ARCHAEOLOGICAL EVALUATION AT TURNCOLE WIND FARM, SOUTHMINSTER, ESSEX (SMTW15)

Work Undertaken For
RES Ltd

July 2015

Report Compiled by
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APS Report No: **62/15**

ARCHAEOLOGICAL PROJECT SERVICES

Quality Control

Archaeological Evaluation at
Turncole Wind Farm,
Southminster
Essex
SMTW 15

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1. SUMMARY

An archaeological evaluation was required in advance of the development of Turncole Wind Farm at Southminster, Essex. The site lay in an archaeologically sensitive area, close to the known locations of a number of prehistoric salt-making sites. This evaluation was focused on the access road, and the trenches were targeted on areas highlighted in a previous geophysical survey as potential salt-making sites.

No evidence was apparent in the trenches for ancient salt-making. Two of the trenches were found to cross former boundaries, which can be traced on nineteenth and early twentieth century mapping.

Finds retrieved included Roman and post-medieval pottery, medieval roof tile and animal bone.

2. INTRODUCTION

2.1 Definition of an Evaluation

An archaeological evaluation is defined as '*a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate*' (CIfA 2014).

2.2 Planning Background

A programme of archaeological evaluation was required on land at Turncole Farm, Southminster, Essex as a condition of planning permission FUL/MAL/10/01070 for the installation of seven wind turbines and associated infrastructure on the site.

A previous archaeological trenching evaluation on the site of the proposed wind farm has been carried out (Garland 2010). The phase of archaeological work described in this report comprises archaeological trial trenching at three locations, identified during a geophysical survey (Smith 2014), along the proposed access roads to the site, as set out in the archaeological brief (ECC HET 2015).

Archaeological Project Services was commissioned by RES Ltd to undertake this work which was carried out between 15th and 23rd June 2015 in accordance with a brief supplied by Essex County Council Historic Environment Team (ECC HET) and a specification prepared by Archaeological Project Services and approved by ECC HET (Appendix 1).

2.3 Topography and Geology

The site (centred approximately on NGR TQ 98556 97956) is located at Turncole Farm, 3.4km southeast of Southminster and 3.3km northeast of Burnham on Crouch in the Maldon District of Essex (Figures 1 and 2).

The site is situated on a large area of reclaimed marshland, now used for agricultural purposes. Aerial photography and satellite imagery of the area have revealed a complex of characteristically sinuous crop and soil marks which define the positions of former marshland creeks. The entire site lies below the 10m Ordnance Datum Contour and previous trial trenching has established that Roman deposits occur at around 0.5m above OD.

The British Geological Survey (BGS) sheet (259) shows that the site lies on London Clay overlain by alluvium.

2.4 Archaeological Setting

Aerial photography and historic mapping suggest that the site was originally marshland crossed with creeks. Salt making sites of the late Iron Age to Roman period are a common feature of this landscape and attest to the historic importance of this industry. Previous archaeological trial trenching indicates Roman salt making may have been conducted within the development area (Garland 2010).

Of the nineteen trenches excavated as part of the previous archaeological evaluation of the site, seventeen revealed no archaeological remains (Garland 2010). Deposits recorded within the former Trench 7 appear to represent the remains of a 'red hill', a site associated with salt production, approximately 0.5km north of the present Trenches 1 and 2. However, briquetage (fired clay equipment associated with salt production) was not recovered and it is possible that the site was not directly associated with production but was associated with the industry in some way. The presence of high status pottery may support this conclusion.

Geophysical survey of the tracks and road between the turbines identified three anomalies thought to represent possible salterns, in the southwestern part of the site (Smith 2014). It was on these anomalies that the trenches were located.

3. AIMS AND OBJECTIVES

The aim of the evaluation was to gather information to enable the archaeological curator to formulate a policy for the management of the archaeological resources present on the site.

The objectives were to establish the type of archaeological activity that may be present within the site; to determine its likely extent; to determine the date, function, state of preservation and spatial arrangement of the archaeological features present on the site; to determine the extent to which the surrounding archaeological features extend into the application area and to establish the way in which the archaeological features identified fit into the pattern of occupation and land-use in the surrounding landscape.

4. METHODS

Three cross-shaped trenches were set out. The centre of the cross of each trench was targeted over the geophysical anomaly (Smith 2014) to be investigated at each location. Each cross limb was originally intended to be 15m long from the centre, but the eastern sides of Trenches 1 and 3 were foreshortened to allow a 9m standoff from the adjacent drain (Figure 3). Trench 1 was up to 1.15m deep, Trench 2 was 0.75m deep and Trench 3 up to 1.25m deep.

Removal of topsoil and other overburden was undertaken by mechanical excavator using a 1.8m wide toothless ditching bucket. The exposed surfaces of the trenches were then cleaned by hand and inspected for archaeological remains. A metal detector was used to assist finds recovery.

A desktop study had identified a high risk for the presence of unexploded ordnance in this part of the site. In accordance with the site risk assessment and method statement, all excavations were supervised by an Explosive Ordnance Clearance (EOC) specialist.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with

an individual written description. A list of all contexts and their interpretations appears as Appendix 2. A photographic record was also compiled and sections and plans were drawn at a scale of 1:10 and 1:20 respectively. Recording of deposits encountered was undertaken according to standard Archaeological Project Services practice.

The location of the excavated trenches was established with a survey grade differential GPS, and the exposed remains subsequently surveyed with the same equipment.

Following excavation, finds were examined and a period date assigned where possible (Appendix 3). The records were also checked and a stratigraphic matrix produced. Phasing was based on the nature of the deposits and recognisable relationships between them.

5. RESULTS

The results of the archaeological evaluation are discussed in trench order. Archaeological contexts are described below. The numbers in brackets are the context numbers assigned in the field.

Trench 1 (Fig. 5)
The earliest deposit in Trench 1 was a very soft dark blackish grey silt and sandy silt (117) at least 1.19m thick. Above this was (116), a deposit of soft light greyish brown sandy silt 0.8m thick, overlain by a firm light yellowish brown sandy silt (102), 0.38m thick. Deposits (102), (116) and (117) all represent alluvial deposits accumulated in tidal marshland. Deposits (116) and (117) were recorded using an auger through the base of the trench (Figure 9, Section 7).

In the south-eastern arm of the trench, curvilinear feature [115] was recorded cutting deposit (102). This comprised an approximately north-south aligned feature at least 6m long by at least 2.5m wide, and 0.66m deep (Fig. 7, Section 3; Plate 7) and was also seen in the northeast arm of the trench. It was filled by soft light brown to yellowish brown fine silt (114), by firm mid brown to reddish brown silty clay (113), and by firm mid-dark brown clayey silt (112). Cut [115] and its fills may represent a channel that was natural in origin. Feature [115] was overlain by deposit (101).

In the south-western arm of Trench 1, deposit (101) lay over (102). It was composed of firm mid blue-grey clay and formed a layer 0.17m thick, probably representing an alluvial deposit. It was cut by a north-west to south-east aligned linear feature [103] (Fig. 7, Sections 1 and 2; Plate 6). This was filled by (104), a deposit of firm mid yellowish brown clayey silt with mid blue grey clay lenses.

The fill (112) of the channel [115], in the eastern part of the trench, was cut by linear feature [111] (Figure 5), which represents a ditch at least 1.8m long by 2.1m wide, and 0.7m deep. Ditch [111] was filled by mid brown silt (110), light yellow brown silt (109), and firm mixed mid brown and light yellow brown silt (108). Post-medieval finds were recovered from the fills of [111]. Cut [107] with its fill of firm light greyish yellow brown silt (106) was probably a shallow recut.

The features were overlain by a 0.24m thick deposit of firm mixed mid-dark grey brown to yellow brown silt (105) and a 0.25m depth of topsoil (100), a firm mid grey brown clayey silt.

Trench 2 (Fig 5)
The earliest deposit recorded in Trench 2 was (205), a very soft laminated dark grey silt sandy-silt. Above this was (204), a deposit of soft laminated light brownish

grey sandy silt. Deposits (205) and (204) were recorded using an auger through the base of the trench (Figure 9, Section 8).

Above (204) was layer (202), composed of firm mid-light yellowish brown clayey silt and sandy silt in laminated layers. Sealing (202) was a layer of hard mid blue grey clay alluvium (201), 0.22m thick (Figure 7, Section 11. Plate 9) and topsoil (200), a firm mid grey brown clayey silt 0.3m thick. Surface finds (203) noted in the topsoil prior to excavation of the trench included three sherds of fragmentary and abraded Roman pottery (greyware).

Trench 3 (Fig 6)
Augering at the southern end of Trench 3 revealed a very soft dark grey silt at least 0.1m thick (321). Above this was a deposit of plastic mid-light greyish brown clayey silt (320), 0.4m thick, overlain by firm mid-light greyish brown clayey silt 0.6m thick (319) (Fig. 9, Section 9).

At the north end of the trench, a very soft mid-dark grey sandy silt (323) overlain by 0.63m thick soft mid greyish brown sandy silt (322) was encountered by auger survey (Fig, 9, Section 10).

In the southern arm of the trench the earliest deposit recorded at the base of the trench was firm mid brownish grey clayey silt and sandy silt, with occasional oyster and cockle shell, (309). This was overlain by stiff mid-light bluish grey clay with occasional light rusty yellow flecking (308) and stiff greyish brown clay 0.12m thick (307).

Although the upper edges were indistinct, (307) appeared to be cut by [306], an east-west aligned linear cut or channel with gently sloping sides at least 2.1m wide by at least 0.6m long and 0.6m deep. Filling [306] was firm mid bluish grey clay with moderate mid rusty brown speckles, and with occasional oyster shell (305). Also filling [306] was stiff mid-dark greyish brown clay (310) which appeared to be cut by ditch [304], at least 1.3m wide by at least 1.8m long and at least 0.85m deep (Fig. 8, Section 4; Plate 8). The earliest fill of [304] comprised firm mid-dark grey silty clay with occasional woody organic roots (303), 0.14m thick. The upper fills consisted of a firm dark greyish brown clayey silt (302) with occasional organic material (reddish speckles and mid brown mottles were noted throughout), and a firm light brown sandy clayey silt (301).

