New Mundesley WTW Site, Land East of Knapton Road, Knapton, Norfolk
Archaeological Evaluation Report

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The New Mundesley WTW, Knapton Road, Knapton, Norfolk

Archaeological Evaluation Report

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With contributions from Rachel Fosberry ACIfA and Carole Fletcher HND BA (Hons) ACIfA illustrations by Séverine Bézie BA MA.

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Summary

Between the 23rd and 24th August 2017, Oxford Archaeology conducted a programme of archaeological evaluation by trial trenching on land east of Knapton Road, Knapton, Norfolk, on the proposed site of the New Mundesley WTW site.

A single trial trench was excavated, targeted over a possible ring ditch identified by crop marks recorded in the Norfolk Historic Environment Record (NHER). The evaluation found no firm evidence for the ring ditch. However, the trench yielded a single linear ditch sealed beneath a layer of colluvium, a small pit and a large, natural solution hollow.
Acknowledgements

Oxford Archaeology would like to thank Anglian Water for commissioning this project and specifically Jo Everitt and Umar Hafeez. Thanks is also extended to Steve Hickling who monitored the work on behalf of Norfolk County Council and to Stephen Macaulay for their advice and guidance.

The project was managed for Oxford Archaeology by Stephen Macaulay. The fieldwork was directed by Paddy Lambert, who was supported by Ryan Neal. Survey and digitizing was carried out by Dave Brown. Thanks is extended to the teams of OA staff that cleaned and packaged the finds under the management of Natasha Dodwell and processed the environmental remains under the management of Rachel Fosberry. Katherine Hamilton prepared the archive.
1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology (OA) was commissioned by Anglian Water to undertake a trial trench evaluation at land east of Knapton Road, Knapton, Norfolk, on the proposed site of the New Mundesley Water Treatment Works (WTW) site.

1.1.2 The evaluation was undertaken on behalf of the Client in response to a Brief for an archaeological evaluation by trial trenching issued by the Norfolk County Council Historic Environment Service (NHES; consultation no. CNF47481 dated 20.6.17). A Written Scheme of Investigation (WSI) was produced by OA detailing the Local Authority’s requirements for work necessary to inform the planning process/discharge the planning condition. This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

1.2.1 The site is located to the south of the historic village of Mundesley, on land to the east of the Knapton Road (B1145). The site is located in the north west corner of a large sub-rectangular field.

1.2.2 The site covers c.0.50ha, and is currently under arable cultivation.

1.2.3 The Bedrock geology comprises the Crag Group Sands and Gravels. This is overlain by Superficial deposit of Britons Lane sands and gravels (British Geological Survey http://mapapps.bgs.ac.uk/geologyofbritain/home.html) (Accessed on 25/07/2017).

1.2.4 The soils on site are characterized as loamy and sandy soils (Soilscapes http://www.landis.org.uk/soilscapes/index.cfm) (Accessed on 25/07/2017).

1.3 Archaeological and historical background

1.3.1 The following section provides a brief summary of known heritage assets within a c.500m radius of the site. This information is drawn from the Norfolk Historic Environment Record (NHER) and the WSI (Macaulay 2017).

Previous Archaeological Investigations

1.3.2 The Norfolk Archaeological Unit (NAU) have conducted two recent investigations close to the site, neither of which - a watching brief during an Anglian Water development (NHER 54292) and an evaluation at The Rookery (NHER 42232) - found any archaeological remains.

Prehistoric and Roman

1.3.3 A possible Bronze Age ring-ditch (NHER 45311) identified from cropmarks lies c.300m to the south-west of the site and within putative Iron Age and Roman field systems.

1.3.4 Evidence for prehistoric (Iron Age) and Roman activity in the vicinity of the site is relatively limited, although a number of undated cropmark sites identified from aerial photography are thought to be Iron Age or Roman in date. These lie fairly close to the site, on the western side of the B1145, whose route is thought to be of Roman origin.
These cropmark site (NHER 15911, 36762, 39058, 40959, 45312 & 45313) combined are suggestive of Iron Age and/or Roman farmsteads, enclosures, drove ways and field systems and lie less than 500m from the development site.

**Saxon and Medieval**

1.3.5 Metal detecting in 2001 uncovered an Early Saxon broach and two medieval coins (one gold) in fields to the west of the B1145, c.500m south-west of the site (NHER 40734).

