Department for Communities and Local Government 2012).

4.0 Archaeological and Historical Background

- 4.1 The earliest find recorded in the study area comprises a burnt and broken Neolithic axehead, found to the west of the village (NHER Reference 34933).
- 4.2 Fieldwalking and metal detecting in several locations around the village has recovered a large group of finds of mixed dates, including prehistoric flint flakes; a Bronze Age socketed axehead and spearhead; Iron Age, Roman and Saxon brooches; Roman, medieval and post-medieval coins; part of a medieval sword; and Iron Age to medieval pottery (NHER Reference 14914, 14915, 14916, 28375, 30679, 30963, 31058, 36541, 40863, 60391). The

given grid references in the NHER are broad references to a 1km grid square but suggest a level of activity in the area throughout the later prehistoric to medieval periods.

- 4.3 In the Domesday Book of 1086, Hockering was in the ownership of Ralph de Beaufour. It was populated by 26 villagers and four slaves, and also included one and a half mills (Williams and Martin 2002). The place name is of old English origin, meaning 'dwellers at the rounded hill' (<http://kepn.nottingham.ac.uk/map/place/Norfolk/Hockering>).
- 4.4 Medieval activity is well-represented in the surrounding area. A medieval moated enclosure is recorded in Hockering Wood, c.800m north of the site (NHER Reference 7307), with a causeway and traces of an outer enclosure. Fragments of a brick wall are exposed at the south corner of the moat, and are of uncertain date.
- 4.5 A medieval deer park is suggested by curving boundaries around Park Farm, to the northeast of the site, but the full date and extent is not known (NHER Reference 7309). A cropmark defining another possible moat is recorded c.700m to the east-southeast, but is positioned on top of a hill and within the deer park also suggests it may be an enclosure around a lodge within the park (NHER Reference 13038). Another square cropmark enclosure c.500m to the east-northeast of this has also been interpreted as a possible moated enclosure, but also as a Roman signal station (NHER Reference 31517).
- 4.6 The parish church of St. Michael's is located to the west of the existing village. It dates to c.1300, with alterations in the 18th and 19th century (NHER Reference 7311).
- 4.7 Later activity in the area is represented by a brick field and kiln marked on the 1883 Ordnance Survey map c.1km to the east of the site (NHER Reference 49736).
- 4.8 In Hockering Wood, to the north of the site, are the remains of RAF Hockering Forward Ammunition Depot, comprising a network of roads, with buildings, bomb stores and water tanks (NHER Reference 36974).

5.0 Aims and Objectives

- 5.1 The purpose of the trial trench evaluation was to define the scope and extent of any further archaeological mitigation work (e.g. excavation or monitoring), required if features of importance are found and cannot be preserved *in situ*, and to create a permanent record of the features and deposits exposed.
- 5.2 Evidence was to be gathered to recover as much information as possible on the origins, date, development, phasing, spatial organisation, character, function, status, significance and the nature of social, economic and industrial activities on the site.

6.0 Methodology

- 6.1 The trial trenching methodology entailed the excavation of five trenches, each 30m long by 1.8m wide. The trenches were located as shown in Figure 2. The fieldwork was undertaken by a team of experienced field archaeologists between 11th December and 13th December 2017, supervised by the author.
- 6.2 The evaluation trenches were accurately located using a Leica GS08 RTK Net Rover GPS. In each trench a mechanical excavator fitted with a 1.8m wide toothless ditching bucket was

used to remove topsoil, subsoil and underlying non-archaeological deposits in spits no greater than 100mm thickness. The process was repeated until the first archaeologically significant or natural horizon was exposed. All further excavation was carried out by hand except for where machine excavation was undertaken in agreement with the advising Historic Environment Officer.

- 6.3 All trenches and resulting spoil were scanned with a metal detector using a unit set to not discriminate against iron.
- 6.4 A full record of the archaeological deposits was made on standard AAL context recording sheets. Archaeological deposits were drawn in plan and section at an appropriate scale (1:20 and 1:50), with OD heights being displayed on each class of drawing. Colour and monochrome photography formed an integral part of the recording strategy with photographs incorporating scales, an identification board and directional arrow, as appropriate.
- 6.5 All finds of all classes were collected, other than obviously modern material from modern overburden and topsoil contexts. The spoil from the excavated trenches was examined for further artefact recovery. Finds collected during the fieldwork were bagged and labelled with the appropriate deposit context number. All finds were processed (cleaned, marked and labelled as appropriate) at the office of AAL, prior to assessment by approved specialists.
- 6.6 Each deposit or layer was allocated a unique identifier (context number), and was accorded a written description. A summary of these are included in Appendix 5. Three-digit numbers within square brackets represent cut features, e.g. ditch [210].

7.0 Results

- 7.1 The stratigraphic sequence in each trench was broadly consistent, comprising topsoil of dark brown silty clay with occasional small to medium angular flints measuring 0.26m thick, sealing a natural geology of firm, mid yellow clay, with frequent medium to large flints and frequent small to medium, sub-rounded limestone. No archaeological features were revealed in Trench 3.

Trench 1

- 7.2 At the north end of the trench was a northwest to southeast aligned linear feature [102], which had been recut on the same alignment [105]. Both cuts contained single fills which were naturally accumulated, 103 and 106 respectively, neither of which contained any finds.
- 7.3 Towards the middle of the trench was a pit or ditch terminal, [107] measuring 1.8m by 1.3m by 0.5m deep (Plate 1). The pit contained a natural silting deposit 108, the fill of which contained 21 sherds of 12th–14th century pottery and a cattle tooth.



Plate 1: Pit [107] looking southeast, scales 1m and 0.4m

Trench 2

- 7.4 At the north end of the trench, a pit [205] was partially exposed. Measuring 0.7m by 0.6m by 0.6m deep, the fill 206, contained eight sherds of 11th to 14th century pottery and eight fragments of animal bone.
- 7.5 Further to the east was a linear ditch [203], orientated west-northwest to east-southeast, measuring 1.6m wide by 0.6m deep, and with a single naturally silted fill, 204, containing six sherds of 13th to 14th century pottery (Plate 2).



Plate 2: Ditch [203] looking northwest, scale 1m and 0.4m

- 7.6 Roughly centrally placed within the trench was a large ditch [210], measuring 8.7m wide and 2.1m deep (Plate 3). The lower fill, 211, was interpreted as a deliberate backfill and contained four sherds of 12th to 14th century pottery. This was sealed by 212, a naturally silted fill containing 24 sherds of 13th to 14th century pottery. Soil samples from fill 211 found a single charred wheat grain, stinking chamomile, and four fragments of wood charcoal. Soil samples from 212 revealed a moderate assemblage of charred wheat and barley grains as well as eight fragments of wood charcoal.