At the north end of the trench there were variations in the deposits. The earliest deposit recorded here was (316), a layer of crumbly light brownish yellow laminated silt. Above (316) was a deposit of crumbly (dry) light yellow-brown silty sand (315). Cut [318] (Fig. 8, Section 6; Plate 10) truncated deposit (315) to the south, and was probably the north side of a large channel, the south side of which was recorded as [306]. It was filled by firm mid brown clayey silt with light yellowish brown laminations (317).

Above (317) was deposit (314), composed of firm mid-dark brown clayey silt forming a subsoil deposit.

In the western arm of Trench 3 was a north-west to south-east aligned linear feature [311] (Fig. 8, Section 5), at least 0.95m wide by 1.15m long and 0.12m deep. It was filled by firm mid brownish grey clayey silt with over 20% small chalk fragments (312).

A layer of ploughsoil (300)/(313) formed the uppermost deposit in the trench.

Modern field drains were noted in all trenches but were not excavated.

6. DISCUSSION

A previous archaeological evaluation had indicated that Roman saltmaking may have been conducted within the development area. The current evaluation trenches were targeted on geophysical anomalies thought to indicate possible saltmaking sites, however no evidence for saltmaking was revealed in the trenches.

The earliest deposits recorded were alluvial silts found at depth by auger survey. In Trenches 1 and 2 the top of these deposits was found at approximately -0.5m OD, and in Trench 3 at approximately -0.8m OD (Figure 9, Sections 7-11).

Above them were firmer light yellowish brown alluvial silts. All the trenches were machine excavated down to these firmer silts.

The overlying general alluvial deposit was a layer of blue-grey clay, up to approximately 0.2m thick, present in all the trenches. As mentioned above, this phase of deposition was not present in the northern part of Trench 3.

The undated linear features revealed in Trenches 1 and 3 probably represent channels naturally formed in a marshland environment. In Trench 1 cut [115] appears to pre-date the general clay layer (101), whereas cut [103] appears to cut through it. In Trench 3 the early channel is represented by cut [306] and probably by cut [318].

In Trenches 1 and 3 ditches were recorded which seem to represent post-medieval re-cutting of the channels mentioned above, possibly as they would have been visible as wet areas requiring drainage. Ditch [111] would indicate re-cutting of [115], and ditch [304] would indicate re-cutting of [306]. The channels and the postulated re-cuts tally closely with ditch boundaries on nineteenth and early twentieth century Ordnance Survey maps (Figure 4).

Trenches for modern field drains were noted in all the evaluation trenches.

7. CONCLUSIONS

An archaeological evaluation was undertaken at Turncole Farm, Southminster, Essex as the site lay in an archaeologically sensitive area, close to known sites of prehistoric and Roman salt production. A previous geophysical survey had identified anomalous readings which it was considered might indicate underlying hearths or furnaces associated with ancient saltmaking.

No archaeological remains indicative of salt production were revealed in the evaluation trenches although there were some surface finds of Roman date.

The evaluation recorded a series of alluvial deposits in all the trenches. In addition, in Trenches 1 and 3 linear features were exposed which approximately correlated with the location of the geophysical anomalies. In Trench 2 no obvious reason was apparent for the anomalous geophysical reading.

The linear features in Trenches 1 and 3 also correlate to former boundaries and ditches identified on historical mapping.

Finds retrieved included Roman and post-medieval pottery, medieval roof tile and animal bone, metalwork and glass.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to thank RES LTD, who commissioned this report and in particular Jimi Edwards, Paul

Fitzgerald, Tracy Scott, and Richard Wagstaff of RES who were present during of the fieldwork. Alan Calton of Zetica monitored the excavations for unexploded ordnance. Maria Medlycott of Essex County Council monitored the archaeological fieldwork. The work was co-ordinated by Denise Drury who also edited this report, together with Gary Taylor.

9. PERSONNEL

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Finds Processing: Lavinia Green, Denise Buckley
Photographic reproduction: Chris Moulis, Mark Peachey
Illustration: Chris Moulis, Mark Peachey
Post-excavation Analysis: Chris Moulis

10. BIBLIOGRAPHY

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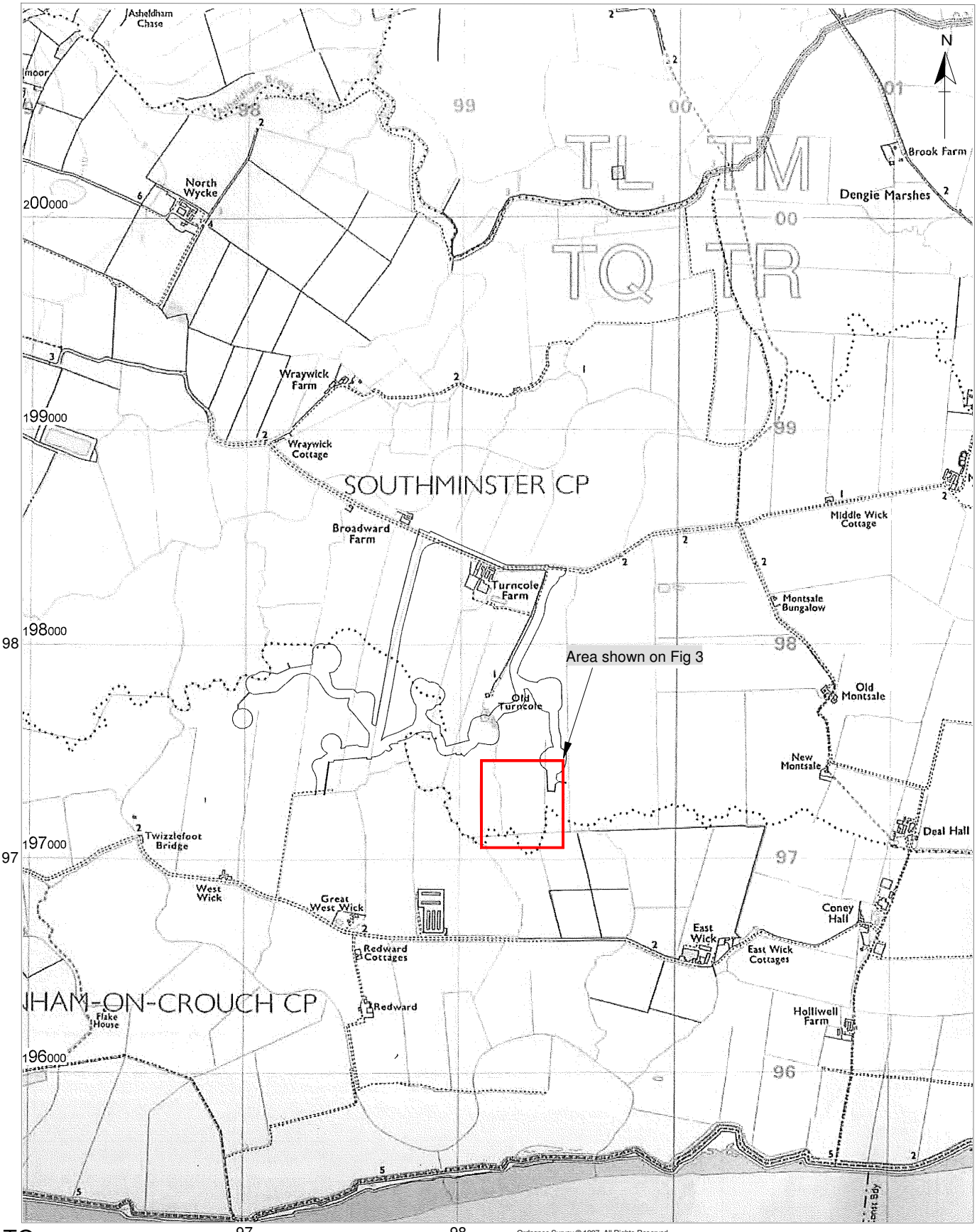
Historic Environment Team, Essex County Council, 2015 *Brief for archaeological trenching of the access roads at Turncole Windfarm, Turncole Farm Lane, Southminster, Essex,* February 2015

Smith, J, 2014 Land at Turncole Windfarm, Southminster, Essex: Geophysical survey, Unpublished APS Report No. **85/14**

11. ABBREVIATIONS

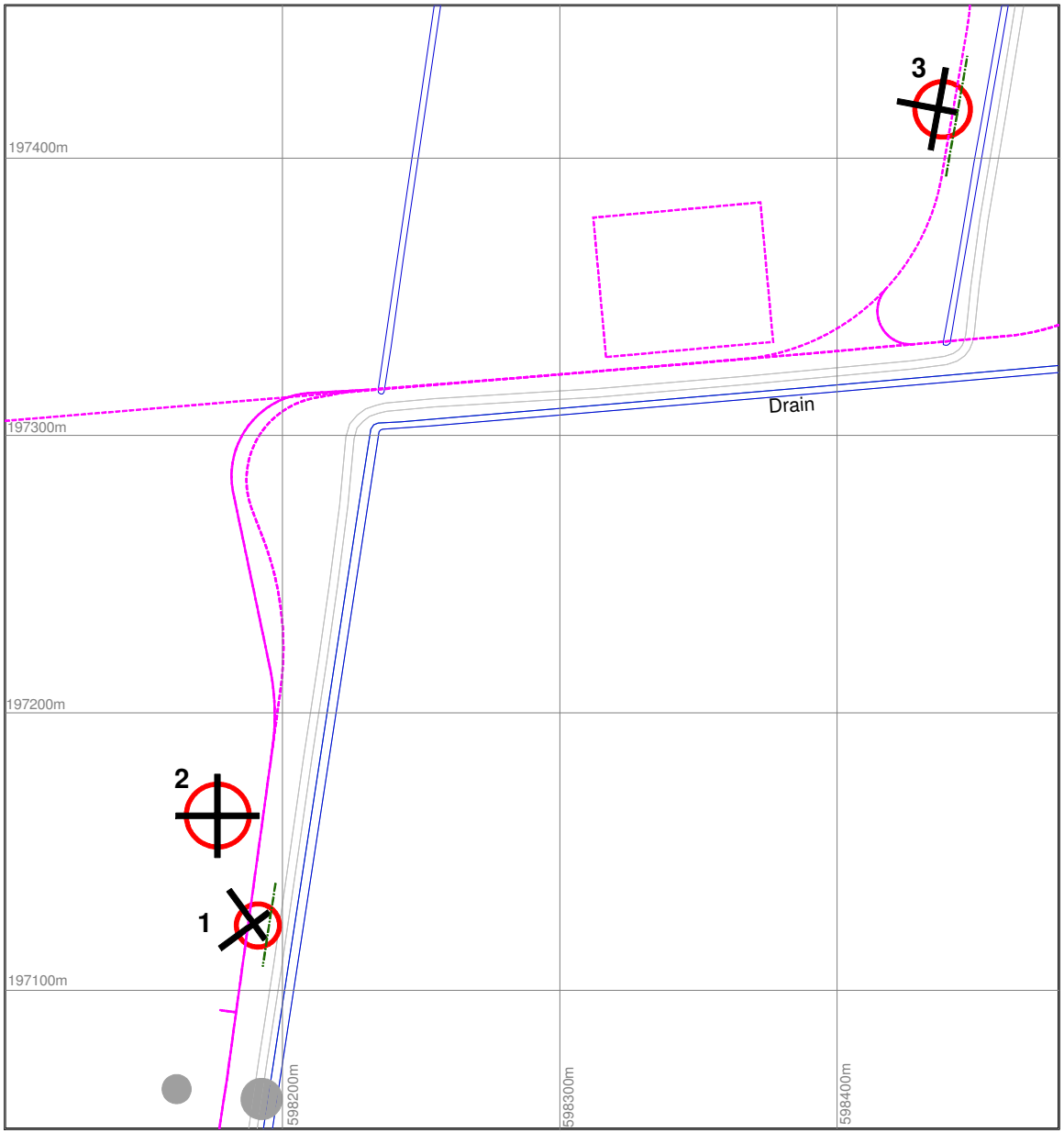
APS	Archaeological Project Services
CIfA	Chartered Institute for Archaeologists
ECC	Essex County Council
HET	Historic Environment Team

