

**WRITTEN SCHEME OF
INVESTIGATION FOR AN
ARCHAEOLOGICAL TRIAL
TRENCH EVALUATION**

**Land West of Newbarn Lane,
North Bersted,
Bognor Regis,
West Sussex,**

**Centred SU 9155 0107
Planning Application Ref. No.:
BE/142/15/OUT**

Project no. 171203

Site Code: NBL 18

January 2018

**Written Scheme of Investigation
for an Archaeological Evaluation on Land
at
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1.0 Introduction

- 1.1 This document represents a Written Scheme of Investigation (WSI) to carry out an archaeological field evaluation on land west of New Barn Lane, North Bersted, Bognor Regis, West Sussex, hereafter 'the Site' (Figure 1). The site is centred on National Grid Reference (NGR SU 9155 0107).
- 1.2 The archaeological trial trench evaluation is to comprise thirty 30m x 1.8m trenches (Figure 2), representing a c.5% sample of the 3.42 hectare site area.

2.0 Background

2.1 Site Description and Location

- 2.1.1 The site lies on the Sussex coastal plain and is approximately level at 5m AOD. The site is comprised of open land and is bound to the north, west and south by a drainage channel and to the east by New Barn Lane. The site lies approximately 1500m south-west of the Aldingbourne Rife.
- 2.1.2 The underlying geology of the site is Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation chalk. The superficial geological deposits comprise River Terrace Deposits of sand, silt and clay.

2.2 Reasons for Project

- 2.2.1 A planning application (Ref. No.: BE/142/15/OUT) for the site has been granted. Condition 4 of the decision notice states:

Condition 4

No development shall take place within the area indicated until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Planning Authority.

Reason: The site is of archaeological significance in accordance with Arun District Local Plan Policy GEN7

- 2.2.2 An Archaeological Desk-Based Assessment (CgMs 2015) was compiled in support of the planning application; that document highlighted that the site had potential for Prehistoric, Roman and Medieval archaeology. This was followed by a geophysical survey (Stratascan 2015) that did not reveal any features.
- 2.2.3 This document is a Written Scheme of Investigation for an archaeological evaluation. All work will be undertaken in accordance with this document as well as the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014). The results of the archaeological evaluation will inform decisions regarding the need for, and extent of, any further archaeological works that may be required in order to mitigate the impact of the development upon the archaeological resource. That decision will be made by the Archaeology Advisor to West Sussex County Council.

- 2.2.4 It should be noted that this Written Scheme of Investigation relates to the evaluation phase of works. If further archaeological work is required it will need to be subject to a separate Written Scheme of Investigation.

3.0 Archaeological Background

3.1 Introduction

- 3.1.1 The following is a summary taken from the DBA (CgMs 2015) with due acknowledge:

3.2 Prehistoric

- 3.2.1 A possible Pleistocene lake was recorded during the 2009 archaeological evaluation approximately 300m north-west of the site (Cotswold Archaeology 2009). The presence of charcoal within its deposits suggests the potential for survival of evidence relating to hominid activity. Close by, a residual mid-Palaeolithic hand axe fragment was recorded.
- 3.2.2 A small assemblage of Early Neolithic pottery sherds and a large assemblage of worked flint including debitage was recorded from a ditch during the 2009 archaeological evaluation approximately 600m north of the site. Undated features close by could also be of similar date (Cotswold Archaeology 2009). In addition, a vessel of possible Neolithic date was found in a pit along with struck and burnt flint during an archaeological evaluation approximately 750m north-east of the site area.
- 3.2.3 Evidence of Bronze Age activity was recorded during the 2009 archaeological evaluation comprising ditches, a possible burnt mound, postholes and pits predominantly located in the northern part of the evaluation area approximately 500m north/north-west of the study site (Fig. 2 Areas A and B). An undated ring ditch, possibly the ploughed out remains of a Bronze Age barrow, was recorded approximately 750m south-west of the study site on a topographical high point within the site (Cotswold Archaeology 2009).
- 3.2.4 Possible prehistoric mounds were recorded during a walkover survey approximately 750m north-east of the study site. A large archaeological evaluation on land at North Bersted approximately 550m-1km east/south-east of the site recorded evidence of Bronze Age occupation comprising ditched field systems, a cremation urn, burnt mounds, ditched trackways, pits, postholes. Evidence of continuation of activity into the Iron Age period was identified. Archaeological investigations at Bognor Community College approximately 800m south-east of the study site recorded evidence of a Late Bronze Age/Iron Age field system and associated round house.
- 3.2.5 A number of Iron Age ditches and pits were recorded during the 2009 evaluation particularly concentrated in the northern part of the evaluation area approximately 750m north-west of the study site suggesting nearby Iron Age settlement activity (Fig. 2 Area A). A possible holloway was recorded approximately 300m south-west and a ditch containing a substantial assemblage of pottery recorded approximately 500m south-west of the study suggests may have been the focus of occupation (Cotswold Archaeology

