

Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Outline Written Scheme of Investigation (Onshore) (Revision B) - Clean Version

Revision B

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Doc. No. C282-RH-Z-GA-00131 9.21

Rev. no. B

Table of Contents

омопс 1	Introduction	
1.1	General Project Background	
1.2	Structure and Purpose of the Outline Onshore WSI	
1.3	Broad Approach to Developing the Detailed WSI	
2	Legislation Policy and Guidance	
2.1	Legislation and Planning Policy	
2.2	Standards, Guidance and Good Practice	
3	Archaeological and Historical Baseline Summary	
3.1	Introduction	
3.2	Designated Heritage Assets	
3.3	Non-designated Heritage Assets	
3.4	Non-designated Heritage Assets	
4	Schedule of Archaeological Requirements	
5	Survey-specific WSIs	
5 5.1	Introduction	
5.2	Aims and Objectives	
5.3	Monitoring	
5.4	Health and Safety	
6	Methodologies (Initial Informative Stages of Mitigation)	
6.1	General Approach	
6.2	Additional Project-wide Archaeological Geophysical Survey	
6.3	Targeted Archaeological Metal Detecting Survey	
6.4	Archaeological Trial Trenching	
6.5	Earthwork Condition (GPS/topographic) Survey	
6.6	Investigation and Recording of Standing Buildings or Structures	
6.7	Geoarchaeological Assessment/Palaeoenvironmental Survey	
7	Methodologies (Subsequent, Additional Mitigation Measures)	
7.1	Introduction	
7.2	Archaeological Excavation Methodology	
7.3	Archaeological Monitoring/Watching Brief	
7.4	Preservation In-Situ	
7.5	Sensitive and Precautionary Approaches to Construction Works	
7.6	Protocol for Archaeological Discoveries	
7.7	Reinstatement of Field Boundaries and Hedgerows	
8	Conclusion/Summary	
9	References	
APPEN		
	ARCHAEOLOGICAL EXCAVATION AND ARCHAEOLOGICAL MONITORING/WATCH	
	BRIEF	
APPEN	DIX 2 OUTLINE SCHEDULE OF ARCHAEOLOGICAL REQUIREMENTS	44



Outline	Written	Scheme	of	Investigation	Doc. No. C282-RH-Z-GA-00131 9.21
Onshor	e)				Rev no B

APPENDIX 3 HEDGEROW ASSESSMENT	.75
APPENDIX 4 FIGURES	.80
APPENDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PHASE TWO	.81
Table of Tables	
Table 3-1: Possible Above Ground Heritage Assets Within Order Limits	

Page 4 of 81

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Outline Written Scheme of Investigation

(Onshore) Rev. no. B

Glossary of Acronyms

AC	Alternating Current
AD	Anno Domini
ALGAO	Association of Local Government Archaeological Officers
ВС	Before Christ
BP	Before Present
CIfA	Chartered Institute for Archaeologists
DCO	Development Consent Order
DEL	Dudgeon Extension Limited
DEP	Dudgeon Offshore Wind Farm Extension Project
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
GIS	Geographical Information System
GPS	Global Positioning System
LiDAR	Light Detection and Ranging
HDD	Horizontal Directional Drilling
HE	Historic England
HER	Historic Environment Record
HES	Historic Environment Service
HLC	Historic Landscape Character
HVAC	High-Voltage Alternating Current
km	Kilometre
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MoRPHE	Management of Research Projects in the Historic Environment
MW	Megawatts
NHER	Norfolk Historic Environment Records
NNDC	North Norfolk District Council
NCC	Norfolk County Council
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Projects

Doc. No C282-RH-Z-GA-00131 9.21



Doc. No C282-RH-Z-GA-00131 9.21

Rev. no. B

OASIS	Online Access to the Index of Archaeological Investigations			
ORPAD	Offshore Renewables Protocol for Archaeological Discoveries			
OS	Ordnance Survey			
PEIR	Preliminary Environmental Information Report			
PPE	Personal Protective Equipment			
RAMS	Risk Assessment Method Statement			
SEL	Scira Extension Limited			
SEP	Sheringham Shoal Offshore Wind Farm Extension Project			
SNC	South Norfolk Council			
UK	United Kingdom			
UPD	Updated Project Design			
UXO	Unexploded Ordnance			
WSI	Written Scheme of Investigation			
WWII	World War Two			



Rev. no. B

Glossary of Terms

Archaeological Excavation	An intrusive form of fieldwork investigation, which systematically identifies, examines and records archaeological deposits, features and structures, and recovers artefacts, ecofacts and other remains within a specified area. Archaeological Excavation is carried out in advance of construction works commencing within the specified area.
Archaeological Monitoring (Watching Brief)	Archaeological observation of intrusive groundworks (e.g. targeted areas of both topsoil stripping and excavation of the cable trench, if required and where possible) and any subsequent required investigation should archaeological remains be exposed. Archaeological monitoring often occurs in areas where the archaeological remains are of low sensitivity or the potential for archaeological remains to survive is uncertain.
Commitment	A term used interchangeably with mitigation and enhancement measures. The purpose of Commitments is to reduce and/or eliminate Likely Significant Effects (LSEs), in EIA terms.
Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP offshore site	The Dudgeon Offshore Wind Farm Extension consisting of the DEP wind farm site, interlink cable corridors and offshore export cable corridor (up to mean high water springs).
DEP onshore site	The Dudgeon Offshore Wind Farm Extension onshore area consisting of the DEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the EIA and HRA for certain topics.
Expert Topic Group (ETG)	A forum for targeted engagement with regulators and interested stakeholders through the EPP.



Doc. No C282-RH-Z-GA-00131 9.21

Rev. no. B

Findspot	A findspot identifies a location where a single or group of artefacts of archaeological interest have been made and lodged with the Humber Historic Environment Record.		
Geoarchaeological Assessment	Geoarchaeology is the application of earth science principles and techniques to the understanding of the archaeological record. Geoarchaeological approaches can inform site formation processes, preservation levels, and identify changes in the physical landscape through time.		
Horizontal directional drilling (HDD) zones	The areas within the onshore cable corridor which would house HDD entry or exit points.		
Jointing bays	Underground structures constructed at regular intervals along the onshore cable corridor to join sections of cable and facilitate installation of the cables into the buried ducts.		
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to the onshore cables at the transition joint bay above mean high water.		
Onshore cable corridor	The area between the landfall and the onshore substation sites, within which the onshore cable circuits would be installed along with other temporary works for construction.		
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substation. 220 – 230kV.		
Onshore Substation	Compound containing electrical equipment to enable connection to the National Grid.		
Order Limits	The limits within which SEP and DEP (the 'authorised project') may be carried out.		
Palaeoenvironmental Assessment	Palaeoenvironmental archaeology uses carefully selected recovery techniques to put archaeological sites into their environmental context and provides evidence on such things as diet, economy and living conditions.		
PEIR boundary	The area subject to survey and preliminary impact assessment to inform the PEIR.		
Restoration of Historic Earthworks	As part of the Principal Contractor's reinstatement works, the contours of historic earthworks located within pre-defined areas, such as ridge and furrow earthworks, would be restored to their preconstruction state.		



Doc. No C282-RH-Z-GA-00131 9.21

Rev. no. B

Study area	Area where potential impacts from the project could occur, as defined for each individual EIA topic.
Sheringham Shoal Offshore Wind Farm Extension site	Sheringham Shoal Offshore Wind Farm Extension lease area.
Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
SEP onshore site	The Sheringham Shoal Wind Farm Extension onshore area consisting of the SEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
The Applicant	Equinor New Energy Limited. As the owners of SEP and DEP, Scira Extension Limited (SEL) and Dudgeon Extension Limited (DEL) are the named undertakers that have the benefit of the Development Consent Order. References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of SEL and DEL as the undertakers of SEP and DEP.
Transition joint bay	Connects offshore and onshore export cables at the landfall. The transition joint bay would be located above mean high water.



Rev. no. B

ONSHORE ARCHAEOLOGY OUTLINE WRITTEN SCHEME OF INVESTIGATION

1 Introduction

1.1 General Project Background

- 1. Equinor New Energy Limited (the Applicant) is seeking a Development Consent Order (DCO) for the Sheringham Shoal Offshore Wind Farm Extension Project (SEP) and Dudgeon Offshore Wind Farm Extension Project (DEP) (hereafter collectively referred to as 'the project' or 'SEP and DEP').
- 2. As the owners of SEP and DEP, Scira Extension Limited (SEL) and Dudgeon Extension Limited (DEL) are the named undertakers that have the benefit of the DCO. References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of SEL and DEL as the undertakers of SEP and DEP.
- 3. The SEP and DEP wind farm sites are located in the southern North Sea, 15.8 kilometres (km) and 26.5km from the coast respectively at their closest point. SEP and DEP will be connected to the shore by offshore export cables to a landfall point at Weybourne, on the North Norfolk coast. From there onshore export cables will transport power over approximately 60km to a new high voltage alternating current (HVAC) onshore substation near the existing Norwich Main substation. The onshore substation will be constructed to accommodate the connection of both SEP and DEP to the transmission grid. A full project description is given in the Environmental Statement (ES), Chapter 4 Project Description (document refence 6.1.4).

1.2 Structure and Purpose of the Outline Onshore WSI

- 4. This Outline Written Scheme of Investigation (WSI) for onshore archaeology has been produced by Royal HaskoningDHV on behalf of the Applicant to support the SEP and DEP DCO application.
- 5. The Outline WSI (Onshore) sets out the proposed approaches and commitments to archaeological survey and investigation to be undertaken post-consent. This includes both initial informative survey stages of mitigation work and subsequent additional mitigation measures, where required. This forms part of an overarching mitigation strategy to be undertaken within the onshore project area.
- 6. The Outline WSI (Onshore) as certified by the Secretary of State would be incorporated into the contracts for the principal contractors of all onshore works as authorised by the DCO. All principal contractors, subcontractors and their suppliers would be required to observe the relevant provisions of the Outline WSI (Onshore) and subsequent detailed WSI and provide evidence of how they will ensure its requirements would be implemented.
- 7. It is anticipated that the initial informative survey stages of mitigation would take place as part of the wider pre-construction programme and activities, followed by further and additional bespoke mitigation requirements on a case-by-case basis, as required, in ongoing consultation and engagement with Norfolk County Council Historic Environment Service (NCC HES) and Historic England (HE).

Page 10 of 81



Rev. no. B

8. A section of the onshore export cables run through Weybourne Woods which is part owned by the National Trust. Equinor acknowledge the National Trust's position as a conservation organisation and will consult with the National Trust's Archaeologist in developing the programme of post-consent archaeology survey and mitigation work insofar as is relevant to their land ownership within Weybourne Woods, as part of the National Trust's Sheringham Park Estate.

9. A separate Outline WSI for offshore archaeology has also been produced and submitted as part of the DCO application (document reference 9.11).

