KEADBY
NEXT GENERATION
POWER STATION
Hydrogen-enabled flexible power

A collaboration between SSE Thermal and Equinor

The Keadby Next Generation Power Station Project

Document Ref: 7.7

Planning Inspectorate Ref: EN0110001

The Keadby Next Generation Power Station Development Consent Order [year]

Land at, and in the vicinity of, the existing Keadby Power Station (Trentside, Keadby, Scunthorpe DN17 3EF)

Outline Written Scheme of Investigation

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(q)

Applicant: Keadby Next Generation Limited

Date: August 2025

Version: V0

ARUP DWD AECOM

Document History

Document Ref	7.7 / Outline Written Scheme of Investigation
Version	V0
Document Owner	AECOM

Glossary

Abbreviation	Description
ADS	Archaeology Data Service
aOD	above Ordnance Datum
BGL	Below Ground Level.
BGS	British Geological Survey
ClfA	Chartered Institute for Archaeologists
CLC	Construction Leadership Council
CPR	Charred Plant Remains
CSCS	Construction Skills Certification Scheme
DBA	Desk Based Assessment
DCO	Development Consent Order
EH	English Heritage
EMHERF	East Midlands Historic Environment Record Framework
ES	Environmental Statement
GPA	Good Practice Advice
HEO	Historic Environment Officer
HER	Historic Environment Record
NGR	National Grid Reference
NHLE	National Heritage List for England
NLC	North Lincolnshire Council
NPPF	National Planning Policy Framework

Abbreviation	Description
OASIS	Online Access to the Index of Archaeological Investigation Scheme
OD	Ordnance Datum
OS	Ordnance Survey
OWSI	Outline Written Scheme of Investigation
PPE	Personal Protective Equipment
PCC	Power and Carbon Capture
RAMS	Risk Assessment and Method Statement
UPD	Updated Project Design
WSI	Written Scheme of Investigation

Contents

Figures

Executive Summary

1. Keadby Next Generation Limited (the 'Applicant') is seeking development consent for the construction, operation and maintenance of a new combined cycle gas turbine ('CCGT') electricity generating station on land at, and in the vicinity of, the existing Keadby Power Station, Trentside, Keadby, Scunthorpe DN17 3EF ('the Site'). The Keadby Next Generation Power Station ('the Proposed Development') is a new CCGT electricity generating station with a capacity of up to 910MW electrical output. The CCGT electricity generating station will be designed to run on 100% hydrogen and able to run on 100% natural gas or a blend of natural gas and hydrogen and will be located on land to the west of Keadby 1 and Keadby 2 Power Stations.
2. This Outline Written Scheme of Investigation (OWSI) describes the archaeological evaluation, and mitigation works to be carried out in association with the Proposed Development. This document sets out the additional actions which will be undertaken to assess the impact of the Proposed Development on the archaeological potential of the Site and inform the development and refinement of appropriate mitigation measures. A written scheme of investigation will be prepared before the construction of the Proposed Development, or before any part of the Proposed Development is constructed. Each written scheme of investigation will comply with this OWSI and will identify any further areas requiring investigation and the nature and extent of the investigation required in order to preserve by knowledge or in-situ any archaeological features that are identified, and the measures to be taken to protect, record or preserve any significant features found. If required, the OWSI will be supplemented to mitigate impacts from the Proposed Development on archaeological assets, by further schedules of archaeological requirements or stage specific WSI. This is proposed to be secured by a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).
3. This document provides an overview of the Proposed Development and Site conditions. It outlines the initial investigation and methodology that will be adopted and describes how the fieldwork will be reported. It goes on to identify and establish responsibility for key components and describes how mitigation would be undertaken, if required. Additionally, it contains information about how unexpected discoveries would be handled in accordance with the relevant regulations, and the health and safety requirements which would need to be considered when conducting fieldwork.

1. Introduction

1.1. Overview

1.1.1. This Outline Written Scheme of Investigation ('OWSI') (**Application Document Ref. 7.7**) has been prepared by AECOM on behalf of Keadby Next Generation Limited (the 'Applicant'). It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO') for a proposed high-efficiency combined cycle gas turbine (CCGT) electricity generating station (the Proposed Development).

1.1.2. This OWSI should be read in conjunction with **ES Volume I Chapter 15**: Cultural Heritage of the ES **(Application Document Ref. 6.2.15)** and **ES Volume II Appendix 15A**: Cultural Heritage Desk-based Assessment **(Application Document Ref. 6.3.24).**

1.1.3. This document comprises an OWSI, the purpose of which is to set out the scope and methodology for the archaeological mitigation works to be undertaken by the Applicant and their appointed archaeological contractor ('the Archaeological Contractor'). In addition, the requirements and responsibilities of the Archaeological Contractor, the Applicant and the Archaeological Consultant have been set out to assist the Archaeological Contractor in the completion of the fieldwork.

1.1.4. The archaeological mitigation works comprises archaeological monitoring of intrusive groundworks within the Main Site and the Construction Laydown Area (refer to Figure 2).

1.1.5. In addition, a programme of geoarchaeological assessment has been agreed with the Archaeological Advisor to the North Lincolnshire Council (the 'LPA'). A broad outline of the scope and timeframes for reporting are set out later in this document, however no detailed scope or methodology is included in this OWSI as the works are underway.

1.1.6. The works specified in this document will be undertaken on behalf of the Applicant by a competent and suitably qualified Archaeological Contractor who is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), or with equivalent demonstrable experience.

1.1.7. All archaeological works will be carried out in accordance with this OWSI, the Site-Specific WSIs (refer to Section 4) and any further specifications approved by the Archaeological Advisor to the Local Planning Authority (LPA). The works will be undertaken in accordance with the guidance provided by CIfA, including the Code of Conduct (2022) and the Standard

and Universal Guidance for Archaeological Monitoring and Recording (2023a; 2023b), and other current and relevant good practice and standards and guidance.

1.1.8. Site-specific WSIs will be prepared taking into account the detailed design within the identified archaeological mitigation areas. This is secured through a requirement of the Draft DCO (**Application Document Ref. 3.1**) which requires the submission of a WSI for each part of the Site, which must be in general accordance with this OWSI.