2009). Iron Age pottery sherds were discovered during road widening works approximately 750m south of the study site.

3.3 Roman

3.3.1 Evidence of Roman settlement activity was recorded during the 2009 archaeological evaluation on relatively high ground approximately 500m north-west of the study site (Fig. 2 Area C). Where the ground fell away to the north and south, ditches associated with a Roman field system were recorded. Evidence of industrial activity comprising a hearth/kiln close to a waterhole was recorded on another topographical high point approximately 400m south-west of the site (Cotswold 2009)

3.3.2 Two trenches excavated during the 2009 evaluation adjacent to the west of the site recorded three ditches of Roman date that could potentially extend into the northern part of the study site. Trench 209 recorded a ditch on a north-east/south-west alignment. The ditch was wide and deep with a steep U-shaped profile and was filled by a series of fills. The lower fill contained animal bone, unworked burnt flint and 11 sherds of late 1st to 2nd century AD Roman pottery. Two sherds of 1st century AD Roman pottery were recovered from the middle fill whilst the upper fill contained burnt flint and CBM fragments. The second ditch was an east/west aligned ditch which was narrow and shallow with a steep, almost v-shaped profile. It was filled with a single fill containing unworked burnt flint, oyster shell and five sherds of 2nd century AD or later Roman pottery (Cotswold Archaeology 2009). Trench 210 recorded a northeast/south-west aligned ditch. It was narrow and shallow with a steep, almost V shaped profile. It was filled with a single fill containing fired clay, animal bone and eight sherds of late 1st to 3rd century AD Roman pottery (Cotswold Archaeology 2009).

3.3.3 A number of pits containing Roman pottery sherds including Samian and the bottom of rotary quern and a hearth or oven were discovered during a watching brief during road widening works approximately 750m south of the site. The large archaeological evaluation on land at North Bersted approximately 550m1km east/south-east of the study site recorded evidence of an early Romano-British settlement and associated field system. A Roman field system and possible trackway were recorded during the investigations at Bognor Community College approximately 800m south-east of the study site. A gold coin was found at the Caravan Park immediately north of the study site. A scatter of burnt flint, oyster shells and late Roman pottery were found on the surface of a ploughed field immediately south-west of the study site. A number of coins were found in a field approximately 600m north-east of the study site.

3.4 Anglo-Saxon and Medieval

3.4.1 Bersted formed part of the estate of Pagham granted by Caedwalla, King of Wessex to Wilfrid and subsequently conveyed to the see of Canterbury. The Archbishops manor was called North Bersted by 1397. St Mary Magdalene Church was built in 13th century in South Bersted approximately 2km south-east of the study site and most likely formed the focus of the early settlement at Bersted.

- 3.4.2 Medieval pottery sherds were recorded during road widening works approximately 750m south of the site. A single Medieval gully was recorded during the evaluation approximately 500m south-east of the site. Evidence of Ridge and furrow was recorded during the 2009 evaluation to the west of the site (Cotswold Archaeology 2009).