1.3 Broad Approach to Developing the Detailed WSI

- 10. This Outline WSI (Onshore) sets out the proposed approaches, methodologies and commitments to archaeological survey, evaluation and investigation which were identified as the outcomes to the EIA process. These are set out in ES Chapter 21 Onshore Archaeology and Cultural Heritage (document reference 6.1.21).
- 11. Each post-consent initial informative stage of mitigation work (survey stage) would be subject to a separate survey-specific WSI to be agreed following consultations with NCC HES (and HE, as required), (see **Section 14**), which will provide further survey-specific details in line with this Outline WSI (Onshore).
- 12. As part of the wider onshore archaeological mitigation strategy both pre-construction and construction related WSIs would be produced. These will detail the subsequent additional mitigation measures to be undertaken within the onshore Order Limits. These would be informed by the results of the initial informative stage of mitigation work as well as build upon the information within this Outline WSI (Onshore) (see Section 14). This would be an iterative process to developing and refining the mitigation approach ensuring that all potential impacts upon onshore archaeology arising from SEP and DEP are fully identified and appropriately and proportionately mitigated, wherever possible.
- 13. Example (model) clauses (APPENDIX 1 EXAMPLE (MODEL) CLAUSES MITIGATION WORKS SPECIFICATION: ARCHAEOLOGICAL EXCAVATION AND ARCHAEOLOGICAL MONITORING/WATCHING BRIEF) have been included only as outline examples of the likely approaches to mitigation works required and the associated specifications. These relate to methodologies for Archaeological Excavation and archaeological monitoring/watching brief.

2 Legislation Policy and Guidance

2.1 Legislation and Planning Policy

14. The primary legislation relating to the consent regime for SEP and DEP is provided by the Planning Act 2008. The Act designates a series of National Planning Statements (NPSs) setting out national policy in relation to NSIPs.



Rev. no. B

15. Of specific relevance to SEP and DEP is EN-1 Overarching NPS for Energy (DECC, 2011a) and EN-3 NPS for Renewable Energy Infrastructure (DECC, 2011b). It is noted that NPS EN-1, EN-3 and EN-5 are in the process of being revised. A draft version of each NPS was published for consultation in September 2021 (Department for Business Energy and Industrial Strategy (BEIS), 2021). Also of relevance is the National Planning Policy Framework (NPPF) Section 16: Conserving and enhancing the historic environment; although the NPPF is not directed specifically at NSIPs, this sets out the principal national policy on the importance, management and safeguarding of heritage assets within the planning process.

2.2 Standards, Guidance and Good Practice

- 16. The following relevant standards, guidance and good practice have been taken account of in the production of this Outline WSI (Onshore), produced by the Chartered Institute for Archaeology (CIfA) and the Association of Local Government Archaeological Officers (ALGAO):
 - Standard and guidance for geophysical survey (ClfA, 2014a);
 - Standard and guidance for archaeological field evaluation (ClfA, 2014b);
 - Standard and guidance for an archaeological watching brief (ClfA, 2014c);
 - Standard and guidance for archaeological excavation (ClfA, 2014d);
 - Standard and guidance for the collection, documentation, conservation and research of archaeological materials (ClfA, 2014e);
 - Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (ClfA, 2014f);
 - Advice Note for Post-Excavation Assessment (ALGAO, 2015);
 - Code of Conduct (ClfA, 2019a);
 - Standard and guidance for the archaeological investigation and recording of standing buildings or structures (ClfA, 2019b); and
 - Standards for Development-led Archaeological Projects in Norfolk (Norfolk County Council Environment Service (NCC ES), 2018).
- 17. Of further relevance is the following non-exhaustive list of publications from HE. Other survey and investigation specific guidelines will also apply in addition to those listed below:
 - Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (2nd Edition) (English Heritage, now Historic England, 2011);
 - Management of Research Projects in the Historic Environment (MoRPHE: Historic England, 2015a);
 - Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (Historic England, 2015b);
 - Preserving Archaeological Remains: Decision-taking for Sites under Development (Historic England, 2016a);



Rev. no. B

- Guidelines for the Use of Geophysics in Archaeology. Questions to Ask and Points to Consider (EAC Guideline 2) (European Archaeologiae Consilium -EAC, 2016);
- Understanding Historic Buildings. A Guide to Good Recording Practice (Historic England, 2016b); and
- Understanding the Archaeology of Landscapes (Historic England, 2017).

3 Archaeological and Historical Baseline Summary

3.1 Introduction

- 18. The following section provides a summary of the known and potential onshore archaeological and cultural heritage resource within the defined study areas as detailed in ES Chapter 21 Onshore Archaeology and Cultural Heritage (document reference 6.1.21).
- 19. The baseline environment was informed by:
 - ES Appendix 21.1 Archaeological Desk Based (Baseline) Assessment (ADBA) (document reference 6.3.21.1);
 - ES Appendix 21.2 Aerial Photographic, LiDAR and Map Regression Analysis (document reference 6.3.21.2);
 - ES Appendix 21.3 Aerial Photography and Historic Map Regression Addendum (document reference 6.3.21.3);
 - ES Appendix 21.6 Priority Archaeological Geophysical Surveys (document reference 6.3.21.6); and
 - ES Appendix 21.7 Archaeological and Geoarchaeological Monitoring Assessment (document reference 6.3.21.7).
- 20. The archaeological periods referred to in this section are broadly defined by the following date ranges:
 - Palaeolithic: 960,000 BP 8,500 BC;
 - Mesolithic: 8,500 4,000 BC;
 - Neolithic: 4,000 2,200 BC;
 - Bronze Age: 2,200 700 BC;
 - Iron Age: 700 BC AD 43;
 - Romano-British: AD 43 410;
 - Early medieval (Saxon): AD 410 1066;
 - Medieval: AD 1066 1499;
 - Post-medieval: AD 1500 1799;
 - 19th Century: AD 1800 1899; and
 - Modern: AD 1900 present day.



Rev. no. B

3.2 Designated Heritage Assets

- 21. There are 276 designated heritage assets within the 1km study area, comprising:
 - 13 Scheduled Monuments;
 - Five Registered Parks and Gardens;
 - 246 Listed Buildings; and
 - 12 Conservation Areas.
- 22. Details of the designated assets are presented in ES **Appendix 21.1**; **Annex 21.1.1** (document reference 6.3.21.1.1).
- 23. No designated heritage assets are located within the Order Limits, with the exception of Manningham and Wolterton Conservation Area, where the cable corridor enters its north-western limits.

3.3 Non-designated Heritage Assets

3.3.1 Summary of Non-designated Heritage Assets within the Study Area

- There are 1,646 non-designated heritage assets within the 500m study area (ES Appendix 21.1, Annex 21.1.2 and Annex 21.1.3 (document reference 6.3.21.1.2 and 6.3.21.1.3)), of which 237 fall within the Order Limits. These comprise 216 previously recorded non-designated heritage assets and 21 previously unrecorded potential non-designated heritage assets (as indicated by Aerial Photographs, LiDAR, and historic mapping data).
- 25. Non-designated heritage assets potentially subject to direct physical impacts are confined to the Order Limits and may comprise potential subsurface archaeological remains and above ground heritage assets (e.g. earthworks or structures).
- 26. Non-designated heritage assets which may be subject to indirect physical or non-physical impacts (associated with change in setting) due to SEP and DEP may be located either within or beyond the parameters of the Order Limits.

3.3.2 Sub-surface Archaeological Remains

- 27. Heritage assets within the Order Limits considered to potentially represent surviving below ground archaeological remains have not yet been fully evaluated through intrusive (e.g. trial trenching) evaluation approaches.
- 28. Features indicative of below ground archaeological remains, as indicated by data available and archaeologically assessed as part of the ADBA (ES **Appendix 21.1** (document reference 6.3.21.1)), include cropmarks, soil/parch marks, depressions, and ditches.
- 29. Sub-surface archaeological remains may also be indicated by features identified in aerial photographs or historic map data as former buildings, structures, or sites. These may no longer survive as extant above ground remains but below ground remains may still be present (ES **Appendix 21.2** (document reference 6.3.21.2)).

Page 14 of 81



Rev. no. B

- 30. A programme of priority archaeological geophysical survey (detailed magnetometry) has also been undertaken at targeted locations and further helps inform an understanding of the subsurface archaeological potential of the Order Limits (see ES Appendix 21.6 (document reference 6.3.21.6)). The types of buried archaeological remains identified range from extensive areas of settlement and enclosure to single clearly defined features.
- 31. A summary of the below ground archaeological remains identified within the Order Limits from the desk-based and non-intrusive evaluation surveys has informed the Schedule of Archaeological Requirements (**Appendix 2**).

3.3.3 Archaeological Potential of the Order Limits

- 32. The overall archaeological potential of the Order Limits is considered to be high (i.e. archaeological discoveries are likely), with the following key areas along the onshore cable corridor identified for potential archaeological discoveries:
 - Roman and medieval settlement activity near Itteringham;
 - A possible Roman military site east of Southgate;
 - Medieval and post-medieval field systems and undated enclosures to the east of Morton on the Hill;
 - A possible Bronze Age barrow cemetery and probable Roman enclosures and field systems at the A47 crossing;
 - A multi-period site just to the north-west of Great Melton;
 - A possible Anglo-Saxon or Medieval settlement near Mannington Estate, and Attlebridge,
 - An undated enclosure (possibly Neolithic/Bronze Age) to the west of High Green;
 and
 - Possible line of the Roman road between Caistor St Edmund and Crownthorpe to the west of Ketteringham.
- 33. Within the onshore substation site, there are records of cropmarks indicative of fragmentary ditches of unknown date and post-medieval field boundaries, along with a geological feature (possible buried channel) recorded in the geophysical survey undertaken for Hornsea Project Three (Orsted, 2018).
- 34. The prehistoric and Roman sites are likely to be readily identified through geophysical survey and would most likely be of local to potentially regional importance. Medieval and post-medieval features are also likely to be readily identified through geophysical survey, with remains unlikely to be of more than local importance. Note that the geophysical survey undertaken to date has already provided enhanced information on this.

3.3.4 Geoarchaeological and Palaeoenvironmental Potential

- 35. The archaeological monitoring of geotechnical works identified deposits of palaeoenvironmental and geoarchaeological interest at three separate locations:
 - River Bure, north of Oulton (BH6-15);



Rev. no. B

- Swannington Beck (BH9-25); and
- River Wensum, south of Attlebridge (BH10-31).
- 36. A summary of the findings and potential is presented below with full details provided in ES **Appendix 21.7** (document reference 6.3.21.7).
- 37. The deposits identified within BH6-15 and BH10-31 represent alluvium and organic alluvium associated with the Rivers Bure and Wensum respectively. These have High Moderate palaeoenvironmental and Moderate geoarchaeological potential.
- 38. The organic deposits identified within BH9-25 have High palaeoenvironmental and geoarchaeological potential. These are interpretated as the fills of a buried tunnel valley of Anglian age. If this origin is accepted then the fills must post-date MIS 12 and, due to the absence of Devensian gravels within this area, must predate the deposition of the Briton's Lane Formation (possibly MIS 6/191 130ka). Therefore, a provisional, mid-Pleistocene date of between c. 424,000 191,000 years ago is proposed.
- 39. All other deposits are considered to have No Low palaeoenvironmental or geoarchaeological potential due to the generally shallow sequences. These are dominated by coarse, gravelly sediments of Mid-Pleistocene origin.
- 40. These areas of moderate to high palaeoenvironmental and geoarchaeological potential could be affected by construction activities both directly and indirectly.