1.2. The Proposed Development

1.2.1. The Proposed Development comprises the construction, operation (including maintenance) and eventual decommissioning of a high-efficiency combined cycle gas turbine (CCGT) electricity generating station on land located in the vicinity of the existing Keadby Power Stations (Keadby 1 and Keadby 2) near Scunthorpe in North Lincolnshire (the 'Site'). Further details related to the location of the Site are provided within **ES Volume I Chapter 3**: The Site and Surrounding Area (**Application Document Ref. 6.2.3**) and details of the Proposed Development are presented in **ES Volume I Chapter 4**: The Proposed Development (**Application Document Ref. 6.2.4**).

1.2.2. The Site is located within the administrative boundary of North Lincolnshire Council (a unitary authority) and is bounded to the south by the Stainforth and Keadby Canal, to the east by the River Trent, to the west by the former Keadby Ash Tip which includes historical landfill, and to the north by agricultural fields in which the Keadby Windfarm is located.

1.2.3. The full extent of the Site is shown on Figure 1, and the components of the Proposed Development relevant to this OWSI are the Main Site and Construction and Laydown Areas which are shown on Figure 2.

1.2.4. The Main Site is located within an area of the Keadby Power Station Site called Keadby Common, in the north-western corner of the Site. The Main Site is currently occupied by improved grassland. The CCGT component of the Proposed Development will be constructed within this area and it is assumed that ground levelling and raising, as well as piling and installation of below ground structures and pipework, will be required across the entire Main Site area.

1.2.5. The Construction and Laydown Area relevant to this OWSI is located to the south of the Stainforth and Keadby Canal, adjacent to the construction and operational access road from the A18. This area is an area of farmland currently under intensive arable management, as well as a strip of land to its immediate north which is currently mown improved grassland,

and an area of hardstanding used for Keadby 2 Power Station laydown. It is assumed that ground levelling will be required across the entire Construction and Laydown Area.

1.3. Structure of this Document

1.3.1. The document is structured as follows:

- Section 1 describes the Proposed Development and the purpose and structure of this document;
- Section 2 describes the background information relevant to this document;
- Section 3 sets out the scope of work, aims and objectives and methodology for the fieldwork;
- Section 4 sets out the methodology for the site-specific WSI;
- Section 5 describes the fieldwork report deliverables and archive requirements; and
- Section 6 sets out the general project requirements.

2. Background Information

2.1. Topography and Geology

2.1.1. The Site encompasses a large and varied topographical landscape including areas of existing power station infrastructure (notably for Keadby 1 Power Station and Keadby 2 Power Station), fields, landfill sites, former ash tip mounds, temporary spoil heaps, field drainage systems, and existing settlement. Further details on the areas within and surrounding the Site are supplied within **ES Volume I Chapter 3**: The Site and Surrounding Area (**Application Document Ref. 6.2.3**) and supporting **Figure 3.3:** Indicative Parts of the Site Plan (**Application Document Ref. 6.4.4**).

2.1.2. The Main Site is bounded to the north, south, west and east (partially) by linear land drains and separated into two land parcels by an east-west unnamed land drain. This area is relatively flat, at approximately 1m Above Ordnance Datum (AOD) with slightly higher areas of ground, banked either side of the land drains.

2.1.3. To the south of the Stainforth and Keadby Canal, the land is relatively flat, at approximately 2m AOD, with a small parcel of land currently used as a temporary laydown and carparking area associated with the Keadby 2 Power Station.

2.1.4. The majority of the Site lies with an area of Warp (artificially deposited alluvium comprising clay and silt) which in some areas within the eastern extent of the Site is underlain by cohesive and granular alluvium. According to published sources, the Warp consists of a deep sequence of late Pleistocene and Holocene clays, sands, silts and in some areas, peat horizons, reflecting the low-lying, wetland character of the area.

2.1.5. Mercia Mudstone comprises the bedrock beneath the Site extending to significant depth (c. 200m). This bedrock forms an elevated ridge, upon

which the primary historic settlements of Crowle, Belton, Epworth and Haxey are located.

2.1.6. Although not mapped at the site, made ground deposits (up to c. 2m depth below ground level (BGL)) are expected across large areas of the Site given the historical site use.

2.2. Heritage Baseline

Previous Archaeological Investigations

2.2.1. Three phases of archaeological evaluation surveys were undertaken in order to support the planning application for the Keadby CCS Power Station DCO application, the results of which have supported the DCO Application for the Proposed Development and have been used to inform the mitigation requirements.

2.2.2. A geoarchaeological hand-auger survey was undertaken within the Main Site and the Construction and Laydown Areas in February - March 2021.

2.2.3. A total of 21 hand auger boreholes were drilled across the Main Site. The sequence recorded was consistent and recorded a fine buff/ pale grey sand overlain by waterlogged black-brown silty organic sand/ silty peat/ organic silt deposits which contained fibrous woody fragments and measured approximately 0.05 – 0.3m thick. Overlying the organic material were fine-grained silts and clays representing alluvial material from overbank inundation events or deliberate warping activities (deliberate and purposive flooding of fields). The alluvium/ warp deposits were overlain by mid-dark brown silty clay topsoil.

2.2.4. A total of 60 hand auger boreholes were drilled across the Construction and Laydown Area south of the Stainforth and Keadby Canal. The sequence recorded was the same as that recorded in the Main Site, however the organic material was more humified and more consistently a black-grey organic silt or sand. The organic material was recorded in all but 17 of the boreholes and measured approximately 0.04 – 0.35m thick. The alluvium/ warp deposits recorded in this area were thickest towards the south-east of the area, thinning out to the north.

2.2.5. Across both areas, the ground level showed small changes in elevation, reflecting the subtle undulations in the underlying sand deposits. The organic materials were recorded at their thickest in these depressions in the ground and were more waterlogged and more like true peats than the organic material recorded on the higher areas. The survey demonstrated an absence of palaeochannels in the two areas, and that the organic

material has accumulated as a result of the undulations in the soft sand surface.