1.3.6 Medieval religious artefacts have been recorded as stray finds in Mundelsey itself, these lie to the north of the development site. A lead Pilgrims bottle (NHER 18891) was found in 1983 and a lead crucifix (NHER 28516) has also been found nearby.

**Post-medieval and Modern**

1.3.7 Elements of the cropmark ditches in the same locality as the possible Iron Age and Roman field system (NHER 45313) are likely to date to the post-medieval period, as represented on the Trunch Tithe Map, forming part of an enclosure.

1.3.8 A number of post-medieval buildings dating from the 18th and 19th century lie close to the site. The Rookery (NHER 14143) is a Grade II Listed Building, whilst a thatched barn thought to date to 1714 lies to the north (NHER 14140). Interestingly, a 19th century Railway carriage is used as an extension to a cottage to the west (NHER 18469).

1.3.9 Aerial photographs show several WWII buildings within 500m of the site. These include slit trenches (NHER 45510), a 1941 road block (NHER 45550) and part of the coastal defences (e.g. NHER 39109), which are extensive in the area.
2 Evaluation Aims and Methodology

2.1 Aims

2.1.1 The project aims and objectives were as follows:

- establish the presence or absence of archaeological remains on the site, characterise where they are found (location, depth and extent), and establish the quality of preservation of any archaeology and environmental remains
- provide sufficient coverage to establish the character, condition, date and purpose of any archaeological deposits
- provide sufficient coverage to evaluate the likely impact of past land uses, and the possible presence of masking deposits
- provide – in the event that archaeological remains are found – sufficient information to construct an archaeological mitigation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables, and orders of cost.

2.2 Methodology

2.2.1 A single trench, measuring 37.70m x 1.8m was machine excavated using a toothless bucket. The machine excavation was supervised at all times by a qualified and experienced archaeologist.

2.2.2 The length of the trench exceeded the original 30m set by the Brief. The trench was extended approximately 5m southwards and 2.70m northwards. This was required in order to suitably characterise the large solution hollow and fully investigate the thick colluvium layer present in the northern end of the trench to identify the correct natural horizon.

2.2.3 Site survey (where necessary) was carried out using a survey-grade differential GPS (Leica CS10/GS08) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.

2.2.4 A register was kept of the trench, features, and photographs. All features, layers and deposits have been issued with unique context numbers. Each feature was individually documented on context sheets, and hand-drawn in section. Written descriptions were recorded on pro-forma sheets comprising factual data and interpretative elements.

2.2.5 Sections of features were drawn at 1:10 or 1:20.

2.2.6 All site drawings include the following information: site code, scale, section number, orientation, date and initials of the archaeologist who prepared the drawing.

2.2.7 The photographic record comprises high resolution digital photographs and black and white photographs, including both general trench shots and specific features. Every feature was photographed at least once. Photographs included a scale, north arrow, site code, and feature number (where relevant), listed in the photograph register.

2.2.8 The site archive is currently held by OAE and will be deposited with the appropriate county stores in due course.
3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below, and include a stratigraphic description of the trench that contained archaeological remains. The full details of the trench, with dimensions and depths of all deposits, can be found in Appendix A. Finds data and spot dates are tabulated in Appendix B. Environmental results can be found in Appendix C.

3.2 General soils and ground conditions

3.2.1 The soil sequence was fairly uniform. The natural geology of sand was overlain by a homogenous silty-sand colluvium to the north of trench, which in turn was overlain by a thin sandy subsoil, which in turn was overlain by ploughsoil.

3.2.2 Ground conditions throughout the evaluation were generally good, and the trench remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 General distribution of archaeological deposits

3.3.1 Archaeological features were present in Trench 1 (Fig.2). Finds were recovered from the natural solution hollow sections 6 and 8 and Pit 4.

3.3.2 The finds are discussed in Appendix B.

3.4 Trench 1

3.4.1 The trench was located in the north-western corner of the field, and was aligned north to south (Plate 1). It contained colluvium, a large natural solution hollow, a small pit and a ditch.

3.4.2 Pit 4 was located in the middle of the trench. It was sub-circular in plan and measured 0.70m wide and 0.18m deep, with steep sides and an irregular base. It contained a single fill (5), a dark brownish grey silty sand, from which two small sherds of prehistoric pottery (0.002kg) were recovered.