3.4 Non-designated Heritage Assets

3.3.5 Above Ground Archaeological Remains and Heritage Assets

41. Features considered to represent above ground heritage assets within the Order Limits are summarised in **Table 3-1** below.

Table 3-1: Possible Above Ground Heritage Assets Within Order Limits

SEP/DEP ID	NHER PrefRef	APS ID	Priority Geophysical Survey Area	Description	Perceived Heritage Importance
877	28552	APS_053	PA12	Extant platforms and ditched enclosure s relating to former medieval tofts.	Medium
1233	32502	APS_158	N/A	World War One Pillbox	Low - Medium
1058	44183	N/A	N/A	Honingham Park	Low
1059	44333	N/A	N/A	Ketteringham Park	Low

42. The heritage assets summarised in **Table 3-1** represent only those within the Order Limits considered to represent above ground remains as indicated by information held by the NHER and confirmed by site visits. Access restrictions, thick vegetation and unharvested crops variously prevented access to some areas during the walkover survey. As such, the potential for further heritage assets to survive as above ground remains in addition to those summarised in **Table 3-1** cannot be discounted.



Rev. no. B

117. It is also acknowledged that examples of above ground historic earthworks are a rare resource within Norfolk as a result of agricultural activity and as such are considered valuable where they do survive as above ground features.

4 Schedule of Archaeological Requirements

- 43. This Outline WSI (Onshore) should be read with reference to the outline Schedule of Archaeological Requirements table (APPENDIX 2 OUTLINE SCHEDULE OF ARCHAEOLOGICAL REQUIREMENTS), which presents a summary of the currently known and potential remains within the onshore SEP and DEP Order Limits.
- The location of these known and potential archaeological remains are presented on Figures 1-15 in APPENDIX 4 FIGURES.
- The outline Schedule of Archaeological Requirements is not definitive and would be subject to regular updates and refinements throughout the post-consent stages. This will occur as more information comes to light, and at key milestones as part of the post-consent archaeological works (for example, following each initial informative stage of mitigation, see **Section 6**). This would be prior to additional mitigation measures being established and formalised within subsequent preconstruction and construction related mitigation WSIs (see **Section 7**).
- 46. In the early post-consent stages of the project, the programme and timetabling of archaeological works would be subject to appropriate consideration with respect to making effective and expedient provision for commencing required pre-construction archaeological survey and investigation work in a timely and efficient manner.
- 47. Each of the survey-specific and subsequent pre-construction and construction related WSIs would include detail on anticipated timetabling and programme. With respect to intrusive work, this would also include anticipated post-excavation timeframes (where required).
- 48. It is also anticipated that the Applicant would retain the services of an archaeological consultant/coordinator in the post-consent stages of the project. The archaeological consultant/coordinator would identify any programme pinch points early in the process, so that these can be effectively allowed for and managed within the wider project timescales.
- 49. Every effort would be made for archaeological works to be appropriately planned with sufficient time allowance provided, within the confines of what can be realistically expected and anticipated at each stage.
- During the construction phase, an archaeologist may not be on site to monitor all elements of the intrusive groundworks. In these instances, SEP and DEP and the relevant appointed Principal Contractor(s) will implement a protocol for reporting archaeological discoveries (PAD) (see **Section 7.6**).



Rev. no. B

5 Survey-specific WSIs

5.1 Introduction

- 51. Each initial informative stage of mitigation work (ultimately informing subsequently required mitigation approaches) would be subject to a bespoke survey specific WSI produced by the appointed Archaeological Contractor(s) and approved by NCC in consultation with NCC HES (and HE, as required). Any variations to the survey specific WSIs would be agreed with NCC in consultation with NCC HES (and HE, as required) prior to their implementation.
- 52. The initial informative stages of mitigation work will include:
 - Additional project-wide Onshore Archaeological Geophysical Survey across areas not subject to the Priority Archaeological Geophysical Survey (Note: the survey-specific WSI for Priority Archaeological Geophysical Survey: Phase Two undertaken at targeted locations to inform the DCO application, is included as APPENDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PHASE TWO to this Outline WSI (Onshore)):
 - Targeted Metal Detecting Survey;
 - Targeted Archaeological Trial Trenching;
 - Targeted Earthwork Condition (GPS/topographic) Survey; and
 - Targeted Geoarchaeological Assessment/Palaeoenvironmental Survey.
- 53. Details on the methodologies for each initial informative stage of mitigation work is presented in **Section 6**.
- 54. Ongoing consultation regarding the commencement and location of the initial informative stages of mitigation work will continue with NCC HES (and HE, as required) throughout the DCO process.

5.2 Aims and Objectives

- 55. The general aims and objectives for the post-consent initial informative stages of mitigation work are to:
 - Further examine the archaeological and cultural heritage resource within the onshore Order Limits, including clarifying the presence/absence and extent of any buried archaeological remains (and above ground remains, e.g. earthworks, extant buildings/structures, where present);
 - Identify, within the constraints of the works, the date, character and condition of any surviving remains within the onshore Order Limits;
 - Assess the degree of existing impacts to sub-surface horizons and to document the extent of archaeological survival of buried deposits within the onshore Order Limits;
 - Analyse and interpret the results; and



Rev. no. B

 Produce reports which will present the results of the works in sufficient detail, including information to allow informed decisions to be made concerning ongoing, and where appropriate additional, mitigation strategies.

5.3 Monitoring

- 56. Having agreed the survey specific WSIs, the Archaeological Coordinator/Contractor(s) will inform NCC HES (and HE, as required) of the proposed commencement dates of fieldwork for each survey/investigation type, and then provide regular updates on the progress of the surveys.
- 57. Reasonable and regular access to the site would be arranged for representatives of NCC HES and HE, as appropriate, for inspection and monitoring visits. These would be accompanied by the Archaeological Coordinator/Archaeological Contractor(s).

5.4 Health and Safety

- 58. Health and Safety considerations would be of paramount importance in conducting all archaeological fieldwork. Safe working practices will override archaeological considerations at all times.
- 59. All work would be carried out in accordance with the Health and Safety at Work Act 1974 and the Management of Health and Safety Regulations 1992, as well as all other relevant Health and Safety legislation, regulations and codes of practice in force at the time.
- 60. The Archaeological Contractor(s) will supply a copy of their Health and Safety Policy and a site and task specific health and safety focused Risk Assessment Method Statement (RAMS) document to the Applicant before the commencement of any fieldwork. The RAMS will have been read and understood by all staff attending the site before any survey and investigation works commence. The Risk Assessment would be subject to updates as any new risks are identified and regularly reviewed.
- 61. The appropriate landowner agreements will need to be in place and any environmental constraints would be highlighted, considered and managed both prior to any archaeological works commencing and during the survey and investigation works themselves.

6 Methodologies (Initial Informative Stages of Mitigation)

6.1 General Approach

62. Initial informative stages of mitigation work would be employed and undertaken in advance of construction works. In the event that non-designated heritage assets cannot be avoided this would be followed by subsequent additional mitigation measures in advance of construction, as and where required (see Section 7).

Page 19 of 81



Rev. no. B

6.2 Additional Project-wide Archaeological Geophysical Survey

- 63. In the pre-application stages of SEP and DEP, Headland Archaeology Ltd. undertook a targeted programme of priority archaeological geophysical survey between September and November 2020, and a second campaign between October and November 2021. This included 37 priority survey areas covering the landfall, sections of the onshore cable corridor and the proposed onshore substation location.
- The survey areas were agreed in advance with NCC HES (and HE, where required) and undertaken in accordance with the WSI for Priority Archaeological Geophysical Survey (Equinor, 2021) (see APPENDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY).
- 65. In total, 30 survey areas were completed. Of the survey areas not completed, two areas fall outside the Order Limits, one was unsuitable for survey due to existing semi-mature conifers and the remaining four were not given permission to access.
- The location of the onshore substation was surveyed as part of the Hornsea Project Three EIA assessment (Orsted, 2018).
- 67. A further geophysical survey effort across the remainder of the onshore cable corridor would be agreed with NCC HES and HE (where required) to identify further anomalies representing archaeological sites and features.
- The Outline Schedule of Archaeological Requirements (see Appendix 2 Outline Schedule of Archaeological Requirements) provides an initial overview of the remaining areas requiring geophysical survey based on existing baseline information and which areas require further discussion with NCC HES.
- 69. Data collected from this additional programme of geophysical survey would be analysed alongside existing data, information and reporting from the priority survey programme, as well as a review of pre-enclosure maps. This will contribute directly to informing archaeological trial trench locations and positioning. Trench location plans would be produced for approval by NCC HES (and in consultation with HE, as required).
- 70. Although detailed magnetometry would be the standard technique to be adopted and implemented for the outstanding geophysical survey work, as it is considered the most appropriate and feasible method to practically cover the area still requiring survey, additional and alternative geophysical survey techniques (if/where relevant) would also be considered, to be agreed with NCC HES (and in consultation with HE, as required).
- 71. The results of the existing desk-based investigations and any results from the Geoarchaeological Assessment (Section 6.7) would be considered when determining the most effective type of geophysical survey technique. Furthermore, any requirement for additional geophysical survey techniques to be used in any specific areas will take into consideration the results of the initial geophysical survey and the effectiveness of trial trenching. This may be required to further characterise the geophysical anomalies of archaeological potential.



Rev. no. B

72. The application and scope of any such alternative or additional methods (in discrete and defined areas) would be outlined in a separate survey specific WSI. If required, these would be considered on a case-by-case (anomaly and suspected feature) basis through consultation with NCC HES (and HE, where required).

73. All additional geophysical survey would be undertaken in accordance with the principles set out in *Standards for Development-Led Archaeological Projects in Norfolk* (NCC ES, 2018).

6.3 Targeted Archaeological Metal Detecting Survey

- 74. Targeted metal detecting survey will aim to ascertain the presence/absence, character, and extent of any surviving archaeological remains through the recovery of associated metallic artefacts. This would build upon previous desk based and Historic Environment Record (HER) information, where applicable. The survey would aim to target high value sites such as Anglo-Saxon cemeteries. This would be achieved through a review of HER and desk-based information, identifying areas where high status finds, such as brooches have been previously found.
- 75. In previous discussion with NCC HES and HE, it has been acknowledged that the only way to try to identify the specific location of Anglo-Saxon cemeteries is by means of metal detector survey. The fields/plots relevant finds, such as brooches will therefore be subject to metal detecting survey, in order to see if the finds evidence can be refined at these locations.