Figure 1: General location plan



Archaeological Project Services		
Project Name: Southminster Turncole Wind Farm		
Scale 1: 25000	Drawn by:MJP	Report No: 62/15

Figure 2. Site location plan



Discrete bi-polar anomaly (possible saltern)

Modern disturbance

Trench location

IDB standoff of 9m

Windfarm infratructure

0 100m

N

Archaeological Project Services		
Project Name: Turncole Wind Farm, Southminster		
Scale 1:2500	Drawn by: CJM	APS Report: 62/15

Figure 3 - Trench location plan

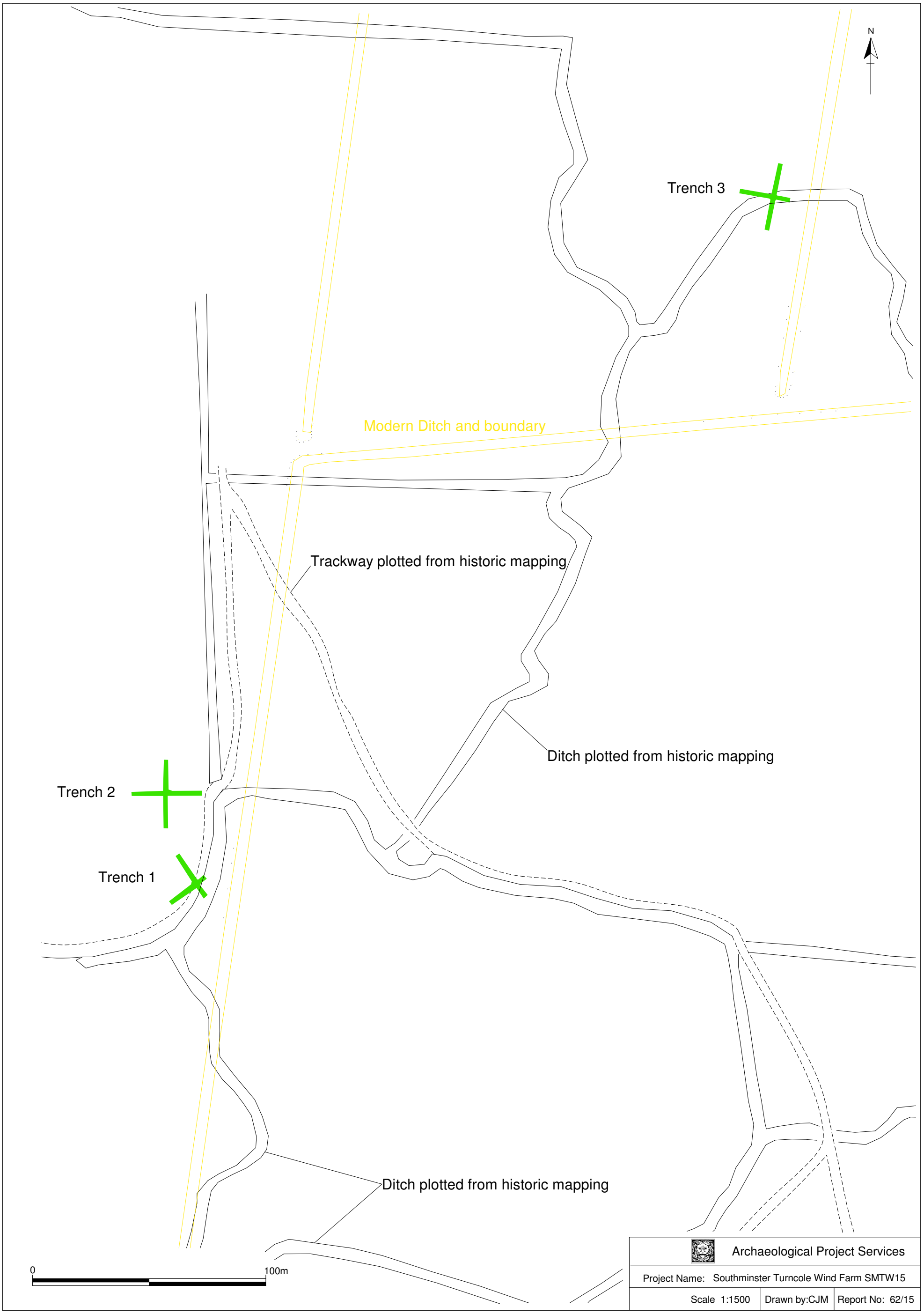


Figure 4. Trench location with boundaries from 1873 Ordnance Survey mapping

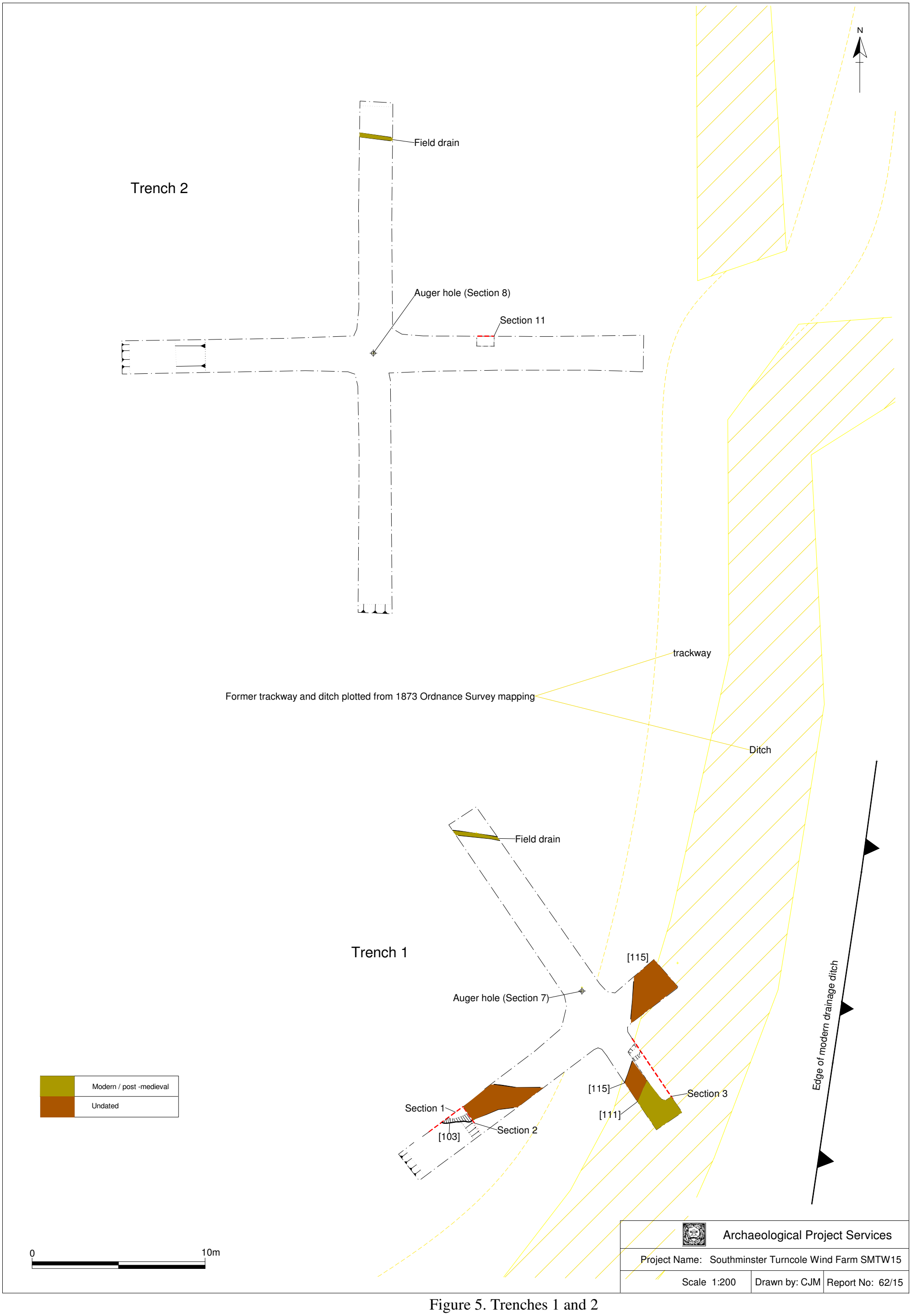


Figure 5. Trenches 1 and 2

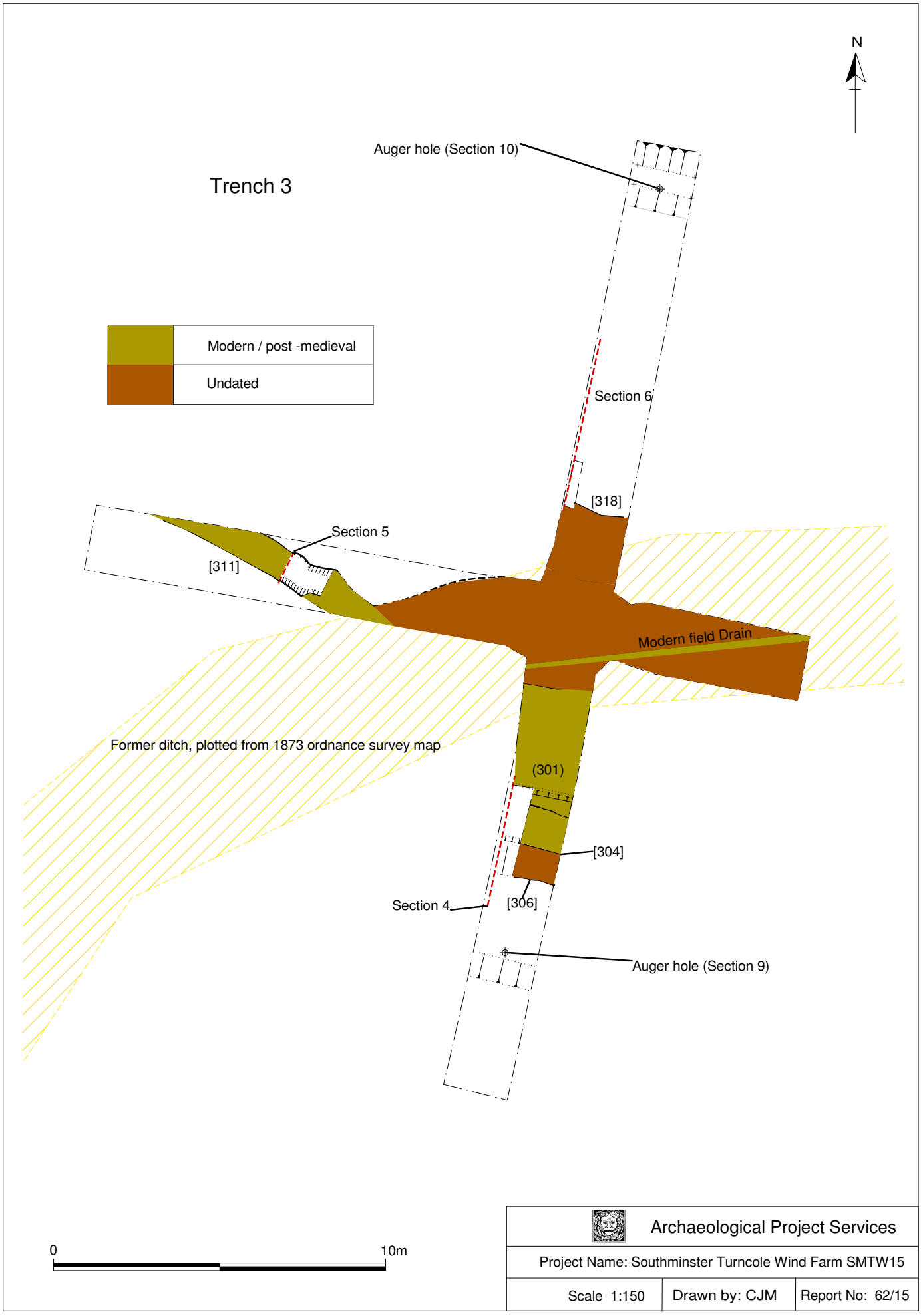


Figure 6. Trench 3

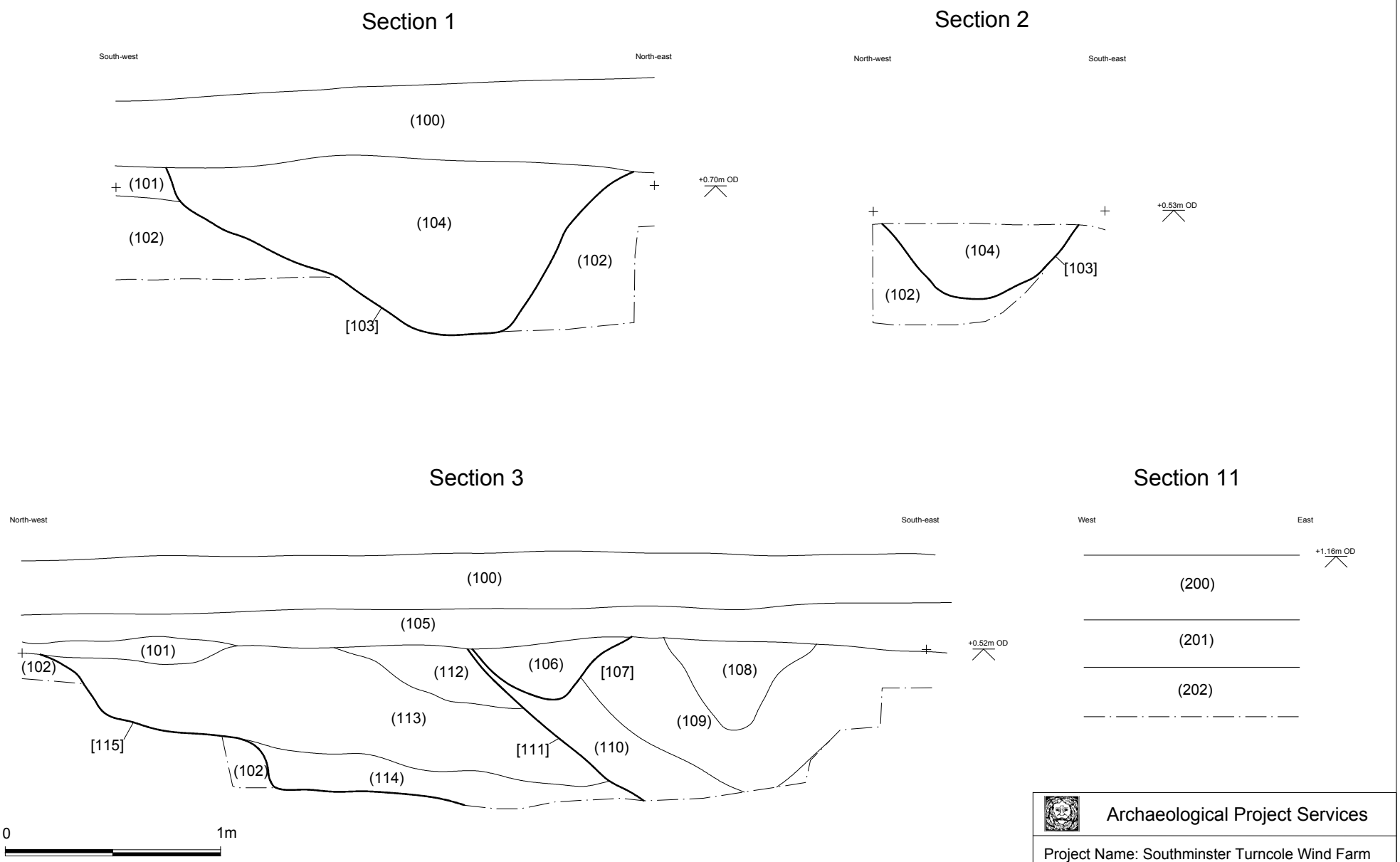


Figure 7. Trench 1 and 2 Sections

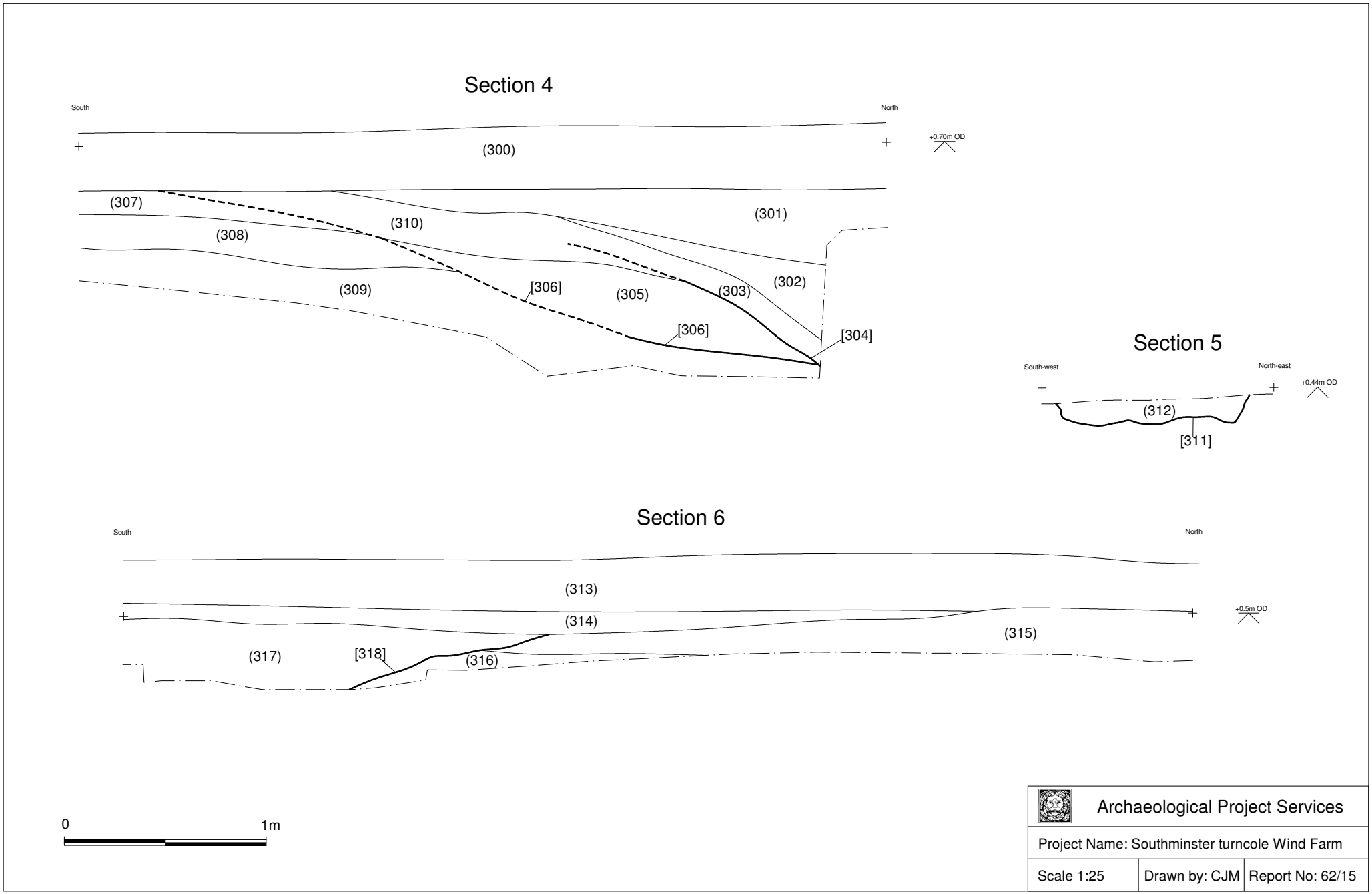


Figure 8. Trench 3 Sections

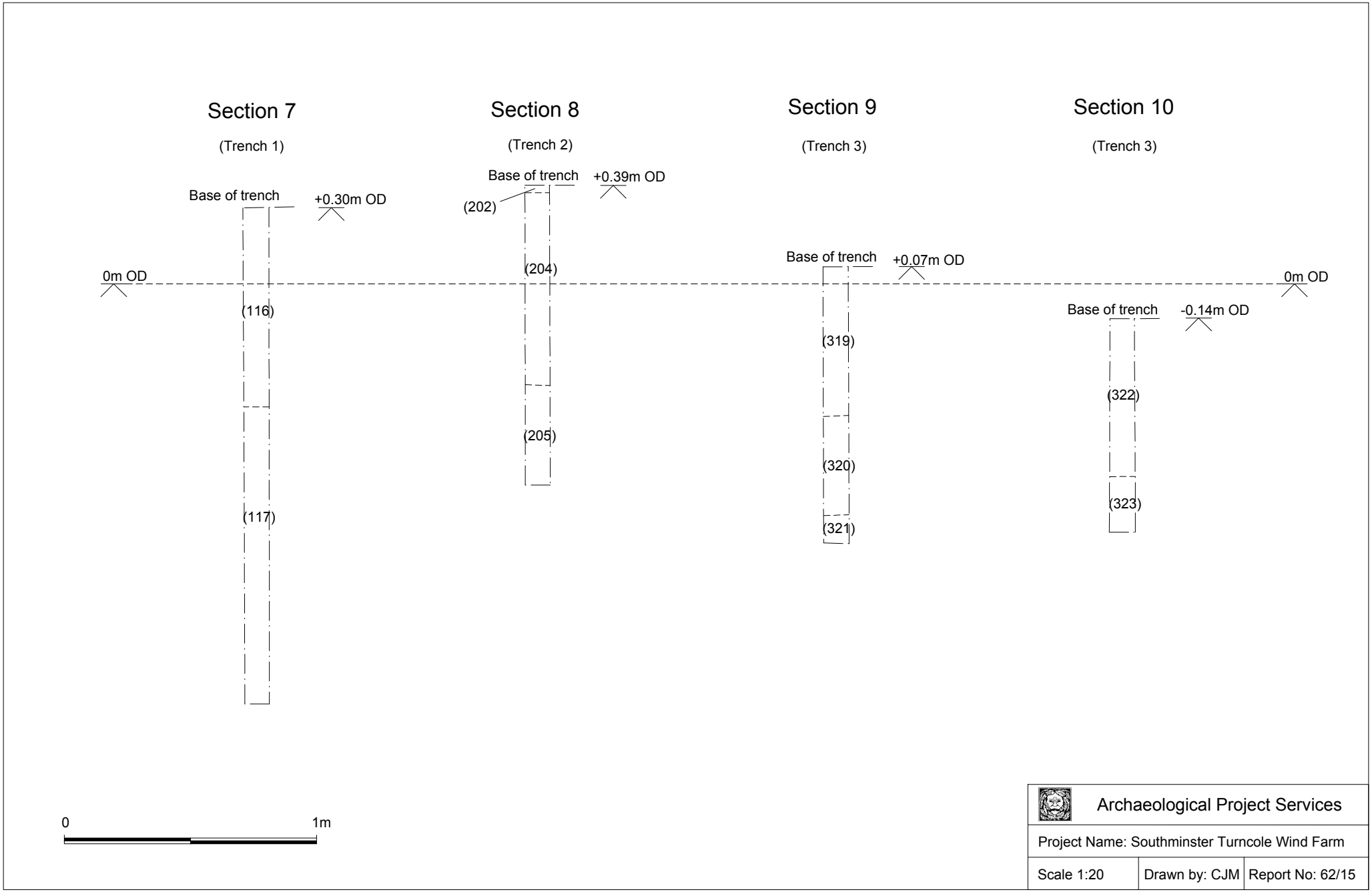


Figure 9. Auger survey results

Plates

Plate 1
General view of area of Trench 1, looking northwest

Plate 2
General view of area of Trench 2, looking northwest

Plate 3
General view of area of Trench 3, looking north

Plate 4
Trench 1, looking southwest

Plate 5
Trench 3, looking north

Plate 6
Trench 1, Sections 1 and 2. Looking north.
Ditch or creek [103]

Plate 7
Trench 1, Section 3. Looking northwest.
Ditch [111] and channel [115]

Plate 8
Trench 3, Section 4. Looking west.
Ditch [304] and channel [306]

Plate 9
Trench 2, Section 11. Looking north

Plate 10
Trench 3, Section 6. Looking northwest

Plate 11
General view looking southwest towards Trench 3

Plate 12
Backfilled Trench 1
looking southwest

Plate 13
Backfilled Trench 2
looking west

Appendix 1: WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL EVALUATION (TRIAL TRENCHING)

PREPARED FOR RES LTD

BY ARCHAEOLOGICAL PROJECT SERVICES

Institute for Archaeologists' Registered Organisation No. 21

MAY 2015

1 SUMMARY

1.1 *This document comprises a Written Scheme of Investigation (WSI), prepared by Archaeological Project Services on behalf of RES, for archaeological evaluation (trial trenching) to be undertaken in advance of construction of the Turncole wind farm, Southminster, Essex.*