3.5 Post-Medieval and Modern

- 3.5.1 During the Post-Medieval period the study site comprised part of three agricultural fields bounded to the south by New Barn Lane within a wider rural landscape some distance from the settlements of North and South Bersted. A possible Post-Medieval field boundary and animal burial was recorded during the 2009 archaeological evaluation approximately 100m south-east of the study site (Cotswold Archaeology 2009). The 1786 estate map shows the site in more detail. There was no change to the site by the early 19th century. The 1842 Tithe map records the site as comprising part of three arable fields. By the late 19th century the former field boundaries on the site had been removed and the site comprised of a single field.

- 3.5.2 Land to the south-west of the study site was used during the Second World War as part of the site of an Advanced Landing Ground airfield constructed in advance of the 1944 D Day invasion (Endacott 2005). Bognor ALG was designed and built as a temporary structure with runways laid on removable Summerfield Track rather than on tarmac. A pre-construction inventory and accompanying plan of the ALG lists two runways; dispersal areas; hardcore working/parking areas; hangars; accommodation and technical buildings and air raid trenches. Most of the ALG buildings were new builds, but some existing buildings were requisitioned, including those at Morell's Farm approximately 1km south-west of the study site. By September 1944 Bognor ALG was replaced by ALGs on the continent and was formally handed back to the original owners for agricultural use (Endacott 2005 and Cotswold Archaeology 2009). The ALG did not extend into the study site.

3.5.3 Geophysical Survey

A detailed magnetometer survey (Stratascan 2016) was conducted over approximately 3.6 hectares of grassland. No features of probable or possible archaeology were identified. All of the responses detected were natural or modern and included areas of natural magnetic variation, disturbance from nearby fencing, an area of made ground and magnetic spikes which were likely to be modern rubbish.

4.0 Research Aims and Objectives

- 4.1 The general aim of the archaeological evaluation is to identify any archaeological features or deposits that will be impacted upon by the proposed development, and to enable a mitigation strategy for any remains to be implemented before development takes place.
- 4.2 More specifically, the evaluation aims to establish the location, extent, date, character, significance and quality of preservation of surviving archaeological remains within the development area.

4.3 Site specific research aims:

- To determine, as far as reasonably practicable, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains.
- To establish the ecofactual and environmental potential of archaeological deposits and features encountered.
- Is there any Prehistoric activity within the site?
- Is there any Roman activity within the site?
- Is there any Medieval activity?
- To enable CgMs and the County Archaeologist to make an informed decision as to the requirement for any further work required in order to satisfy the archaeological condition.

4.4 With reference to the South Eastern Research Framework (SERF):

- *Clarification of the characteristics of the lesser nucleated settlements, and hence of their role in relationship to surrounding rural settlements (SERF Roman Research Agenda)*

5.0 Method

- 5.1 All work will be carried out in accordance with the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time. A detailed Risk Assessment and Method Statement will be prepared.
- 5.2 Wherever possible, before excavation begins the client will provide information regarding the presence of any below/above ground services. The site will be walked over and inspected to visually identify, where possible, the location of above and below ground services. All evaluation trench locations will be scanned before excavation with a Cable Avoidance Tool (CAT) in order to verify the absence of any live underground services.
- 5.3 All works will be undertaken in accordance with the standards set out within the Specification.
- 5.4 All works will be conducted in compliance with the standards outlined in the Institute for Archaeologists' *Standard and Guidance for Archaeological Evaluations* (IfA 2008) and the recently issues *Sussex Standards* (WSCC, ESCC & CDC 2015).
- 5.5 Trenching will evenly distributed across the site amounting to thirty 30mx2m Trenches (see Figure 2). Geophysical survey results do not warrant any targeting.

- 5.6 The trenches will be laid out to achieve a representative spread across the accessible part of the site. The trenches will be plotted using GPS/TST and tied in to the Ordnance Survey.
- 5.7 The trial trenches will be excavated using a 360° tracked excavator equipped with a toothless bucket and under constant supervision by ASE. Machine excavation will proceed to a depth at which the top of archaeological levels, or the top of natural deposits, are exposed, whichever is the higher.
- 5.8 The general depth of the trenches is not expected to exceed 1.2m, to comply with Health and Safety regulations. However, should excavation extend beyond this depth, or less if deemed unsafe, trench sides will be stepped or battered as appropriate.
- 5.9 Trenches completed to the satisfaction of CGMS & the Archaeological Advisor, will be backfilled using the excavated material in the approximate stratigraphic sequence in which they were excavated. They will be left level on completion. No other reinstatement or surface treatment will be undertaken.