6.4 Archaeological Trial Trenching

- 76. Programmes of archaeological trial trenching would be undertaken post-consent. These would be focused primarily on potential archaeological anomalies identified from the analysis of the geophysical survey data, Aerial Photographic and Lidar Assessment and Geoarchaeological Assessment work. Several trenches may also be needed to sample and investigate apparent blank areas.
- 77. The Archaeological Co-ordinator and the Archaeological Contractor will agree a trial trenching strategy with NCC HES. This would be appropriate and proportionate to the type of archaeological anomaly targeted for evaluation. This will ensure its character is established and suitable mitigation is subsequently undertaken.
- 78. The data and findings from the trial trenching programmes will further inform the approaches to subsequent additional mitigation requirements where required (both pre-construction and at/during construction) on a case-by-case basis.
- 79. Further mitigation requirements may include:
 - archaeological excavations (normally undertaken within the pre-construction programme as part of an early works programme for instance); and
 - archaeological monitoring (watching briefs) (often undertaken during the construction topsoil strip, sometimes also on the excavation of the cable trench(es) and any subsequent/associated open cut trenching and ground intrusive works, e.g. at crossing locations, joint pits, compound, and mobilisation areas etc).



Rev. no. B

80. All archaeological trial trenching would be undertaken in accordance with the principles set out in *Standards for Development-Led Archaeological Projects in Norfolk* (NCC ES, 2018).

6.5 Earthwork Condition (GPS/topographic) Survey

- 81. Earthwork Condition Surveys would target locations (for example in areas of pasture and non-arable, or any areas thought or known to contain important surviving or potentially important historic landscape features) to record the presence/absence, extent, profile and 'on the ground' condition of any surviving, above ground historic earthworks. This would focus on features which may be impacted by the construction works within the Order Limits.
- 82. Data collected from the topographical survey would predominantly feed into an additional approach (in certain identified areas) with respect to construction related backfilling and reinstatement (e.g. the 'restoration' of any historic earthwork features or trends and landform/shape, where possible).

6.6 Investigation and Recording of Standing Buildings or Structures

83. Built heritage/historic building surveys and recording may also be required at certain targeted locations as part of the post-consent initial informative stages of mitigation, and could result in subsequent, additional mitigation, as required, in the form of further conservation and restoration requirements. For example the WWI pillbox (SEP/DEP ID 1233) located along the proposed access route to the landfall.

6.7 Geoarchaeological Assessment/Palaeoenvironmental Survey

- 84. Geoarchaeological assessment/paleoenvironmental survey is largely designed to identify deposits that often lie outside the main areas of traditional archaeological interest along a large linear scheme. These have a high potential for yielding information that would permit the reconstruction of the past environmental, vegetational and land use history of the areas within the Order Limits.
- 85. Where required and justified, such a survey often facilitates the recognition of:
 - localised palaeochannel sediments;
 - small bogs or lake deposits;
 - valley floodplain sediments and dry valley fills; and
 - buried soils from which the palaeoenvironmental history of an area may be reconstructed through the analysis of a series of identified features.
- 86. For example, any identified areas of peat-rich soils, with the potential for organic preservation and which would be impacted by the connection works.
- 87. The Archaeological and Monitoring Assessment (ES Appendix 21.8 (document refence 6.3.21.8)) highlighted the geoarchaeological and palaeoenvironmental potential based on an assessment of geotechnical works undertaken within the Order Limits. A summary of the geoarchaeological and palaeoenvironmental potential within the Order Limits is summarised in Section 3.3.4.
- 88. A post-consent approach to geoarchaeology and the palaeoenvironment would be formulated and agreed, in consultation with NCC HES (and HE, as required).



Rev. no. B

7 Methodologies (Subsequent, Additional Mitigation Measures)

7.1 Introduction

- 89. The initial informative stages of mitigation have the potential to indicate the presence of previously unknown buried archaeological remains (and further verify previously known/anticipated above ground and buried site remains).
- 90. This will enable the archaeological and historic environment resource associated with and impacted by SEP and DEP to either be safe-guarded and/or better understood. This would be by means of subsequent mitigation measures in a manner that is both appropriate and proportionate to the significance of the remains present. This would be formally agreed through consultation with NCC HES (and HE, as required) as part of separate pre-construction and construction related WSIs.
- 91. Subsequent mitigation measures are expected to comprise a combination of the following recognised standard approaches both in advance of and/or during construction:
 - Archaeological Excavation;
 - Archaeological Monitoring/Watching Brief;
 - Preservation In-Situ;
 - Sensitive and Precautionary Approaches to Construction Works;
 - Protocol for Archaeological Discoveries; and
 - Reinstatement of Field Boundaries and Hedgerows.

7.2 Archaeological Excavation Methodology

- 92. Archaeological excavation is an intrusive form of fieldwork, which systematically identifies, examines and records archaeological deposits, features and structures. It also recovers artefacts, ecofacts and other remains within a specified area where the extents of archaeological remains are well defined by previous survey and evaluation work.
- 93. This type of mitigation would be recommended in advance of construction and employed where micro-siting of the cables (for example) is not appropriate or achievable, and therefore the preservation in-situ of known archaeological deposits is not possible.
- 94. Should the archaeological remains extend beyond the limits of the pre-defined archaeological excavation area and continue within the Order Limits, machine stripping will continue from the feature(s) of interest until the area is clear of archaeological remains. Archaeological excavation will lead to a programme of post-excavation assessment, analysis, and publication.
- 95. Following completion of the archaeological excavation fieldwork, a post-excavation assessment would be carried out in accordance with HE's guidance MoRPHE (Historic England, 2015a). This would result in the preparation of an Updated Project Design (UPD). This would include the following:
 - proposals and a timetable for further analysis (including scientific dating, if appropriate);

Page 23 of 81



Rev. no. B

- publication of the results (including a synopsis for publication) in an appropriate academic journal or monograph series; and
- preparation of the archive (including all paper records, reports and finds assemblages) for deposition in an appropriate museum or archive facility.
- 96. NCC HES would be consulted on the proposals included in the UPD prior to issue.
- 97. Wherever possible archaeological excavation would be carried out in advance of construction, as this would ensure that the most sensitive sites of identified archaeological significance are dealt with well in advance of relevant construction activity. Additionally, this would ensure that construction would be able to progress in an effective and timely manner in these areas during the construction window.

7.3 Archaeological Monitoring/Watching Brief

- 98. Archaeological monitoring/watching brief involves archaeological observation and any subsequent required investigation conducted during certain groundworks (e.g. targeted areas of both topsoil stripping and excavation of the cable trench, if required and where possible) associated with the construction phase.
- 99. Where appropriate (in locations identified in advance), machine excavation would proceed under archaeological observation, but would not be controlled directly by the nominated on-site archaeologist(s). A contingency period would be included in the works programme to allow investigation and recording of archaeological remains that might be identified, disturbed, or destroyed. Watching briefs (archaeological monitoring) normally take place where there is a lower potential of encountering archaeological remains, as part of construction-led ground intrusive works.
- 100. An agreed mechanism would be established to allow archaeological investigation during the watching brief, where appropriate. However, it is not usually anticipated that substantial archaeological remains (which would generally be highlighted for archaeological excavation were known about) would be found in areas that have been identified for watching brief, although the possibility still remains.
- 101. The programme of the watching brief would also result in the preparation of a report and ordered archive. Where archaeological remains are investigated and recorded a further programme of post-excavation assessment, analysis and publication would be required, as appropriate, as outlined above under the archaeological excavation.

7.4 Preservation In-Situ

- 102. Where well-preserved and/or significant archaeological remains survive within or along a development site, the local planning authority, through their archaeological advisers, in this case NCC HES, may state a preference for preservation 'in-situ' of certain remains.
- 103. Where opportunities remain for preserving sites (including important features)/certain areas or elements of sites/certain areas of significantly important archaeological remains in-situ through the pre-construction and construction stages, these would be considered on a case by case, site by site and area by area basis in further discussion with the relevant planning authority and NCC HES/HE (as required).



Rev. no. B

104. As part of the post-consent detailed design phase, further consideration would be given, where possible, to micrositing (within the confines of the Order Limits) which will seek to minimise impact upon those areas of highest sub-surface archaeological potential, within the confines of engineering and other environmental constraints.

7.5 Sensitive and Precautionary Approaches to Construction Works

- 105. Certain areas within the onshore Order Limits may require additional, sensitive and precautionary approaches to construction works. The aim of these would be to ensure no accidental damage or accidental physical interactions occur with certain existing sensitive structures and features (of a historic nature) in identified areas. For example the WWI pillbox (SEP/DEP ID 1233) located along the proposed access route to the landfall.
- The onshore cable corridor may be more constrained at certain locations and construction works will need to be conducted in a sensitive and controlled manner. Signage and temporary barriers would be required to ensure that no accidental damage or physical interactions occur, in certain instances.
- 107. Specific constrained areas would be identified in the post-consent detailed design stage. The above measures of precautionary working will likely need to be adopted and would be further detailed in a Construction Stage Plan(s), Contractor Environmental Action Plan(s), or similar.

7.6 Protocol for Archaeological Discoveries

- 108. For all intrusive groundworks carried out onshore above MHWS where an archaeologist is not present, SEP and DEP's project team and the relevant appointed Principal Contractor(s) will implement a protocol for reporting archaeological discoveries (PAD). The PAD would be based on the principles set out in the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) (The Crown Estate, 2014).
- 109. ORPAD (The Crown Estate, 2014) states that "It is recognised that this Protocol refers primarily to offshore schemes of development. However, with offshore renewable schemes it is usual to have associated infrastructure (such as export cables) that impact not only the offshore historic environment, but also inshore, intertidal, and in fully terrestrial localities. Therefore, this Protocol has been designed to operate in all of these environments, where an archaeologist is not present."
- 110. ORPAD came into effect in December 2010 (updated in July 2014) and applies to pre-construction, construction, and installation activities in developing offshore renewable energy schemes where an archaeologist is not present on site. The main objective of the protocol is to reduce direct impacts from occurring on currently unrecorded heritage assets. This is done by allowing for the effective reporting of discoveries of archaeological material in a manner that is conducive to construction works in order to ensure that advice, concerning measures to address discoveries, is received and implemented in a timely and efficient manner.
- 111. Should previously unknown buried archaeological remains of a significant nature be encountered during construction works, the temporary suspension of intrusive groundworks may be required.