1.2 *Previous archaeological work undertaken as part of the project comprised a desk-based assessment and a programme of trial trenching. Evidence of Roman salt making was identified in one of the nineteen trenches excavated. A post-medieval ditch recorded in a separate trench formed the only other feature of archaeological interest. Subsequently a geophysical survey was undertaken along the route of the tracks and the road linking the turbines which recorded anomalies indicating three possible saltern sites and a series of drainage ditches.*

1.3 *Planning permission for development of the site has been granted subject to the implementation of a programme of archaeological work. This WSI relates to a programme of evaluation of the possible saltern sites and is based on a brief for archaeological works issued by the Historic Environment Team at Essex County Council.*

1.4 *On completion of the fieldwork a report will be prepared detailing the results of the scheme of works. The report will consist of a narrative supported by illustrations and photographs.*

2 INTRODUCTION

2.1 This document comprises a Written Scheme of Investigation for a programme of archaeological evaluation (trial trenching) at the proposed Turncole Wind Farm, Southminster, Essex.

2.2 The document contains the following parts:

- 2.2.1 Overview
- 2.2.2 The archaeological and natural setting
- 2.2.3 Stages of work and methodologies to be used
- 2.2.4 List of specialists
- 2.2.5 Programme of works and staffing structure of the project

3 SITE LOCATION, SOILS AND TOPOGRAPHY

3.1 The site (centred approximately on NGR TQ 98556 97956) is located at Turncole Farm, to the southeast of Southminster and northeast of Burnham on Crouch in the Maldon District of Essex.

3.2 The site is situated on a large area of reclaimed marshland, now used for agricultural purposes. Aerial photography and satellite imagery of the area have revealed a complex of characteristically sinuous crop and soil marks which define the positions of former marshland creeks. The entire site

lies below the 10m Ordnance Datum Contour and previous trial trenching has established that Roman deposits occur at around 0m above OD.

4 PLANNING BACKGROUND

4.1 Planning permission FUL/MAL/10/01070 is subject to a condition requiring the implementation of a programme of archaeological work.