6.0 Hand Excavation Method

- 6.1 Once the level of archaeological deposits has been exposed by machine, cleaning of the trench base will be undertaken by hand where necessary. Appropriate sampling of all archaeological features identified in the evaluation trench will be carried out by hand.
- 6.2 Examination and cleaning of all archaeological deposits will be by hand using appropriate hand tools. Any archaeological deposits will be examined and recorded both in plan and section. The objective will be to define remains rather than totally remove them. Features will be investigated, where possible, as follows:
 - 50% of each intrusive feature (pits, postholes).
 - All terminals and intersections of linear features.
 - 50% structural features (beamslots, ring ditches) - actual surviving structural elements (walls, collapse/debris fields) only require exposure, cleaning and preservation for excavation in more appropriate circumstances.
 - 50-100% domestic/industrial working features (hearths, ovens) – unless large and structural, in which case see above. However, excavation will be sufficient to enable the principal aims and objectives of this evaluation to be achieved, without the risk of over-excavation which could damage the integrity of the archaeological remains should development not be pursued or subsequent mitigation be required. The scope of the sampling will be agreed with CGMS & the Archaeological Advisor
- 6.3 In the event of the identification of an exceptional number and complexity of archaeological deposits, sample excavation will be more circumspect and will aim to be minimally intrusive. Excavation will, however, be sufficient to resolve the principal aims of the evaluation.
- 6.4 Where complex archaeological stratification is encountered, deposits will be left *in situ* and measures to assess the depth of this stratification agreed with

CGMS & James Kenny, archaeological advisor to ADC. Where modern features are seen to truncate the archaeological stratification, then these will be carefully removed without damage to surrounding deposits to enable the depth of stratification to be assessed.

7.0 Recording

- 7.1 All exposed archaeological deposits will be recorded using ASE's *pro forma* recording system.
- 7.2 A complete drawn record of excavated archaeological features and deposits will be compiled. This will include both plans and sections, drawn to appropriate scales (1:20 for plans, 1:10 for sections), and with reference to a site grid tied to the Ordnance Survey National Grid. The Ordnance Datum (OD) height of all principal features and levels will be calculated and plans/sections will be annotated with OD heights.
- 7.3 A photographic record will be maintained during the evaluation using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images will be subject to managed quality control and curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image set.
- 7.4 ASE will inform the archaeological advisor of the commencement of fieldwork and the progress of the investigations on the Site.

8.0 Finds and Environmental Sampling

- 8.1 Appropriate strategies for the recovery of artefacts and environmental samples will be devised and implemented by ASE's Finds and Environmental Specialists and where appropriate the English Heritage Scientific Advisor.
- 8.2 All artefacts from excavated contexts will be retained, except those from features or deposits of obviously modern date. In such circumstances, sufficient artefacts will be retained in order to elucidate the date and/or function of the feature or deposit.
- 8.3 Excavated spoil will be visually scanned for artefacts. Where appropriate, a suitable metal detector will be used to enhance artefact recovery. Trench areas and spoil heaps from excavation will be examined.
- 8.4 All retained artefacts will, as a minimum, be washed, weighed, counted and identified. Any artefacts requiring conservation or specific storage conditions will be dealt with immediately in line with *First Aid for Finds* (Watkinson & Neal 1998). Ironwork from stratified contexts will be X-rayed and stored in a stable environment along with other fragile and delicate material.
- 8.5 All artefacts recovered during the excavations on the Site are the property of the landowner. They are to be suitably bagged and boxed in accordance with the *United Kingdom Institute for Conservation, Conservation Guidelines nos.2* and, on completion of the archaeological post-excavation programme, will be deposited with the relevant museum.