Rev. no. B

- 112. Groundwork activities during which previously unidentified sites or unexpected discoveries of material may be encountered include:
 - The removal of topsoil anywhere across the Order Limits;
 - The excavation of transition joint bays at the landfall;
 - Open cut trenching as part of the duct installation works;
 - The excavation of Joint Bays, HDD pits and Link Boxes along the onshore cable corridor;
 - Groundworks associated with the onshore cable corridor, logistic compounds, and associated access roads; and
 - Groundworks associated with the onshore substation.
- 113. Each worksite team will have a Site Champion, a single person who is responsible for reporting discoveries to a Nominated Contact within SEP and DEP's project team. The Nominated Contact will notify the Retained Archaeologist, who will seek further advice from NCC HES.
- 114. The Nominated Contact would be the Environment Manager and/or Principal Contractor within SEP and DEP's project team. Individual Site Champions for specific activities would be specified in method statements. The identity of the Site Champion would be clearly communicated to work teams, via pre-commencement briefings (toolbox talks) for example.
- 115. SEP and DEP's project team would be responsible for ensuring that construction teams working within the Order Limits are provided with appropriate training in the application of the PAD and that all staff and contractors are aware of their responsibilities under the protocol.
- 116. Training to construction staff, site crews and work teams with regard to the practical application of the protocol in their day-to-day work can be provided by a sufficiently experienced and qualified Archaeological Contractor. Hard copies of the PAD document would be made available for use at each temporary construction compound.
- 117. Provision would be made by SEP and DEP's project team, in accordance with the PAD, for the prompt reporting/recording to NCC HES of archaeological remains encountered or suspected during works.
- 118. Following completion of the onshore construction works, a report would be produced by the Archaeological Contractor presenting the results of the PAD implementation during relevant activities. This would be submitted to NCC HES. If no discoveries are made, a nil discoveries report would be compiled to demonstrate adherence to the measures as would be set out in the construction-related mitigation WSI. This would be produced in the post-consent/pre-construction stages of the project.



Rev. no. B

7.7 Reinstatement of Field Boundaries and Hedgerows

- 119. Impact to the Historic Landscape Character (HLC) of the onshore Order Limits has been minimised through careful route selection. This would be further offset by returning field boundaries/hedgerows to their pre-construction condition and character post-construction, wherever possible, as part of a sensitive programme of backfilling and reinstatement/landscaping (see Outline Landscape Management Plan (document reference 9.18) and Outline Ecological Management Plan (document reference 9.19).
- 120. Certain hedgerows and field boundaries (e.g. county and parish boundaries) may require archaeological recording prior to and/or during the construction process and further enhanced provisions made and implemented during backfilling and reinstatement.
- 121. A review of the hedgerows which fall within the onshore Order Limits and which meet the criteria as set out under The Hedgerows Regulations 1997 was undertaken. Initially 98 hedgerows have been identified as requiring archaeological recording prior to and/or during construction; these are presented in **APPENDIX 3 HEDGEROW ASSESSMENT**. A further review will be required prior to construction to confirm which hedgerows require archaeological recording and reinstatement.

8 Conclusion/Summary

- 122. This Outline WSI (Onshore) has been produced to set out the principles and proposed approaches to archaeological survey and investigations that would be undertaken in advance of and during construction. This includes both initial informative stages of mitigation work and subsequent mitigation measures, as and where required.
- 123. This document sets out an initial overarching archaeological mitigation strategy that would be undertaken within the onshore SEP and DEP Order Limits once the DCO has been granted.
- 124. The survey specific WSIs and final pre-construction and construction mitigation WSIs would be agreed with and approved by the relevant planning authority in consultation with NCC HES (and HE, as required). All documents would be produced in-line with relevant legislation, planning policy, guidance and good practice (Section 4).

Doc. No. C282-RH-Z-GA-00131 9.21

Rev. no. B

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Rev. no. B

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Page 30 of 81



Doc. No. C282-RH-Z-GA-00131 9.21

Rev. no. B

APPENDIX 1 EXAMPLE (MODEL) CLAUSES – MITIGATION WORKS SPECIFICATION: ARCHAEOLOGICAL EXCAVATION AND ARCHAEOLOGICAL MONITORING/WATCHING BRIEF

10.1 Introduction

- 1. The following sections provide example (model) clauses specific to the type of additional archaeological mitigation work (and the associated specifications) likely to be required following the initial informative stages of mitigation post-consent. Preparation of pre-construction and construction related WSIs would be undertaken with reference to and inclusion of relevant model clauses, as outlined below.
- 2. The structure outlined below is anticipated to provide the framework only for the preconstruction and construction related mitigation WSIs, which would be tailored with specific requirements and circumstances on a case-by-case/site-by-site basis, as required.
- 3. The information provided is specific to the location of the project within Norfolk, as well as more general local, regional and national-type approaches.
- 4. This appendix relates mainly to archaeological excavation and recording approaches and associated requirements to be undertaken.

10.2 General Approach

- 5. All WSIs would be prepared in accordance with:
 - Chartered Institute for Archaeologists (ClfA): Standard and guidance for an archaeological watching brief (ClfA, 2014c);
 - ClfA: Standard and guidance for archaeological excavation (ClfA, 2014d);
 - ClfA: Code of Conduct (ClfA, 2021);
 - HE: Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015a); and
 - Norfolk County Council Standards for Development-Led Archaeological Projects in Norfolk (NCC ES, 2018).
- 6. The WSIs will also take account of:
 - Research and Archaeology: A Framework for the Eastern Counties: 1. Resource Assessment (Glazebrook, 1997);
 - Research and Archaeology: A Framework for the Eastern Counties: 2. Research Agenda and Strategy (Brown and Glazebrook (eds), 2000); and
 - Research and Archaeology Revisited: A Revised Framework for the East of England (Medlycott et al., 2011).

Page 31 of 81



Rev. no. B

10.3 Site Briefings (Toolbox Talks)

- 7. Site briefings will include, as a minimum; the SEP and DEP's Health and Safety requirements/procedures; the Principal Contractor's Health and Safety requirements/procedures; and Unexploded Ordnance (UXO) awareness. There may also be ecological briefings ('toolbox talks') and requirements in specific relation to archaeological works.
- 8. It is assumed that the Principal Contractor would be responsible for UXO survey and clearance across the onshore Order Limits by a specialist UXO survey team, in advance of construction.

10.4 Archaeological Monitoring of Soil Stripping

- 9. The location of archaeological excavation areas would be plotted on the ground using electronic survey equipment typically accurate to ±100 mm in the field with respect to the OS grid, in order to ensure that the positions are transcribed accurately from location plans.
- Mechanical excavation will utilise suitable construction plant (and fully certified and experienced machine drivers), which for areas of archaeological excavation is anticipated to be a tracked 360-degree excavator(s) or other suitable plant, fitted with a flat bladed 'toothless' ditching bucket. The topsoil and subsoil within the archaeological excavation areas would be excavated in spits of no more than 0.1m down under the direct control and supervision of the Archaeological Contractor(s).
- 11. For areas outlined for archaeological excavation, the topsoil and subsoil would be removed until either the top of the latest archaeological horizon or undisturbed natural deposits are encountered. Particular attention would be paid to achieving a clean and well-defined horizon (surface) with the machine.
- 12. Topsoil and subsoil excavated from the archaeological excavation areas would be stored separately. As far as practicable this would be beyond the limits of the archaeological excavation areas. Or where possible, within the limits of the 'site' on archaeologically blank areas.
- 13. All spoil arising from the archaeological excavation areas should also be investigated and scanned with a metal detector by the Archaeological Contractor(s) to recover any artefacts.
- 14. The extent of each archaeological excavation area should be clearly marked, and the ends enclosed/demarcated using high visibility fencing in order to highlight the archaeological excavation area and in order to ensure that no construction traffic can inadvertently enter the work area. The Archaeological Contractor(s) will make daily checks of any fencing.
- 15. If there are deep excavations (> c. 1.2-1.5 m deep) then alternative fencing arrangements would be required and agreed in conjunction with the Principal Contractor, the Archaeological Contractor(s) and SEP and DEP's project team, this may involve fencing being erected around individual slots through features or over parts of the 'site'.

Page 32 of 81



Rev. no. B

16. The machined surface would be cleaned by hand, where required, for the acceptable definition of archaeological remains. It is not anticipated that the entire archaeological excavation area will require hand cleaning.

17. Provision would be made so that any areas in which sub-surface archaeological remains are identified as being present are not subject to prolonged periods of exposure. Archaeological remains and/or deposits left exposed to the elements for extended periods can suffer weathering which can accelerate their degradation, damage and/or loss. In addition, archaeology left exposed may be the target of heritage crime (e.g. illegal metal detecting). The Archaeological Contractor(s) would be responsible for ensuring that adequate security and protection measures are put in place in order to alleviate this risk, alongside the Principal Contractor, where relevant.

10.5 Hand Excavation of Archaeological Features

- 18. Archaeological features and deposits would be excavated using appropriate hand tools, such as a mattock, shovel, and hand trowel, in an archaeologically controlled and stratigraphic manner to meet the aims and objectives of the investigation.
- 19. Hand excavation would be targeted to provide sufficient information on the form, extent, level of preservation and function, with emphasis on stratigraphic relationships between features and recovery of dating evidence. Archaeological excavation and recording would be confined to the working width of the machined area.
- 20. In accordance with the *Standards for Development-Led Archaeological Projects in Norfolk* (NCC ES, 2018) the following would be undertaken as minimum requirements:
 - At least a 10% sample of each linear feature would be excavated in segments, with professional judgement and discussions during site monitoring visits informing strategies. Relationships with other features and deposits would be investigated and sections showing the relationships drawn. Isolated sections away from intersections should also be excavated to retrieve dating evidence.
 - Unless falling into the categories below, discrete/non-linear features (pits and postholes for example) will normally be 50% excavated (half-sectioned) and the section drawn. Relationships would be investigated and sections showing relationships drawn.
 - Graves (inhumations and cremations) would be 100% excavated and detailed plans and sections drawn (once relevant licences have been secured).
 - Industrial features (kilns, ovens etc) would be 100% excavated, planned in detail and sections drawn. Full sampling will take place to recover evidence of purpose, fuel etc.
 - Discrete features with high palaeoenvironmental potential would be 100% excavated. Strategies for excavating infilled ponds and palaeochannels would be based on professional judgement and discussions during site monitoring visits.



Rev. no. B

- Features containing artefacts of high significance (hoards, structured deposits or whole or near whole pottery vessels, for example) would be 100% excavated.
- All buried soils would be appropriately sampled. Excavation/investigation strategies should be informed by a geoarchaeologist and agreed with NCC HES and, where relevant, Historic England's Regional Science Adviser. Buried soils must not be excavated by machine without prior agreement of NCC HES.
- 21. Archaeological features, deposits and spoil would be metal detected before and during manual excavation. Artefacts would be recovered, spatially recorded, labelled, bagged, and retained.
- 22. Provision should be made to extend the excavation area if significant archaeological remains are found to extend beyond the initially defined excavation boundary and it is practically possible to do so within the area to be impacted by construction-related activities. The potential need to extend excavation areas would be mentioned in briefs and Written Schemes of Investigation.
- 23. Archaeological contractors must provide sufficient, secure and separate accommodation for site records, and for finds processing and finds storage if these activities take place on site.
- 24. If deep features, such as shafts or wells, are encountered, hand-excavation will not proceed below a safe working depth of c. 1.2-1.5m from the machined surface. An appropriate methodology for achieving full excavation below this depth would be agreed in consultation with the Archaeological Coordinator, the Principal Contractor (where applicable), the Archaeological Contractor(s), NCC HES and SEP and DEP's project team.
- 25. A separate method statement for excavation of deep features would be prepared by the Archaeological Contractor(s), if required.
- 26. Machine-assisted excavation may be permissible if large/deep deposits or homogenous and non-archaeological layers are encountered, but only after consultation with the Archaeological Coordinator and NCC HES.
- 27. Any variation to the above would be agreed with the Archaeological Coordinator, SEP and DEP's project team and/or their representatives, the Archaeological Contractor(s) and NCC HES on site, and shall be confirmed in writing.