2.2.6. The auger survey identified organic deposits across both areas which have the potential to contain paleoenvironmental data and waterlogged archaeological remains. The underlying sands also have the potential to preserve multi-period land surfaces from the later prehistoric period onwards.

2.2.7. A geophysical survey was also undertaken across the Main Site and Construction Laydown Areas in April 2021.

2.2.8. The survey identified a number of anomalies of possible archaeological origin including linear and rectilinear anomalies which may represent partial enclosures; and linear anomalies associated with agricultural activities including warping systems and ploughing.

2.2.9. Subsequently, trial trench evaluation was undertaken across the Main Site and the Construction and Laydown Areas in March - April 2022.

2.2.10. The trial trenching comprised 50 trenches across the two areas. A total of 26 trenches were located within the Main Site and a total of 24 trenches were located within the Construction and Laydown Area south of the Stainforth and Keadby Canal.

2.2.11. The majority of the features identified during the trial trenching related to the post-medieval process of flood warping. Further features identified relate to former field boundaries/ drainage relating to land use before and after the warping process. The remaining features identified comprised modern land drains. All of the features clearly post-date the formation of the peat throughout the two areas, having been cut into this deposit. The possible enclosures identified in the geophysical survey were not identified in the trial trenching, and the features were confirmed to form part of the post-medieval warping drains, and no evidence for enclosures was identified.

2.2.12. Geoarchaeological trial pits were undertaken across the two areas, within the trial trenches, in order to characterise the deposit sequence across the two areas. This comprised the Sutton Sand Formation, overlain by a thin but variable layer of silty-clay peat, which in turn was overlain by post-medieval / modern alluvial warp which was likely deposited as part of deliberate flooding events. Across the Main Site, the alluvial warp deposits were partially or fully truncated in some trenches, which most likely occurred during the removal of the historic landfill which is recorded as previously occupying the area. In Trench 21 within the Main Site, the peat

and alluvial warp deposits were fully truncated and a made ground deposit containing various industrial materials directly overlay the natural sands.

2.2.13. The geoarchaeological trial pits were also assessed to identify any potential buried land surfaces. No such archaeological features or artefacts were identified. A total of five column samples and associated bulk samples were retrieved across both areas for further paleoenvironmental assessment and radiocarbon dating. The samples were predominantly collected within hollows of the natural sands where the peat deposits were at their thickest.

2.3. Archaeological and Historical Background

2.3.1. The archaeological and historical background of the Site has been set out in detail in a desk-based assessment (**ES Volume II Appendix 15A**, (**Application Document Ref. 6.3.24**), and is summarised here.

2.3.2. Palaeoenvironmental remains are considered heritage assets based on their potential to reconstruct past environments. The presence of peat deposits within the Site and study area has been demonstrated, with deposition occurring between the Late Neolithic and Iron Age periods. Further, palaeochannels pre-dating post-medieval drainage schemes have been identified to the northeast and south of the Site, indicating the presence of a former channel (approximately 13-14m below ground level) of the River Trent beneath the footprint of the Keadby 1 Power Station, with a possible area of higher ground (eyot) to the east.

2.3.3. The majority of known evidence for prehistoric activity is located on the higher ground ridges of Crowle and Belton, where remains are not buried beneath post-medieval warping sediments and earlier periods/ events of alluviation. Baseline assessment has demonstrated that peat deposition occurred in the late Neolithic period, and there is potential for a buried pre-Neolithic land surface to exist beneath this.

2.3.4. The wetland marsh environment from the Late Neolithic onwards, would be attractive to populations, yielding rich resources (peat, fish, game, plants, wood). The proximity of the area to known sites of prehistoric settlement (such as at Crowle) mean that that this wetland environment would have been easily accessible during these periods. Evidence of Bronze Age activity in the wider area includes a hoard of socketed axes and a Bronze Age shield, and a possible one-tree log boat identified near White House Farm. The latter was found within a peat layer and demonstrates the preservation potential of such deposits.

2.3.5. The recovery of Romano-British ‘bog body’, dated to the late 3rd to 4th centuries c. 270m north of the Site demonstrates the level of preservation

that peat provides, as well as demonstrating Roman activity within the area. Roman occupation is known to have occurred at Crowle, which may have functioned as a trading post at this time. A possible small Romano-British settlement is thought to exist within the eastern limits of the Site based on a recorded pottery scatter. This settlement may be associated with occupation of an eyot (island) during this period.

2.3.6. The place names Keadby and Gunness suggest Viking derivation, with Keadby thought to mean 'Kaeti or keti's farmstead' and Gunness to mean 'Gunni's headland'. If settlements existed here at this time they may have been connected to retreating positions of the Danes, mentioned in 11th century Anglo-Saxon chronicles as Danes taking shelter in the marshlands of Axholme in order to use its sea and river connections.

2.3.7. Throughout the medieval period the Site is likely to have remained marshland, used as summer pasture and exploited for the rich fishing and hunting resources that such an environment provides. To date however, no medieval remains have been identified within the Site and the only remains recovered in the vicinity of the Site is a lead spindlewhorl, found in a garden in Gunness.

2.3.8. The post-medieval period saw dramatic and systematic drainage programmes on the Isle of Axholme, converting areas of marshland and moorland into organised, drained and fertile enclosures to create an entirely new landscape. The work comprised cutting of new drains, constructions of dykes, re-directing the flow of the island's bounding rivers, and warping systems. The ambitious programme began in the 1620s, designed by Cornelius Vermuyden, who had been commissioned by Charles I to drain the land.

2.3.9. The first power station was constructed within the Keadby Power Station site and opened in 1952. The power station was coal fired and comprised a coal store, compounds, chimneys, conveyors, turbine house, boiler house and further features. The power station operated until 1984 and was replaced in 1996 by Keadby 1 Power Station, a gas fired power station constructed on the main footprint of the previous station in the 1990s. The Keadby 2 Power Station began construction in 2018 and is also located within the Site alongside the extant structures from the Keadby 1 Power Station.

3. Scope of Work

3.1. Overview of Scope

Geoarchaeological Assessment

3.1.1. Following the completion of the previous phases of on-site geoarchaeological assessment undertaken as part of the Keadby CCS Power Station DCO application, the Archaeological Advisor to the LPA confirmed the requirement for a detailed geoarchaeological assessment and report.