9.0 Environmental Sampling

- 9.1 Environmental samples will be processed using tank flotation unless considered detrimental to the samples or recovery rate (such as for waterlogged samples). Bulk samples will target recovery of plant remains (charcoal and macrobotanicals), fish, bird, small mammal and amphibian bone, and small artefacts. Waterlogged samples will be wet sieved through nested sieves and stored in wet, cool conditions or dried if considered an appropriate form of conservation for the remains. Specialist samples may also be taken from dry or waterlogged contexts. Such samples will target recovery of pollen (using monolith tins), molluscs, foraminifera, parasites and insects. Larger samples (80-100 litres) will be extracted wholesale from deposits rich in marine molluscs and large mammal bones. As a general rule waterlogged wood specimens will be recorded in detail in their original location. If removed they will be cleaned, photographed and a thin section sample will be taken for identification. Specimens will either be stored in wet cool conditions or dried if considered appropriate for the material. In all instances deposits with clear intrusive material shall be avoided.
- 9.2 In the event of discovery of any human remains, it is proposed that they will be left *in situ*, covered and protected. Following discussions with ASE, CGMS, the archaeological advisor and the Coroner, the need for and appropriateness of their excavation/removal as part of the evaluation will be determined. Where deemed appropriate they will be fully recorded, excavated and removed from the Site subject to compliance with the relevant Ministry of Justice Licence which will be obtained by ASE
- 9.3 Should human remains be excavated at the evaluation stage, all excavation and post-excavation will be in accordance with the standards set out in IfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. Appropriate specialist guidance/site visits will be undertaken by an appropriately qualified osteologist. The final placing of human remains following analysis will be subject to the requirements of the Ministry of Justice Licence.
- 9.4 ASE will notify CGMS and the archaeological advisor, immediately if material is recovered considered to be covered by the Treasure Act of 1996. All necessary information required by the Treasure Act (i.e. finder, location, material, date, associated items etc.) will be reported to the County Coroner within 24 hours.

10.0 Reporting

- 10.1 Following completion of the evaluation fieldwork a detailed report will be prepared. The report will include sufficient documentary research in order to place the results of the evaluation in its archaeological context. The report will be made available within four weeks of the completion of all fieldwork subject to the availability of any specialist reports that might be required.
- 10.2 The report will, as a minimum, include the following elements:
- A non-technical summary

- The aims and methods used in the evaluation
 - The results of the evaluation to include:
 - A description of the observed archaeological features and deposits and the stratigraphic sequence (to include topsoil, subsoil and natural deposits)
 - detailed tabulated context data
 - plans and section drawings at appropriate scales to locate the site, trenches and excavated deposits
 - tabulation of all artefacts recovered from the trenches and listed by context and material type
 - specialist reports
 - A discussion/conclusion to include:
 - the archaeological and environmental potential of the deposits
 - the Site's significance in its broader archaeological and landscape setting
 - The location and size of archive
- 10.3 The information will be deposited within the West Sussex Historic Environment Record where it can be freely copied without reference to ASE for the purposes of archaeological research or Development Control within the planning process.
- 10.4 If considered appropriate, a short report on the results of the programme of archaeological recording will be prepared for publication in an appropriate national journal.
- 10.5 Details of the Site will be submitted online to the OASIS (Online Access to the Index of Archaeological Investigations) database
- 11.0 Archive**
- 11.1 Before work commences arrangements will be made with the local museum for the deposition of the archive. On completion of the report a cross-referenced and internally consistent archive will be produced. The primary archive, including copies of all photographs, will be deposited with the relevant depositing museum no later than six months after completion of the work.
- 11.2 The completed project archive will be prepared in accordance with the guidelines outlined in Appendix 3 of *Management of Archaeological Projects* (English Heritage 1991) and in accordance with the *Guidelines for the preparation of excavation archives for long term storage* (UKIC 1990).

12.0 Insurance

- 12.1 Archaeology South-East is insured against claims for: public liability to the value of £50,000,000 any one occurrence and in the aggregate for products liability; professional indemnity to the value of £15,000,000 any one occurrence; employer's liability to the value of £50,000,000 each and every loss.