3.4.3 The large natural solution hollow was located at the southern end of the trench and was irregular in plan. It was 9.5m across on its north to south axis. Three separate slots were excavated at its northern and southern edges, with the final slot located in the middle of the feature. The feature extended to the east and west beyond the limit of the trench.

3.4.4 Slot 6 was located at the southern edge of the feature. It was rectangular in plan with gentle sides and an irregular base, measuring 2.10m wide and 0.54m deep. It was filled by a single dark yellowish brown silty sand colluvium (7) with common medium to large flints throughout and contained three abraded sherds of residual Iron Age pottery (0.003kg), alongside moderately abraded sherds of late medieval or early post-medieval pottery (0.011kg) and an unprovenanced sherd (0.014kg).

3.4.5 Slot 8 (Plate 2) comprised a 1m x 1m slot located in the middle of the feature to determine the depth and establish the full character of the feature. It was 0.72m deep
The New Mundesley WTW, Knapton Road, Knapton, Norfolk

with an irregular base and vertical sides, containing a single dark yellowish brown colluvium fill (9) with occasional small to medium flints throughout. A small, abraded sherd of pottery (0.003kg) that is not closely dateable was recovered. The environmental sample taken from this fill contained no preserved plant remains.

3.4.6 Slot 10 was located at the northern edge of the feature and measured 1.10m wide and 0.32m deep. Here too its base was irregular with gently sloped sides. It contained a single fill (11), a mid-yellowish brown silty sand colluvium with abundant small gravel throughout the fill.

3.4.7 Ditch 12 (Plate 3) was located at the north end of the trench, orientated east to west. It measured 0.80m wide and 0.22m deep, with gentle sides and a concave base. It contained a single mid-yellowish brown silty sand fill (13). An environmental sample taken from fill 13 contained charred wheat and barley, although this material cannot be conclusively determined as being contemporary with the deposit (Appendix C).

3.4.8 Ditch 12 was sealed by a thick colluvium layer (14) (Fig. 2, Plate 4) that was located towards the northern end of the trench, and was approximately 0.32m thick. It extended for 17.4m on its north to south axis. Its location is suggestive of it collecting into a natural hollow of some kind at the bottom of the hill, and it is likely that the layer extends east and west beyond the limit of the trench.

3.5 Finds summary

3.5.1 Only eight artefacts were recovered from the evaluation. Pit 4 produced two small sherds of pottery (0.002kg) of possible Bronze Age or Iron Age date.

3.5.2 Hollow 8 produced three abraded sherds (0.003kg) of residual Iron Age pottery, alongside moderately abraded sherds of late medieval or early post-medieval pottery. Hollow 10 produced an unprovenanced sherd (0.003kg) that is not closely datable, but possibly Roman.

3.5.3 These finds are considered to be residual, and are a result of hill wash or later ploughing.

3.6 Finds summary

3.6.1 Three environmental samples were taken in order to assess the quality of preservation of palaeoenvironmental remains. Samples were taken from Pit 4, Solution Hollow 8 and Ditch 12. However, preservation was poor with little potential for charred remains. These are discussed in Appendix C.

3.6.2 No animal bone was recovered from the evaluation. It is unknown if this is as a result of soil conditions or if there is genuine absence of such material.
4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 Archaeological features, distinguished by their dark brown and light grey colours, were clearly visible within the evaluation trench during the initial machining. However, a layer of colluvium observed at the northern end of the trench made the correct level of the natural horizon hard to discern. This was rectified by re-machining of this layer.

4.1.2 Weather conditions during both excavation and recording were generally good.

4.1.3 All features exposed by the trenching were investigated, and the results are considered to be reliable.

4.2 Evaluation objectives and results

4.2.1 The evaluation aimed to establish the character, date, state of preservation of archaeological remains within the proposed development area (Macaulay 2017).

4.2.2 The archaeological remains comprised a ditch and a pit. The solution hollow was a natural feature. All features were in a poor to fair state of preservation.

4.2.3 It is difficult to determine an accurate date for the features as the finds were largely recovered from a natural hollow feature and therefore are almost certainly intrusive.

4.3 Interpretation

4.3.1 Although the site lies in an area of possible archaeological interest, with the prehistoric period being relatively well represented within a radius of 1km of the site, the evaluation found no significant remains to suggest a focus of archaeological activity.