Plate 3: Ditch [210] looking northeast, scales are 2m and 3x 1m

Trench 4

- 7.7 Trench 4 was orientated east to west in the southern part of the site. A large linear ditch was exposed at the east end of the trench, [402], measuring 5.2m wide and 1.5m deep (Plate 4). It was aligned broadly north to south and contained three naturally silted fills, one of which, 403, contained three iron nails dated broadly from the medieval to post-medieval periods. Soil samples from fill 403 produced two fragments of wood charcoal. Two animal bone fragments were also recovered from this fill.



Plate 4: Pit [402] looking south, scales 2m and 1m

Trench 5

- 7.8 Trench 5 was located towards the south end of the site and was orientated northeast to southwest (Plate 5). A linear feature likely to represent the continuation of [402], Trench 4, was uncovered. With the agreement of the advising local authority archaeologist no further excavation of this feature took place.



Plate 5: Trench 5 looking southeast, scales 2m and 1m

8.0 Discussion and Conclusion

- 8.1 Evidence for archaeological activity was recorded in four of the five trenches, with Trench 3 being archaeologically sterile.
- 8.2 A recut linear feature was recorded in Trench 1. This ran parallel to the existing northern boundary of the site and may represent the presence of a migrating boundary that has been recut and realigned slightly, although the lack of dating evidence limits any further interpretation. A pit or ditch terminal in this trench produced a moderate assemblage of medieval coarsewares, which suggests dumping of domestic waste on or near to the site in the medieval period.
- 8.3 A large, linear ditch was recorded in Trench 2, and also produced a moderate assemblage of medieval pottery. The composition of its two fills was noticeably different, with the lower fill producing four sherds of pottery, and an environmental sample almost entirely devoid of charred cereal grains or weed seeds. The upper fill, however, produced 24 sherds of pottery and more frequent charred cereal grains and charcoal. This may suggest an increase in the level of crop processing and domestic activity over time, although the density of finds and environmental material is still not high enough to suggest these activities were taking place on or in the immediate vicinity of the site. Nonetheless, the ditch represents a substantial boundary feature, measuring in excess of 8m wide. Another pit and a linear feature in this trench also produced medieval dating evidence.
- 8.4 A large linear feature was recorded in Trenches 4 and 5. Dating evidence from the feature was limited to three nails of a broad medieval to post-medieval date. This possibly forms the continuation of a linear hollow visible in LiDAR mapping to the south of the site, but again the lack of dating evidence limits the interpretive potential. It is not present on historic Ordnance Survey mapping or the Tithe Map for the area, and as such is likely to have fallen out of use by the time of the production of these maps in the 19th century. Whether this represents a man-made boundary, or a natural channel, is also uncertain.

9.0 Effectiveness of Methodology

- 9.1 The trial trenching methodology was suited to the nature and scale of this project. It has identified pits and linear features of medieval date that are likely to be impacted upon by the proposed development.

10.0 Acknowledgements

- 10.1 Allen Archaeology would like to thank D R Builders for this commission.

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Appendix 1: Pottery

By Peter Thompson

Archaeological trial-trench evaluation excavations recovered a total of 63 sherds (363g); contained in ditch and pit features in a moderately to heavily abraded condition. The pottery is entirely of medieval date, probably deposited in the 13th-14th centuries, although sparse sherds may originate from the 11th century onwards. The principal class of vessel present was the cooking pot (jar), with a single coarse bowl also present, as well as rare body sherds of glazed Grimston ware. The bulk of the medieval pottery was contained in ditch [210], with a slightly higher mean sherd weight than the sparse sherds from other features, but remaining small. It is likely that this assemblage represents the limited clearing of debris into ditches from domestic occupation in the local vicinity, but does not constitute the dumping or middening of material from occupation directly adjacent to the ditches.

Methodology

The sherds were examined under x35 binocular microscope and recorded according to the Medieval Pottery Research Group Guidelines (Slowikowski *et al* 2001), with all date entered into a spreadsheet that forms part of the archive. Fabric codes and numbers are those developed for the Suffolk County Council (SCC) pottery type series (Table 1) and applicable to Norfolk. Rim codes in the text are also taken from the SCC pottery type series.

Fabric Code	Fabric No.	Fabric Description	Date
MCW1	3.00	Medieval coarse ware 1. Fine sandy matrix, with moderate small burnt black organics, and occasional other inclusions of medium sub-rounded quartz and red iron ore pellets. Sparse mica on surfaces, surfaces usually pale grey/buff mottled with dark grey/black mottling.	12 th -14 th C
MCW2		Medieval coarse ware 2. Common fine to medium sub-rounded to rounded quartz, occasional red iron, and coarse quartz or flint and rare calcareous inclusions. Mainly grey cores and grey or brown surfaces, can be oxidised.	11 th -13 th /14 th C
MCW3		Medieval coarse ware 3. Common well-sorted fine to medium sub-rounded to rounded grey quartz with rare coarse quartz but few other inclusions. Mainly grey wares but can have brown or orange surfaces.	
MCW4		Medieval coarse ware 4. Common fine to medium sub-rounded to rounded clear, dark grey and occasional red quartz, occasional calcareous inclusions. Orange throughout.	
GRCW	3.22	Grimston-type coarseware. Fabrics in keeping with Grimston coarseware range (Leah 1992).	mid-12 th - 14 th C
GRIM	4.10	Grimston ware. Glazed Grimston ware (Leah 1992).	late 12 th - 14 th C
MCW4		Medieval coarse ware 4. Common fine to medium sub-rounded to rounded clear, dark grey and occasional red quartz, occasional calcareous inclusions. Orange throughout.	