3.1.2. The geoarchaeological assessment will broadly comprise progressing environmental samples obtained from previous phases of fieldwork to full analysis, updating the deposit for the Site, integrating all available palaeoenvironmental data and to produce a synthesis of the data for inclusion in a peer-reviewed publication. The geoarchaeological assessment will incorporate all relevant previous phases of fieldwork undertaken across the Site, including those undertaken for the Keadby 1, Keadby 2 and Keadby CCS projects where the data is available.

3.1.3. The assessment is currently underway with reporting anticipated to be completed by January 2026.

3.1.4. The scope and deadlines for the geoarchaeological assessment have been agreed with the Archaeological Advisor to the LPA through email and online meetings.

Archaeological Monitoring

3.1.5. Two areas within the Site have been identified as requiring archaeological monitoring (as shown on Figure 2), these are:

- The Main Site; and
- The Construction and Laydown Area south of Stainforth and Keadby Canal

3.1.6. The assessment presented in **ES Volume III Appendix 15A (Application Document Ref. 6.3.24)** identified organic (peaty) deposits as well as a potential earlier land surface below the peat deposits across the Main Site and the Construction and Laydown Area south of Stainforth and Keadby Canal. These deposits have the potential to contain well-preserved

palaeoenvironmental data and artefacts which could contribute to local and regional research.

3.1.7. Construction activities across these two areas have the potential to result in the removal or truncation of any such remains. As such, archaeological monitoring of any below ground works during construction in these areas will be required, including any topsoil / subsoil stripping. The methodology for this is set out in Section 3.3 below.

Protocol for Unexpected Archaeological Discoveries

3.1.8. In addition to the two components of the Proposed Development identified above which require archaeological monitoring, a protocol for unexpected archaeological discoveries will be implemented across the entire Site for all components of the Proposed Development. The methodology for this is set out in Section 3.4 below.

3.2. Aims and Objectives

General Aims and Objectives

3.2.1. The general aims and objectives of the archaeological works are:

- to identify the presence or absence of surviving archaeological remains within relevant areas of the Site;
- to characterise and date any archaeological features, deposits or finds recovered; and
- to produce a report on the findings of the archaeological works.

Research Framework and Regional Research Agendas

3.2.2. Consideration of research themes is key to understanding the potential evidential significance of archaeological remains.

3.2.3. The East Midlands Historic Environment Research Framework (EMHERF, 2025) should be consulted to identify any relevant research agendas. Provision should be made for updating the EMHERF interactive digital

resource, where the results of a fieldwork project contribute towards agenda topics and noted explicitly in the conclusions of the relevant report.

3.2.4. The Archaeological Contractor will set out specific research frameworks and agendas relevant to the scope of works for that element of the Proposed Development, within the Site-specific WSI.

3.3. Methodology for Archaeological Monitoring

Document Requirements

3.3.1. Prior to the start of works for each component of the Proposed Development set out above in Section 3.1, a Site-specific WSI will be required to be prepared by the Archaeological Contractor and agreed with the Archaeological Advisor to the LPA.

3.3.2. A general outline of the requirements of the content of the Site-specific WSI are set out in Section 4 below.

3.3.3. In addition, the Archaeological Contractor shall prepare and submit a Risk Assessment and Method Statement (RAMS) for the archaeological works prior to the commencement of the works. The RAMS will be submitted to the Applicant and/or their appointed Principal Contractor for their review and approval prior to the commencement of the fieldwork.

Constraints

3.3.4. The Applicant and/or their appointed Principal Contractor will be responsible for identifying all constraints on site, including landscape and ecological considerations, utilities, UXO, contaminated ground etc, and will make all relevant information and reports on any such constraint available to the Archaeological Contractor.

3.3.5. The Applicant and/or their appointed Principal Contractor will be responsible for identifying all hazards on site and shall be aware of the hazards of working close to overhead and buried services, including high voltage overhead cables, and shall be responsible for taking the necessary precautions to ensure all personnel, including the Archaeological Contractor, maintain a safe working distance at all times.

Archaeological Monitoring

3.3.6. The Archaeological Contractor will be present on site as necessary to monitor all excavation and/or soil disturbance for the defined parts of the

Site that require archaeological monitoring as outlined above in Section 3.1.

3.3.7. If archaeological remains are identified, works will cease in the affected areas and the Archaeological Contractor will be given sufficient time to investigate, observe and record the remains as appropriate.

Hand Excavation

3.3.8. Archaeological remains identified for sample excavation will be cleaned and hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the archaeological monitoring. A sufficient sample of deposits/features will be investigated through sample excavation to record the horizontal and vertical extent of the stratigraphic sequence to the level of undisturbed natural deposits. Sample excavation will also target the interrelationships between features and major feature intersections to understand and record their relationships, where these are revealed / identified.

3.3.9. The area of works will be located and mapped using suitable electronic surveying equipment resulting in a digital pre-excavation plan (even if they reveal no archaeological features). The plan will be overlaid at an appropriate and recognisable scale onto the Ordnance Survey national grid (using digital map data).

Archaeological Recording

3.3.10. A full written, drawn and photographic record will be made of all archaeological remains, in accordance with standard archaeological methodologies.

3.3.11. The location and depth of areas monitored will be recorded. The stratigraphic sequence encountered will also be recorded, even where no archaeological deposits have been identified.

3.3.12. Where appropriate, i.e. where archaeological remains are encountered, detailed hand-drawn plans and sections of features will be produced at an appropriate scale (normally 1:50 or 1:20 for plans and 1:10 for sections). All plans and sections will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.

3.3.13. Digital photography (minimum 12-megapixel resolution) will be used to record the archaeological works and will follow Archaeological Data Service (ADS) (2011) advice for secure long-term storage and migration of

files. In addition to records of archaeological features, a number of general site photographs will also be taken to give an overview of the site.

3.3.14. Indices of context records, drawings, samples and photographs will be maintained and checked. These will form part of the project archive. These indexed registers will be fully cross-referenced.