10.6 Archaeological Recording

- 28. All archaeological deposits, features and artefacts exposed, examined, or excavated must be fully recorded using written records (NCC HES, 2018).
- 29. Each archaeological excavation area and any area excavated archaeologically during archaeological monitoring (watching brief) would be given a unique site code, and this would be written on all records, drawings, artefact bags and sample containers.
- 30. An accession number will also be obtained by the Archaeological Contractor from Norfolk Museums and Archaeology Services prior to commencing work.



Rev. no. B

- 31. Following machine excavation, the extent of excavation areas would be accurately recorded using electronic survey equipment typically accurate to ± 100mm in the field with respect to the OS grid. The data would be overlaid at an appropriate scale onto the OS National Grid (using digital map data).
- 32. Archaeological remains would be recorded in plan using electronic survey equipment. All survey points used would be accurately tied into the OS National Grid.
- 33. A full written, drawn and photographic record would be made of archaeological features and deposits (contexts) with each context given a unique number and described on a separate record sheet. A context register, with brief details, will also be kept during the archaeological work.
- In addition to the electronic survey of features, as a minimum, all interventions and areas of detailed archaeology would be planned by hand, using tape measures.
- 35. Hand drawn plans and sections of features would be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections) with Ordnance Datum (OD) heights recorded in metres, correct to two decimal places.
- 36. Each drawing would be given a unique drawing number. A drawing register, with brief details, would be maintained throughout the archaeological works.
- 37. Digital colour photography will form an integral part of the recording strategy, and all photographs will incorporate scales, an identification board and directional arrow. A photographic record would be maintained throughout. Photographs would be taken of all excavated features.
- 38. In addition to records of archaeological features, general photographs recording the context of the archaeological excavation and any area excavated archaeologically during archaeological monitoring (watching brief) will also be taken. This may include drone/overhead photography to record the excavation areas, where results warrant it, as is recommended in Norfolk County Council Environment Service's Standards for Development-led Archaeological Projects in Norfolk (NCC ES, 2018). Any fencing of individual features or slots would be removed, prior to any photographic recording taking place.
- 39. A photographic register, with brief details, will also be maintained throughout the archaeological works.

10.7 Artefact Recovery

- 40. With respect to finds and landowner permissions for the removal of artefacts and ecofacts, it is common practice on linear, multi-phase schemes to approach the landowners at the end of the project to request their permission to deposit any artefacts in an appropriate local museum once all items are accounted for. This process would be adhered to as part of the project and would be facilitated and overseen by the Archaeological Contractor.
- 41. Artefacts would be collected and labelled with the unique site code and context number of the deposit in which they were recovered.



Rev. no. B

- 42. Each 'significant' find would be recorded three dimensionally using electronic survey equipment typically accurate to ± 100mm in the field with respect to the OS grid and assigned a 'Special Finds' number. Similarly, if artefact scatters are encountered these will also be recorded three dimensionally.
- 43. Bulk finds would be collected and recorded by context.
- 44. All archaeological artefacts that are collected from the archaeological excavation areas and any area excavated archaeologically during archaeological monitoring (watching brief) that do not clearly belong to a particular context would be recorded as un-stratified and assigned the topsoil context number.
- 45. All non-modern and significant modern artefacts would be stored and processed in a manner appropriate to the material to minimise further deterioration. All retained artefacts will, as a minimum, be washed, weighed, counted, and identified. Any artefacts requiring conservation or specific storage conditions would be dealt with immediately in line with First Aid for Finds (Watkinson & Neal, 1998).
- 46. Artefacts would be properly conserved after excavation and would be stabilised for storage, where required. If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment. If any of the archaeological excavation areas and any area excavated archaeologically during archaeological monitoring (watching brief) result in the recovery of unstable artefactual remains (e.g. metallic objects or preserved wood/leather), the Archaeological Contractor will commission the services of a suitable specialist to advise and implement conservation of unstable artefacts; to undertake x-ray analysis and to provide an assessment of potential summary, which will then be attached to the main report(s).
- 47. All finds and environmental samples would be processed (cleaned and marked), as appropriate. Each category of find or environmental/industrial material would be examined by a suitably qualified archaeologist or specialist and the results incorporated into the post-excavation assessment report.
- 48. The collection, documentation, and conservation of all artefactual and ecofactual material will conform to the Chartered Institute for Archaeologists' *Standards and guidance for the collection, documentation, conservation, and research of archaeological materials* (CIfA, 2014e).

10.8 Soil Sampling Strategy

- 49. Environmental samples would be taken from a range of contexts and phases encountered on site, and from any deposit where it is expected that worthwhile environmental evidence may be recovered. Such deposits will include, though not be restricted to, waterlogged, and burnt contexts. Provision would be made for the recovery of material suitable for scientific dating.
- 50. The soil sampling strategy for each archaeological excavation area would be informed by the results of the initial informative stages of mitigation, and any bespoke soil sampling strategy identified by the specialists as part of the post-excavation assessment of the evaluation works would be detailed in the site specific WSIs/Method Statements. Where practicable and deemed important, an environmental specialist will visit individual 'sites' and advise on an appropriate strategy to maximise the potential recovery, tied into the regional research agenda (Brown and Glazebrook, 2000; and Medlycott *et al.*, 2011).



Rev. no. B

- 51. Flotation samples would be taken as part of a sampling strategy from a range of stratigraphically securely contexts, where present, and will typically be between 40 and 60 litres in size. Where feasible, flotation samples would be taken as scatter samples, whereby tubs would be filled from different locations within the designated fill to avoid spatial preservation bias or missing biological remains invisible to the naked eye which can form discrete 'clusters' within the fill (English Heritage, now Historic England, 2011).
- 52. Samples must be taken from appropriately cleaned surfaces, be collected with clean tools and be placed in clean containers. They would be adequately recorded and labelled, and a register of all samples would be kept. Samples should be stored appropriately in a secure location prior to being provided or sent to the appropriate specialist.
- 53. Radiocarbon, dendrochronology, archaeomagnetic, pollen and monolith samples may be considered for collection where justified and warranted. These approaches would need to be agreed in consultation with the Archaeological Contractor, the Archaeological Coordinator, NCC HES, and SEP and DEP's project team.
- 54. Further advice on the appropriateness of the Archaeological Contractor's proposed strategies may be sought from the Historic England Regional Science Advisor (East of England), as appropriate, although NCC HES would provide advice and recommendations in the first instance, again as required.
- 55. The sampling strategy, assessment and analysis of samples and subsequent reporting will follow best practice as recommended by Historic England (English Heritage, now Historic England, 2011).
- 56. All environmental samples would be processed as appropriate. Each category of environmental material would be examined by a suitably qualified archaeologist or specialist and the results incorporated into the report.

10.9 Human Remains

- 57. If human remains are discovered, an application for a licence from the Ministry of Justice under Section 25 of the Burial Act 1857 would be made by the Archaeological Contractor(s). The works will also take place in accordance with the appropriate Environmental Health regulations. Other specific and bespoke requirements may also be required, on a case-by-case/site-by-site basis. Excavation of the human remains will only take place after a licence is obtained.
- 58. During excavation, burials must be recorded in situ and subsequently lifted, washed in water (without any additives), and packed to standards compatible with McKinley & Roberts 1993 and Brickley & McKinley 2004.
- 59. Where appropriate, samples should be taken to retrieve small bones and other biological remains.
- 60. Where articulated human remains are discovered, provision must be made for a recognised specialist in human skeletal material to visit the site and confirm their identification during the fieldwork stages of the project.



Rev. no. B

10.10 Treasure

- Any recovered artefacts that are designated Treasure as defined by the Treasure Act 1996 would be treated in accordance with said Act. All Treasure would be reported to H. M. Coroner. SEP and DEP's project team and the Archaeological Coordinator will also be informed at the earliest opportunity.
- 62. Any Treasure would be removed to a secure store. Where removal cannot be affected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

10.11 Completion of Archaeological Fieldwork

- 63. The Archaeological Contractor(s) shall prepare and submit completion statements to SEP and DEP's project team and the Archaeological Coordinator once each distinct archaeological excavation area and any area excavated archaeologically during archaeological monitoring/watching brief have been vacated. Following internal review these will also be made available to NCC HES (and HE, as required) for information and comment.
- 64. The completion statements will include:
 - A brief summary of the results of the works.
 - A general location plan and all features plan of the archaeological excavation areas and any areas excavated archaeologically during monitoring/watching brief.
 - Quantification of the primary archive including contexts, finds and samples.
 - A brief chronological summary of the archaeological remains.

10.12 Reporting Requirements

- Verbal progress reports and brief written progress reports would be provided to SEP and DEP's project team and the Archaeological Coordinator regularly during the archaeological investigations. They will also be provided at any stage during the works, upon reasonable request. NCC HES (and HE, where required) will also be regularly updated with progress.
- The reporting of the archaeological investigations would be commensurate with the results of the investigation and would be produced in accordance with the relevant CIfA Standards and Guidance documents (CIfA, 2019a-b and 2014a-f). The Management of Research Projects in the Historic Environment: The MoRPHE Project Mangers' Guide (Historic England, 2015) should also be considered relevant.
- The post-excavation assessment report for the archaeological excavations and any areas excavated archaeologically during monitoring/watching brief should ultimately incorporate the results of the earlier programmes of archaeological trial trenching. This will ensure the results from all fieldwork are fully integrated.
- 68. There should also be comment within the reporting from the project/Archaeological Contractor's(s') geophysicist on the results of the archaeological investigations/excavations



Rev. no. B

- 69. Records and finds from other previous archaeological works (where project applicable) should also be examined and integrated into the assessment report, wherever possible. All finds must be assessed in relation to latest existing local and regional artefact type series. The content provided within the assessment report will adhere to best practice and available guidance, where relevant.
- 70. The post-excavation assessment will result in the preparation of an Updated Project Design (UPD), which will include proposals and a timetable for further analysis (including scientific dating, if appropriate), publication of the results (including a synopsis for publication) in an appropriate academic journal or monograph series, and preparation of the archive (including all paper records, reports and finds assemblages) for deposition in an appropriate museum or archive facility (see Section 10.13). NCC HES would be consulted on the proposals included in the UPD prior to issue.
- 71. A draft report would be issued for review by SEP and DEP's project team and the Archaeological Coordinator prior to agreement and issue of the final report to NCC HES, and HE where required.
- 72. It is anticipated that issue of the final report should follow within XX weeks of comments being provided on the draft report (timeframe to be agreed with NCC HES post-consent).
- 73. A fully collated and completed version of the report shall be included in PDF format. Both hard and digital version copies of the report will ultimately be lodged with NHER. The Archaeological Contractor(s) would be responsible for ensuring this is done. Upon request, a project CD or USB shall also be submitted containing image files in JPEG or TIFF format, digital text files shall be submitted in Microsoft Word format, and figures and drawings in recent/compatible version AutoCAD and/or ArcGIS format.
- 74. A digital version of the report would be placed with OASIS (Online Access to the Index of Archaeological Investigations) at An OASIS form would be included as part of all reports produced. The Archaeological Contractor(s) would be responsible for ensuring this is done.