Table 1: Pottery fabric codes and descriptions

Fabric Code	Sherd Count	Weight (g)
MCW1	10	88
MCW2	23	155
MCW3	20	63
MCW4	2	6
GRCW	5	38
GRIM	3	13
<i>Total</i>	<i>63</i>	<i>363</i>

Table 2: Quantification of medieval fabric types

Commentary

The bulk of the assemblage is comprised of locally-produced coarse wares (Table 2: MCW1-4), likely from kilns in central Norfolk; with occasional vessels sourced from the major industry at Grimston c.35km to the west, potentially representing the import of finer (or decorated) glazed jugs or jars. The local coarse wares are focussed on cooking pots, with examples in ditch [210] (212) including those in MCW1 (type F5), MCW2 (type D5) and MCW3 (type D3); all representing utilitarian cooking pots with variants of simple everted, tapering and flat-topped rims. An MCW3 neck sherd in pit [107] exhibits roulette decoration, a common feature on 12th-14th century cooking pots and jars (i.e. Jennings 1981, 48-9). Also present in ditch [210] (212) was a MCW2 bowl with a similar rim (type A2), in a particularly coarse variant of that fabric, suggesting a robust domestic function, potentially a storage vessel or basin. None of the vessels in ditch [210] exhibit evidence of wear although MCW3 sherds in pit [107] appear burnt, supporting the presence of cooking pots. Occasional GRIM body sherds with green lead glazed decoration were contained in ditches [203] and [210] but could not conclusively be assigned a form, although dispersed incised lines on the sherd from the former suggest a jug.

Ditch [210] (211 & 212) contained a total of 28 sherds (215g), accounting for 44% of the assemblage by sherd count (59% by weight). It includes examples of all medieval fabrics except MCW4, including multiple cooking pots and a bowl that appear to represent domestic debris from occupation in the 13th to 14th centuries. Sparse sherds of comparable character were contained in pits [107], [205] and ditch [203] are likely contemporary, although diagnostic vessel types are very limited and similar coarse wares were consumed from the 11th/12th centuries.

Bibliography

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Slowikowski, A, Nenck, B, and Pearce, J, 2001 *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*, Medieval Pottery Research Group Occasional Paper 2

					Total POT		MCW1		MCW2		MCW3		MCW4		GRCW		GRIM	
Feature	Fill	Tr	Description	Spot Date	F	W	F	W	F	W	F	W	F	W	F	W	F	W
107	108	1	Pit (natural accumulation)	12th-14th C	21	61	3	10	6	15	11	33	1	3				
203	204	2	Ditch	13th-14th C	6	33	2	5	2	18			1	3			1	7
205	206	2	Pit	11th-14th C	8	54			8	54								
210	211	2	Ditch (dump deposit)	L12th-14th C	4	49	2	41	1	3							1	5
210	212	2	Ditch (natural accumulation and dump deposit)	13th-14th C	24	166	3	32	6	65	9	30			5	38	1	1
Total					63	363	10	88	23	155	20	63	2	6	5	38	3	13

	No.	Fabric Description
MCW1	3.00	Medieval coarse ware 1, (12th-14th)- Fine sandy matrix, with moderate small burnt black organics, and occasional other inclusions of medium sub-rounded quartz and red iron ore pellets. Sparse mica on surfaces, surfaces usually pale grey/buff mottled with dark grey/black mottling.
MCW2	3.00	Medieval coarse ware 2. Common fine to medium sub-rounded to rounded quartz, occasional red iron, and coarse quartz or flint and rare calcareous inclusions. Mainly grey cores and grey or brown surfaces, can be oxidised.
MCW3	3.00	Medieval coarse ware 3. Common well-sorted fine to medium sub-rounded to rounded grey quartz with rare coarse quartz but few other inclusions. Mainly grey wares but can have brown or orange surfaces.
MCW4	3.00	Medieval coarse ware 4. Common fine to medium sub-rounded to rounded clear, dark grey and occasional red quartz, occasional calcareous inclusions. Orange throughout.
GRCW	3.22	Grimston-type coarseware. Fabrics in keeping with Grimston coarseware range (Leah 1992)
GRIM	4.10	Grimston ware. Glazed Grimston ware (Leah 1992)

Appendix 2: Metal finds

By Mike Wood

Introduction

A small collection of iron nails was collected during archaeological investigation on land off Heath Road, Hockering, Norfolk.

Methodology

The material was counted and weighed in grams, then examined visually to identify any diagnostic pieces and the overall condition of the assemblage. No x-rays were available at the time of writing. A summary of the material is recorded in Table 3.

Assemblage

Context	Material	Object	Date	Measurements (mm)	No.	Wt (g)	Comments
403	fe	nail	Med to post-med	57.25x15.63x11.65	3	17.6	Corroded round headed nails with tapering square shafts.

Table 3: Iron objects

Discussion

The assemblage comprises corroded nails recovered from context 403. The nails are in poor condition and are only broadly dateable to medieval or later periods based on visual assessment.

Recommendations for further work

Such a limited assemblage of medieval to modern material offers little opportunity for further study, with the material all suitable for discard.

Appendix 3: Animal Bone

By J Wood

Introduction

A total of 11 (125g) refitted fragments of animal bone were recovered by hand during a program of archaeological works undertaken by Allen Archaeology Ltd on land off Heath Road, Hockering, Norfolk. No context data or dating evidence was available at the time of assessment.

Methodology

For the purposes of this assessment the entire assemblage has been fully recorded into a database archive. Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present. Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986) in addition to the use of the reference material. Where distinctions could not be made the bone was recorded as sheep/goat (S/G).

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable.

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one.

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

Results

The overall condition of the bone was moderate, averaging at grade 3 on the Lyman criteria (1996).

No evidence of butchery, working, gnawing, burning or of pathological change was noted on the remains.

Species Representation

Table 4 summarises the number of fragments of bone identified to species or taxon from each context.

Context	Cut	Taxon	Element	Side	Number	Weight (g)	Comments
108		Cattle	Tooth	R	1	5	Broken lower dpm4 in wear
206		Large Mammal Size	Scapula	X	1	30	Fragmentary blade
		Unidentified	Unidentified	X	7	2	Fragments
403		Equid (Horse Family)	Metatarsal	R	1	71	Proximal shaft, Bp=48mm

Context	Cut	Taxon	Element	Side	Number	Weight (g)	Comments
		Large Mammal Size	Long Bone	X	1	17	Proximal shaft

Table 4: Taxon summary, by context

A single cattle tooth and a fragment of Equid metatarsal were identifiable to species, the remaining fragments were unidentifiable beyond size category.

Discussion of Potential

The assemblage is too small at this stage to provide detailed data on the dietary economy, animal utilisation or husbandry practices taking place on site.

Significance of the Data

Due to the nature of the assemblage and the lack of period specific context, the significance of the assemblage is limited.

No further work is recommended on this assemblage.

