

Heckington Fen Solar Park

EN010123

Outline Written Scheme of Investigation- Mitigation

Applicant: Ecotricity (Heck Fen Solar) Limited

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OUTLINE WRITTEN SCHEME OF INVESTIGATION - MITIGATION

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Heckington Fen, Lincolnshire

Outline Written Scheme of Investigation – Mitigation

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On behalf of	Ecotricity (Heck Fen) Solar Ltd
Address	Lion House Rowcroft Stroud GL5 3BY
Site location	Energy Park: Six Hundreds Farm, Heckington Fen, East Heckington Cable Route: Brown's Drove, Swineshead Bridge, Swineshead (north of route) to Bicker Drove, Villa Farm (south of route), Boston
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Heckington Fen, Lincolnshire

Outline Written Scheme of Investigation – Mitigation

1 INTRODUCTION

1.1 Project and planning background

1.1.1 Wessex Archaeology has been commissioned by Pegasus Group ('the consultant') on behalf of Ecotricity (Heck Fen Solar) Ltd ('the client'), to produce a written scheme of investigation (WSI) for the archaeological mitigation at Heckington Fen. This work considers the footprint of both the Energy Park and Cable Route Corridor.

1.1.2 The proposed energy park is located at Six Hundreds Farm, Heckington Fen, East Heckington (NGR 519789 345641; **Fig. 1**). The proposed cable route runs from Brown's Drove, Swineshead Bridge, Swineshead (north of route) to Bicker Drove, Villa Farm (south of route), Boston, (NGRs 521474 343910 to 519648 339324; **Fig. 1**).

1.1.3 The energy park is proposed for the construction of a solar park and energy storage facility. The cable route connects with the National Grid Bicker Fen substation. These elements form the Proposed Development Plan for the Environmental Impact Assessment Scoping Report (Pegasus Group 2022a) and the Development Consent Order Application.

1.1.4 As stated in the EIA (*ibid*):

The Development falls within the definition of a 'nationally significant infrastructure project' (NSIP) under Section 14(1)(a) and 15(2) of the Planning Act 2008 (the 'Act') as the construction of a generating station with a capacity of more than 50MW, with a capacity in the region of 500MW.

1.1.5 Archaeological evaluation of the energy park (Wessex Archaeology 2023) revealed a range of archaeological remains that may be targeted by mitigation works. The specific areas to be targeted have not yet been finalised (although a preliminary hazard map is outlined below). A further archaeological evaluation on the cable route is yet to be undertaken. It is anticipated that the results of the cable route evaluation may also require mitigation. The mitigation works may include localised redirection of the cable, strip, map and sample excavation and/or watching brief.

1.1.6 The archaeological evaluations are part of a staged approach to determining the archaeological potential of the site, which has included desk-based assessment and walkover survey (Pegasus Group 2022b) and geophysical survey (SUMO 2022, Headland Archaeology 2022, ASWYAS 2022 and Magnitude Surveys 2022).

1.2 Scope of document

1.2.1 This WSI sets out the outline aims of the potential excavation, and the methods and standards that will be employed. In format and content, it conforms to current best practice, as well as to the guidance in *Management of Research Projects in the Historic Environment* (MoRPHE, Historic England 2015a) and the Chartered Institute for Archaeologists' (CIfA)



Standard and guidance for archaeological excavation (ClfA 2014a) and watching brief (ClfA 2014b).

- 1.2.2 This outline WSI is a certified document within the Development Consent Order (DCO) and is secured by Requirement 12 of the draft DCO (document reference 3.1). Requirement 12 provides that no phase of the remainder of the authorised development may commence until a Written Scheme of Archaeological Investigation (which must accord with this Outline Written Scheme of Investigation – Mitigation) for that phase has been submitted to and approved by the county authority, in consultation with the relevant planning authority.
- 1.2.3 This document will be submitted to the client, the consultant and the archaeological advisors to the local planning authorities for approval prior to the start of the excavation. In addition, the document will be submitted to Historic England.

1.3 Location, topography and geology

- 1.3.1 The entire site is located in arable land. The energy park is north of the A17 and east of Heckington, centred at NGR 519789 345641 (**Fig. 1**). The cable route is west of the A17 and east of South Forty Foot Drain, between NGR 521474 343910 (north) and 519648 339324 (south; **Fig. 1**).
- 1.3.2 The entire site is low lying, with ground levels at 1–5 m OD.
- 1.3.3 The underlying geology comprises mudstone and siltstone of the West Walton Formation with mudstone of the Ampthill Clay Formation in the north-eastern half of the energy park, and mudstone of the Oxford Clay Formation in the south of the cable route. The superficial geology comprises tidal flat deposits of clay and silt. (British Geological Survey 2022).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Previous investigations related to the development

Heritage desk-based assessment (2022)

- 2.1.1 The historical and archaeological background was assessed in a prior desk-based assessment (Pegasus Group 2022b), which considered the recorded historic environment resource of the site and a 2 km-radius study area measured from the boundaries of the site. A summary of the assessment is presented below, with relevant Monument ID numbers from the Lincolnshire Historic Environment Record (HER).

Geophysical survey (2022)

- 2.1.2 A series of geophysical surveys (SUMO 2022; Headland Archaeology 2022; ASWYAS 2022; Magnitude Surveys 2022) were carried out across the site. The surveys concluded that the site is dominated by geological/natural anomalies associated with the former saltmarsh landscape, crossed by palaeochannels and oxbow lakes.
- 2.1.3 Possible archaeological features were identified in the north-eastern part of the energy park in the form of linear, ditch-type anomalies, tentatively interpreted as a cluster of irregularly shaped enclosures (Headland Archaeology 2022). Continuation of these rectilinear features was detected in the east and south-east, and interpreted as possibly related to (pre)historic salt-working activity (Magnitude Surveys 2022).
- 2.1.4 In the eastern part of the energy park a former post-medieval duck decoy, known from historic documentary sources and visible as a cropmark on historic aerial photographs partially visible in the survey data (Magnitude Surveys 2022).



- 2.1.5 Geophysical anomalies associated with mapped and unmapped field boundaries, drainage channels and modern ploughing were identified in the central and southern parts of the energy park (ASWYAS 2022).
- 2.1.6 Possible archaeological features were recorded in the northern part of the cable route, to the south-west of Royalty Farm, where interconnecting ditch-type anomalies form a possible enclosure complex which respects former watercourses (Headland Archaeology 2022). Cropmarks were identified in this field on historic aerial photographs by the desk-based assessment (Pegasus Group 2022b). Anomalies representing former field boundaries were also detected.

Archaeological evaluation (2022)

- 2.1.7 Archaeological evaluation of the energy park (Wessex Archaeology 2023) revealed a small assemblage of Mesolithic/Neolithic flints, recovered from the north of the energy park.
- 2.1.8 Romano–British activity was recorded across the central and southern portions of the site and comprised enclosures, possible settlement, and evidence of salt processing.
- 2.1.9 Following the Romano-British period the next phase of datable remains are those of early to mid-eighteenth century drainage and field system. Evidence for hunting pursuits includes a duck decoy and possible coverts/wooded compartments, perhaps as cover for foxes or game birds. The site underwent relatively little change through the twentieth century aside from the demolition of some farm buildings and amalgamation of smaller fields to aid modern farming.

2.2 Archaeological and historical context

Prehistoric and Romano-British

- 2.2.1 In the Early Holocene, the site would have comprised low-lying saltmarsh crossed by tidal river channels. Marine transgression would have filled the channels with sediment, creating dry ridges of silt, or roddons. A number of these roddons were settled and used during the prehistoric and Romano-British periods.
- 2.2.2 Historic aerial photographs taken in 1946–1947, 1966 and 1973 show palaeochannels across the western third and south-eastern quadrant of the energy park and sinuous watercourses in the north-eastern quadrant of the energy park.
- 2.2.3 Surrounding the energy park, to the east and west, are clusters of cropmarks that are believed to indicate enclosures, roundhouses and a trackway of Iron Age and Romano-British settlements. Within the energy site, cropmarks that may be suggestive of prehistoric and/or Roman features are visible on historic photographs of the north and on recent Google Earth imagery of the south-west corner.
- 2.2.4 Along the route of the North Sea Gas Pipeline through the western part of the site, Romano-British pottery sherds and possible briquetage were collected during fieldwalking in the 1970s; and may indicate Roman salt-working in the vicinity.
- 2.2.5 Neolithic and Bronze Age tools and Romano-British pottery have been discovered to the east of the cable route, near Swineshead (HER MLI12570, MLI12574, MLI12569, MLI12590), West Low Grounds (HER MLI2573) and Holthills Farm (HER MLI22410). Finds suggest a possible saltern present at Holthills, while a Romano-British saltern has been identified at Helpringham Fen, south-west of the Bicker Fen substation.



- 2.2.6 Cropmarks of probable Iron Age and Romano-British settlement have been recorded around 750 m east of the cable route's central section at East Low Grounds (HER MLI90812), as well as at Bicker Fen (HER MLI2525, MLI90808 and MLI90811) at the south end of the route and near Donnington (HER MLI90719), 1 km south of the route.
- 2.2.7 In 2022 archaeological mitigation works for Viking Link identified undated ditches, gullies and pits, as well as a roundhouse, to the north and west of the Heckington Fen cable route (Wessex Archaeology, forthcoming). It is possible that these features were remains of prehistoric and/or Romano-British settlement, salt production and agricultural activity.

Early medieval and medieval

- 2.2.8 Garwick, approximately 800 m to the south-west of the energy park, is believed to be the location of a high-status Middle Anglo-Saxon trading centre of possible Early Anglo-Saxon or even Roman origins (HER MLI116391). A total of 269 mid-6th to mid- 8th-century coins alongside brooches, hooked tags, tweezers, and strap ends were found during metal - detecting and is one of Lincolnshire's largest recorded assemblages of finds from this period. In 2009 archaeological investigations on the western side of the extent of the possible trading centre revealed an articulated male skeleton with grave goods comprising a blade, iron seax and a small iron knife (HER MLI99381).
- 2.2.9 Swineshead is mentioned in the Anglo-Saxon Chronicle for c. AD 890 in relation to a charter dating from AD 675. There has been some evidence of early medieval activity recorded within the town. Heckington, Steyning (Swineshead) and Bicker were all recorded in the 1086 Domesday survey (Open Domesday 2022).