3.3.15. On completion of the field project the site archive will be consolidated, checked to ensure it is internally consistent and ordered as a permanent archive.

Artefact Recovery

3.3.16. All artefacts will be collected, stored and processed in accordance with standard methodologies and national guidelines. All finds, except for modern artefacts, will be collected and retained.

3.3.17. The Archaeological Contractor will clarify their Selection and Retention Strategy in their Method Statement and will ensure that it is in line with CIfA guidelines (2020). Each 'significant find' will be recorded three dimensionally. Similarly, if artefact scatters are encountered these should be also recorded three dimensionally. Bulk finds will be collected and recorded by context.

3.3.18. All recovered artefacts will be stabilised, conserved and stored in accordance with the current national conservation guidelines and standards. If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment.

3.3.19. Artefacts will be stored in appropriate materials and conditions and monitored to minimise further deterioration.

Environmental Sampling

3.3.20. The Archaeological Contractor's Method Statement will outline an appropriate environmental sampling strategy that conforms to this specification. Provision will also be made for the recovery of material suitable for scientific dating.

3.3.21. Any samples taken must come from appropriately cleaned surfaces, be collected with clean tools and be placed in clean containers. They will be adequately recorded and labelled, and a register of all samples will be kept. Once the samples have been obtained, they should be stored

appropriately in a secure location prior to being sent to the appropriate specialist.

Human Remains

3.3.22. If human remains are discovered during the archaeological monitoring, the remains shall provisionally, in accordance with current good practice, be covered and protected and left in situ.

3.3.23. In the event of the discovery of human remains, the Archaeological Contractor will notify the Archaeological Advisor to the LPA and His Majesty's Coroner immediately, and all works in the vicinity of the remains should stop until an agreement has been made as to how to manage the remains.

3.3.24. The removal of human remains, if this is deemed necessary in consultation with the Archaeological Advisor to the LPA, will only take place in accordance with a Ministry of Justice licence and under the appropriate Environmental Health regulations and the Burial Act 1857.

Treasure

3.3.25. Any artefacts which are recovered that fall within the scope of the Treasure Act 1996 and Treasure (Designation) (Amendment) Order 2023, will be reported to the Applicant, the Archaeological Advisor to the LPA and His Majesty’s Coroner immediately.

3.3.26. The Archaeological Contractor will ensure that the Treasure regulations are enforced, and all the relevant parties are kept informed. A list of finds that have been collected that fall under the Treasure Act and related legislation will be included in the fieldwork report.

3.3.27. Artefacts that are classified as 'treasure' will be removed to a safe place. Where removal cannot be affected on the same working day as the discovery, suitable security measures must be taken to protect the finds from damage or unauthorised removal.

Finds Processing

3.3.28. Initial processing of finds (and if appropriate other samples) will be carried out concurrently with the fieldwork. The processing of finds will be finished shortly after completion of the investigations. The finds will be retained (according to the Artefact Recovery section), washed, marked, bagged and logged on a MS Access or GIS database (or equivalent), together with

their locations (if applicable) according to the National Grid (eastings, northings) and Ordnance Datum (height), accurate to two decimal places.

3.3.29. The finds assemblage will be treated, labelled and stored in accordance with the appropriate and current guidance. At all times the Archaeological Contractor shall ensure that the processing of the assemblage is in accordance with the requirements of the local planning authority.

3.3.30. If appropriate, each category of find or each material type will be examined by a suitably qualified archaeologist or specialist and the results incorporated into a fieldwork report.

3.3.31. The deposition of any finds collected during the archaeological monitoring and the related archive forms the final stage of this project.

Unexpectedly Significant or Complex Discoveries

3.3.32. In the event of significant, or important unanticipated archaeological discoveries, an additional WSI, or addendum to the existing Site-specific WSI, may be required to set out the methodology for the detailed recording of the archaeological remains, and to allow adequate time within the construction programme. Under these circumstances the Archaeological Contractor will notify the Applicant immediately, and the remains will be protected from damage. If the remains require investigation beyond the resources allocated to the archaeological monitoring, the Archaeological Contractor will estimate the additional time and resources needed to complete the archaeological investigation and will inform the Applicant. The WSI, or addendum, will be prepared by the Archaeological Contractor and shall be approved by the Archaeological Advisor to the LPA.

Monitoring, Progress Reports and Meetings

3.3.33. Regular progress reports will be sent to the Archaeological Advisor to the Local Planning Authority by the Archaeological Contractor whilst the fieldwork is on-going, the timings of which are to be agreed between all parties.

3.3.34. The archaeological monitoring may be subject to monitoring visits by the Archaeological Advisor to the LPA who will have unrestricted access to the investigation, site records or any other information. The work will be

inspected to ensure that it is being carried out to the required standards and that it will achieve the stated objectives.

3.3.35. A minimum of five working days' notice will be provided to Archaeological Advisor to the LPA of the commencement of the works.

Completion of Fieldwork

3.3.36. The Archaeological Contractor shall confirm completion of the works to the Applicant, the Archaeological Advisor to the LPA within one working day of completing the archaeological works.

3.3.37. The site will be left in a tidy, professional, and safe condition, and the Archaeological Contractor will ensure that all materials brought onto site are removed.

3.3.38. A fieldwork report will be prepared in accordance with the requirements set out in Section 5.

3.4. Protocol for Unexpected Archaeological Discoveries

3.4.1. In the event of unexpected archaeological discoveries being made during construction activities where no archaeological mitigation works are being undertaken (as specified in Section 3 of this OWSI), the Applicant will notify the Archaeological Advisor to the LPA immediately. It is anticipated that all construction works within the vicinity of the unexpected remains will be suspended until completion of any required archaeological excavation and recording is completed in that area.

3.4.2. An additional Site-specific WSI may be required to set out the methodology for the recording of the archaeological remains, and to allow adequate time within the construction programme. The Applicant will liaise with their appointed archaeological advisor in order to determine whether the remains require further investigation.

4. Site-specific Written Scheme of Investigation

4.1. General Requirements

4.1.1. The Archaeological Contractor will be responsible for the production of Site-specific WSIs prior to the commencement of development in that part of the Site. The Site-specific WSIs will be drafted in general accordance with the principles and methods set out in this OWSI.