13.0 References

Archaeology South-East, 2007 *Post-Excavation Manual 1: Finds and Environmental Deposition and Processing Guidelines*

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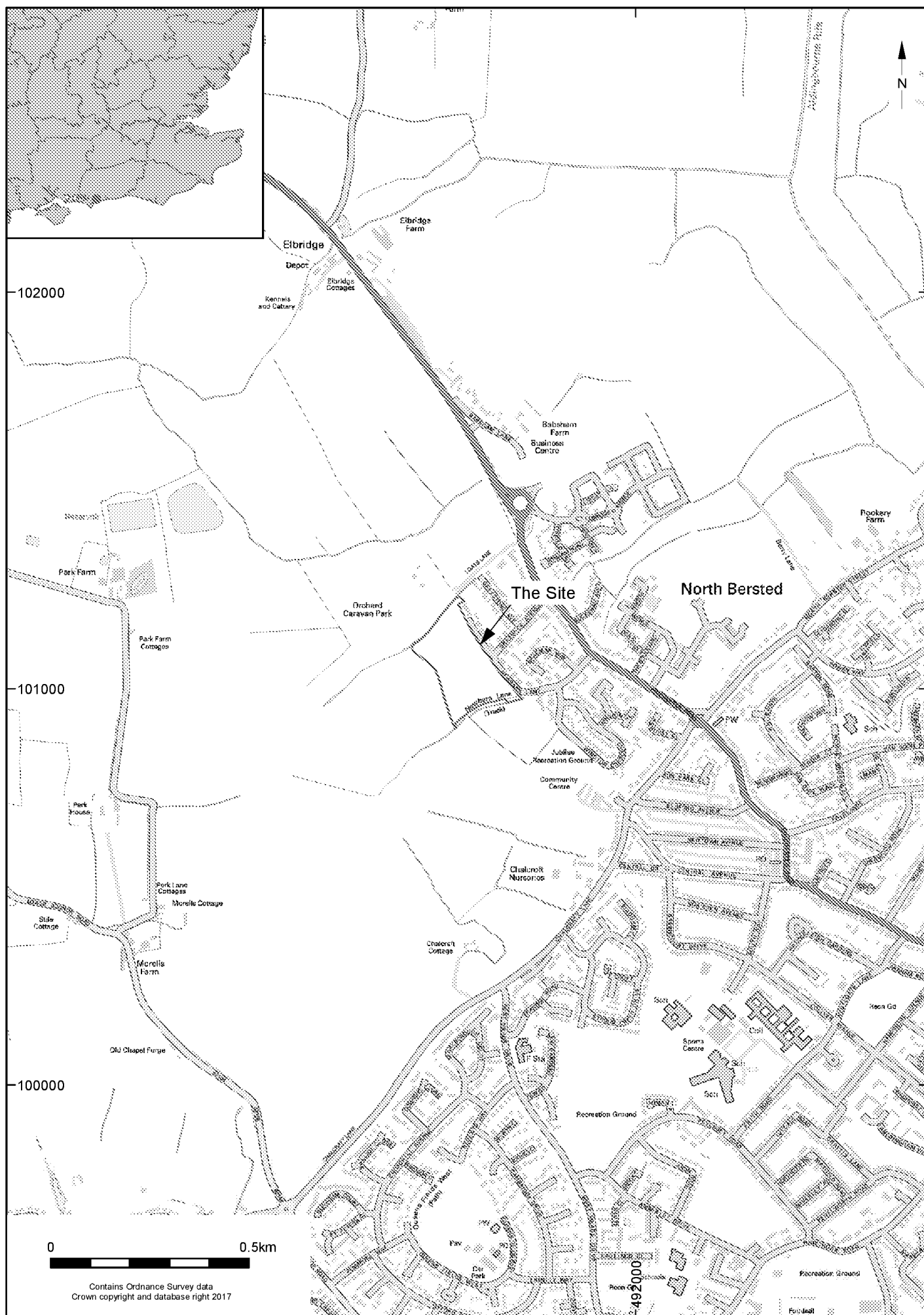
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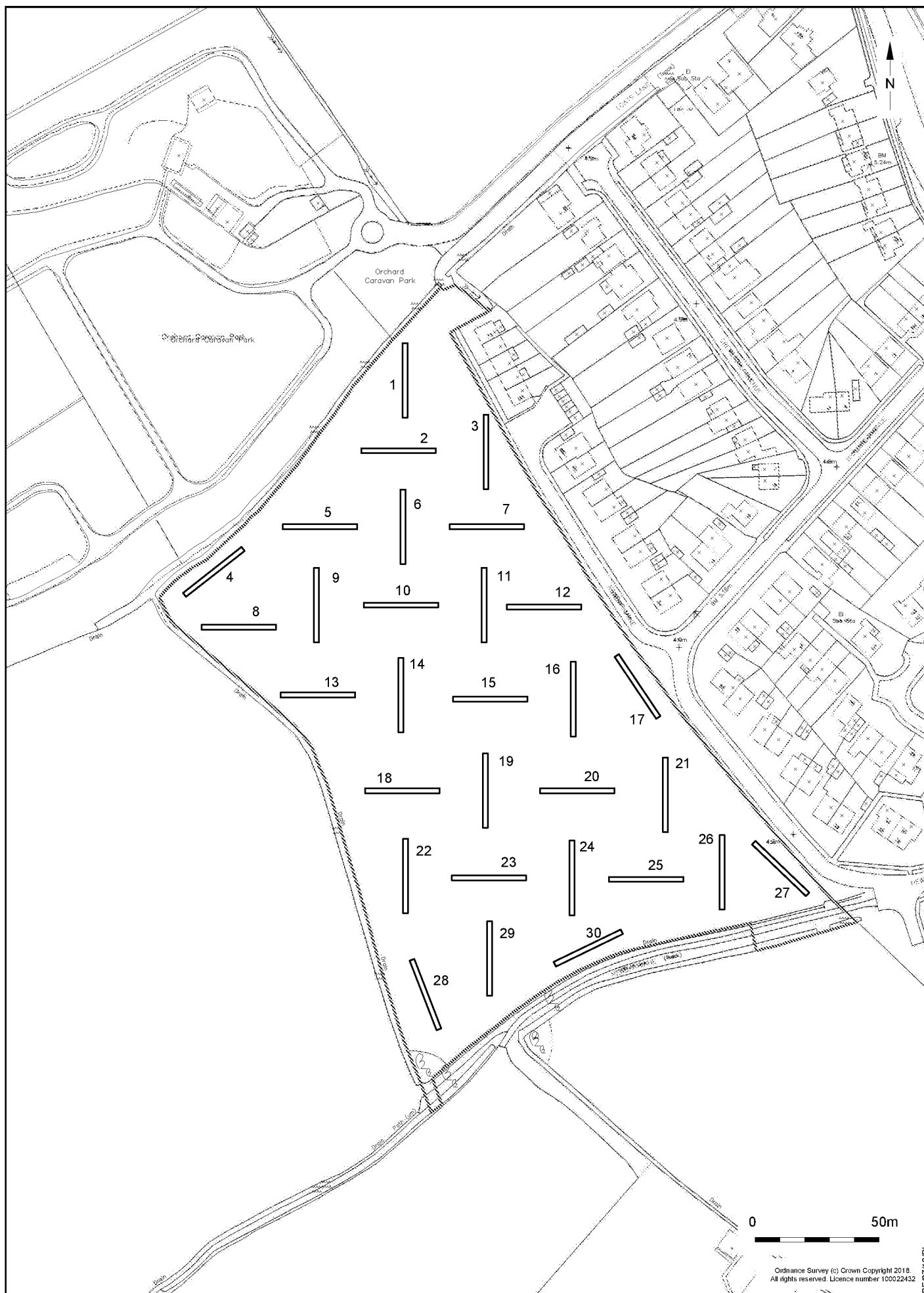
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Archaeology South-East,
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Report Ref:

Drawn by: JLR

Land West of New Barn Lane, North Bersted. Bognor Regis

Trench location

Fig. 2

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Cgms

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