Post-medieval and modern

- 2.2.10 The Lincolnshire Fens were subject to large-scale drainage engineering schemes from the 17th century onwards. The construction of the South Forty Foot Drain, to the west of the cable route, was undertaken 1635–1638.
- 2.2.11 The Heckington Enclosure Map and Award, dated 1764, indicate that the eastern part of the energy park was drained by 1702 while the remainder was drained in 1764.
- 2.2.12 Historic maps show the land along which the cable route extends as drained by the late 18th century.
- 2.2.13 The 1818 Ordnance Surveyor's map shows the energy park divided into numerous sub-rectangular fields with a duck decoy, windmills and farms. The duck decoy is visible as a large pentagon-shaped cropmark on aerial photographs of the eastern part of the site taken in 1946, 1950 and 1966. Duck decoys, used in the 18th and 19th centuries, consisted of a central pond with five netted radial channels among trees and lined by paths.
- 2.2.14 The 1850 Tithe Map for Great Hale shows the north-western section of the cable route, between the A17 and Labour in Vain Drain, and illustrated a greater number of fields to the east of Hall Farm than exist today. The First Edition OS map showed the land proposed for the cable route comprising sub-rectangular fields. Small buildings and farmhouses are also present, dotted around the landscape.
- 2.2.15 The settlement of East Heckington along the A17, was in existence by the 18th century (MLI87648). Buildings recorded here by the HER include the 19th-century or earlier farmsteads of Poplars Farm (MLI121995), Elm Grange (MLI121956), Home Farm (MLI121955), Rectory Farm (MLI121954), and Rakes Farm (MLI121953); two 19th century places of worship (MLI87649, MLI97290); an early 20th century or earlier smithy



(MLI88102); and the early 20th century house and designed landscape of Park House (MLI87654).

2.2.16 The HER records six former farms or outfarms within the energy park. These included two farms by the name of Six Hundreds Farm along Six Hundreds Drove in the eastern part of the site, and New Grange in the north-western corner.

2.2.17 Historic mapping shows sluices and drainage pumps along Head Dike at the northern and north-eastern boundaries of the energy park, and diamond-shaped plantations, perhaps coverts, in the south. In the later 20th century, most of the outfarms and barns within the site were demolished and/or replaced by modern barns and some fields were amalgamated.

3 AIMS AND OBJECTIVES

3.1 Aims

3.1.1 The aims (or purpose) of any mitigation works, as defined in the ClfA *Standard and guidance for archaeological excavation* (ClfA 2014a) and *watching brief* (ClfA 2014b), are:

- to examine the archaeological resource within a given area or site within a framework of defined research objectives;
- to seek a better understanding of the resource;
- to compile a lasting record of the resource; and,
- to analyse and interpret the results of the excavation, and disseminate them.

3.2 Research objectives

3.2.1 A rationale for the investigation of each mitigation area will be produced at a future point and included in a location specific WSI. This rationale will include relevant research objectives for each area. Following consideration of the overarching archaeological potential of the site and the East Midlands Research framework (Research Frameworks 2022), the research objectives of the mitigation works may include:

- to determine how the upland-lowland divide manifested in the regional agricultural economy and other aspects of the archaeological record;
- to determine whether we can chart more closely the processes of agricultural intensification and expansion and the development of field systems;
- to determine what resources moved in and out of the region during the Romano-British period; and,
- to determine what production techniques and exchange networks were involved in the manufacture and marketing of salt and building materials;

4 MITIGATION METHODS

4.1 Introduction

4.1.1 Based on the results of the evaluation within the energy park, and the likelihood for results within the cable route discussed in the archaeological and historical background above, three potential methods of mitigation are proposed across the scheme;

- Preservation in situ (e.g. local diversion of the cable route within the Order Limits);
- Strip Map and Record (SMR) excavations, and;



- Archaeological Watching Brief.

4.1.2 Areas of archaeological potential will be assessed on an individual basis and, in consultation with the client, consultant, Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council, location-specific Written Schemes of Investigation will be produced in advance of any further intrusive archaeological works.

4.1.3 The methodology for strip map and record, and watching brief are outlined below.

5 FIELDWORK METHODS

5.1 Introduction

5.1.1 Health and safety will override archaeological considerations in all works since, as stated in ClfA guidance, *Health and Safety regulations and requirements cannot be ignored no matter how imperative the need to record archaeological information; hence Health and Safety will take priority over archaeological matters* (ClfA 2014a, 11).

5.1.2 Following confirmation of the archaeological requirements, location specific WSIs will be produced for all areas subject to archaeological mitigation (SMR or watching brief).

5.1.3 All works will be undertaken in accordance with the detailed methods set out within this WSI and subsequent location specific WSI. Any significant variations to these methods will be agreed in writing with the client, the consultant, and the archaeological advisors to the local planning authorities prior to being implemented.

5.2 Setting out of the excavation area

5.2.1 The excavation areas will be set out using a Global Navigation Satellite System (GNSS). Minor adjustments to the layout may be required to take account of any on-site constraints such as vegetation or located services, and to allow for machine manoeuvring. The locations of excavated areas will be tied in to the Ordnance Survey (OS) National Grid and Ordnance Datum (OD) (Newlyn), as defined by OSTN15 and OSGM15.

5.3 Service location and other constraints

5.3.1 The client will provide information regarding the presence of any below/above-ground services, and any ecological, environmental or other constraints.

5.4 Strip, map and record excavations

5.4.1 A preliminary 'hazard map' of potential SMR mitigation areas has been designed for the Energy Park (**Figs 2–7**). The rationale is expressed in Table 1 and is awaiting comment from the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council. The need for SMR within the cable route will be determined once the results of the trial trenching are available.

5.4.2 Strip Map and Record areas will include a red limit of excavation. Where the area of interest is not clearly defined by previous trenching or geophysical investigations, a 10 m amber 'buffer' or contingency zone will be included in the event that significant archaeological remains are found to extend beyond the red limit of excavation. Excavation within this amber zone will only be carried out following consultation with the client, consultant, Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council.



Table 1 Hazard map rationale

Red	Amber	Field	Rationale
R1	A1	G7	Romano-British? remains in trench 124 with 10 m buffer
R2	A2	G7	Romano-British? remains in trench 132 with 10 m buffer
R3	A3	G21–23	Saltern in trench 353 with 10 m buffer and area of dispersed Romano-British? remains (G21)
R4	A4	SH1	Romano-British? remains in trenches 425, 433–436 and 961–963 with 10 m buffer
R5	A5	SH1	Romano-British? remains in trenches 448–451 and 460–461 with 10 m buffer and area to south
R6		SH11–12	Ecological buffer extended to cover larger territory and archaeological remains in trench 833

- 5.4.3 The strip, map and record excavation areas will be excavated using a 360° tracked excavator equipped with a toothless bucket. Machine excavation will be under the constant supervision and instruction of the monitoring archaeologist, and will proceed in level spits of approximately 50–200 mm until either the archaeological horizon or the natural geology is exposed. Where necessary, the surfaces of archaeological deposits will be cleaned by hand.
- 5.4.4 A sample of the archaeological features and deposits identified will be hand-excavated, sufficient to address the aims of the excavation. The following minimum sampling levels are proposed:
- 50% of all discrete archaeological features (e.g., pits, post holes);
 - 50% of all structural features (e.g., ring ditches, roundhouse gullies, beam slots) including all terminals and feature intersections, except if *in situ* built remains are revealed, where they will be cleaned and recorded pending the implementation of a detailed excavation and recording strategy (to be agreed with all parties);
 - 50–100% of features and deposits associated with specific domestic and/or industrial activities (e.g., hearths, ovens, kilns);
 - 100% of all inhumation and cremation burials, and other cremation-related deposits; and
 - 10–20% of all linear features (e.g., ditches, gullies), including all terminals and feature intersections.
- 5.4.5 If the sampling levels outlined above are not proportionate to the significance of the archaeological remains identified, the scope of works will be reassessed in consultation with the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council, with up to 100% of individual features or deposits being excavated as required.
- 5.4.6 Spoil derived from both machine stripping and hand-excavation will be visually scanned for the purposes of finds retrieval, and where appropriate will also be metal-detected by trained archaeologists. Artefacts and other finds will be collected and bagged by context.
- 5.4.7 If human remains are uncovered, the specific methods outlined below will be followed.
- 5.4.8 Consideration will be given to the use of accredited local metal detector operators, subject to written agreement regarding disclosure, surrender and ownership of finds not falling under the *Treasure Act 1996*.



5.5 Watching brief

- 5.5.1 A watching brief will be undertaken by at least one archaeologist, subject to the number of site operations being carried out at any one time. All mechanical excavation will, where possible, be undertaken using a toothless ditching bucket and will be constantly monitored by the watching archaeologist.
- 5.5.2 Without causing unnecessary delay to the groundwork programme, the archaeologist may ask for the groundwork to be temporarily halted whilst investigations are carried out. If appropriate, areas of archaeological interest will be defined and suitably protected in advance of their investigation and recording.
- 5.5.3 Where necessary, the surface of archaeological deposits will be cleaned by hand. A sample of the archaeological features and deposits identified will be hand-excavated and recorded, sufficient to address the aims of the watching brief. Spoil derived from both machine stripping and hand-excavation will be visually scanned for the purposes of finds retrieval, and where appropriate will also be metal-detected by trained archaeologists. Artefacts and other finds will be collected and bagged by context.
- 5.5.4 If extensive, complex or well-preserved archaeological remains are identified, for which the scope of the approved watching brief WSI is insufficient, the watching archaeologist will halt the groundwork, delimit the area of archaeological interest, and report immediately to the Wessex Archaeology project manager. Wessex Archaeology will then inform the groundwork contractor, the client and the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council, as a contingent excavation or revised strategy may be required.
- 5.5.5 If human remains are uncovered, the specific methods outlined below will be followed.
- 5.5.6 Consideration will be given to the use of accredited local metal detector operators, subject to written agreement regarding disclosure, surrender and ownership of finds not falling under the *Treasure Act 1996*.

5.6 Recording

- 5.6.1 All exposed archaeological deposits and features will be recorded using Wessex Archaeology's pro forma recording system.
- 5.6.2 A complete record of excavated archaeological features and deposits will be made. This will include plans and sections, drawn to appropriate scales (generally 1:20 or 1:50 for plans, 1:10 for sections) and tied to the OS National Grid.
- 5.6.3 A full photographic record will be made using digital cameras equipped with an image sensor of not less than 16 megapixels. This will record the detail and the general context of the principal features and the site. Digital images will be subject to managed quality control and curation processes to ensure long term accessibility of the image set. Photographs will also be taken of all areas, including access routes, to provide a record of conditions prior to and on completion of the excavation.

5.7 Survey

- 5.7.1 The real time kinematic (RTK) survey of all excavated areas and features will be carried out using a Leica GNSS connected to Leica's SmartNet service. All survey data will be recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSTN15 and OSGM15, with a three-dimensional accuracy of at least 50 mm.