4.1.2. The Archaeological Contractor will be responsible for the delivery of the archaeological works programme in accordance with the Site-specific WSIs, and this responsibility will include all on-site and off-site archaeological works and recording.

4.1.3. The Site-specific WSIs will be prepared in consultation with and approved by the Archaeological Advisor to the LPA prior to the start of works.

4.1.4. The Site-specific WSIs will be prepared in accordance with current standards and guidance and should include the following sections as a minimum:

- a statement on the technical, research and ethical competences of the project team, including relevant professional accreditation;
- site location (including map) and descriptions;
- context of the project;
- geological and topographical background;
- archaeological and historical background;
- general and specific research aims of the project, with reference to Regional Research Frameworks;
- methodology;
- collection and disposal strategy for artefacts, ecofacts, and all paper, graphic and digital materials (including Data Management Plan and Selection Strategy);
- arrangements for immediate conservation of artefacts;
- post-fieldwork assessment and analysis of project data;
- report preparation (including details of the section headings);
- publication and dissemination proposals, as required;
- archive proposals including museum accession numbers;
- copyright;
- details of finds storage;
- programme and staffing;

- health and Safety considerations;
- environmental protection considerations; and
- monitoring procedures.

5. Reporting

5.1. Fieldwork Report

5.1.1. A fieldwork report will be required following the completion of each stage of archaeological fieldwork as set out in Section 3.1

5.1.2. The fieldwork report will include the following as a minimum:

- a brief summary of the results;
- a plan of the site location;
- a plan of the area of investigations;
- archaeological and historical background;
- detailed plans and sections to a known scale (if appropriate);
- general and detailed photographs, as appropriate; and
- copies of on-site recording sheets and drawing, as appropriate.

5.1.3. The Archaeological Contractor will submit a copy of the draft report to the Applicant, the Archaeological Advisor to the LPA. In finalising the report, the comments of the Archaeological Advisor to the LPA will be taken into account. The finalised report will be submitted in digital (PDF) format to the Historic Environment Record, and to the Applicant

5.1.4. An OASIS[1] entry shall be completed at the end of the fieldwork, irrespective of whether a formal report is required. The Archaeological Consultant will complete the online form at oasis.ac.uk within one month following completion of the fieldwork. Should technical advice be required the Archaeological Consultant will contact OASIS (oasis@ads.ahds.ac.uk).

5.2. Archive Preparation and Deposition

5.2.1. Prior to the start of each stage of archaeological fieldwork (during preparation of the Site-specific WSIs), the Archaeological Contractor will contact the recipient museum to determine the requirements for the

[1] Online AcesS to the Index of archaeological InvestigationS. Oasis.ac.uk/about

preparation and deposition of the physical archive and finds and agree any accession numbers.

5.2.2. The archive will be prepared in accordance with the CIfA guidelines, including the Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives (CIfA 2020).

5.2.3. The Archaeological Contractor will compile a Data Management Plan and Selection Strategy in line with CIfA guidelines (CIfA 2020) and include it in their Site-specific WSI.

5.2.4. The digital archive must be deposited with a Trusted Digital Repository, such as the ADS (2011) and it is anticipated that the repository will have in-house Data Management Plans to allow for the long-term preservation of the digital archive data, including plans for data back-up and migration to new digital formats as they emerge.

6. General Requirements

6.1. Programme and Access

6.1.1. The programme for each stage of archaeological investigation shall be agreed between the Applicant and/or their appointed Principal Contractor, and the Archaeological Contractor. The Archaeological Advisor to the LPA will be notified of the programme for the fieldwork in a timely manner.

6.1.2. Access to the defined area where archaeological mitigation works are required will be arranged and organised by the Applicant and/or their appointed Principal Contractor.

6.2. Confidentiality and Publicity

6.2.1. All communication regarding this project is to be directed through the Applicant. The Archaeological Contractor will refer all inquiries to the Applicant without making any unauthorised statements or comments.

6.2.2. The Archaeological Contractor will not disseminate information or images associated with the project for publicity or information purposes without the prior written consent of the Applicant.

6.3. Copyright

6.3.1. The Archaeological Contractor shall retain their copyright in all reports, documentation and images produced as part of this project. The Archaeological Contractor shall obtain all relevant copyrights from sub-specialists and relevant copyright holders (such as Ordnance Survey) required to produce the reports detailed in this Site-specific WSI and any subsequent publication.

6.3.2. The Archaeological Contractor shall not withhold the rights of the Applicant or Archaeological Consultant to use, disseminate or publish the reports

prepared by the Archaeological Contractor so long as the Archaeological Contractor is suitably attributed.

6.3.3. The Archaeological Contractor will be responsible for obtaining permission to retain archaeological finds from the landowners in line with current best practice (English Heritage 2011; CIfA 2020).

6.3.4. The Archaeological Contractor shall be responsible for the transfer of ownership and copyright to the recipient depository / museum prior to the deposition of the archives.

6.4. Adherence to WSI

6.4.1. The Archaeological Contractor will undertake the works in accordance with this OWSI, the Site-specific WSI and in accordance with the relevant RAMS. No variation from, or changes to, the OWSI, Site-specific WSI and/ or RAMS will occur except by prior agreement with the Applicant and where appropriate, consulted on with the Archaeological Advisor to the LPA.

6.5. Insurances and Health and Safety

6.5.1. The Applicant and/or their appointed Principal Contractor is responsible for providing information on any relevant constraints within the site, including, but not limited to, recently conducted service and utility searches (for both buried and overhead services) and Unexploded Ordnance Survey (UXO) reports.

6.5.2. The Archaeological Contractor shall prepare a Risk Assessment and Method Statement (RAMS) and a project specific Health and Safety Plan and submit these to the Applicant and/or their appointed Principal Contractor for approval prior to starting on site. These should include staff CVs which should detailed the Health and Safety qualifications held by the Archaeological Contractor site team, including Site Managers Safety Training Scheme (SMSTS) and Site Supervisors Safety Training Scheme (SSSTS).