4.3.2 The evaluation trench was targeted on a possible ring ditch that was identified via aerial photography (Macaulay 2017), however, no firm evidence for this feature was found. Ditch 12, located at the northern end of the trench, was undated and linear in plan and cannot be conclusively interpreted as part of the ring ditch. The layer of colluvium (14) that was removed to reveal the ditch is suggestive of an earlier date, although in the absence of definitive dating this cannot be stated with any degree of certainty. The environmental sample recovered from the ditch fill contained evidence for wheat and barley, but it is not possible to determine whether these remains are contemporary with the deposit.

4.3.3 Pit 4 was undated, the two small fragments (0.002kg) of pottery recovered from the top of the feature are of prehistoric, possibly Bronze Age date, but are probably residual and deposited with the colluvium from the top of the hill. The fill of the pit was a dark brown silty sand, which may suggest a later date for the feature.

4.3.4 The large hollow (slots 6, 8 and 10) was a natural geological feature (solution hollow). The sherds of pottery (0.032kg) recovered had a wide date range, were heavily abraded and are residual; probably derived from hill wash and natural erosion from the top of the slope. The presence of the pottery, residual or otherwise, may suggest an archaeological focus elsewhere in the vicinity.
4.4 **Significance**

4.4.1 The evaluation has shown that there is a paucity of significant archaeological remains on the site.

4.4.2 The only feature of interest is the ditch located at the northern end of the trench. This may be suggestive of archaeological potential at the site, but with a focus elsewhere.

4.4.3 The environmental potential of the site is poor with no animal bone recovered and very little potential for the recovery of preserved plant remains.
APPENDIX A  TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

<table>
<thead>
<tr>
<th>Trench 1</th>
<th>General description</th>
<th>Orientation</th>
<th>N-S</th>
<th>Length (m)</th>
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<th>Width (m)</th>
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<th>Avg. depth (m)</th>
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<td>Layer</td>
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<td>Subsoil</td>
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<td>Layer</td>
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<td>-</td>
<td>-</td>
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<td>4</td>
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<td>Undateable</td>
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</table>
APPENDIX B FINDS REPORTS

B.1 Pottery

By Carole Fletcher, prehistoric pottery identification by Matt Brudenell

Assemblage

B.1.1 A small assemblage of eight pottery sherds was recovered from Trench 1, weighing in total 0.035kg, with an average sherd weight of approximately 4g.

B.1.2 Pit 4 produced two small abraded sherds of prehistoric, possibly Bronze Age, pottery from a natural solution hollow, into which material has accumulated. Section 8 produced three abraded sherds of residual Iron Age pottery, alongside moderately abraded sherds of late medieval or early post-medieval pottery and an unprovenanced sherd. Section 10 produced a single abraded sherd that is not closely datable.

Conclusion

B.1.3 The presence of prehistoric pottery of a possible Bronze Age or Iron Age date indicates some level of activity in the vicinity. The later pottery suggests low levels of rubbish deposition or manuring. If further work is undertaken, the pottery should be incorporated into any later report.

Finds Catalogue

<table>
<thead>
<tr>
<th>Trench</th>
<th>Context</th>
<th>Cut</th>
<th>Form, Fabric and Description</th>
<th>MNV</th>
<th>No. of Sherds</th>
<th>Weight (kg)</th>
<th>Ceramic Date</th>
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<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>4</td>
<td>Body sherd, small abraded fragments of quartz- and grog-tempered fabric. Buff-orange outer surface and thick margin, mid-dark grey core; unclear if inner surface is present</td>
<td>1</td>
<td>2</td>
<td>0.002</td>
<td>Not closely datable, however the sherds may be Bronze Age</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>Body sherd, small abraded fragments of quartz- and vegetable-tempered fabric. Buff-brown external surfaces, mid grey margins and core.</td>
<td>1</td>
<td>3</td>
<td>0.005</td>
<td>Iron Age</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Body sherd, unprovenanced glazed ware. Dull red fabric, hackly fracture, partially glazed externally, horizontal incised lines</td>
<td>1</td>
<td>1</td>
<td>0.011</td>
<td>Late medieval to early post-medieval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Body sherd, unprovenanced, relatively smooth quartz-tempered fabric. Dull orange external surface and thin margin, pale grey core, inner margin and surface</td>
<td>1</td>
<td>1</td>
<td>0.014</td>
<td>Not closely datable</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td></td>
<td>Abraded base angle, sherd of pale buff fabric with external pale grey surface due to heat/sooting. Quartz-tempered, rare flint</td>
<td>1</td>
<td>1</td>
<td>0.003</td>
<td>Not closely datable, possibly Roman</td>
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<tr>
<td>Total</td>
<td></td>
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<td></td>
<td>5</td>
<td>8</td>
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</table>