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Appendix 4: Environmental Sampling

By Ellen Simmons

Introduction

Three bulk sieving (BS) soil samples, each of thirty litres in volume, were taken from the backfill of a channel and two fills of a ditch, during an archaeological evaluation by trial trenching on land off Heath Road, Hockering, Norfolk (NGR: TG 0772 1346). Pottery from the site is dated as 11th – 14th century. The soil samples were processed for the recovery of charred plant macrofossils and wood charcoal and assessed in order to determine the concentration, diversity, state of preservation and suitability for use in radiocarbon dating, of any archaeobotanical material present. A further aim of this assessment was to evaluate the potential of any archaeobotanical material present to provide evidence for the function of the contexts, the economy of the site or for the nature of the local environment.

Methodology

The soil samples were processed by Bryn Leadbetter of Allen Archaeology for the recovery of charred plant remains and wood charcoal, using a water separation machine. Floating material was collected in a 300µm mesh, and the remaining heavy residue retained in a 1mm mesh. The flots and heavy residues were air dried. The greater than 4mm fraction of the heavy residues were fully sorted for organic remains and artefacts and then discarded. Where no potential was noted for the recovery of organic remains such as fish bone or Mollusca, or artefacts such as beads less than 4mm in size, the less than 4mm fraction of the heavy residue was then also discarded.

The samples were assessed in accordance with Historic England guidelines for environmental archaeology assessments (English Heritage 2011). A preliminary assessment of the samples was made by scanning using a stereo-binocular microscope (x10 - x65) and recording the abundance of the main classes of material present. The small quantity of charred plant macrofossils were identified and quantified in full.

Identification of plant material was carried out by comparison with material in the author's own reference collection and various reference works (e.g. Cappers *et al.* 2006). Plant nomenclature follows Stace (2010). The composition of the samples is recorded below in table 1. The seed, in the broadest sense, of the plant is always referred to in the table unless stated otherwise. The abbreviation *cf.* means 'compares with' and denotes that a specimen most closely resembles that particular taxa more than any other.

Results

Preservation

Preservation of charred cereal grain was relatively poor with grains exhibiting puffing and distortion. Preservation of wood charcoal fragments was good. The proportion of intrusive roots in ditch fill 211 was high, indicating an increased probability that charred material present in this context may be intrusive. The proportion of intrusive roots in channel fill 403 and ditch fill 212 was moderate to low.

Charred plant macrofossils

A free threshing wheat grain (*Triticum aestivum* / *turgidum* s.l.), a probable free threshing wheat grain, an indeterminate barley grain (*Hordeum* indet.) an indeterminate wheat grain (*Triticum* indet.) and three indeterminate cereal grains were present in ditch fill 212. An indeterminate wheat grain and a seed of stinking mayweed (*Anthemis cotula*) were present in ditch fill 211. No charred plant macrofossils were present in channel fill 403.

Wood charcoal

Eight wood charcoal fragments greater than 2mm in size were present in ditch fill 212, four fragments were present in ditch fill 211 and two fragments were present in channel fill 403. Preliminary examination of the assemblage using low power microscopy indicated that predominantly ring porous taxa were present.

Mollusca

Relatively rich assemblages of over one hundred land snail shells (Mollusca) were present in channel fill 403 and ditch fill 212.

Radiocarbon dating

Charred material suitable for radiocarbon dating was present in the sampled contexts in the form of charred cereal grain.

Context number	403	211	212
Feature number	405	210	210
Flotation sample number	1	2	3
Feature type	Channel	Ditch	Ditch
Sample volume (litres)	30	30	30
Volume of intrusive roots (ml)	40	40	10
Flot volume excluding roots (ml)	20	10	30
% Intrusive roots	50	80	25
*key + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.			
CROP MATERIAL*			
<i>Hordeum</i> indet. (barley) grain			1
<i>Triticum aestivum / turgidum</i> s.l. (free threshing wheat) grain			1
<i>Triticum</i> cf. <i>aestivum / turgidum</i> s.l. grain			1
<i>Triticum</i> indet. (wheat indeterminate) grain		1	1
Cereal indet. grain			3
Total identifiable crop material	0	1	7
WILD / WEED PLANT SEEDS*			
<i>Anthemis cotula</i> (stinking chamomile)		1	
Total identifiable wild / weed plant material	0	1	0
NON SEED PLANT MATERIAL			
> 4mm wood charcoal fragments	2		
> 2mm wood charcoal fragments		4	8
Charcoal (DP = predominantly diffuse porous. RP = predominantly ring porous)	RP	RP	RP
INTRUSIVE PLANT MATERIAL / NON PLANT MATERIAL*			
Mollusca	+++++	++++	+++++

Table 5: Archaeobotanical sample assessment

Discussion of Potential

The cereal grains are likely to have been charred accidentally during parching or food preparation, while the cereal chaff and wild or weed plant seeds are likely to have been removed during crop processing and charred as waste. The low density of charred plant material present in the sampled contexts may indicate that activities involving crop processing or food preparation were not being carried out to any great extent in the vicinity of the sampled features. It is also possible that the low density of charred plant material is related to preservation conditions or that crop processing waste was disposed of elsewhere, or used for other purposes such as temper rather than being burnt.

The crop types present in ditch fills 211 and 212 were barley (*Hordeum* sp.), free threshing wheat (*Triticum aestivum* / *turgidum* s.l.) and indeterminate wheat (*Triticum* indet.). Free threshing wheat was the most common wheat type cultivated during the medieval period in England, with barley also representing an important crop (Moffett 2006, 47-50). Stinking mayweed (*Anthemis cotula*) is also a characteristic crop weed of medieval archaeobotanical assemblages. The increasing frequency of this species in archaeobotanical assemblages from the Roman period onwards has been related to the expansion of agriculture on to heavier clay soils (Jones 1981, 111).

Ring porous taxa which are frequently represented in archaeological charcoal assemblages include oak (*Quercus* sp.), ash (*Fraxinus* sp.) and elm (*Ulmus* sp.). Identification using high power microscopy would however be necessary in order to confirm which taxa are present.

Full sorting, identification and analysis of the charred plant macrofossil assemblage would be unlikely to yield any additional archaeobotanical evidence. The number of wood charcoal fragments greater than 2mm in size present in the sampled contexts is also too small to provide a representative sample of woody taxa utilised as fuel. No further analysis of the charred plant macrofossil or wood charcoal assemblage would therefore be recommended.