6.5.3. The Archaeological Contractor shall at all times maintain a safe working distance from any overhead and buried services / utilities. In addition, the Archaeological Contractor shall be responsible for any requirements with regard to work in the vicinity of watercourses.

6.5.4. All site personnel will wear personal protective equipment (PPE) as defined by the Archaeological Contractor's approved RAMS undertaken in accordance with mandatory requirements. Any visitors to the

investigations will require a site induction in accordance with the Archaeological Contractor's Health and Safety requirements and will have read the appropriate Archaeological Contractor's site-specific RAMS. The Archaeological Contractor will ensure that any visitors to the investigations are equipped with suitable PPE prior to entry to the site. All equipment that is used in the course of the fieldwork must be 'fit for purpose' and be maintained in a sound working condition that complies with all relevant Health and Safety regulations and recommendations.

6.5.5. The Archaeological Contractor will assure the provision and maintenance of adequate, suitable and sufficient welfare and sanitary facilities at appropriate locations for the duration of the works. The locations for the temporary site welfare facilities and vehicle parking will be agreed with the Applicant and/or their appointed Principal Contractor prior to the start of the works. Facilities, roles and responsibilities shall adhere to the provisions of the relevant Health and Safety Executive guidance (HSE 2007).

6.5.6. All site personnel will familiarise themselves with the following:

- site emergency and evacuation procedures;
- the site's health & safety coordinator;
- the first aider; and
- the location of the nearest hospital and doctor's surgery.

7. References

ADS (2011). Digital Antiquity Guides to Good Practice. Archaeology Data Service, University of York. [Last Accessed: 24.07.25]

Chartered Institute for Archaeologists (CIfA) (2022). Code of Conduct. [Last Accessed: 24.07.25]

CIfA (2020). Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives. [Last Accessed: 24.07.25]

CIfA (2023a). Standard and Guidance for Archaeological Monitoring and Recording. [Last Accessed: 24.07.25]

CIfA (2023b). Universal Guidance for Archaeological Monitoring and Recording.

Health and Safety Executive (HSE) (2007) Guidance for employers on welfare provisions. [Last Accessed: 24.07.25]

Research Frameworks (2025) East Midlands Historic Environment Research Framework. [Last Accessed: 24.07.25]

The Stationery Office, Burial Act 1857. [Last Accessed: 24.07.25]

The Stationery Office, Treasure Act 1996. [Last Accessed: 24.07.25]

The Stationery Office, Treasure (Designation) Order 2002. [Last Accessed: 24.07.25]

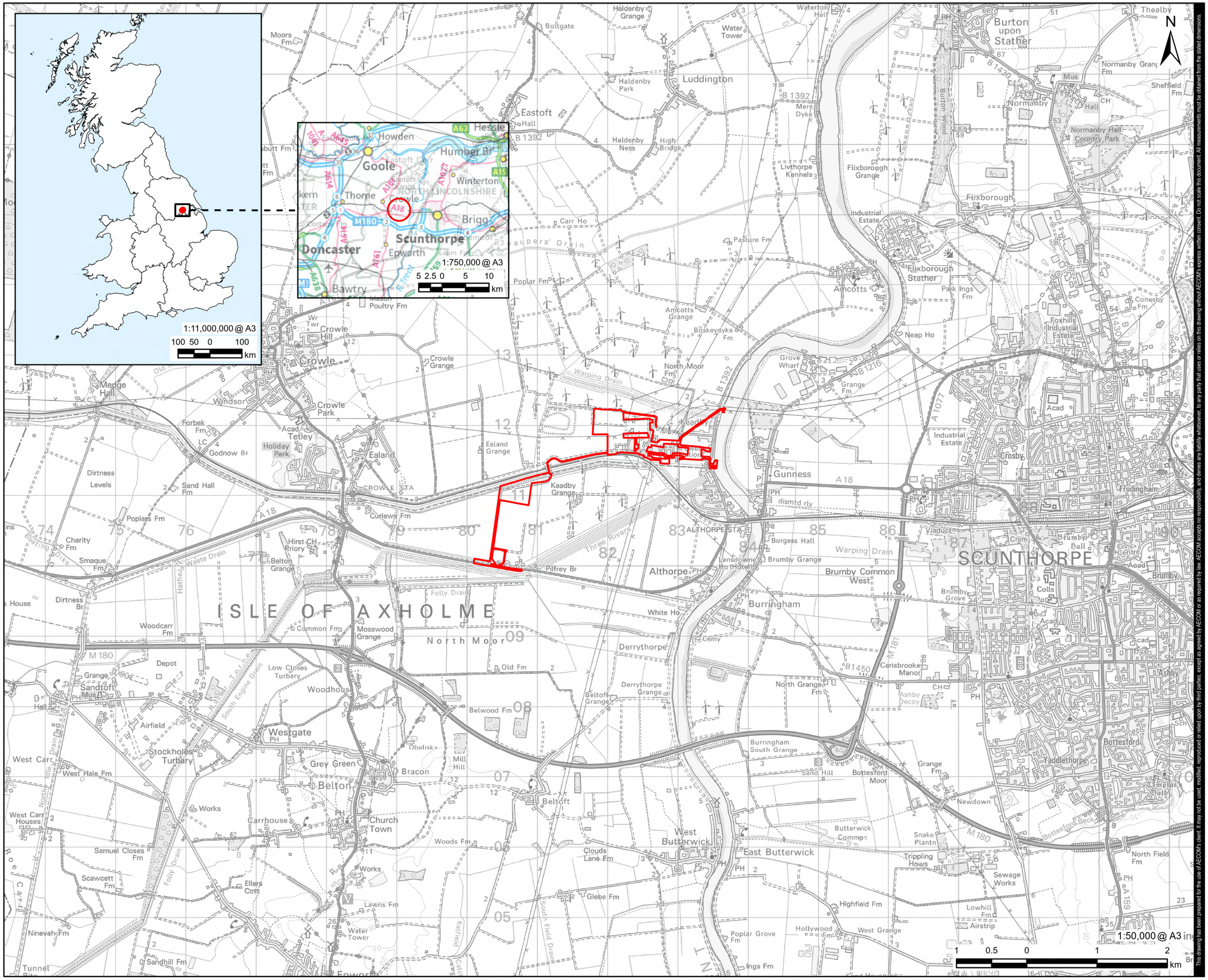
The Stationery Office, Treasure (Designation) (Amendment) Order 2023 [Last Accessed: 24.07.25]