5.8 Monitoring

- 5.8.1 The client will inform the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council of the start of the excavation and its progress. Reasonable access will be arranged for site visits to inspect and monitor the progress of the excavation. Any variations to the WSI, if required to better address the project aims, will be agreed in advance with the client and the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council.

5.9 Reinstatement

- 5.9.1 The excavated areas will be left open, with no backfilling or other reinstatement undertaken.

5.10 Finds

General

- 5.10.1 Archaeological finds will be collected and retained in accordance with the selection strategy outlined in **Appendix 2** and in accordance with ClfA guidance (2014c). Where appropriate, soil samples may be taken and sieved to aid in finds recovery. Any finds requiring conservation or specific storage conditions will be dealt with immediately in line with *First Aid for Finds* (Watkinson and Neal 1998).

Human remains

- 5.10.2 In the event of discovery of any human remains (articulated or disarticulated, cremated or unburnt), all excavation of the deposit(s) will cease pending Wessex Archaeology obtaining a Ministry of Justice Licence (this includes cases where remains are to be left *in situ*).
- 5.10.3 Should human remains require removal, all excavation and post-excavation will be in accordance with Wessex Archaeology protocols, and in-line with current guidance documents (e.g., McKinley 2013) and the standards set out in ClfA Technical Paper 13 (McKinley and Roberts 1993). Appropriate specialist guidance/site visits will be undertaken if required.
- 5.10.4 The final deposition of human remains subsequent to the appropriate level of osteological analysis and other specialist sampling/examinations will follow the requirements set out in the Ministry of Justice licence.

Treasure

- 5.10.5 Wessex Archaeology will immediately notify the client and the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council on discovery of any material covered, or potentially covered, by the *Treasure Act 1996*. All information required by the *Treasure Act* (i.e., finder, location, material, date, associated items etc.) will be reported to the Coroner within 14 days.

5.11 Environmental sampling

Introduction

- 5.11.1 All sampling will be undertaken following Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015b).



Site-specific sampling strategy

- 5.11.2 Depending on the size, complexity and duration of a site, the formulation of a site-specific sampling strategy will be considered at an early stage. Initially informed by prior works or predicted conditions, the strategy will be developed and adapted as the excavation continues, with support provided by specialist site visits and/or phone advice as appropriate. The aim of the strategy will be to effectively target both archaeological and landscape features in order to address the aims and objectives of the project, if appropriate with reference to local or regional research agendas. Any change in strategy will be agreed with the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council.

Sampling methods

- 5.11.3 Bulk environmental soil samples, for the recovery of plant macrofossils, wood charcoal, small animal bones and other small artefacts, will be taken as appropriate from well-sealed and dateable contexts. In general, features directly associated with particular activities (e.g., pits, latrines, cesspits, hearths, ovens, kilns, and corn driers) should be prioritised for sampling over features, such as ditches or postholes, which are likely to contain reworked and residual material.
- 5.11.4 If waterlogged or mineralised deposits are encountered, an environmental sampling strategy will be devised and agreed with the Senior Historic Environment Officer at Heritage Lincolnshire and the Historic Environment Officers at Lincolnshire County Council as appropriate. Specialist guidance will be provided by a member Wessex Archaeology's geoarchaeological and environmental team, with site visits undertaken if required.
- 5.11.5 Any samples will be of an appropriate size – typically 40 litres for the recovery of environmental evidence from dry contexts, and 10 litres from waterlogged deposits.
- 5.11.6 Following specialist advice, other sampling methods such as monolith, Kubiena or contiguous small bulk (column) samples may be employed to enable investigation of deposits with regard to microfossils (e.g., pollen, diatoms) and macrofossils (e.g., molluscs, insects), soil micromorphological or soil chemical analyses.

6 POST-EXCAVATION METHODS AND REPORTING

6.1 Stratigraphic evidence

- 6.1.1 Initially, the archive will be consolidated: all written and drawn records from the excavation will be collated, checked for consistency and stratigraphic relationships. Context data will then be entered into a database, which can be updated during any future analyses. A stratigraphic assessment of the context data will be made, this will involve:
- a review of context and stratigraphic groups;
 - preliminary phasing of the site based on recorded stratigraphic relationships, pottery spot-dates and any other relevant information;
 - the identification of any problems with stratigraphic interpretation (due to truncation, redeposition, residuality etc.), and problems with phasing (due to low level of finds etc.);
 - the identification of site drawings to be digitised;
 - the suggestion of possible targets for radiocarbon or other scientific dating; and
 - a quantification of features.



6.2 Finds evidence

- 6.2.1 All retained finds will, as a minimum, be washed, weighed, counted and identified. They will then be recorded to a level appropriate to the aims and objectives of the excavation. The report will include a table of finds by period and/or feature group. Recording and reporting will conform to the Type 2 (Appraisal) level according to ClfA's *Toolkit for Specialist Reporting (2022a)*, to include appropriate quantification, characterisation and assessment of significance and potential.
- 6.2.2 Metalwork from stratified contexts will be X-rayed and, along with other fragile and delicate materials, stored in a stable environment. The X-raying of objects and other conservation needs will be undertaken by Wessex Archaeology in-house conservation staff, or by another approved conservation centre.
- 6.2.3 Artefacts and other finds will be suitably bagged and boxed in accordance with the guidance given by the relevant museum and generally in accordance with the standards of the ClfA (2014d).

6.3 Environmental evidence

- 6.3.1 Bulk environmental soil samples will be processed by standard flotation methods. The residues will be fractionated into 5.6/4 mm and 1/0.5 mm and dried if necessary. The coarse residue fraction (>5.6/4 mm), and the fine fraction when appropriate, will be sorted and discarded, with any finds recovered given to the appropriate specialist. The flot will be retained on a 0.25 mm mesh and scanned to assess the environmental remains present and their preservation. Unsorted fine residues will be retained until after any analyses and discarded following final reporting (in accordance with the Selection policy, below).
- 6.3.2 In the case of samples from cremation-related deposits the flots will be retained on a 0.25 mm mesh, with residues fractionated into 4 mm, 2 mm and 1 mm. In the case of samples from inhumation burial deposits, the sample will be wet-sieved through 9.5 mm and 1 mm mesh sizes. The coarse fractions (9.5 mm) will be sorted with any finds recovered given to the appropriate specialist together with the finer residues.
- 6.3.3 Any waterlogged samples will be processed by standard waterlogged flotation methods.
- 6.3.4 Recording and reporting will conform to the Type 2 (Appraisal) level according to ClfA's *Toolkit for Specialist Reporting (2022a)*, to include appropriate quantification, characterisation and assessment of significance and potential.

6.4 Reporting

General

- 6.4.1 Following completion of the fieldwork and the assessment of the stratigraphic, artefactual and ecofactual evidence, a draft post-excavation assessment report will be submitted for approval to the client and the Senior Historic Environment Officer at Heritage Lincolnshire, for comment. Once approved, a final version will be submitted.
- 6.4.2 The report will include the following elements:
- Non-technical summary;
 - Project background;
 - Archaeological and historical context;



- Aims and objectives;
- Methods;
- Results – stratigraphic, finds and environmental;
- Statement of potential – of the stratigraphic, finds and environmental data – the extent to which the archive might be able to meet the original aims and research objectives of the project;
- Updated Project Design, including summary of recommendations for any further analyses and updated project aims, with proposals for any publication (including a task list scheduling the personnel and resources required for analyses);
- Archive preparation and deposition arrangements;
- Appendices;
- Illustrations; and,
- References.

6.4.3 A copy of the final post-excavation assessment report will be deposited with the HER, along with surveyed spatial digital data (.dxf or shapefile format) relating to the excavation.

OASIS

6.4.4 An OASIS (online access to the index of archaeological investigations) record [REDACTED] will be created, with key fields completed, and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

7 ARCHIVE STORAGE AND CURATION

7.1 Museum

7.1.1 It is recommended that the project archive resulting from the excavation be deposited with The Collection Museum, Art and Archaeology, Lincolnshire. Provision has been made for the cost of long-term storage in the post-fieldwork costs. The museum has received notification of the project prior to fieldwork commencing, and an accession has been obtained (LCNCC:2022.104).

7.2 Transfer of title

7.2.1 On completion of the excavation, every effort will be made to persuade the legal owner of any finds recovered (i.e., the landowner), with the exception of human remains and any objects covered by the *Treasure Act 1996*, to transfer their ownership to the museum in a written agreement.

7.3 Preparation of archive

Physical archive

7.3.1 The physical archive, which may include paper records, graphics, artefacts, and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by The Collection, and in general following nationally recommended guidelines (Brown 2011; ClfA 2014d; SMA 1995). The archive will usually be deposited within one year of the completion of the project, with the agreement of the client.



Digital archive

- 7.3.2 The digital archive generated by the project will be deposited with a Trusted Digital Repository, in this instance the Archaeology Data Service (ADS), to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance) and accompanied by metadata. Full details of the collection, documentation, storage and selection of digital data are included in the project Document Management Plan (DMP), available on request.

7.4 Selection strategy

- 7.4.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of an archaeological project require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e., the retained archive should fulfil the requirements of future researchers and the receiving Museum.
- 7.4.2 The selection strategy, which details the project-specific selection process, is underpinned by national guidelines on selection and retention (Brown 2011, section 4) and generic selection policies (SMA 1993; Wessex Archaeology's internal selection policy) and follows ClfA's *Toolkit for Selecting Archaeological Archives* (2022b). It should be agreed by all stakeholders (Wessex Archaeology's internal specialists, external specialists, local authority, museum) and fully documented in the project archive.
- 7.4.3 The project-specific selection strategy is presented here as **Appendix 2**, which at this stage includes the on-site collection strategy for finds. Further modifications are expected to be made to the selection strategy as the project progresses; specific review points will be at assessment stage, and on project completion prior to final archive preparation.

7.5 Security copy

- 7.5.1 In line with current best practice (e.g., Brown 2011), on completion of the project a security copy of the written records will be prepared in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

8 OUTREACH AND SOCIAL MEDIA

- 8.1.1 In line with its charitable aims, Wessex Archaeology will, where possible and in consultation with the client, seek opportunities to disseminate the results of the evaluation and engage with the local community through social media, press releases, open days and volunteer involvement, while taking into account issues such as health and safety, confidentiality and vandalism.

9 COPYRIGHT

9.1 Archive and report copyright

- 9.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes,



including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*.

- 9.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research, or development control within the planning process.

9.2 Third party data copyright

- 9.2.1 This document, the post-excavation assessment report and the project archive may contain material that is non-Wessex Archaeology copyright (e.g., Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.