Analysis of the rich Molluscan assemblage from channel fill 403 and ditch fill 212 would however be expected to provide palaeoenvironmental evidence for the nature of the local environment.

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Appendix 5: Context Summary List

Trench 1

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
100	Layer	Soft, dark brown silty clay with occasional small to medium angular flints			0.25	Topsoil
101	Layer	Firm, mid yellow clay with frequent medium to large flints and frequent small to medium sub-rounded limestones				Natural geology
102	Cut	Northwest-southeast orientated linear with shallow stepped sides, gradual break of slope to flat base		1.6	0.7	Cut of boundary ditch
103	Fill	Compact, light grey clayey silt			0.46	Natural silting in ditch [102]
104	Fill	Compact, light brown clayey silt with frequent small chalk flecks			0.22	Fill of ditch [102]
105	Cut	Northwest-southeast orientated linear with shallow sides, moderately shallow break of slope to sloping base (NE)		0.8	0.36	Cut of ditch re-cut [102]
106	Fill	Compact, mid orange brown silty clay with occasional small chalk flecks			0.36	Natural silting in ditch [105]
107	Cut	Sub-square shaped feature with moderate concave sides, moderately steep break of slope to flat base	2.5 (to LOE)	1.8	0.6	Cut of pit
108	Fill	Friable, mid brownish grey silty clay with occasional small to medium sub-angular flints and limestones			0.6	Natural silting in pit [107]

Trench 2

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
200	Layer	Soft, dark brown sandy silt with occasional small angular flints			0.3	Topsoil
201	Layer	Friable, light brown silty clay with			0.1	Subsoil

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
		occasional small to medium sub-angular flints				
202	Layer	Firm, mid yellow grey clay with occasional small to large flints and limestones				Natural geology
203	Cut	Northeast- southwest orientated linear with moderately steep straight sides, moderately sharp break of slope to flat base		1.6	0.6	Cut of drainage ditch
204	Fill	Firm, mid yellow brown silty clay with occasional small flints and chalk flecks			0.6	Fill of ditch [203]
205	Cut	North- south orientated sub-circular feature with moderately steep stepped sides, moderate break of slope to concave base	1.8 (to LOE)	0.66 (to LOE)	0.36	Cut of pit
206	Fill	Firm, light yellowish brown silty clay with frequent flints and chalk inclusions and occasional charcoal flecks			0.36	Naturally silted fill of pit [205]
207	Void	Void				Void
208	Void	Void				Void
209	Void	Void				Void

Trench 3

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
300	Layer	Friable, dark brown silty clay with occasional small angular flints			0.2	Topsoil
301	Layer	Soft, mid brown clayey silt with frequent small limestones and small angular flints			0.2	Subsoil
302	Layer	Firm, mid yellow clay with occasional small to medium flints and limestones				Natural geology

Trench 4

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
400	Layer	Soft, dark brown silty sand with occasional small angular flints			0.3	Topsoil
401	Layer	Firm, mid yellow grey clay with occasional small to large sub-angular chalk and flints				Natural geology
402	Fill	Firm, mid brown silty clay with occasional large sub-angular flints			0.44	Naturally silting of ditch [405]
403	Fill	Firm, mid greyish brown silty clay with occasional medium angular flints			0.54	Naturally silting fill of ditch [405]
404	Fill	Firm, mid greyish blue clayey silt with frequent large sub-rounded flints			0.23	Natural silting of ditch [405]
405	Cut	Northeast- southwest orientated linear with moderate concave sides, gradual break of slope to uneven base		5.2	1.2	Cut of ditch

Trench 5

Context	Type	Description	Length (m)	Width (m)	Thickness/depth (m)	Interpretation
500	Layer	Friable, dark brown silty clay with occasional flints			0.2	Topsoil
501	Layer	Firm, light grey clay with occasional sub-angular limestones			0.1+	Natural geology

Appendix 6: Oasis Form

2/20/2018

OASIS FORM - Print view

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

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OASIS ID: allenarc1-309737

Project details

Project name	Land off Heath Road, Hockering, Norfolk
Short description of the project	Allen Archaeology Limited was commissioned by D R Builders to undertake an archaeological evaluation by trial trenching on land of Heath Road, Hockering, Norfolk, as a condition of planning consent for a residential development. The site lies in an area of some archaeological potential, with quantities of finds of mixed dates, ranging from prehistoric to post-medieval having been found by metal detecting in the wider area. Medieval activity is represented by a moated enclosure to the north and a possible deer park to the northeast. The fieldwork was undertaken over a period of three days from the 11th to the 13th December 2017. Five trenches were excavated, each measuring 30m long by 1.8m wide. The trenching revealed archaeological activity in four of the five trenches, with only Trench 3 being sterile. Trenches 1 and 2, in the north of the site, contained a number of pits and ditches, some of which were undated, and some producing small groups of medieval pottery, hinting at domestic activity in the vicinity. A large linear ditch, orientated northeast to southwest, was identified in Trenches 4 and 5, and contained medieval to post-medieval finds. The feature may correspond to a large, curving boundary ditch seen on LiDAR data extending to the north and south of the site.
Project dates	Start: 11-12-2017 End: 13-12-2017
Previous/future work	No / No
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 4 - Character Undetermined
Monument type	FARM None
Significant Finds	POTTERY Medieval
Significant Finds	IRON NAILS Medieval
Significant Finds	ANIMAL BONE Uncertain
Methods & techniques	"Metal Detectors","Photographic Survey","Targeted Trenches"
Development type	Housing estate
Prompt	Planning condition
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	NORFOLK BRECKLAND HOCKERING land off Heath Road, Hockering, Norfolk
Postcode	NR20 3JA

2/20/2018

OASIS FORM - Print view

Study area 0.52 Hectares
Site coordinates 0 0 N52:40:45 (52.679045 E1:04:17 (1.071393) Point
Site coordinates TG 0772 1346 52.678498056653 1.07312102514 52 40 42 N 001 04 23 E Point

Project creators

Name of Organisation Allen Archaeology Limited
Project brief originator Contractor (design and execute)
Project design originator AAL
Project director/manager Chris Clay
Project supervisor Shoned Jones
Type of sponsor/funding body Client

Project archives

Physical Archive recipient Norfolk Museum
Physical Archive ID ENN142694
Physical Contents "Animal Bones","Ceramics","Environmental","Metal"
Digital Archive recipient Norfolk Museum
Digital Archive ID ENN142694
Digital Contents "none"
Digital Media available "Database","Images raster / digital photography","Spreadsheets","Text"
Paper Archive recipient Norfolk Museum
Paper Archive ID ENN142694
Paper Contents "Animal Bones","Ceramics","Environmental","Metal"
Paper Media available "Context sheet","Photograph","Report"