4.2 The proposed Turncole wind farm includes the installation of seven wind turbines with a maximum height to blade tip of 126.5m and the associated infrastructure including an on-site substation, crane hardstandings, electrical cables and a permanent met mast, and temporary infrastructure to facilitate the construction works.

4.3 Previous archaeological investigation has been carried out and reported. This phase of archaeological work will comprise archaeological trial trenching at three locations identified during a geophysical survey at the site (as set out in the archaeological brief provided by the local authority Historic Environment Team).

5 SOILS AND TOPOGRAPHY.

5.1 The British Geological Survey (BGS) sheet (259) shows that the site lies on London Clay overlain by alluvium.

6 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

6.1 Desk Study

6.1.1 The EIA for the wind farm scheme included a full desk-based assessment, supplemented by a site walkover, the results of which were presented in the Environmental Statement (ES) submitted in support of the planning application.

6.1.2 In summary the baseline report for the ES concluded that the proposed development site is low lying and within an area that comprised salt marsh through the prehistoric and early historic periods, before drainage during the last 200 years to convert the area to agriculture.

6.1.3 Salt making sites of the late Iron Age to Roman period are a common feature of this landscape and attest to the historic importance of this industry

6.2 Field evaluation

6.2.1 Of the nineteen trenches excavated as part of an archaeological evaluation of the site, seventeen revealed no archaeological remains (Garland 2010). Remains recorded within Trench 7 appear to represent the remains of a 'red hill', a site associated with salt production. However, briquetage (fired clay equipment associated with salt production) was not recovered from the site and it is possible that the site was not directly associated with production but was associated with the industry in some way. The presence of high status pottery may support this conclusion.

6.3 Geophysical survey

6.3.1 Geophysical (magnetometer) survey was carried out along the routes of the tracks and road between the turbines A 30m corridor centred on the final road lines was subject to the survey together with the crane hardstandings, substation and temporary compound.