10.13 Archive Preparation and Deposition

- 75. The archive will consist of the documentary and digital records and any archaeological material generated during all phases of the fieldwork.
- 76. All records and materials produced would be quantified, ordered, indexed, marked with the unique project, site, and context number and internally consistent. The archive would be kept secure at all stages of the project.
- 77. The site archive would be deposited with the Norfolk Museums and Archaeology Services within six months (or as close to as possible) of the completion of all fieldwork and associated post-excavation assessment and analysis work for the project. It will then become publicly accessible.

Page 39 of 81



Rev. no. B

- 78. The Archaeological Contractor would be responsible for identifying any specific requirements or policies of the museum/records office in respect of the archive, and for adhering to those requirements. The archive will conform to the standards required by the national guidelines in 'Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation' (AAF, 2007) and 'Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives' (CIfA, 2020).
- 79. Finds must be appropriately conserved and stored in accordance with UK Institute of Conservators Guidelines (Walker, 1990). The finds, as a permanent part of the site archive, should be deposited with the Norfolk Museums and Archaeology Services. If this is not possible for all or any part of the finds archive, then provision must be made for additional recording (e.g. photography, illustration, analysis), as appropriate.
- 80. Prior to the commencement of archaeological fieldwork, The Archaeological Contractor will contact the NHER regarding the acquisition of further event numbers or confirming previous event numbers still apply. Event numbers may be issued on an area by area/stage by stage or project wide basis, but this would be confirmed with NHER personnel prior to starting the next stage of archaeological works in each instance.
- Also, at the start of work (immediately before fieldwork recommences) an OASIS online record must be initiated by the Archaeological Contractor and main areas/distinct coherent land parcels/stages of the onshore project area completed on details, location and creators' forms.
- 82. All parts of the OASIS online form must be completed for submission to the NHER. This should include an uploaded .pdf version of entire final reporting (a paper copy should also be included with the archive), as relevant to each stage of fieldwork.
- 83. The deposition of the archive forms the final stage of the (archaeological) project. The Archaeological Contractor must provide SEP and DEP's project team and the Archaeological Coordinator with copies of all communication with the recipient museum/records office and written confirmation of the receipt/deposition of the archive.
- 84. The Archaeological Contractor will liaise with SEP and DEP's project team to address the transfer of ownership and any copyright issues.

10.14 Monitoring Progress and Site Visits

- Verbal progress reports and brief written daily and/or more detailed weekly progress updates would be provided by the Archaeological Contractor to SEP and DEP's project team and the Archaeological Coordinator during the course of the archaeological investigations, and also at any juncture upon request. Updates on progress will subsequently be passed onto NCC HES by the Archaeological Coordinator and/or the Archaeological Contractor.
- 86. The Archaeological Contractor will only accept direct and formal instruction from SEP and DEP's project team, or where appropriate the Archaeological Coordinator. If any problems are encountered during the fieldwork these would be reported to SEP and DEP's project team and the Archaeological Coordinator immediately.



Rev. no. B

- 87. Monitoring progress meetings between the Archaeological Contractor, SEP and DEP's project team and the Archaeological Coordinator would be held on site during the fieldwork (ongoing Covid-19 restrictions dependent), as required. Representatives from NCC HES and HE (where required) would be invited to attend in order to monitor the works on behalf of the local planning authorities. These meetings would be arranged by/through the Archaeological Coordinator.
- 88. NCC HES will also be afforded access to the site on request, outside of any formal monitoring progress meetings. Arrangements should be made through the Archaeological Coordinator and the Archaeological Contractor's(s') key named contacts. Where appropriate, the Principal Contractor will also need to be informed in order that access can be facilitated in a safe manner.
- 89. NCC HES would be informed in good time of the start dates and project duration and would be requested to approve sign-off of the archaeological excavation areas.
- 90. Following top-soil strip and associated sub-soil removal across each archaeological excavation area, an initial meeting between the Archaeological Contractor(s), SEP and DEP's project team, the Archaeological Coordinator and NCC HES may be held to further agree the excavation/recording/sampling strategy for each area/site/stage etc.
- 91. Where necessary to achieve the objectives of the investigation within the overall project programme, variations to the scope of works would be agreed on site at progress meetings, as appropriate.
- 92. Any variations to the archaeological investigation locations/dimensions caused by ecological constraints, vegetation cover or ground conditions (for example) would be agreed with SEP and DEP's project team, the Archaeological Contractor(s) and the Archaeological Coordinator and communicated to NCC HES.
- 93. Following the discovery of any unexpected archaeological sites during archaeological monitoring/watching brief work, the Archaeological Contractor(s) will ensure that the archaeological remains are properly dealt with and sufficiently resourced beyond (in addition to) the monitoring/watching brief archaeologist(s) on site, where appropriate. A process for this would be agreed between the Archaeological Contractor(s), SEP and DEP's project team and the Archaeological Coordinator. The Principal Contractor will also need to be informed of any additional personnel on site, where appropriate/relevant.

10.15 Security, Confidentiality and Publicity

- 94. Although information regarding the project is in the public domain, the archaeological investigation works may attract interest.
- 95. In the event of any enquiries by the public, the Archaeological Contractor(s) will refer all enquiries to SEP and DEP's project team, the Archaeological Coordinator and the Principal Contractor without making any unauthorised statements or comments.
- 96. The Archaeological Contractor(s) will not disseminate information or images associated with the project for publicity or information purposes, without the permission of SEP and DEP's project team.



Rev. no. B

10.16 Copyright

- 97. The Archaeological Contractor(s) shall assign copyright in all reports and documentation/images produced as part of this project to SEP and DEP's project team. The Archaeological Contractor(s) shall retain the right to be identified as the author/originator of the material.
- 98. The Archaeological Contractor(s) may apply in writing to use/disseminate any of the project archive or documentation (including images), and any such permission will not be unreasonably withheld.

10.17 Resources and Timetable

- 99. All archaeological personnel involved in the project must be suitably qualified and experienced professionals. The Archaeological Contractor(s) will provide SEP and DEP's project team and the Archaeological Coordinator with staff CVs of the Project Manager, Project Officer(s), Site Supervisor(s) and any proposed specialists. These will in turn be provided to NCC HES, if requested.
- 100. Site assistants' CVs will not be required, but all site assistants should ideally have a minimum of six months excavation experience. Additional CVs must be made available upon request by SEP and DEP's project team and the Archaeological Coordinator.
- 101. All equipment and tools required by the Archaeological Contractor(s) would be supplied by the Archaeological Contractor(s).
- 102. The Archaeological Contractor(s) must give immediate warning to SEP and DEP's project team and the Archaeological Coordinator should any agreed programme date not be achievable, due to for example severe/extreme weather conditions.

10.18 Health and Safety

- 103. The Archaeological Contractor(s) will adhere to any overarching risk assessments and any project specific health and safety plan prepared by the Principal Contractor, SEP and DEP's project team and/or their representatives.
- 104. The Archaeological Contractor(s) will provide SEP and DEP's project team and/or their representatives with details of their public and professional indemnity insurance and all other insurances required by law.
- The Archaeological Contractor(s) will have their own Health and Safety policies compiled using national guidelines, which conform to all relevant Health and Safety legislation. A copy of the Archaeological Contractor(s) Health and Safety policy would be submitted to SEP and DEP's project team and/or their representatives.
- 106. The Archaeological Contractor(s) will prepare health and safety focused RAMS specific to the archaeological works to be undertaken and will submit these to SEP and DEP's project team and/or their representatives for approval prior to entering the individual work sites.
- 107. Pre-Construction information would be provided by SEP and DEP's project team and/or their representatives in accordance with the Approved Code of Practice, as required.



Rev. no. B

- 108. The Archaeological Contractor(s) shall be responsible for identifying any buried or overhead services and taking the necessary precautions to avoid damage to such services, prior to the commencement of excavation works. Service location plans and UXO information (if available) would be provided by SEP and DEP's project team and/or their representatives, where appropriate, but these must be checked through appropriate means prior to the commencement of archaeological investigation works.
- 109. The Archaeological Contractor(s) will not commence any excavation works unless authorised to do so by SEP and DEP's project team and/or their representatives.
- 110. The Archaeological Contractor will adhere to the Principal Contractor's and SEP and DEP's project team Personal Protective Equipment requirements (PPE). As a minimum the following PPE will always be worn on site:
 - High visibility vest/jacket;
 - Approved work wear (e.g. overalls/trousers/long-sleeved tops);
 - Hard hat:
 - Safety boots with reinforced toes and mid-sole, with ankle support;
 - Safety glass; and
 - Gloves.
- 111. In undertaking the work, the archaeologists are to abide by all statutory provisions and by-laws relating to the work in question, including the Health and Safety at Work Act 1974.
- 112. No lone working would be permitted at any time.
- 113. The archaeological works may be halted in the event that adverse/extreme weather, ground conditions or health and safety requirements demand it and the site-specific situation reassessed prior to any recommencement.

10.19 General Provisions

- 114. Following completion of the archaeological investigation and recording works, the Archaeological Contractor(s) will leave work sites in a tidy and workmanlike condition at the end of each day, and remove all materials brought onto the site, including any grid pegs or other markers.
- 115. The Archaeological Contractor(s) is to allow the site records to be inspected and examined at any reasonable time, during or after the investigations, by SEP and DEP's project team and the Archaeological Coordinator.
- 116. Access for parking and use/provision of site welfare facilities shall be agreed between SEP and DEP's project team and the Archaeological Contractor(s) prior to entering each discreet work site.
- 117. Provision must be made for fencing of archaeological remains, or potential archaeological remains, where identified at/during construction, whilst archaeological investigation and recording works continue.
- 118. The Archaeological Contractor(s) will need to make provision for site security, in conjunction with SEP and DEP's project team and the Principal Contractor (where relevant), particularly where sensitive archaeological remains are uncovered.