Entered by Cova Escandon (c.escandon@allenarchaeology.co.uk)
Entered on 20 February 2018

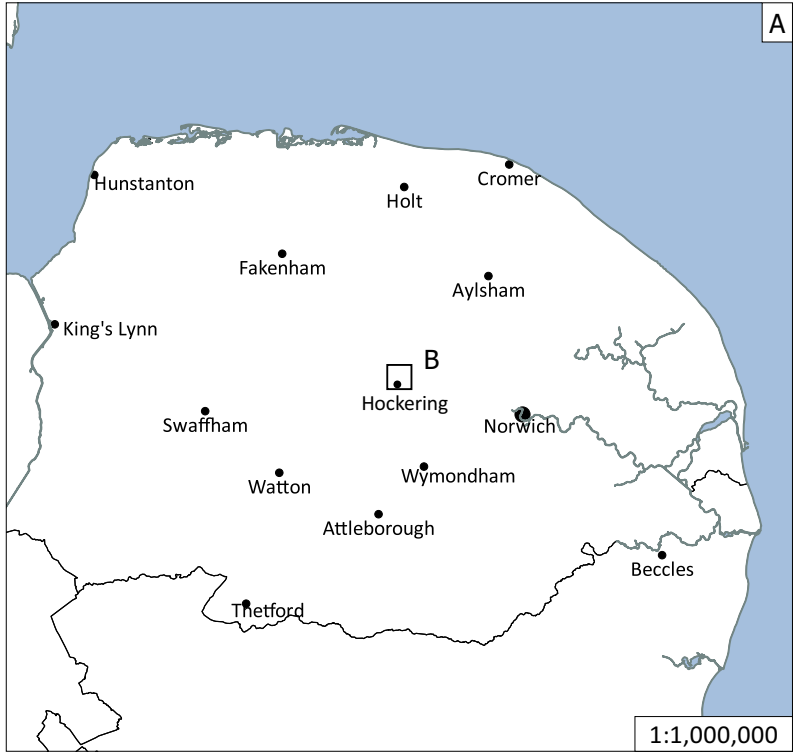


Figure 1: Site location outlined in red

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Site Code	HOHR 17
Scale	1:10,000,000 1:1,000,000 1:25,000 @ A4
Drawn by	D Leigh
Date	09/01/18

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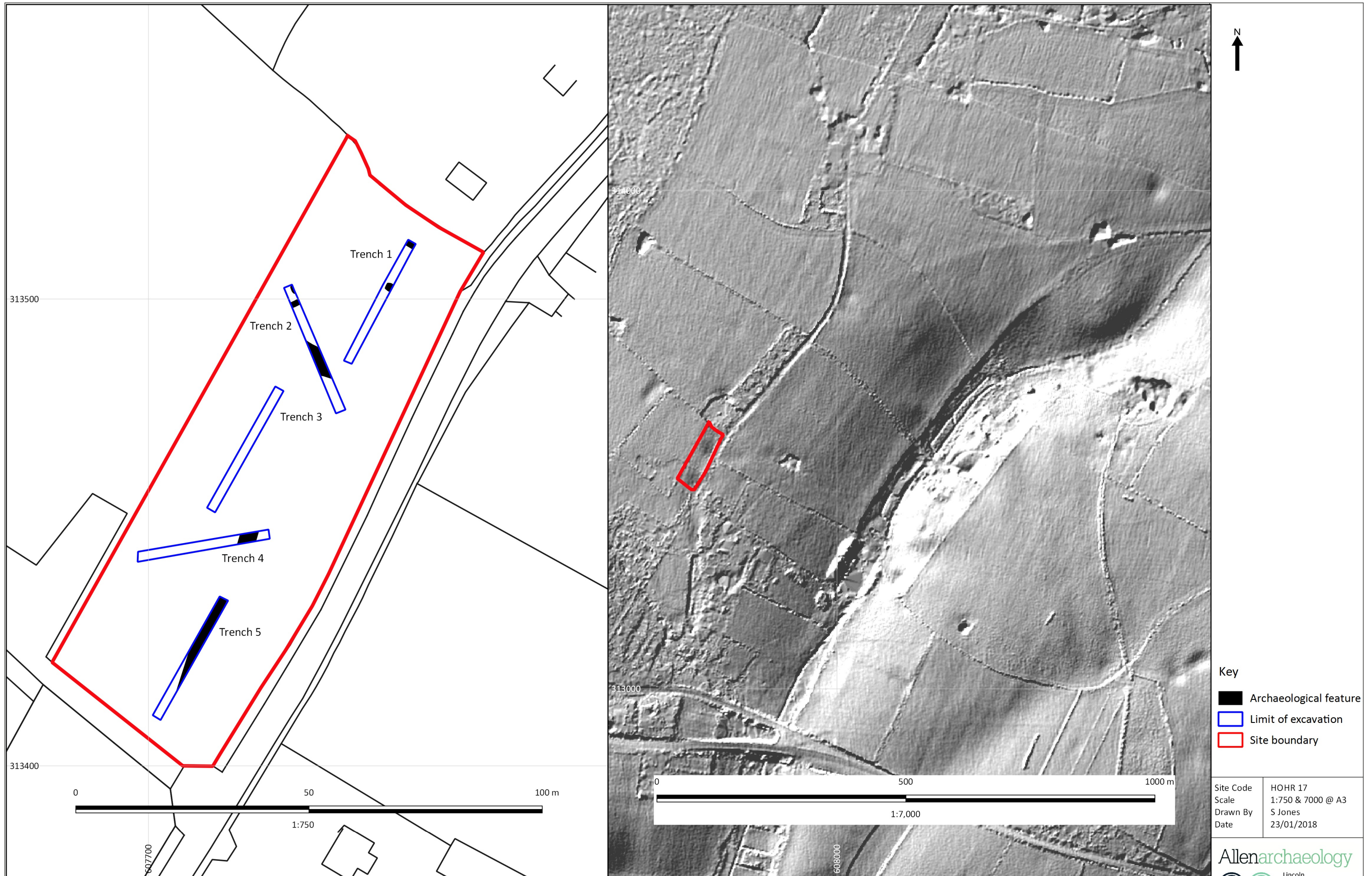
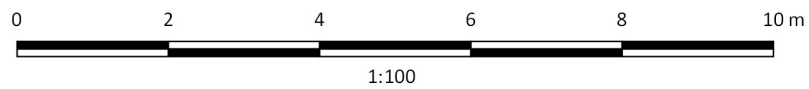
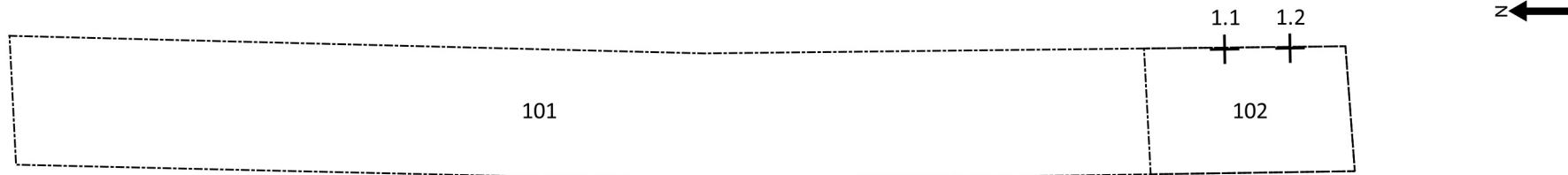