6.3.2 The survey identified three possible salterns, in the southwestern part of the site, together with a broad network of thirty seven probable drainage ditches across the wider site and a positive linear anomaly of possible archaeological interest (on a separate alignment to the ditches) in the northwest of the site (Smith 2014).

7 AIMS AND OBJECTIVES

7.1 The aim of the work is to establish the extent and nature of any archaeological deposits that may be affected by the development and to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

7.2 The objectives of the work will be to:

7.2.1 Determine the date of the archaeological remains present on the site.

7.2.2 Determine the extent and spatial arrangement of archaeological remains present within the site.

7.2.3 Establish the character of archaeological remains present within the site.

7.2.4 Determine the extent to which surrounding archaeological remains extend into the site.

7.2.5 Identify the way in which the archaeological remains identified fit into the pattern of occupation and land-use in the surrounding landscape.

8 SITE OPERATIONS

8.1 General Considerations

8.1.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation. A Risk Assessment will be prepared prior to the investigation, and updated throughout its duration.

8.1.2 The work will be undertaken according to the relevant codes of practice issued by the Chartered Institute for Archaeologists (CIfA). Archaeological Project Services is an CIfA registered archaeological organisation managed by a Member (MCIfA) of the Institute.

8.1.3 All work will be carried out in accordance with *Standards for Field Archaeology in the East of England, 2003*.

8.1.4 Any artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and the discovery promptly reported to the appropriate coroner's office.

8.1.5 Excavation of the archaeological features exposed will only be undertaken as far as is required to determine their date, sequence, density and nature. All archaeological features exposed will be excavated and recorded unless otherwise agreed with the Historic Environment Officer, Essex County Council. The investigation will, as far as is reasonably practicable, determine the level of the natural deposits to ensure that the depth of the archaeological sequence present on the site is established.

8.1.6 Should human remains be discovered they will be left in situ with excavation being limited to the identification and recording of such remains. If removal of the remains is necessary the appropriate Ministry of Justice licences will be obtained and the local environmental health department informed. If relevant, the coroner and the police will be notified.

8.1.7 Open trenches will be marked by hazard tape attached to road irons or similar poles. Subject to the consent of the archaeological curator, and following the appropriate recording, the trenches, particularly those of excessive depth, will be backfilled as soon as possible to minimise any health and safety risks.

9 TRIAL TRENCHING

9.1 Reasoning for this technique

9.1.1 The site has high potential for the presence of salt making sites of the late Iron Age and Roman periods.

9.1.2 Trial trenching enables the in situ determination of the sequence, date, nature, depth, environmental potential and density of archaeological features present on the site.

9.1.3 The trenching proposal is for six trenches, two each in a cross-shape arrangement to be excavated at each of the three locations identified (by geophysical survey) as possible salterns.

9.1.4 Trenches have been centred on the geophysical anomalies and positioned to allow a minimum 9m margin (stand off) required between the excavations and the adjacent water bodies (IDB drains). Trenches will measure between 20m and 30m in length by 1.8m. The proposed trench location is attached to this document.

9.2 Methodology

9.2.1 Removal of the topsoil and any other overburden will be undertaken by mechanical excavator using a toothless ditching bucket. To ensure that the correct amount of material is removed and that no archaeological deposits are damaged, this work will be supervised by Archaeological Project Services. On completion of the removal of the overburden, the nature of the underlying deposits will be assessed by hand excavation before any further mechanical excavation that may be required. Thereafter, the trenches will be cleaned by hand to enable the identification and analysis of the archaeological features exposed.

9.2.2 Investigation of the features will be undertaken only as far as required to determine their date, form and function. The work will consist of half- or quarter-sectioning of features as required and, where appropriate, the removal of layers.

9.2.3 If appropriate, samples will be taken of deposits for the assessment of environmental and economic evidence and/or industrial residues. Sampling will be in accordance with current best practice and guidance (eg English Heritage 2001; 2011).

9.2.4 Archaeological features will be recorded on APS pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn.

9.2.5 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at more appropriate scales.

9.2.6 Throughout the duration of the trial trenching a photographic record consisting of black and white prints (reproduced as contact sheets) and colour digital images will be compiled. The photographic record will consist of:

- the site before the commencement of field operations.
- the site during the investigation to show specific stages of work, and the layout of the archaeology within the area.
- individual features and, where appropriate, their sections.
- groups of features where their relationship is important.

- the site on completion of fieldwork.

9.2.7 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered, ready for later washing and analysis. All finds work will be carried out to accepted professional standards and the Institute of Field Archaeologists *Guidelines for Finds Work* (1992).

9.2.8 Conservation of artefacts will be carried out by Lincoln City and County Museum. The resources available for conservation is dependent on the quantity and type of artefacts recovered from the site.

9.2.9 The location of the site recording grid will be established by a GPS or EDM survey and accurately related to the Ordnance Survey grid and to suitably mapped local features.

9.2.10 During the investigations, all exposed surfaces, excavation horizons, and spoil, will be regularly and repeatedly metal-detected to ensure optimum recovery of artefacts. Any identified artefacts will be excavated from its parent context in normal stratigraphic sequence.

9.2.11 Prior to commencement of site operations the Essex County Archaeological Office will be contacted to acquire an event or site code.

9.3 Environmental sampling strategy

9.3.1 Bulk samples of 40 litres per context, or the entire excavated portion in smaller features such as small pits, post-holes or hearths will be retrieved from suitable contexts. Samples will be collected and stored in sealable buckets.

9.3.2 Sampling for scientific dating (if required) will be taken from securely stratified deposits that have minimal risk of contamination. If necessary advice on sampling strategies will be obtained from an environmental archaeologist. If necessary the specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis should further stages of archaeological work be required.

10 POST-EXCAVATION ASSESSMENT AND REPORT

10.1 Stage 1

10.1.1 On completion of site operations, the records and schedules produced during the scheme of works will be checked and ordered to ensure that they form a uniform sequence forming a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued and labeled, the labeling referring to schedules identifying the subject/s photographed.

10.1.2 All finds recovered during the field work will be washed, marked and packaged according to the deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

10.2 Stage 2

10.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.

10.2.2 Finds will be sent to specialists for identification and dating.

10.2.3 Any samples taken will be sent to specialists for processing and assessment.

10.3 Stage 3

10.3.1 On completion of stage 2, a report detailing the findings of the scheme of works will be prepared.

10.3.2 This will consist of:

- A non technical summary of the results of the investigation.
- A description of the archaeological setting of the scheme of works.
- Description of the topography of the site.
- Description of the methodologies used during the scheme of works.
- A text describing the findings of the scheme of works.
- A consideration of the local, regional and national context of the scheme of works findings.
- Plans of the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.
- Sections of the archaeological features.
- Interpretation of the archaeological features exposed, and their chronology and setting within the surrounding landscape.
- Specialist reports on the finds from the site.
- Appropriate photographs of the site and specific archaeological features.

11 ARCHIVE

11.1 The documentation, finds, photographs and other records and materials generated during the investigation will be sorted and ordered in accordance with guidelines issued Essex County Council for deposition of archives. This work will be undertaken by the Finds Supervisor, an Archaeological Assistant and the Conservator (if relevant). The archive will be deposited with the receiving museum as soon as possible after completion of the project, and within 12 months of completion.

11.2 The Essex County Council Historic Environment Team will be contacted to obtain their agreement for receipt of the project archive and to establish their requirements with regards to labelling, ordering, storage, conservation and organisation of the archive.

11.3 A transfer of title document will be provided to the landowner to request deposition of the finds archive to a suitable repository.

12 REPORT DEPOSITION

12.1 An unbound draft copy of the report will be supplied initially to the County Archaeological Office for comment. Copies of the final report will be sent to: the client; the Essex County Council Archaeology Office (2 copies and a digital copy); and the Essex County Historic Environment Record.

13 PUBLICATION

13.1 A report of the findings of the investigation will be submitted for inclusion in the journal *Essex Archaeology and History*. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Post-medieval Archaeology, Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and

later remains, and *Britannia* for discoveries of Roman date.

13.2 Details of the investigation will also be input to the Online Access to the Index of Archaeological Investigations (OASIS).

14 CURATORIAL MONITORING

14.1 Curatorial responsibility for the project lies with Essex County Council Historic Environment Team. As much notice as possible will be given in writing to the curator prior to the commencement of the project to enable them to make appropriate monitoring arrangements.

15 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

15.1 Variations to the scheme of works will only be made following written confirmation of acceptability from the archaeological curator.

15.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

16 STAFF TO BE USED DURING THE PROJECT

16.1 The works will be directed by Denise Drury, MCIfA Team Leader Archaeology at Archaeological Project Services. The on-site works will be supervised by an Archaeological Supervisor with knowledge of archaeological investigations of this type. Archaeological excavation will be carried out by Archaeological Technicians, experienced in projects of this type.

16.2 The following organisations/persons will, in principal and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

Task	Body to be undertaking the work
Conservation	Conservation Laboratory, City and County Museum, Lincoln
Pottery Analysis	
Prehistoric	Alex Beeby, APS ceramic specialist; with assistance from David Knight - Trent & Peak Archaeological Trust if appropriate
Roman	Alex Beeby, in house Roman pottery specialist
Anglo Saxon and Medieval –	A. Beeby, APS or A Irving, Independent pottery analyst
Post-medieval	G Taylor, APS
Non pottery Artefacts	G Taylor APS or J Cowgill, Independent Specialist
Animal Bones	Matilda Holmes, independent faunal remains specialist
Environmental Analysis	J Rackham or V Fryer, Independent Specialists
Human Remains Analysis	R Gowland, Independent Specialist

17 PROGRAMME OF WORKS

17.1 The fieldwork aspect of the programme is expected to be of one to two weeks duration. An archaeological supervisor and assistant with experience of such investigations will undertake the work.

17.2 Post-excavation analysis and report production will be undertaken by the supervisor, or a post-excavation analyst as appropriate, with assistance from a finds supervisor, illustrator and external specialists. The analysis aspect is expected to be completed within four weeks.

18 INSURANCES

18.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

19 COPYRIGHT

19.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act* 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

19.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

19.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act* 1988 for the client to pass any report, partial report, or copy of same, to any third party.