10 WESSEX ARCHAEOLOGY PROCEDURES

10.1 External quality standards

- 10.1.1 Wessex Archaeology is registered as an archaeological organisation with the Chartered Institute for Archaeologists (CIfA) and fully endorses its *Code of conduct* (CIfA 2014e) and *Regulations for professional conduct* (CIfA 2014f). All staff directly employed or subcontracted by Wessex Archaeology will be of a standard approved by Wessex Archaeology, and archaeological staff will be employed in line with the CIfA codes of practice and will normally be members of the CIfA.

10.2 Personnel

- 10.2.1 The fieldwork will be directed and supervised by an experienced archaeologist from Wessex Archaeology's core staff. The overall responsibility for the conduct and management of the project will be held by one of Wessex Archaeology's project managers, who will visit the fieldwork as appropriate to monitor progress and to ensure that the scope of works is adhered to. Where required, monitoring visits may also be undertaken by Wessex Archaeology's Health and Safety manager. The appointed project manager will be involved in all phases of the investigation through to its completion.
- 10.2.2 The following key staff are proposed:
- Project Manager Emily Eastwood
 - Fieldwork Director Hannah Dabill
- 10.2.3 The analysis of any finds and environmental data will be undertaken by Wessex Archaeology core staff or external specialists, using Wessex Archaeology's standard methods, under the supervision of the departmental managers and the overall direction of the project manager. A complete list of specialists is provided in the Appendix.
- 10.2.4 Wessex Archaeology reserves the right, where necessary due to unforeseen circumstances, to replace nominated personnel with alternative members of staff of comparable expertise and experience.



10.3 Internal quality standards

- 10.3.1 Wessex Archaeology is an ISO 9001 accredited organisation (certificate number FS 606559), confirming the operation of a Quality Management System which complies with the requirements of ISO 9001:2015 – covering professional archaeological and heritage advice and services. The award of the ISO 9001 certificate, independently audited by the British Standards Institution (BSI), demonstrates Wessex Archaeology's commitment to providing quality heritage services to our clients. ISO (the International Organisation for Standardisation) is the most recognised standards body in the world, helping to drive excellence and continuous improvement within businesses.
- 10.3.2 Wessex Archaeology assigns responsibility to individual managers for the successful completion of all aspects of a project including reporting. This includes monitoring progress and quality; controlling the budget from inception to completion; and all aspects of health and safety for the project. At all stages, the project manager will carefully assess and monitor performance of staff and adherence to objectives, timetables and budgets, while the manager's own performance is monitored by the team leader or regional director. The technical managers in the Graphics, Research, GeoServices and IT sections provide additional assistance and advice.
- 10.3.3 All staff are responsible for following Wessex Archaeology's quality standards but the overall adherence to and setting of these standards is the responsibility of the senior management team who, in consultation with the team leaders/regional directors, also ensure projects are adequately programmed and resourced within Wessex Archaeology's portfolio of project commitments.

10.4 Health and safety

- 10.4.1 All works will be undertaken in accordance with the *Health and Safety at Work Act 1974*; the *Management of Health and Safety at Work Regulations 1999*; and all other applicable health and safety legislation.
- 10.4.2 Wessex Archaeology has a fully compliant health and safety management system that has year on year satisfied the criteria for SSIP certification (Safety Schemes in Procurement). SSIP itself is aligned with PAS91.
- 10.4.3 Wessex Archaeology will, for all projects, produce one or more task and site-specific risk assessments and method statements (RAMS), which will ensure our staff can work safely on the site. A copy of the RAMS and our Health and Safety Policy can be provided to the client. All staff on our sites will be made fully familiar with the RAMS before work commences.
- 10.4.4 We aim to work collaboratively on health and safety with clients and, where separately appointed, with principal contractors. We expect clients to provide in good time all the necessary risk information about a site that may affect the archaeological work, such as locations of utilities or any known ground contamination. We will comply with the project specific Personal Protective Equipment (PPE) requirements, and any other specific additional requirements of the Principal Contractor.
- 10.4.5 All fieldwork staff are certified through the Construction Skills Certification Scheme (CSCS) and have undergone UKATA Asbestos Awareness Training. Staff who carry out specific tasks are suitably trained and competent to do so through training accredited by the Construction Industry Training Board (CITB), Institution of Occupational Safety & Health (IOSH) and the National Plant Operators Recognitions Scheme (NPORS).



10.5 Insurance

- 10.5.1 Wessex Archaeology holds Employers Liability (£15,000,000), Public Liability (£15,000,000) and Professional Indemnity (£10,000,000) policies.



REFERENCES

- ADS 2013. *Caring for Digital Data in Archaeology: a guide to good practice*. Archaeology Data Service & Digital Antiquity Guides to Good Practice.
- ASWYAS 2022. *Site 3, Heckington Fen Solar Park, Lincolnshire: Geophysical Survey*. Unpubl. rep.
- British Geological Survey 2022. *BGS Geology Viewer* [redacted] (accessed November 2022).
- Brown, D. H. 2011. *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (revised edition). Archaeological Archives Forum.
- Chartered Institute for Archaeologists [ClfA] 2014a. *Standard and Guidance for Archaeological Excavation* (revised edition October 2020). Reading: ClfA.
- ClfA 2014b. *Standard and Guidance for An Archaeological Watching Brief* (revised edition October 2020). Reading: ClfA.
- ClfA 2014c. *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (revised edition October 2020). Reading: ClfA.
- ClfA 2014d. *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (revised edition October 2020). Reading: ClfA.
- ClfA 2014e. *Code of Conduct*. Reading: ClfA.
- ClfA 2014f. *Regulations for Professional Conduct*. Reading: ClfA.
- ClfA 2022a. *Toolkit for Specialist Reporting* [redacted] (accessed November 2022).
- ClfA 2022b. *Toolkit for Selecting Archaeological Archives* [redacted] (accessed November 2022).
- English Heritage 2011. *Environmental Archaeology. A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation* (2nd edition). Portsmouth: English Heritage.
- Headland Archaeology 2022. *Area 2, Heckington Fen Solar Park, Lincolnshire: Geophysical Survey Report*. Unpubl. rep.
- Historic England 2015a. *Management of Research Projects in the Historic Environment: the MoRPHE project managers' guide*. Swindon: Historic England.
- Historic England 2015b. *Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record*. Swindon: Historic England
- Magnitude Surveys 2022. *Geophysical Survey: Area 4 Heckington Fen Solar Park, Lincolnshire*. Unpubl. rep.
- McKinley, J. I. 2013. Cremation: excavation, analysis and interpretation of material from cremation-related contexts, in S. Tarlow, S. and L. Nilsson Stutz (eds) *The Oxford Handbook of the Archaeology of Death and Burial*, 147–71. Oxford: Oxford University Press.



- McKinley, J. I. and Roberts, C. 1993. *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Reading: ClfA Technical Paper 13.
- Open Domesday 2022. *Open Domesday* [redacted] (accessed December 2022).
- Pegasus Group, 2022a. *Environmental Impact Assessment Scoping Report*. Unpubl. rep.
- Pegasus Group, 2022b. *Heritage Desk-Based Assessment: Heckington Fen Solar Park*. Unpubl. rep.
- Research Frameworks 2022. *East Midlands Historic Environment Research Framework*. [redacted] (accessed December 2022).
- SMA 1993. *Selection, Retention and Dispersal of Archaeological Collections*. London: Society of Museum Archaeologists.
- SMA 1995. *Towards an Accessible Archaeological Archive*. London: Society of Museum Archaeologists.
- SUMO 2022. *Geophysical Survey Report: Area 1, Heckington Fen Solar Park, Lincolnshire*. Unpubl. rep.
- Watkinson, D. and Neal, V. 1998. *First Aid for Finds: practical guide for archaeologists*. United Kingdom Institute for Conservation of Historic & Artistic Works.
- Wessex Archaeology 2023. *Heckington Fen Energy Park, Lincolnshire: Archaeological Evaluation*. Unpubl. rep. 267010.02



APPENDICES

Appendix 1 Finds and environmental specialists

Name	Qualifications	Specialism
Sander Aerts	BA, MSc	Archaeoentomological remains, animal bone, marine shell and archaeobotanical remains (carbonised)
Phil Andrews	BSc; FSA; MCIfA	Slag and metal working debris
Ceridwen Boston	BSocSc; MA; MSc; DPhil	Osteoarchaeology; funerary archaeology
Elina Brook	BA; MA; PCIfA	Later prehistoric and Romano-British pottery, and small finds
Alex Brown	BA; MSc; PhD	Geoarchaeology, palynology
Kirsten Egging Dinwiddy	BA; MA; MCIfA	Human remains (inhumations)
Erica Gittins	BA; MA; PhD	Prehistoric flint
Phil Harding	PhD	Prehistoric flint, particularly Palaeolithic flint
Lorrain Higbee	BSc; MSc; MCIfA	Animal bone
Matt Leivers	BA; PhD; ACIfA	Prehistoric pottery and flint
Inés López-Dóriga	BA; MA; PhD	Archaeobotanical remains
Erica Macey-Bracken	BA; ACIfA	Post-medieval finds, ceramic building material and worked wood
Katie Marsden	BSc	Pottery from prehistoric to post-medieval/modern. Metalwork of all periods, including coins. Small and bulk finds including fired clay, ceramic building material, worked bone
Jacqueline McKinley	BTech; FSA	Human remains (inhumations and cremations)
Nicki Mulhall		Geoarchaeology and archaeobotanical remains
Richard Payne	BSC; MSc; MPhil	Geoarchaeology
Emma Robertson	BA; MSc	Human remains (inhumations)
Megan Scantlebury	BA, MSc	Archaeobotanical remains
Rachael Seager Smith	BA; MCIfA	Pottery with particular emphasis on Roman ceramics; and metalwork, fired clay, ceramic building material, stone, worked bone, shale, glass, and wall plaster
Andrew Shaw	BA; MA; PhD	Palaeolithic lithic artefacts and Pleistocene geoarchaeology
Amy Thorp	BA; MA	Pottery with emphasis on Roman ceramics, small finds
Ed Treasure	BSc; MRes; PhD	Archaeobotanical remains, including plant remains and charcoal/wood



Appendix 2 Selection Strategy

[267012]
[Heckington Fen Energy Park Mitigation, Lincolnshire]
[version 1, 05/12/2022]

Selection Strategy

Project Information

Project Management

Project Manager	Emily Eastwood
Archaeological Archive Manager(s)	Moira Taylor and Jessica Irwin
Organisation	Wessex Archaeology (WA)