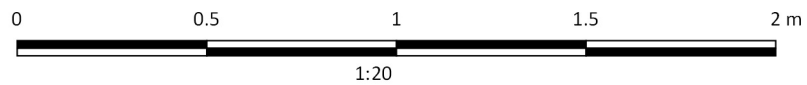
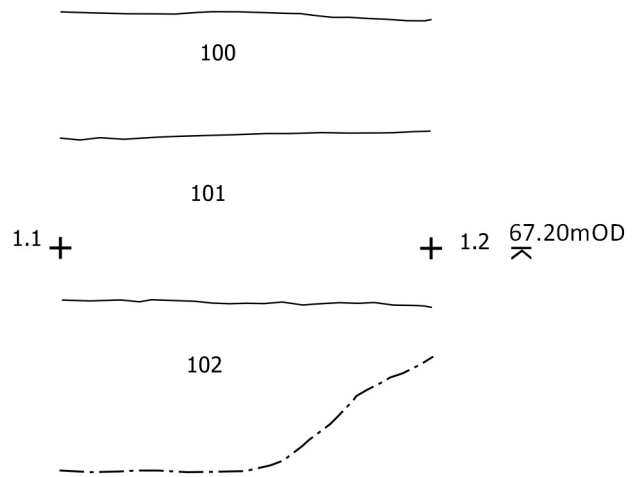
Figure 2: Trench location plan and LiDAR mapping of surrounding area.

- Key
- Archaeological feature
 - Limit of excavation
 - Site boundary

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Scale	1:750 & 7000 @ A3
Drawn By	S Jones
Date	23/01/2018



West-facing section



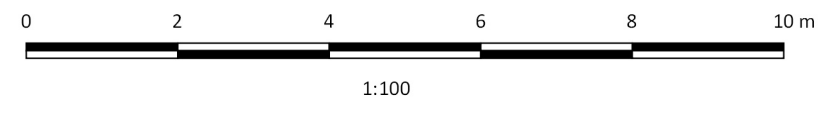
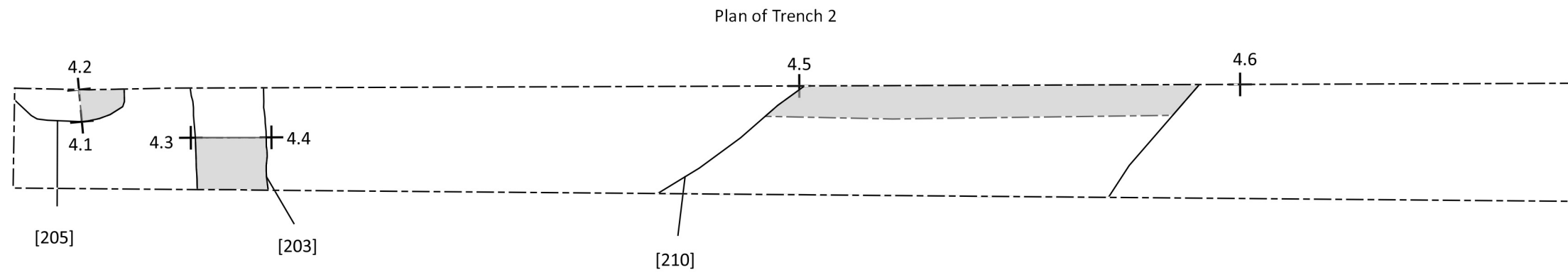
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Drawn By	A Telford
Date	24/11/17

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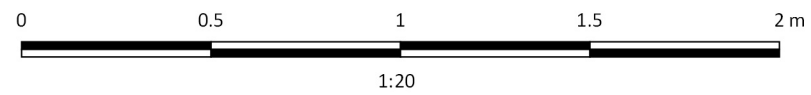
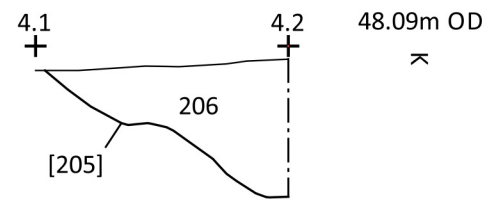


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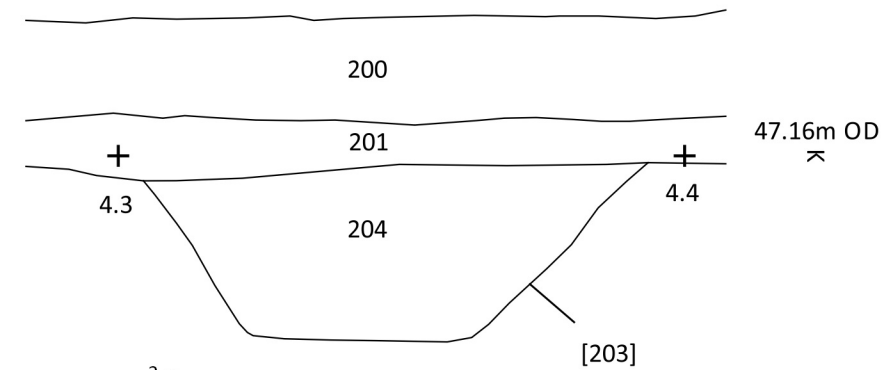
Figure 3: Plan and Section of Trench 1