Appendix 1 Figures

Figure 1 Site Location

Revision: 0 Drawn: MAB Checked: SM Approved: JW Date: 2025-08-20

Filename: I:\5004 - Information Systems\60721867_Keadby_Hydrogen_DCO\02_Maps\ES_Report\Appendix_WSI_ArchaeologyAppendix_WSI_Figures.aprx



AECOM

PROJECT

KEADBY
NEXT GENERATION POWER STATION
Hydrogen-enabled flexible power

A collaboration between **SSE Thermal** and **Equinor**

CONSULTANT

AECOM Limited
Midpoint,
Alencon Link,
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

Proposed Development Site

NOTES

Reproduced from Ordnance Survey digital map data © Crown copyright 2025. All rights reserved. Licence number AC0000808122.
Contains OS data © Crown Copyright and database right 2024

ISSUE PURPOSE

ENVIRONMENTAL STATEMENT

PROJECT NUMBER

60721867

FIGURE TITLE

Site Location Plan

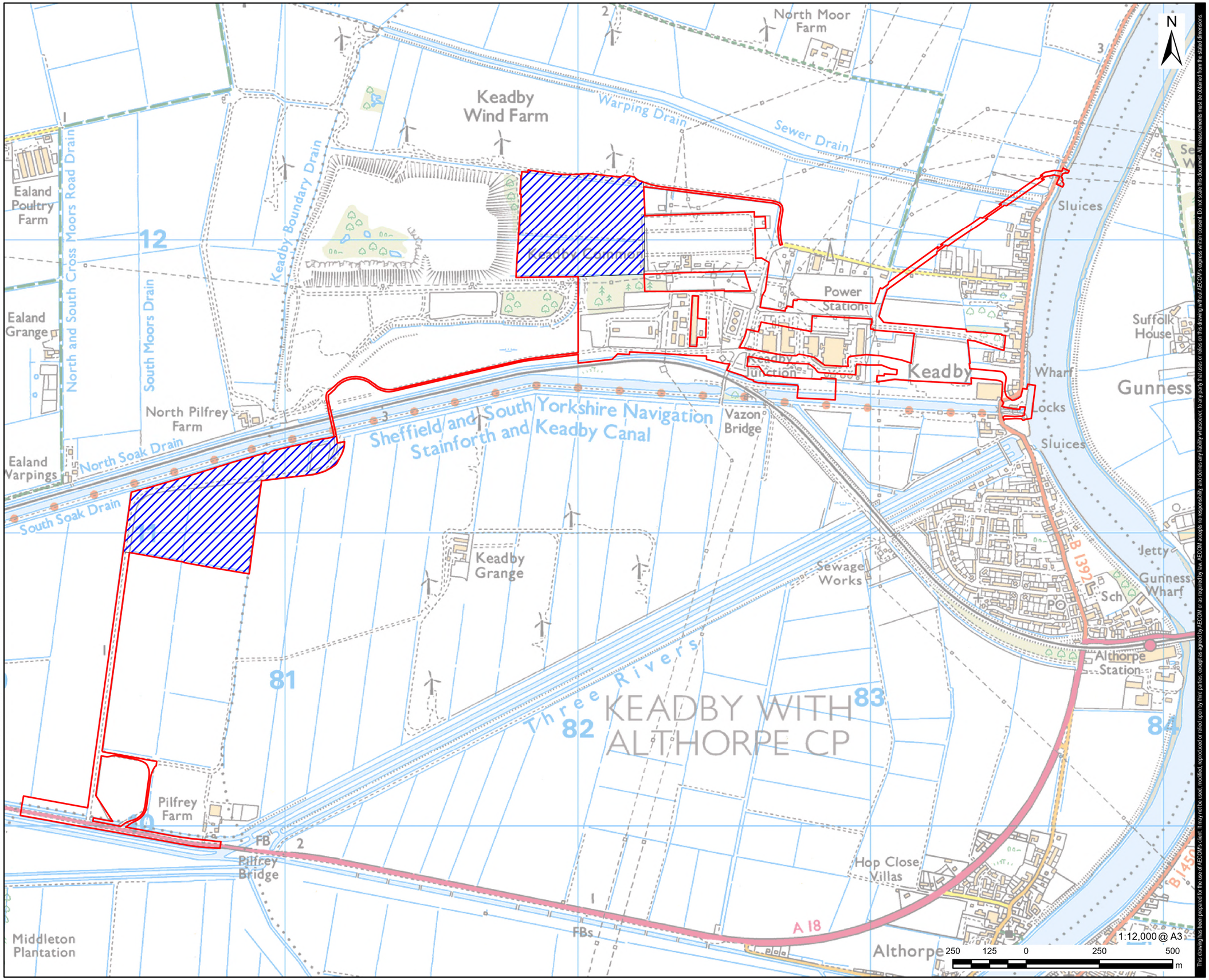
FIGURE NUMBER

Figure 1

Figure 2 Archaeological Mitigation Areas

Revision: 0 Drawn: MAB Checked: SM Approved: JW Date: 2025-08-20

Filename: I:\5004 - Information Systems\60721867_Keadby_Hydrogen_DCO\02_Maps\ES_Report\Appendix_WSI_Archaeology\Appendix_WSI_Figures.aprx



AECOM

PROJECT

KEADBY
NEXT GENERATION POWER STATION
Hydrogen-enabled flexible power

A collaboration between **SSE Thermal** and **Equinor**

CONSULTANT

AECOM Limited
Midpoint,
Alencon Link,
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Proposed Development Site
- Archaeological Mitigation Area

NOTES

ISSUE PURPOSE

ENVIRONMENTAL STATEMENT

PROJECT NUMBER

60721867

FIGURE TITLE

Archaeological Mitigation Areas

FIGURE NUMBER

Figure 2