Stakeholders

Date Contacted

Stakeholders		Date Contacted
Collecting Institution(s)	The Collection Museum (01522 550961) Archaeology Data Service	
Project Lead / Project Assurance	Lead: Hannah Dabill Assurance: Emily Eastwood	N/A
Landowner / Developer	Ecotricity (Heck Fen) Solar Ltd (Developer) Multiple landowners	
Other (external)	External finds & environmental specialists (see WSI) Denise Drury, Senior Historic Environment Officer at Heritage Lincolnshire (hereafter 'HL') and Matthew Adams and Jan Allen, Historic Environment Officers at Lincolnshire County Council (hereafter 'LCC') Others as appropriate (eg, Historic England for scheduled sites)	
Other (internal)	WA Finds Manager (Rachael Seager Smith) WA Environmental Manager (Sander Aerts)	N/A; briefed as part of standard project process



	WA Geomatics & BIM Manager (Tori Wilkinson) WA internal finds & environmental specialists (see WSI)	
Resources		
Resources required	WA Finds and Environmental specialists; WA archives team	
Context		
<p>This overarching selection strategy document is based on the ClfA Archives Selection Toolkit (2022b) and relates to archaeological project work being undertaken by Wessex Archaeology as defined in the WSIs.</p> <p>Relevant standards, policies and guidelines consulted include:</p> <p><u>General</u></p> <ul style="list-style-type: none">• <i>Selection, Retention and Dispersal of Archaeological Collections</i> (Society of Museum Archaeologists, 1993)• <i>Archaeological archives: a guide to best practice in creation, compilation, transfer and curation</i> (AAF, revised edition 2011, section 4)• <i>The Collection Museum, Lincoln: museum guidelines</i> (2017) <p><u>Finds</u></p> <ul style="list-style-type: none">• <i>Standard Guidance for the collection, documentation, conservation & research of archaeological materials</i> (CIFA, 2014d)• <i>A Standard for Pottery Studies in Archaeology</i> (Prehistoric Ceramics Research Group, Study Group for Roman Pottery, Medieval Pottery Research Group 2016) <p><u>Environmental</u></p> <ul style="list-style-type: none">• <i>Environmental Archaeology: A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation</i> (English Heritage 2011)• <i>Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record</i> (Historic England 2015)• <i>Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains</i> (English Heritage 2008)• <i>Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood</i> (English Heritage 2010)• <i>Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation</i> (Historic England 2018) <p>Research objectives of the project</p> <p>Following consideration of the archaeological potential of the site and the East Midlands Research framework (Research Frameworks 2022), the research objectives of the excavation are to determine:</p> <ul style="list-style-type: none">• how the upland-lowland divide manifested in the regional agricultural economy and other aspects of the archaeological record;• whether we can chart more closely the processes of agricultural intensification and expansion and the development of field systems;• what resources moved in and out of the region during the Romano-British period; and• what production techniques and exchange networks were involved in the manufacture and marketing of salt and building materials;		



REVIEW POINTS

Consultation with all Stakeholders regarding project-specific selection decisions will be undertaken at a maximum of three project review points:

1. Data gathering: on site, if any unforeseen discovery necessitates an amendment to the proposed collection strategy, or if adjustments are made to any sampling strategy
2. End of data gathering (assessment stage)
3. Archive compilation

1 – Digital Data

Stakeholders

WA Project Manager; WA Archives Manager; WA Geomatics & BIM Manager; The Collection Museum; Senior Historic Environment Officer at HL and the Historic Environment Officers at LCC; ADS

Selection

Location of Data Management Plan (DMP)

This document is designed to link to the project Data Management Plan (DMP), which can be supplied on request.

To promote long-term future reuse deposition file formats will be of archival standard, open source and accessible in nature following national guidance from ADS 2013, ClfA 2014d and the requirements of the digital repository.

Any sensitive data to be handled according to Wessex Archaeology data policy to ensure it is stored and transferred securely. The identity of individuals will be protected in line with GDPR. If required, data will be anonymised and redacted. Selection and retention of sensitive data for archival purposes will occur in consultation with the client and relevant stakeholders. Confidential data will not be selected for archiving and will be handled as per contractual obligation.

Document type	Selection Strategy	Review Points
Site records	Most records will be completed digitally on site (with the exception of registers). All will be selected for deposition.	3
Reports	To include WSIs, Interim reports, post-excavation assessment reports, publication reports. Final versions only will be selected for deposition.	2, 3
Specialist reports	Specialist reports will generally be incorporated in other documents with only minimal editing (reformatting, etc), and will be selected only if the original differs significantly from the incorporated version.	2, 3



Photographic media (site recording)	Substandard and duplicate images will be eliminated; pre-excavation images may not be selected where duplicated by post-excavation shots; working shots will be very rigorously selected to include only good quality images with potential for reuse and those integral to understanding features, their inter-relationships and location on site; site condition and reinstatement photos will not be selected.	2, 3
Photographic media (objects)	Images of individual or groups of objects, to include those of significance selected for publication and reporting. Substandard and duplicate images will be eliminated; all others will be selected.	3
Photographic media (photogrammetry)	All terrestrial photogrammetry recording will generate orthographic photos. For those features or finds which are particularly archaeological significant, 3D models will be generated and deposited but raw photos will only be selected where models have been selected and OBJs are to be deposited, where re-processing may have some archaeological value (eg very significant features, or where the model is less accurate than the surveyed georeference targets or of lower quality and the quality of the original photos is good enough to represent a reasonable chance of better future outcomes). Aerial photogrammetry topographic surveys will generate 3D models and orthographic photos, and the final outputs in the form of the report. These will all be selected, but not the raw photos from aerial surveys.	2, 3
Photographic media (community engagement and other activities)	General shots, promotional videos, etc. None will be selected, unless images are generated that are not duplicated in the main site record, but which have specific archaeological value.	3
Survey data	Site survey data will be used to generate CAD/GIS files for use in post-excavation activities. Shapefiles of both the original tidied survey data, and the final phased drawings will be selected.	2, 3
Databases and spreadsheets	Context, finds and environmental data in linked databases. Final versions will be selected. Any specialist data submitted separately will also be selected.	2, 3
LIDAR data	All will be selected	2, 3
Laser Scan data	All will be selected	2, 3
Geophysical data	RAW data and Interpretation Geo-tiffs	2, 3
Administrative records	Includes invoices, receipts, timesheets, financial information, email correspondence. None will be	3



	selected, with the exception of any correspondence relating directly to the archaeology.	
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De-Selected Digital Data

De-selected data will be stored on WA secured servers on offsite storage locations. The WA IT department has a backup strategy and policies that involves daily, weekly and monthly and annual backups of data as stated in the DMP. This strategy is non-migratory, and original files will be held at WA under their unique project identifier, as long as they remain useful and usable in their final version format. This data may also be used for teaching or reference collections by the museum, or by WA unless otherwise required by contractual or copyright obligations.

Amendments

Date	Amendment	Rationale	Stakeholders

2 – Documents

Stakeholders

WA Project Manager; WA Archives Manager; The Collection; Senior Historic Environment Officer at HL and the Historic Environment Officers at LCC

Selection

A security copy of all paper/drawn records is a requirement of ClfA guidelines. This will be prepared on completion of the project, in the form of a digital PDF/A file. If the security copy is not required for deposition by Stakeholders, it will be retained on backed-up servers belonging to Wessex Archaeology.

Note that some information may be redacted to comply with GDPR legislation (personal data).

Document type	Selection Strategy	Review Points
Site records	Selected records only will be completed in hard copy on site (registers, some graphics). All will be selected for deposition.	3
Reports	Hard copies of all reports (SSWSIs, Interim reports, post-excavation assessment reports, publication reports). All will be selected for deposition, with the exception of earlier versions of reports which have been clearly superseded.	2, 3
Specialist reports & data	Specialist reports will generally be incorporated in other documents with no significant editing.	2, 3



	Supporting data is more likely to be included in the digital archive, but if supplied in hard copy and not incorporated elsewhere, this will be selected.	
Photographic media	X-radiographic plates: all will be selected.	3
Secondary sources	Hard copies of secondary sources will not be selected.	3
Working notes	Rough working notes, annotated plans, preliminary versions of matrices etc, will not be selected.	3
Administrative records	Invoices, receipts, timesheets, financial information, hard copy correspondence. None will be selected, with the exception of any hard copy correspondence relating directly to the archaeology.	3

De-Selected Documents

De-selected sensitive analogue data will be destroyed (shredded) subject to final checking by the WA Archives team with the remainder recycled. Possible exceptions include records retained for business purposes, including promotional material, teaching and internal WA library copies of reports.

Amendments

Date	Amendment	Rationale	Stakeholders

3 – Materials

Material type	Artefacts (bulk and registered finds)	Section 3.	3.1
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Stakeholders

WA Archives Manager; WA Finds Manager; WA internal specialists; external specialists (if required); The Collection; Senior Historic Environment Officer at HL and the Historic Environment Officers at LCC; landowner

Selection

Note that human remains are not included in this selection strategy; their recovery and subsequent treatment and curation will be governed by a Ministry of Justice licence(s).

The on-site finds recovery strategy is given below; it is of necessity fairly generic. It is anticipated that this will be reviewed and updated at the project assessment stage, once all collected finds have been processed and quantified. Amendments may be made prior to that on site in the event



of unforeseen discoveries necessitating adjustments to recovery or sampling strategies (eg production sites, large concentrations of building debris, 'burnt mounds').

Throughout the following section, 'stratified' is taken to include topsoil deposits, while 'unstratified' indicates anything completely separated from context eg spoilheap finds, or surface finds other than those directly associated with underlying features.