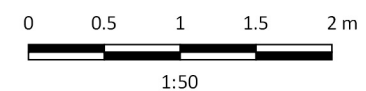
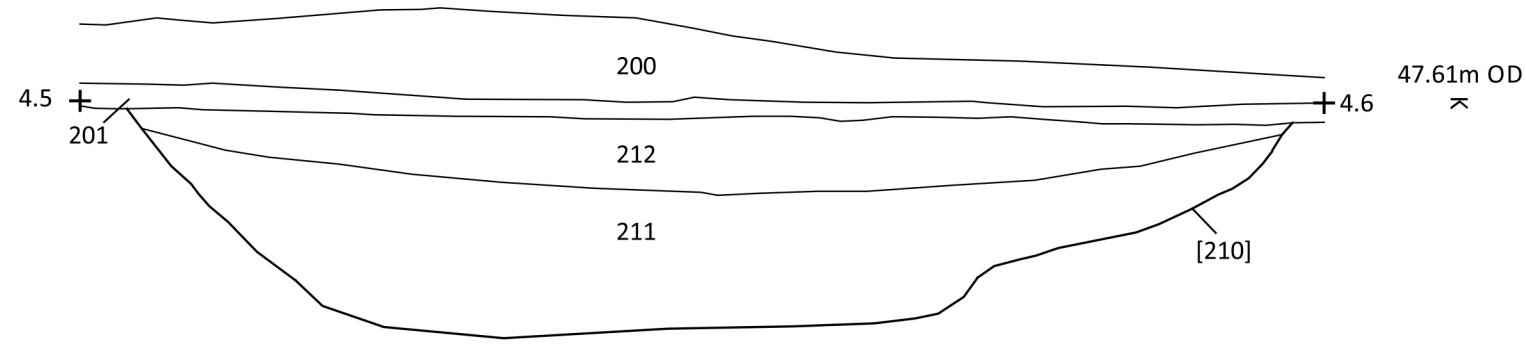
Southwest-facing section



Northeast-facing section



Northwest-facing section



Site Code	HOHR 17
Scale	1:100, 50 & 20 @ A3
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Date	23/01/2018

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Figure 4: Plan and sections of Trench 2

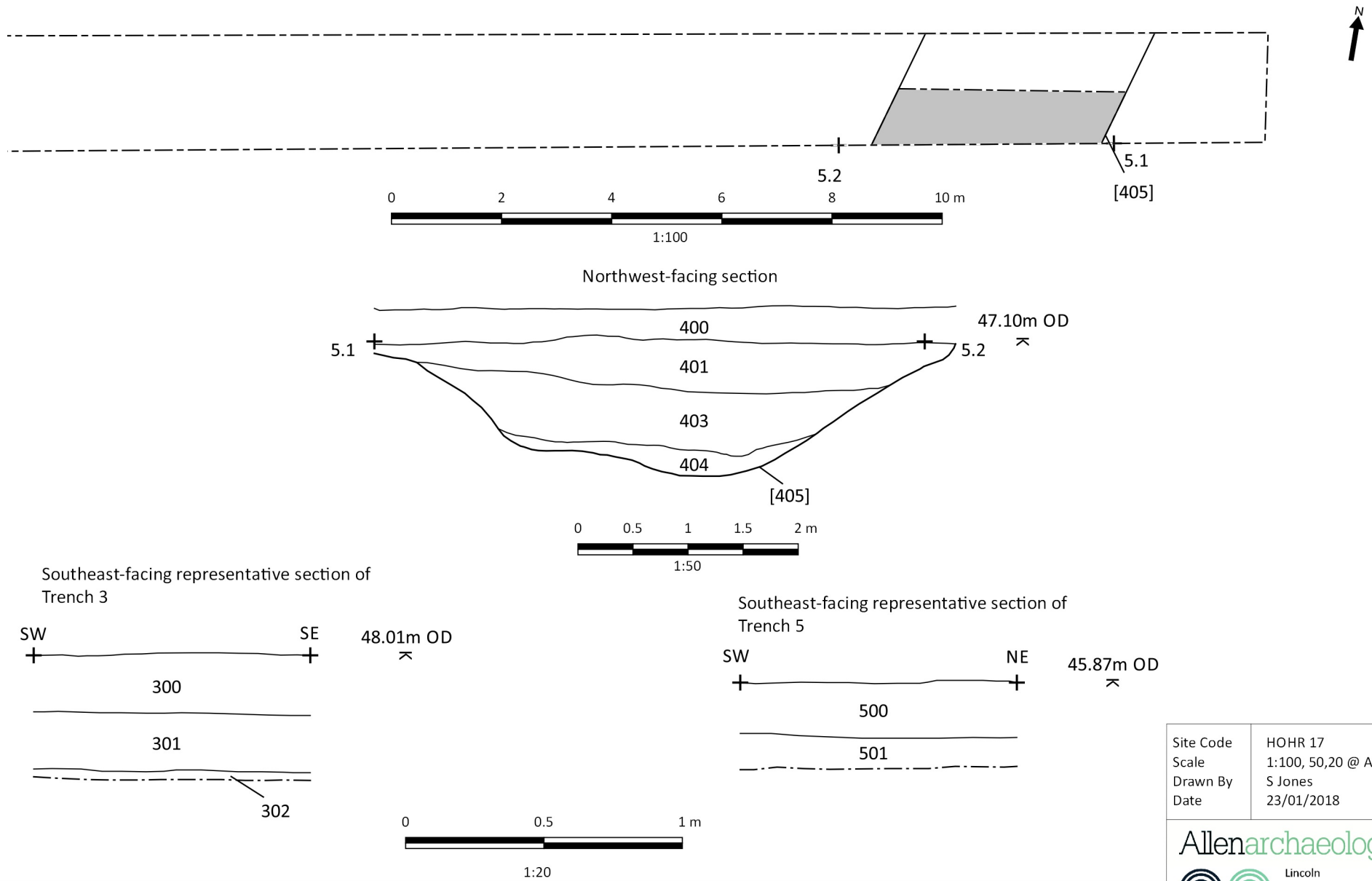


Figure 5: Plan and sections of Trench 4 and representative sections of Trenches 3 and 5

Site Code	HOHR 17
Scale	1:100, 50,20 @ A4
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Date	23/01/2018

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