19.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

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Appendix 2

CONTEXT DESCRIPTIONS

Trench 1			
Context	Description	Interpretation	Date
100	Firm mid grey brown clay silt. Layer 0.38m thick.	Local plough soil	Modern
101	Firm mid blue-grey clay. Layer 0.17m thick.	Alluvial deposit.	
102	Firm light yellowish brown sandy silt. Layer 0.38m thick.	Local natural.	
103	Linear aligned NW to SE. With, to the west a steep concaved side stepping down to a moderate straight side stepping down to a steep straight side, to the east a moderate concaved side stepping down to a steep straight side. Base concaved. Filled by (104). 2.15m wide, 0.83m deep, 1.50m long.	Cut to ditch / gulley. Field boundary system.	
104	Firm mid yellowish brown clay silt with rare mid blue grey clay lenses. 0.83m thick.	Fill to [103]. Silting events.	
105	Firm mixed mid-dark grey brown to yellow brown silt. With rare fine sand, occasional clay lenses, occasional red brown – yellow brown mineral stains. Deposit 0.24m thick.	Subsoil affected by creek [115] and ditch [111]. (Upper fill of [111]?)	
106	Firm light yellow brown, with slight grey hue, silt. With rare clay fine lenses, occasional mineral stains, rare slate fragments, rare shells. Deposit 0.3m thick.	Silting to possible gulley [107].	
107	Linear aligned N to S with moderate smooth sides and narrow concaved base. Filled by (106). 1.8m long, 0.6m wide and 0.3m deep. Cuts [111] and [115].	Cut to drainage gulley / ditch.	
108	Firm mixed mid brown and light yellow brown silt with rare fine shell, rare fine stones / pebbles. Deposit 0.37m thick.	Fill of [111]. Deliberate fill.	
109	Moderate light yellow brown silt with occasional bands of mid brown silt, rare lenses of clay, rare shell, rare small pebbles. Deposit 0.5m thick.	Fill to [111]. Redeposit of mixed natural.	
110	Moderate mid brown silt with some clay, rare flecks charcoal / seed, occasional lenses of yellow brown silt, rare small rounded pebbles, rare shell. Deposit 0.26m thick.	Fill to [111]. Silting, redeposit.	
111	Linear, Filled by (108), (109), (110). 1.8m long, 2.1m wide, 0.7m deep.	Ditch	
112	Firm pliable mid – dark brown clay silt with occasional to moderate cockle shells, rare oyster / razor shells. Deposit 0.24m thick.	Fill to [115]. Trample band.	

	Cut by [111] and [107].		
113	Firm mid brown to reddish brown silty clay with rare shell and moderate mineral staining. Deposit 0.4m thick.	Fill to [115]. Silting.	
114	Soft light brown to yellowish brown fine silt with moderate clay and rare fine sand. Deposit 0.23m thick.	Fill to [115]. Primary silting.	
115	Curvi-linear aligned SW-N with moderate stepped sides with a slightly concaved base. Filled by (112), (113), (114). 1.8m long, 2.5m wide, 0.66m deep. Cut by [107] and [111].	Natural cut to creek/ channel.	
116	Soft light greyish brown sandy silt. Deposit 0.8m thick.	Alluvial deposit.	
117	Soft dark blackish grey silt / sandy silt. 1.19m+ thick.	Alluvial deposit.	
Trench 2			
200	Firm mid grey brown clay silt.	Plough soil	
201	Hard mid blue grey clay.	Alluvial deposit.	
202	Firm mid –light yellowish brown clay silt, sandy silt laminated layers.	Natural.	
203	Surface finds before trench excavated.		
204	Soft light brownish grey sandy silt. Laminated.	Alluvium.	
205	Very soft dark grey silt sandy-silt. Laminated.	Alluvium.	
Trench 3			
300	Firm dark greyish brown silty clay. Moderate small chalk fragments noted in the western arm of the trench. 0.25m thick.	Plough soil.	
301	Firm light brown sandy clayey silt. Deposit 0.35m thick.	Fill to [304]. Dumped deposit.	
302	Firm dark greyish brown mottled with mid brown clayey silt with occasional organic material. Reddish speckles noted through out. Deposit 0.4m thick.	Fill of [304]	
303	Firm mid-dark grey silty clay occasional organic fragments, woody roots etc. deposit 0.14m thick.	Probably an old topsoil/ land surface (on the flanks of [304]).	
304	Linear aligned E-W with moderate sides. Filled by (301), (302), (303). 1.2m wide, 1.8m long.	Ditch, probably post medieval.	
305	Firm mid bluish grey with moderate mid rusty brown speckles, clay with occasional oyster shell. Deposit 0.4m thick.	Fill to [306]. Naturally derived.	
306	Linear aligned E-W with gently sloping sides.	Possibly natural	

	At least 2.1m wide by at least 0.6m long. 0.6m deep	channel.	
307	Stiff greyish brown clay. 0.12m thick	Alluvium	
308	Stiff mid-light bluish grey clay with occasional light rusty yellow flecking	Alluvium	
309	Firm mid brownish grey clayey silt and sandy silt, with occasional oyster and cockle shell. At least 0.56m thick	Alluvium	
310	Stiff mid-dark greyish brown clay, with patches of mid brown and bluish mid-light grey. 0.25m thick	Deposit, possibly an upper fill of [306]	
311	Linear anomaly aligned NW-SE with irregular sides. At least 0.95m wide by 1.15m long and 0.12m deep	Possible shallow ditch. Post medieval	
312	Firm mid brownish grey clayey silt with over 20% small chalk fragments. Occasional small post-medieval brick and tile fragments. 0.12m thick.	Fill of [311]. A modern dumped deposit	
313	Firm mid yellowish brown clayey silt. 0.28m thick	Plough soil	
314	Firm mid-dark brown clayey silt. 0.12m thick	Subsoil	
315	Crumbly (dry) light yellow-brown silty sand, at least 0.24m thick	Natural deposit	
316	Crumbly light brownish yellow silt. A laminated deposit, with more sandy and more clayey variations in the laminations	Alluvium	
317	Firm mid brown clayey silt with light yellowish brown laminations	Fill of [318]	
318	Linear feature aligned WSW-ENE. Gradually sloping sides. At least 1.8m long by 1m wide and at least 0.28m deep	Linear feature. Possibly natural in origin	
319	Firm mid-light greyish brown clayey silt. 0.6m thick	Alluvium	
320	Plastic mid-light greyish brown clayey silt. 0.4m thick	Alluvium	
321	Very soft dark grey silt. At least 0.1m thick	Alluvium	
322	Soft mid greyish brown sandy silt. 0.63m thick	Alluvium	
323	Very soft mid-dark grey sandy silt. At least 0.22m thick	Alluvium	

Appendix 3

THE FINDS

ROMAN POTTERY
By Alex Beeby

Introduction
All the material was recorded at archive level in accordance with the guidelines laid out by Darling (2004). The pottery was recorded using the codes and system developed for the City of Lincoln Archaeological Unit (Darling and Precious, 2014). Concordant codes from the Essex County Council Field Archaeology Unit fabric series are also included in the Archive table below (*c.f.* Stansbie and Biddulph, 2008). A total of three sherds from three vessels, weighing 10 grams were recovered from the site.

Methodology
The material was laid out and viewed in context order. Sherds were counted and weighed by individual vessel within each context. The pottery was examined visually and using x20 magnification. This information was then added to an Access database. An archive list of the pottery is included in Table 1 below.

Condition
The pottery is in a very fragmentary condition. One piece is classed as abraded.

Results
Table 1, Roman Pottery Archive

Trench	Context	CLAU Cname	Essex Code	Form	Alter	Comments	Sherds	Vessel	Weight
2	203	GFIN	GRF	JBK		BS; FINE WHITE MICA	1	1	3
2	203	GREY	GRS	CLSD		BS	1	1	4
2	203	GREY	GRS	JB	ABR	RIM; LID SEATED?	1	1	3
2	203	DATE				ROMAN			
						Total	**3**	**3**	**10**

Provenance
All of the pottery was recovered from the topsoil in Trench 2, before the excavation of the trench.

Range
There are three pieces of Roman pottery. These small fragments, all of which are Greyware (GREY), cannot be closely dated.

Potential
No further work is required. The pottery should be retained and poses no problems for long-term storage.

POST ROMAN POTTERY
By Alex Beeby

Introduction
All the material was recorded at archive level in accordance with the guidelines laid out in Slowikowski *et al.* (2001). The pottery codenames (Cname) are in accordance with the Post Roman pottery type series for Lincolnshire, as published in Young *et al.* (2005). Concordant codes from the Essex Post Roman Pottery series (*c.f.* Cotter, 2000) are also included in the Archive table below. A total of two sherds from two vessels, weighing 12 grams were recovered from the site.

Methodology
The material was laid out and viewed in context order. Sherds were counted and weighed by individual vessel within each context. The pottery was examined visually and using x20 magnification. This information was then added to an Access database. An archive list of the pottery is included in Table 2 below. The pottery dates to the post medieval period.

Condition
The pottery is fragmentary, but not abraded.

Results
Table 2, Post Roman Pottery Archive

Tr	Cxt	Lincs Cname	Full Name	Essex Code	Form	Part	Description	Date	NoS	NoV	W(g)
1	109	PMED	Post Medieval Red Earthenware	40	Closed	BS	Sandy fabric	16th-17th	1	1	5
1	109	PMED	Post Medieval Red Earthenware	40	Closed	BS	Fine Micaceous; standard fabric	M16th-17th	1	1	7
								Total	**2**	**2**	**12**

Provenance
The pottery was recovered from ditch [111] in Trench 1.

Range
There are two fragments of post-medieval red earthenware (PMED) pottery; this material is common in this area.

Potential
The material requires no further work. The pottery should be retained as part of the site archive and should pose no problems for long-term storage.

CERAMIC BUILDING MATERIAL
By Alex Beeby

Introduction
All the material was recorded at archive level in accordance with the guidelines laid out by the Archaeological Ceramic Building Materials Group (2002). A total of eight fragments of ceramic building material, weighing 579 grams were recovered from the site.

Methodology
The material was laid out and viewed in context order. Fragments were counted and weighed within each context. The ceramic building material was examined visually and using x20 magnification. This information was then added to an Access database. An archive list of the ceramic building material is included in Table 3 below.