Find Type	Selection Strategy	Review Points
Animal bone	All will normally be collected from stratified contexts. Selection could be recommended at next review point, dependent on stratigraphic integrity, condition and size of assemblage.	2, 3
Building materials (other, eg, mortar, plaster, <i>opus signinum</i>)	If found <i>in situ</i> , these should be recorded on site and, if appropriate, a small sample of <i>opus signinum</i> or wall plaster (not mortar) retained for further examination. Loose fragments of mortar or <i>opus signinum</i> should not be collected, but their presence on site should be noted. All loose wall plaster will be collected from stratified contexts. Selection likely to be recommended at next review point.	2, 3
Burnt (unworked) flint	All will normally be collected from stratified contexts. Selection likely to be recommended at next review point.	1 (if large quantities encountered), 2, 3
Ceramic building material	All CBM from stratified contexts will be collected and reviewed at the processing stage. If <i>in situ</i> structures are encountered, these should be fully recorded on site, but samples of components may be collected for a closer examination of form, fabric and dimensions. Selection likely to be recommended at next review point.	1 (if large quantities encountered), 2, 3
Ceramic objects	Includes spindlewhorls, loomweights, slingshot, portable kiln furniture, etc. All will be collected, including any unstratified examples.	2, 3
Clay tobacco pipes	All will normally be collected from stratified contexts. Selection likely to be recommended at next review point.	2, 3
Coins	All will be collected, including unstratified finds.	2, 3
Fired clay	Includes structural material ('daub') as well as briquetage, and undiagnostic fragments. All will be collected from stratified contexts. Selection likely to be recommended at next review point.	2, 3
Glass, vessel and window	All will normally be collected from stratified contexts. Unstratified post-medieval/modern	1 (if large quantities)



	material will not be collected, unless of intrinsic interest. If large-scale post-medieval/modern bottle dumps are encountered, items will be recorded <i>in situ</i> as far as possible, and a small sample collected. Selection likely to be recommended at next review point.	encountered), 2, 3
Glass, objects	All will be collected, including unstratified finds	2, 3
Jet, shale, amber	All will be collected, with the possible exception of unstratified unworked shale or shale-working waste. Selection could be recommended at next review point, dependent on condition.	2, 3
Leather and textile	All will be collected, including unstratified finds. Selection could be recommended at next review point, dependent on date and condition.	2, 3
Marine shell	All will normally be collected from stratified contexts. If large-scale dumps are encountered, an appropriate sampling strategy may be employed with the aim of characterising the shell assemblage (species, condition, potential sources, management of oyster beds, etc). All shell-working waste will be collected. Selection likely to be recommended at next review point.	1 (if large quantities encountered), 2, 3
Metalwork	All will be collected from stratified contexts, with the exception of obviously modern (19 th -/20 th -century) objects found in topsoil/overburden or unstratified. Selection likely to be recommended at next review point.	2, 3
Metalworking residues	All will be normally collected from stratified contexts. Selection likely to be recommended at next review point.	2, 3
Pottery, prehistoric	All will be collected, including unstratified finds.	2, 3
Pottery, all other periods	All will be collected from stratified contexts. From unstratified contexts, only pieces of intrinsic interest will be collected, unless this is the only datable material recovered. Selection could be recommended at next review point.	2, 3
Stone, building	<i>In situ</i> architectural fragments and other building material may be recorded on site rather than collected, and samples taken for geological identification. Other building stone will be collected from stratified contexts. From unstratified contexts, only pieces of intrinsic interest (eg, architectural fragments). Selection likely to be recommended at next review point.	2, 3



Stone, portable objects	All will be collected from stratified contexts. From unstratified contexts, only identifiable objects.	2, 3
Stone, unworked	Unworked stone will only be collected if considered to be archaeologically significant, ie included in features intentionally, or thought to have fulfilled a specific function.	2, 3
Worked bone and antler	Includes finished objects as well as boneworking waste. All will be collected, including unstratified finds.	2, 3
Worked flint	All will be collected.	2, 3
Worked wood	This includes all structural timbers as well as any portable objects (e.g. vessels, implements, etc). Structural timbers found <i>in situ</i> should be recorded stratigraphically but may be sampled for species identification and/or dating without full recovery. All other will be collected, with the exception of unstratified and undiagnostic pieces. Selection could be recommended at next review point.	1 (if <i>in situ</i> finds encountered), 2, 3

Uncollected Material

Finds which fall outside the categories proposed for on-site collection will not normally be recorded beyond a general comment on site recording sheets on the presence and nature of large concentrations (eg building materials, modern debris), but if specific sampling strategies are employed to deal with, for example, production waste, then a more accurate guide to the actual size of the parent assemblage (and thus the sample percentage) will be given.

Any uncollected material will be left *in situ* or (if collected and then de-selected), re-incorporated into the site.

De-Selected Material

Consideration will be given to the suitability for use for handling or teaching collections by the museum or Wessex Archaeology, or whether they are of particular interest to the local community. De-selected material will either be returned to the landowner or disposed of. All will be adequately recorded to the appropriate level before de-selection.

Amendments

Date	Amendment	Rationale	Stakeholders

3 – Materials



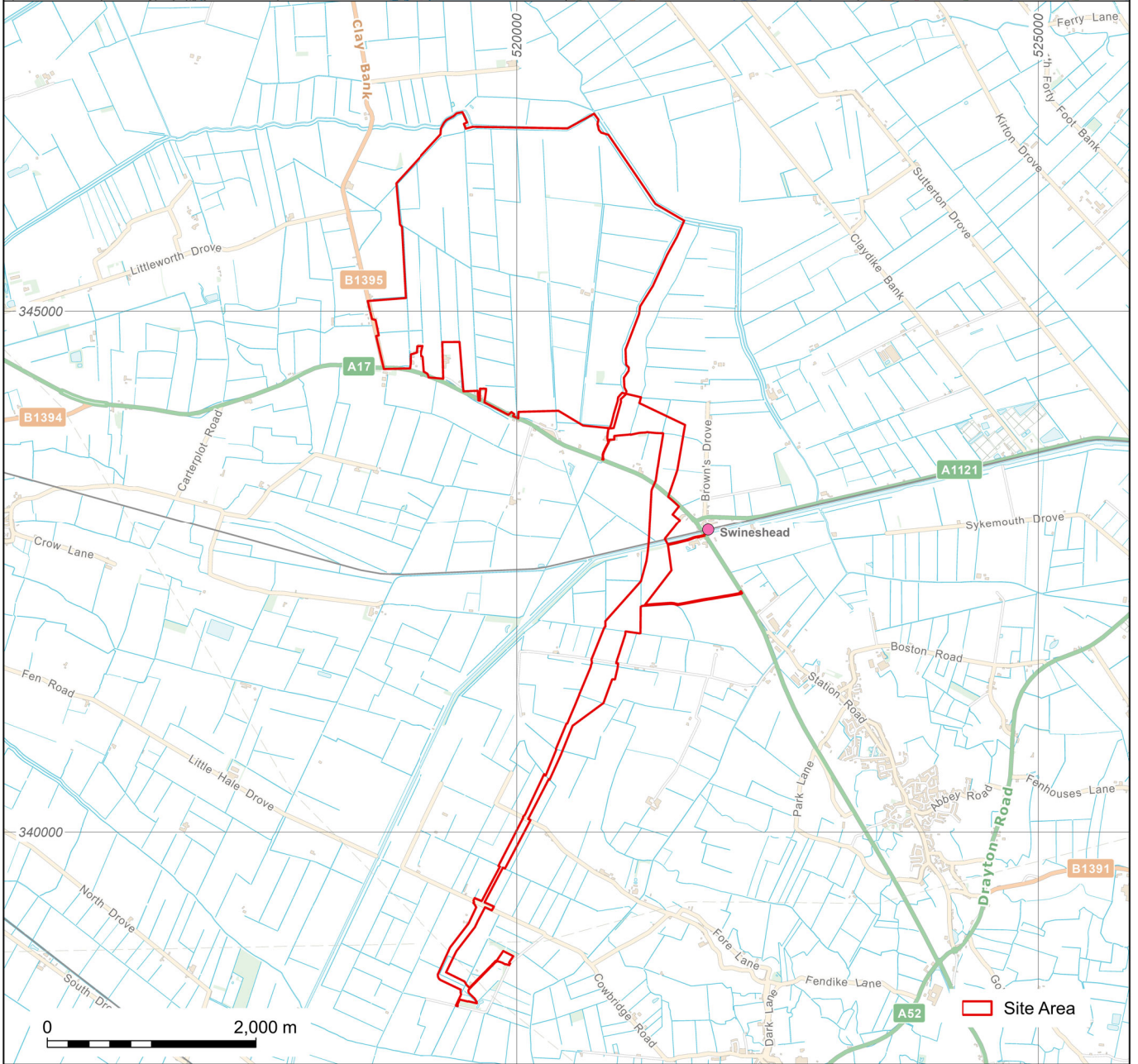
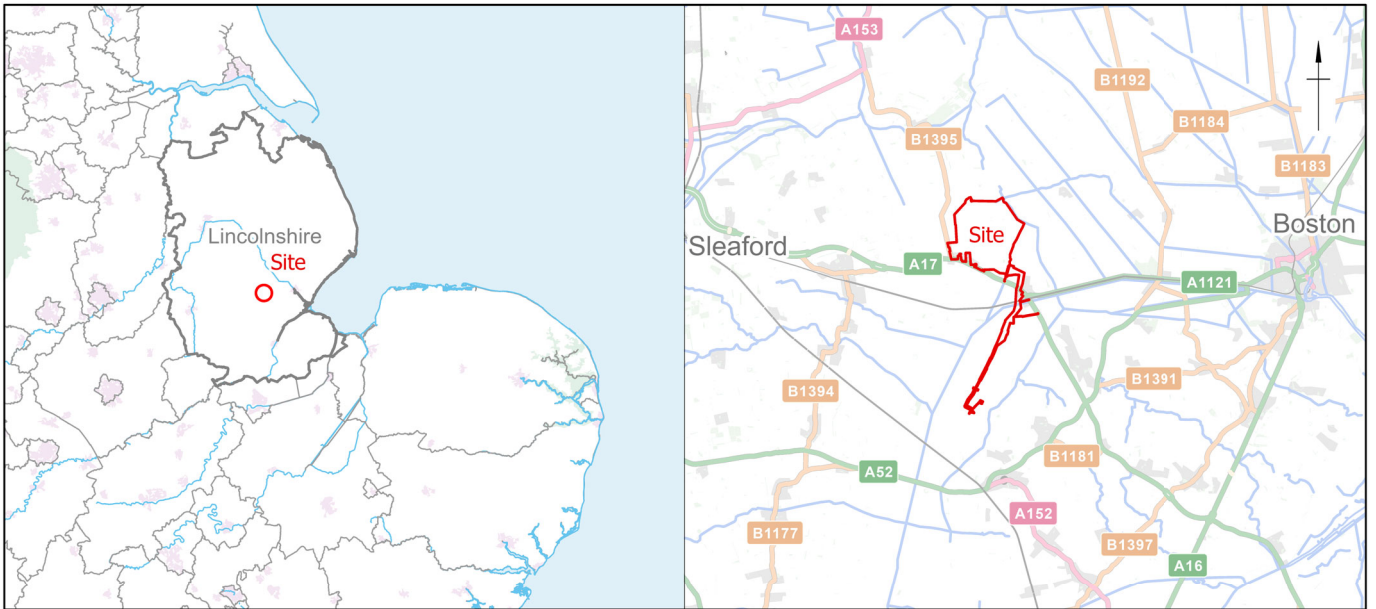
Material type	Palaeoenvironmental material	Section 3.	3.2
Stakeholders			
WA Archives Manager; WA Environmental Officer; WA internal specialists; external specialists (if required); The Collection; Senior Historic Environment Officer at HL and the Historic Environment Officers at LCC			
Selection			
All contexts suitable for environmental sampling will be considered for sampling. All environmental sampling will be undertaken following Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015a) and as stated in relevant WSI.			
Env Material Type	Selection Strategy	Review Points	
Unprocessed samples	In the event of any samples being eliminated from processing due to lack of archaeological significance, these will not be retained.	2, 3	
Unsorted residues	Residues from samples not proposed for further analysis will be de-selected, with the possible exception of any taken for the recovery of human remains.	2, 3	
Assessed flots with no extracted materials	Assessed flots with no extracted materials are considered to be devoid of any significant environmental evidence and will be de-selected.	2, 3	
Assessed or analysed flots with extracted materials	All analysed samples will be selected; assessed flots with extracted materials with no further research potential (to be established on a sample by sample case) may be de-selected.	2, 3	
Charred & waterlogged plant remains	All extracted plant remains will be selected	3	
Mollusca	All extracted mollusca will be selected	3	
All other analysed material (eg insects, pollen)	All material will be selected	3	
Uncollected Material			
Any uncollected material will be left <i>in situ</i> or re-incorporated into the site.			
De-Selected Material			