Table 1: Pottery and CBM (MNV=minimum number of vessels)
APPENDIX C    ENVIRONMENTAL REPORTS

C.1   Environmental Samples

By Rachel Fosberry

C.1.1 Three bulk samples were taken from features within the evaluated area at land east of Knapton Road, Knapton, Norfolk in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations. Samples were taken from features encountered within Trench 1 from undated deposits.

Methodology

C.1.2 The total volume (up to 20L) of each of the samples was processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.1.3 The dried flots were scanned using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 1. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers et al. 2006) and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.4 For the purpose of this initial assessment, items such as cereal grains have been scanned and recorded qualitatively according to the following categories:

# = 1-5, ## = 6-25, ### = 26-100 specimens

C.1.5 Items that cannot be easily quantified such as charcoal have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.1.6 Preservation of plant remains is poor to moderate with low density and diversity. Modern rootlets are present in each sample and may have caused intrusion of plant remains.

C.1.7 Single charred grains of wheat (Triticum sp.) and barley (Hordeum vulgare) are present in Sample 2, fill 13 of ditch 12 but it is not possible to determine whether they are contemporary with the deposit. Occasional charcoal was recovered from Sample 3, fill 9 of hollow 8 and Sample 1, fill 5 of pit 4 did not contain any preserved plant remains.
C.1.8 Molluscs have not been preserved and there are no finds in any of the sample residues.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Context No.</th>
<th>Feature No.</th>
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Table 1: Environmental samples from ENF142486

**Discussion**

C.1.9 The recovery of charred grain indicates that there may be potential for the preservation of plant remains at this site but these results are tentative. The charcoal recovered from hollow 8 has the potential for species identification and radiocarbon dating if required.

C.1.10 If further excavation is planned for this area, it is recommended that environmental sampling is carried out in accordance with Historic England guidelines (2011).
APPENDIX D  BIBLIOGRAPHY

www.seedatlas.nl


Jacomet, S. 2006 Identification of cereal remains from archaeological sites. (2nd edition, 2006) IPNA, Universität Basel / Published by the IPAS, Basel University.

Macaulay, S, 2017, New Mundesley WTW Site, Land East of Knapton Road, Knapton, Norfolk Written Scheme of Investigation, Oxford Archaeology


# APPENDIX E  OASIS REPORT FORM

## Project Details

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<th>OASIS Number</th>
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## Previous Work

- No

## Future Work

- Unknown

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## Prompt

- Water Act 1989 and subsequent code of practice

## Development Type

- Water Treatment Works

## Place in Planning Process

- Not known/Not recorded

## Techniques used (tick all that apply)

- Aerial Photography - interpretation
- Aerial Photography - new
- Annotated Sketch
- Augering
- Dendrochronological Survey
- Documentary Search
- Environmental Sampling
- Fieldwalking
- Geophysical Survey
- Laser Scanning
- Measured Survey
- Metal Detectors
- Photogrammetric Survey
- Photographic Survey
- Phosphate Survey
- Remote Operated Vehicle Survey
- Sample Trenches
- Survey/Recording of Fabric/Structure
- Targeted Trenches
- Test Pits
- Topographic Survey
- Vibro-core
- Visual Inspection (Initial Site Visit)

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## Address (including Postcode)

- 14 Knapton Rd, Mundesley, Norwich NR11 8LA

## Project Originators

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<tr>
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<td>James Albone</td>
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### Project Design Originator
Stephen Macaulay

### Project Manager
Stephen Macaulay

### Project Supervisor
Paddy Lambert

#### Project Archives

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Figure 1: Site location showing archaeological trench (black) in development area outlined (red)
Figure 2: Trench plan and selected sections
Plate 1: Trench 1 looking north

Plate 2: Slot 8 in natural hollow
Plate 3: Ditch 12 looking west

Plate 4: Baulk section showing colluvium at north end, looking west