Condition
The ceramic building material is not overly abraded, although three pieces are sooted and a fourth has been subjected to extreme high heat and is partially vitrified.

Results
Table 3, Ceramic Building Material Archive

Cxt	Cname	Full Name	Fabric	Description	Date	NoF	W(g)
100	PNR	Peg, nib or ridge tile	OX/R/OX; fine-medium sandy	Flat roofing tile; sooted upper surface	13th-15th	2	133

108	PNR	Peg, nib or ridge tile	OX/R/OX; fine-medium sandy	Flat roofing tile	13th-15th	1	19
109	PNR	Peg, nib or ridge tile	OX/R/OX; fine-medium sandy; Fe; Ca	Flat roofing tile; sooted over the break	13th-15th	1	84
109	MODDRAIN	Modern Drain	Light firing; fine	Fluted/corrugated land drain pipe	L19th-E20th	2	240
203	CBM	Ceramic building material	OX/R/OX; fine	Abraded; surfaceless	Roman or Post Roman	1	4
203	BRK	Brick	Oxidised; vitrified	Clinkered surfaces and over break	Roman or Post Roman	1	99
					Total	**8**	**579**

Provenance
All of the ceramic building material came from Trenches 1 and 2. Ditch [111] within Trench 1 produced the only stratified pieces. The remainder of the material was unstratifed.

Range
There are four pieces of medieval dated flat roofing tile (PNR), a single fragment of brick (BRK) of indeterminate date, two fragments of modern drainage pipe (MODDRAIN) and a further piece of undiagnostic ceramic building material (CBM). All of the fragments of tile came from Trench 1, with two contexts, (108) and (109), within feature [111], both producing pieces.

Potential
There is no potential for further work. The ceramic building material should be retained as part of the site archive and should pose no problems for long-term storage.

FIRED CLAY
By Alex Beeby

Introduction
All the material was recorded at archive level in accordance with the guidelines laid out by the Archaeological Ceramic Building Materials Group (2002).

Methodology
The material was laid out and viewed in context order. Fragments of fired clay were counted and weighed within each context. This information was then added to an Access database. An archive list of the fired clay is included in Table 4 below.

Condition
The fired clay is mostly very fragmentary and many fragments are noticeably abraded.

Results
Table 4, Fired Clay Archive

Tr	Cxt	Class	Fabric	Comment	Date	NoF	Weight
1	100	FCLAY	Oxidised; fine; mica	Abraded; surfaceless; flint; CBM?	Undated	7	67
1	110	FCLAY	Oxidised; fine; mica	Abraded; single rough surface; heavily bleached; briquetage?	Undated	1	1
1	110	FCLAY	Oxidised; fine	Abraded; surfaceless; heavily bleached on one side	Undated	1	1

Tr	Cxt	Class	Fabric	Comment	Date	NoF	Weight
1	110	FCLAY	Oxidised; medium sandy	Abraded; surfaceless; flake; probably CBM	Undated	1	1
2	203	FCLAY	Oxidised; fine; Ca	Flat surface; bleached	Undated	1	2
2	203	FCLAY	Oxidised; fine; mica	Surfaceless	Undated	3	20
3	312	FCLAY	Oxidised; fine; Ca	Flat surfaces; 8mm thick with organic impressions on basal surface	Undated	1	4
3	312	FCLAY	Oxidised; fine	Surfaceless abraded flakes; vesicular	Undated	4	4
					Total	**19**	**100**

Provenance
Fired clay was recovered from all three trenches, with stratified fragments retrieved from (110) within ditch [111] in Trench 1 and (312) in ditch [311] in Trench 3. Pieces labelled (100) from Trench 1 and (203) from Trench 2 were collected from the topsoil.

Range
Most of the material is undiagnostic. Fragments from [111] and the topsoil in Trench 2 (203) are partially bleached. One item from [111] is particularly heavily bleached, probably indicating that this has come into contact with salt solution. Although the group is not diagnostic enough to be certain of this, it is possible that this assemblage contains fragments of briquetage, or of items or structures related to salt making or salt working.

Potential
The fired clay requires no further work. The material should be retained as part of the site archive and should pose no problems for long-term storage.

Summary
A small assemblage of fired clay was recovered. Most of the pieces are undiagnostic, although two fragments are bleached, perhaps due to contact with salt solution.

FAUNAL REMAINS
By Paul Cope-Faulkner

Introduction
A total of 5 (140g) fragments of faunal remains were recovered from stratified contexts.

Methodology
The faunal remains were laid out in context order and reference made to published catalogues (e.g. Schmid 1972; Hillson 2003). All the animal remains were counted and weighed, and where possible identified to species, element and side. Also fusion data, butchery marks, 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 (mouse size), small (rabbit size), medium (sheep size) or large (cattle size).

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.

Provenance
The remains were recovered from a ditch.

Condition
The overall condition of the remains was good to moderate, averaging at grades 2-3 on the Lyman Criteria (1996).

Results
Table 5, Fragments Identified to Taxa

Cxt	Taxon	Element	Side	Number	W (g)	Comments
109	Large mammal Medium mammal	Pelvis Humerus	- -	1 1	100 11	
110	Sheep/goat oyster	Metatarsus shell	- bot	1 2	14 15	

Summary
As a small assemblage, the faunal remains are of limited potential. The remains may have originated as butchery waste, apart from the oyster shell which is food waste, as they have shucking notches evident.

The remains are archive stable.

GLASS
By Gary Taylor

Introduction
One piece of glass weighing 5g was recovered.

Condition
The glass is in good condition.

Results
Table 6, Glass Archive

Cxt	Description	NoF	W (g)	Date
203	Fragment of colourless bottle.	1	5	late 19th/20th century

Provenance
The glass was recovered from the surface of Trench 2 prior to excavation (203).

Range
A single piece of probable 20th century bottle was recovered.

Potential
The glass is of limited potential.

OTHER FINDS
By Gary Taylor and Denise Buckley

Introduction
Six items weighing a total 252g were recovered.

Condition
All the finds are in good condition, though the metal items are corroded and encrusted.

Results

Table 7, Other Materials

Cxt	Material	Description	NoF	W (g)	Date
108	Fire residue	Cinder	1	2	Post-medieval?
	Iron	Hinge / fitting? Post-medieval?	1	113	
109	Iron	Square sectioned rod.	1	133	
110	Fire residue	Cinder	1	1	
203	Slate	Welsh roofing slate	2	3	19th-20th century
TOTALS			6	252	

Provenance

The finds were recovered from ditch fills (108, 109 and 110) and the surface of Trench 2 prior to excavation (203).

Range

The finds consist of cinders, two iron items, and two pieces of slate. The slate is Welsh roofing slate, which began to be traded widely from its source with the advent of the railways in the mid 19th century. This material perhaps entered the area in manuring scatter. The cinders may also have been deposited by manuring scatter, though could be detritus from traction engines involved in steam ploughing in the 19th-early 20th centuries.

The two iron items are not readily identifiable. One could be part of a hinge and the other is a square-sectioned bar. They may both be machinery parts.

Potential

Apart from dating evidence, the other finds are of limited potential.

SPOT DATING

The dating in Table 8 is based on the evidence provided by the finds detailed above.

Table 8, Spot dates

Cxt	Date	Comments
100	unstratified	includes medieval and post-medieval material
108	Post-medieval	based on 1 iron object
109	L19th-E20th	based on CBM
110	undated	
203	unstratified	includes Roman and early modern material
312	undated	

ABBREVIATIONS

ACBMG	Archaeological Ceramic Building Materials Group
BS	Body sherd
CBM	Ceramic Building Material
CXT	Context
NoF	Number of Fragments
NoS	Number of sherds
NoV	Number of vessels
TR	Trench
W (g)	Weight (grams)

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Appendix 4

GLOSSARY

Alluvium	Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, e.g. [004].
Cropmark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, etc. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.

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Appendix 5

THE ARCHIVE

The archive consists of:

42	Context records
3	Context register sheets
2	Trench records
2	Photographic record sheets
1	Section record sheet
1	Plan record sheet
6	Daily record sheets
8	Sheets of scale drawings
1	Bag of finds

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

Museum Resource Centre,
14 Ryegate Road,
Colchester
CO1 1YG

Accession Number	COLEM:2014.74
Archaeological Project Services Site Code:	SMTW15
OASIS record number	archaeol1-216101

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

OASIS DATA COLLECTION FORM: England

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OASIS ID: archaeol1-216101

Project details

Project name	An archaeological evaluation at Turncole Wind Farm, Turncole Farm Lane, Southminster, Essex
Short description of the project	An evaluation comprising three cross shaped trenches revealed backfilled former creeks and post-medieval field boundaries. No evidence for Iron Age or Romano-British saltmaking was revealed.
Project dates	Start: 15-06-2015 End: 23-06-2015
Previous/future work	Yes / Not known
Any associated project reference codes	SMTW15 - Sitecode
Any associated project reference codes	FUL/MAL/10/01070 - Planning Application No.
Any associated project reference codes	COLEM 2014.74 - Museum accession ID
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	DITCH Post Medieval
Monument type	CREEK Uncertain
Significant Finds	CBM Post Medieval
Significant Finds	ANIMAL BONE Post Medieval
Methods & techniques	"'Targeted Trenches"'
Development type	Wind farm developments
Prompt	Planning condition
Position in the planning process	Between deposition of an application and determination

Project location

Country	England
Site location	ESSEX MALDON SOUTHMINSTER Turncole Wind Farm, Turncole Farm Lane
Postcode	CM0 8NE
Study area	1000000.00 Square metres
Site coordinates	TQ 98556 97956 51.6447425167 0.870169283366 51 38 41 N 000 52 12 E Point
Height OD / Depth	Min: 0m Max: 0m

Project creators

Name of Organisation	Archaeological Project Services
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Denise Drury
Project director/manager	Denise Drury
Project supervisor	Chris Moulis
Type of sponsor/funding body	Developer
Name of sponsor/funding body	RES LTD

Project archives

Physical Archive recipient	Colchester Museum
Physical Contents	"Animal Bones","Ceramics"
Digital Archive recipient	Colchester Museum
Digital Contents	"Animal Bones","Ceramics"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	Colchester Museum
Paper Contents	"Animal Bones","Ceramics"
Paper Media available	"Context sheet","Diary","Drawing","Photograph","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
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