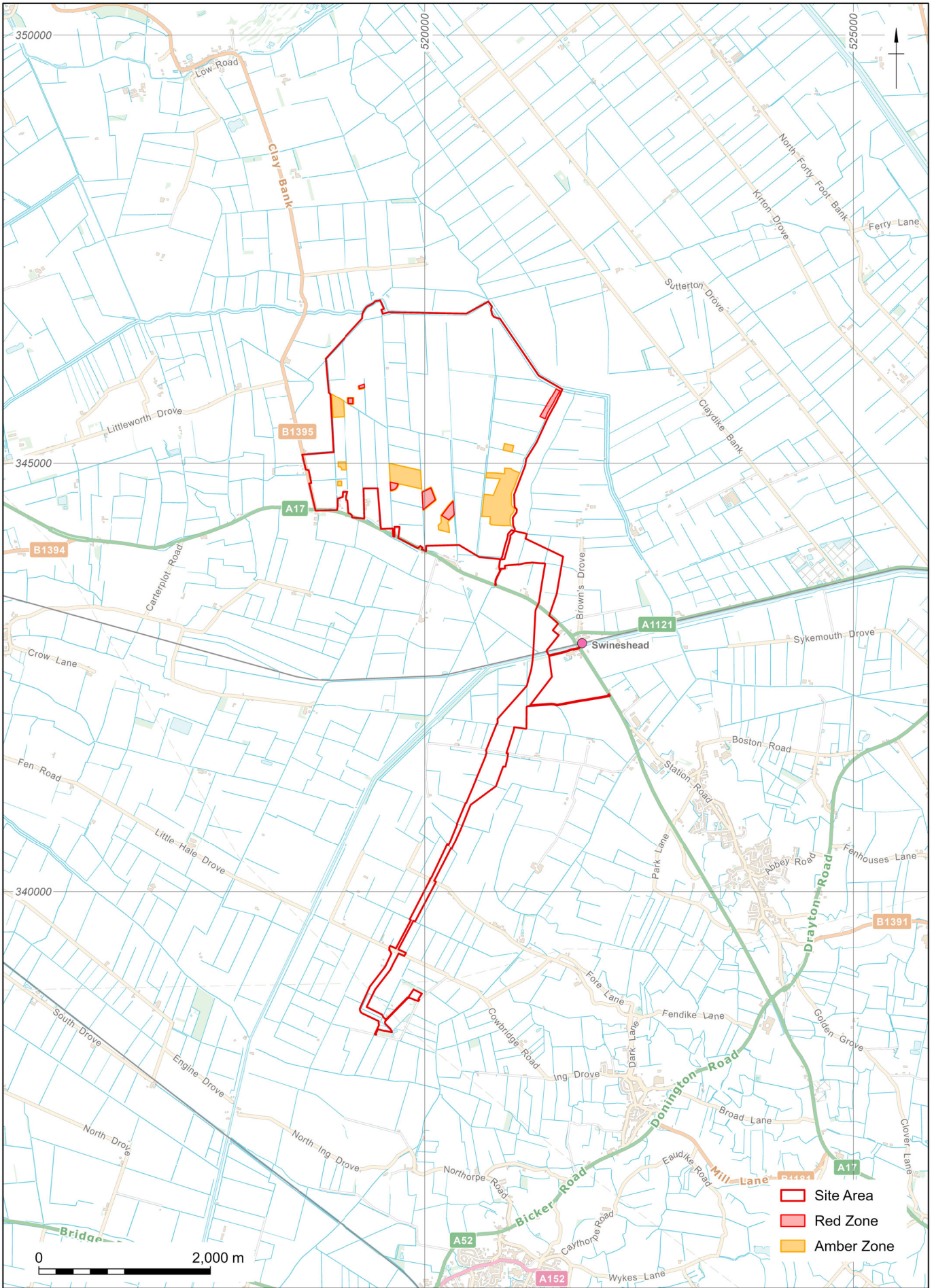
De-selected material from samples will be disposed of after processing and post-excavation recording. All processed material will be adequately recorded to the appropriate level before de-selection.

Amendments

Date	Amendment	Rationale	Stakeholders



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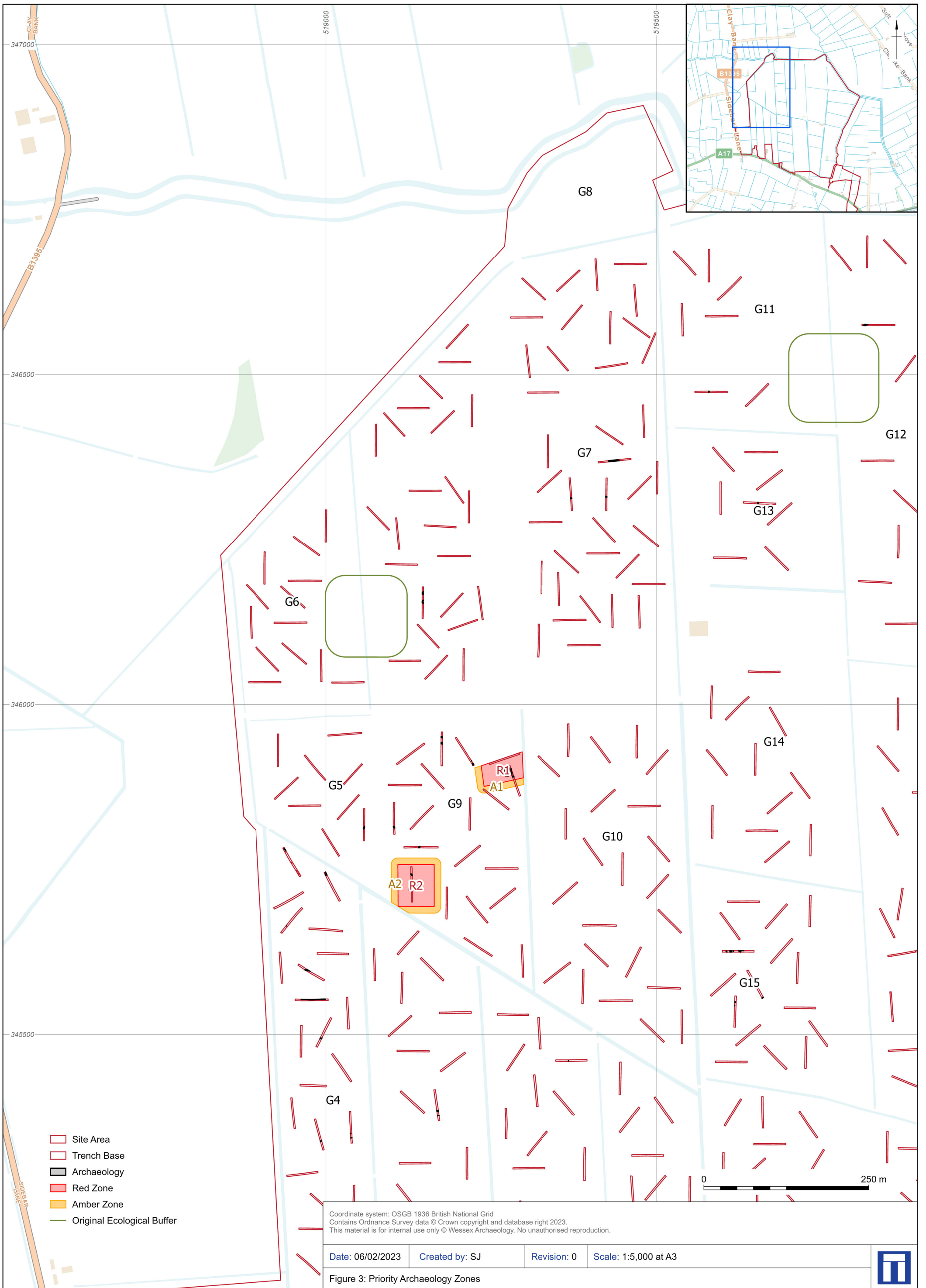


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Figure 2: Priority Archaeology Zones





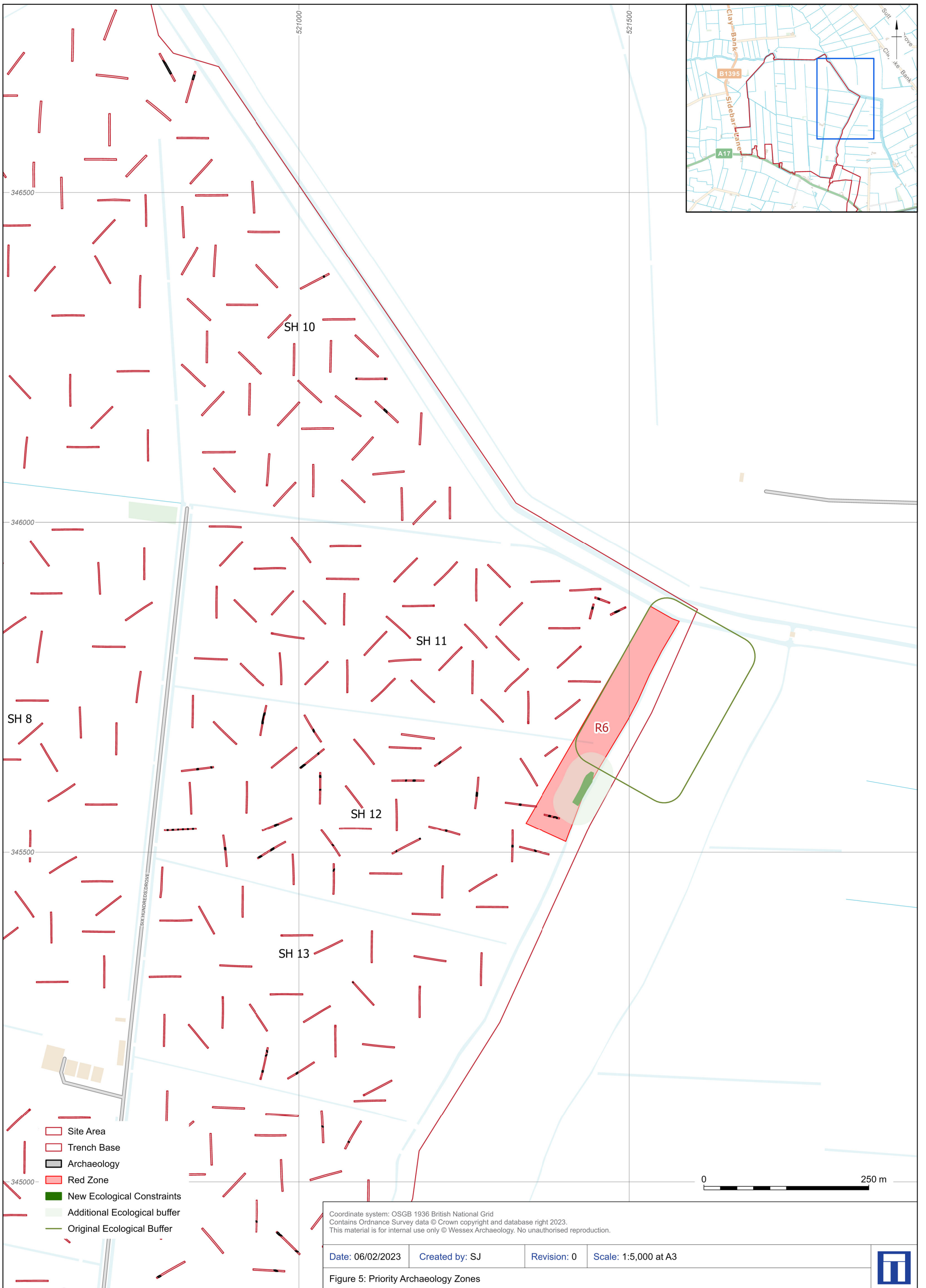
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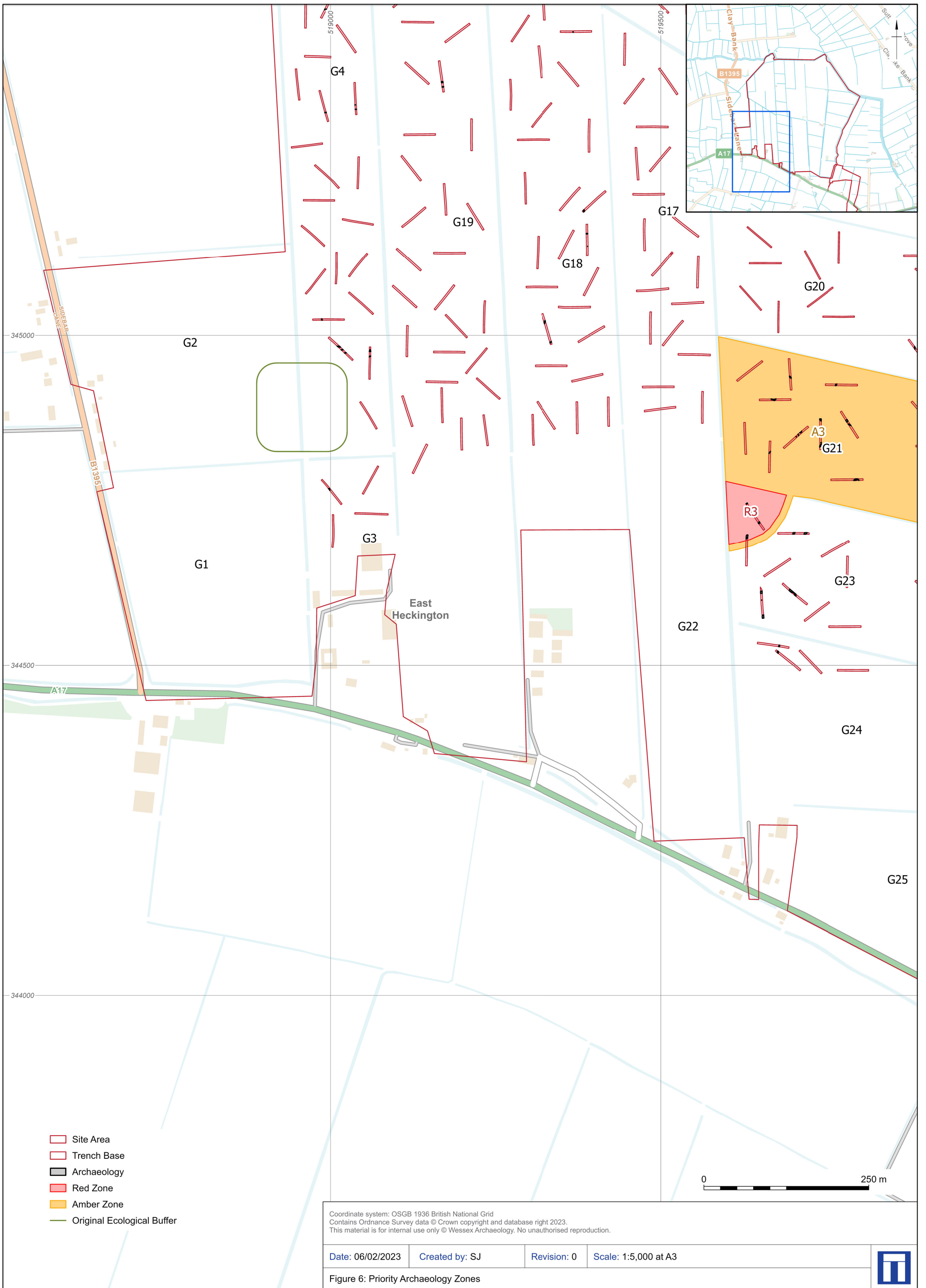
Date: 06/02/2023 Created by: SJ Revision: 0 Scale: 1:5,000 at A3

Figure 3: Priority Archaeology Zones







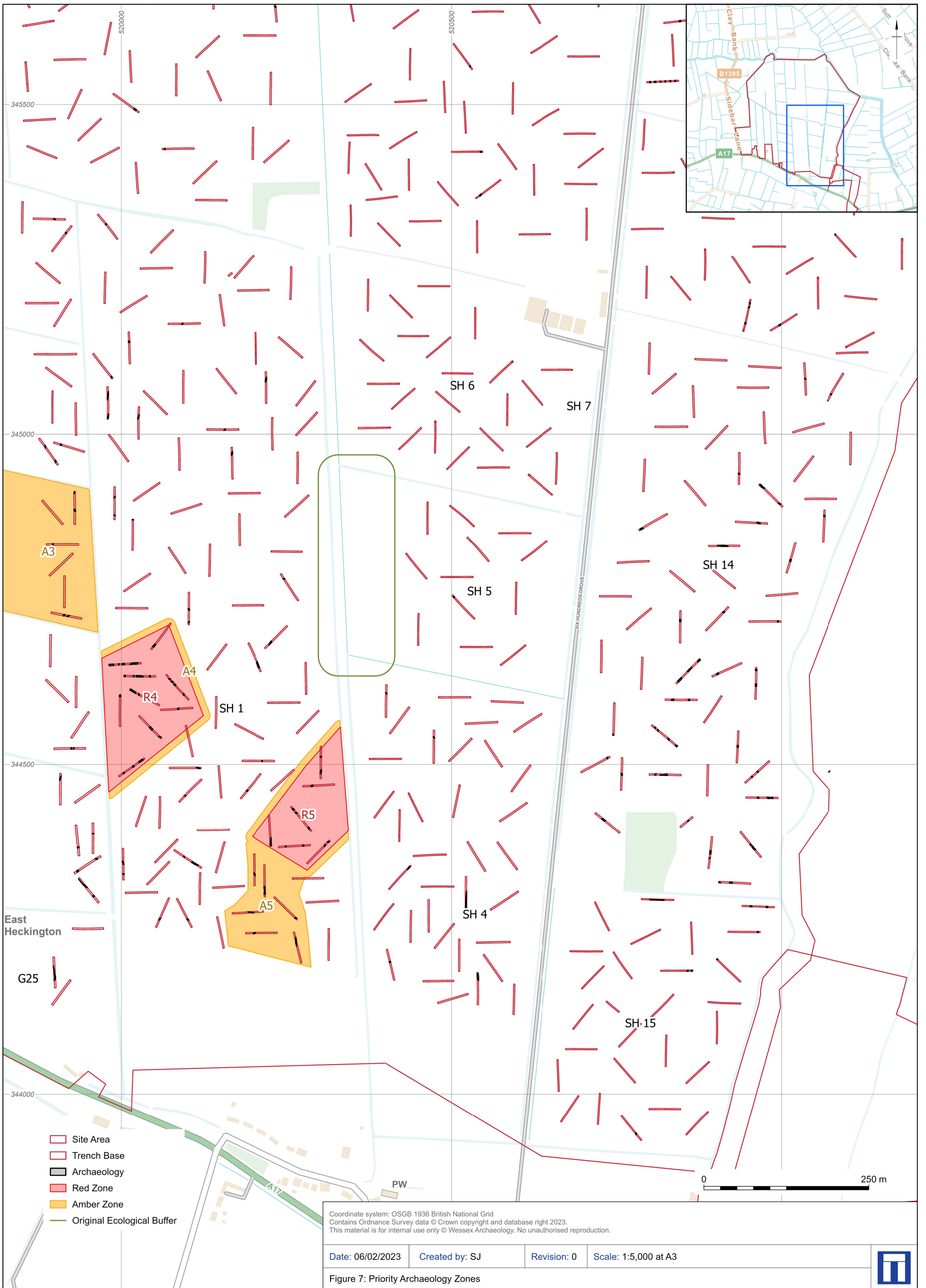


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Figure 6: Priority Archaeology Zones





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Figure 7: Priority Archaeology Zones





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