Outline Written Scheme of Investigation

(Onshore) Rev. no. B

APPENDIX 2 OUTLINE SCHEDULE OF ARCHAEOLOGICAL REQUIREMENTS

Doc. No. C282-RH-Z-GA-00131 9.21

Page 44 of 81

Classification: Open Status: Final



Rev. no. B

Outline Schedule of Archaeological Requirements

				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with l	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Access to Onshore Substation	SEPDEP ID 328, 586, NHER 37649, 52135	Small enclosed Roman inhumation cemetery: prehistoric, post- medieval and undated features and multi-period finds, alongside cropmarks of fragmentary undated ditches	Medium - High	N/A	N/A	Yes (Slight): onshore substation access road interacts with the eastern aspect of asset and will be affected by construction related activities; however, the current land use appears to be a quarry site and therefore the asset may have already been impacted.	621937	303298	To be discussed with NCC HES due to nature of existing development and proposed construction activities	To be discussed with NCC HES due to nature of existing development and proposed construction activities	TBC	N/A	N/A
Access to Onshore Substation	SEPDEP ID 327, 1489, APS_027, NHER 37650	Late Bronze Age flint scatters, post medieval building material	Medium	Cropmarks over ditches, of unknown date and origin	N/A	Yes (Slight): onshore substation access road interacts with the eastern aspect of asset and will be affected by construction related activities	621934	302886	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Access to Onshore Substation	SEPDEP ID 1484, APS_022	Bank or bund which may be associated with quarrying to the north	Low	A bank or bund which may be associated with quarrying to the north	N/A	Yes (Slight): onshore substation access road intersects centre and northern	621775	302664	To be discussed with NCC HES due to nature of construction works.	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A

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Doc. No. C282-RH-Z-GA-00131 9.21

Rev. no. B

				Results of AP	Describe of Delocity				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
						extent of asset and will be affected by construction related activities							
Onshore Substation and Access	SEPDEP ID 570, NHER 37651	Late Bronze Age flint concentrations, post medieval finds	Medium	N/A	N/A	Yes (Slight): onshore substation access road interacts with the asset and will be affected by construction related activities	621500	302524	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Substation	SEPDEP ID 547, NHER 57922	Roman pits and possible field system south of Mangreen Farm, Swardeston	Medium	N/A	PA2: Linear settlement clearly identified along the western edge of the survey area, which comprises a series of sub- rectangular enclosures with divisions and multiple discrete anomalies. Low magnitude linear anomalies suggest a field system extending to the east of the settlement.	Yes: onshore substation interacts with the asset and will be affected by construction related activities	621400	301972	Yes	N/A	Yes	N/A	N/A
Access to Onshore Substation	SEPDEP ID 544, 1464, APS_002, NHER 52082	Cropmarks of possible enclosures, a ring ditch, field boundaries and ditches of unknown, but	Medium - High	Cropmarked eroded linear ditches, likely boundaries and tracks, and a curvilinear ditched	N/A	Yes (Slight): onshore substation access road interacts with the southern aspect of	621779	301494	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A

Status: Final



				Results of AP	Deculte of Driority				Post-consent	Evaluation Stag	es to be agreed with	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
		possible Roman date		enclosure which may be a Bronze Age funerary feature		asset and will be affected by construction related activities							
Onshore Substation location, compound and HDD section	SEPDEP ID 1376, 1147, 1467, APS_005, NHER 52079, 52080	Cropmarks of ditches and field boundaries	Low	Cropmarks of fragmentary ditches of unknown date and postmedieval field boundaries.	Completed as part of Hornsea Project Three. Survey undertaken by SUMO in 2017: two former field boundaries were recorded along with a geological feature (possible buried channel) running on a NW/SE alignment across the northern part of field.	Yes (Slight): the assets are locations within the eastern section of the Onshore Substation location and will be affected by construction related activities	621978	301877	Completed	N/A	Yes	N/A	N/A
Onshore Substation	SEPDEP ID 1405, NHER 9751	Undated and unidentified cropmark	Low	N/A	N/A	Yes (Slight): Onshore Substation area intersects southern extent of asset and will be affected by construction related activities	621747	302289	Yes	N/A	Yes	N/A	N/A
Onshore Substation	SEPDEP ID 707, NHER 55197	Roman Coin	Low	N/A	PA2: Multiple anomalies adjacent to and abutting the eastern edge of extant lane, comprising a series of sub- rectangular	Yes (Slight): Onshore Substation area intersects eastern extent of asset and will be affected by	621338	302189	Complete	N/A	Yes	N/A	N/A



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
					enclosures with divisions and multiple discrete anomalies (indicative of settlement activity), which clearly located the site of the former medieval village of Gowthorpe.	construction related activities							
Onshore Substation	SEPDEP ID 1323, 1479, 1480, APS_017, APS_018, NHER 52077	Site of a probable World War Two searchlight battery	Medium - High	Site of World War Two searchlight battery	N/A	Yes: onshore substation interacts with the asset and will be affected by construction related activities	621994	302324	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 703, 1465, APS_003, NHER 52076	Cropmarks of field boundaries and ditches of unknown date but possible Roman date	Medium	Cropmarks of ditches, intersects Roman pits and possible field system south of Mangreen Farm.	PA1: No coherent pattern of anomalies but cluster of anomalies in the south-west corner. Also, other linear and discrete anomalies, particularly in the western half of the field which may have archaeological potential.	Yes: start of the onshore cable route and access roads leading to the/adjacent to the Onshore substation intersects these assets and will be affected by construction related activities	62154	301554	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1463, APS_001	Eroded bank	Low	Eroded bank which may have been a headland to	N/A	Yes: Onshore Cable route intersects centre of asset and will	620514	301457	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A



Rev. no. B

				Results of AP	Deculte of Driority				Post-consent	Evaluation Stag	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
				Medieval ploughing		be affected by construction related activities							
Onshore Cable Corridor	SEPDEP ID 1466, APS_004	Cropmarked ditch	Low	Cropmarked ditch with a terminal defined gap, which could be part of an undated enclosure	N/A	Yes (Slight): onshore cable route clips north-eastern corner of asset and will be affected by construction related activities	620080	301715	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 436, 1486, APS_024, NHER 22652	Extraction site and multi-period finds	Low	Extraction site of unknown date.	N/A	Yes (Slight): Onshore Cable route intersects northern extent of asset and will be affected by construction related activities	617980	302749	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1167, NHER 9742	Site of part of 18th century Turnpike road	Low	N/A	N/A	Yes: Onshore Cable route intersects asset and will be affected by construction related activities	622222	302649	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 762, 393, 280 NHER 28161, 25513, 9477	Multi period finds area, with evidence of Anglo-Saxon finds and prehistoric flints	Low	N/A	N/A	Yes: Onshore Cable route intersects centre of asset and will be affected by construction related activities	617370, 617494, 617569	303239, 303349, 303199	Yes	Yes	Yes	N/A	N/A

Status: Final



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with N	ICC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 611, 1487, APS_025, NHER 58937	Eroded bank and evidence of Anglo-Saxon finds within SEPDEP ID 611	Low	Very eroded bank likely to be headland created by medieval ploughing which is now fully eroded.	N/A	Yes: Onshore Cable route intersects centre of asset and will be affected by construction related activities	618966	302811	Yes	Yes	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 641, 952, 482, 1491, APS_029, NHER 30575, 49971, 50006	Eroded banks and ditches	Low	Eroded banks and ditches where field boundaries have been removed to facilitate modern farming.	N/A	Yes (Slight): Onshore Cable route intersects southern extent of asset and will be affected by construction related activities	618505	303030	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1059, NHER 44333	Ketteringham Park	Low	N/A	N/A	Yes (Slight): Onshore Cable route intersects northern extent of asset and will be affected by construction related activities	616658	302634	Yes	N/A	TBC - to be informed by results of geophysical survey	TBC	N/A
Onshore Cable Corridor	SEPDEP ID 1492, APS_030	Extraction site	Low	Extraction site of unknown date.	N/A	Yes: Onshore Cable route intersects centre of asset and will be affected by construction related activities	616548	30342	Yes	N/A	Yes	N/A	N/A



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Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 766, 1335, 1093, 466, 836, 937, 871, 872, 1483, 1490, APS_021 & APS_028, NHER 28710, 54604, 54616, 28163, 28164, 28165, 28157, 28158	Former WWII site and possible post-medieval park boundary	Low - Medium	Former WWII military site / accommodation and earthwork which may be a post medieval park boundary	PA4: Area of magnetic disturbance locates accommodation building. Linear anomalies to south and east of the building locate likely services associated with the building.	Yes: Onshore cable route intersects northern extent of Former WWII military site (SEPDEP ID 1335) and associated features and will be affected by construction related activities	616358 - 616134	302892 - 302637	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1225, NHER 13571	Norfolk Railway (Yarmouth, Norwich and Brandon)	Low	N/A	N/A	Yes: Onshore cable route intersects asset and will be affected by construction related activities	613797	296263	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 723, 973, 1100, 1495, 1496, 1498, APS_033 to 034 & APS_036, NHER 59846, 19725, 19725	Roman road Caistor St Edmund and Crownthorpe	Medium - High	Cropmarks over Roman road between Caistor St Edmund and Crownthorpe.	PA5: Former boundaries of unknown date are identified in all three fields in the PA. No clear response from the road. Clusters of discrete anomalies located at the southern end of the survey area which may be small quarry pits from which material was excavated for use	Yes: Onshore cable route intersects centre of each asset and runs parallel to the projected line of Roman road and will be affected by construction related activities	615230 - 614502	303136 - 303530	Complete	N/A	Yes	N/A	N/A



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Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
					in the road's construction.								
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 675, NHER 22643	Roman Brooch findspot	Medium	N/A	N/A	Yes: Onshore cable route intersects centre of asset and will be affected by construction related activities	615434	303275	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1500, APS_038	Post-enclosure boundaries	Low	Post-enclosure boundaries which have been removed to facilitate modern farming	N/A	Yes (Slight): Onshore cable route intersects south extent of asset and will be affected by construction related activities	613696	304025	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 298, NHER 20669	Prehistoric worked flints and Iron Age to post- medieval finds, with evidence of Anglo-Saxon period finds	Low - Medium	N/A	N/A	Yes: Onshore Cable route intersects centre of asset and will be affected by construction related activities	612678	304400	Yes	Yes	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 661, 633, NHER 17473, 23853	Mesolithic flint scatter and later prehistoric worked flints	Medium	N/A	N/A	Yes: Onshore Cable route intersects centre of asset and will be affected by construction related activities	612369	304996	Yes	Yes	TBC - to be informed by results of geophysical survey	N/A	N/A

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Doc. No. C282-RH-Z-GA-00131 9.21

				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with l	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor	SEPDEP ID 672, 288, 464, 1379, 415, 1355, 430, 459, 1501, 1502, 416, APS_039 & 040, NHER 22038, 18294, 19752, 53602, 19744, 53603, 15277, 19751, 19748	Rectilinear Enclosure and ditches	Low - Medium	Cropmarks of rectilinear enclosure, ditches and large infilled pits.	PA6: Large rectilinear enclosure identified to the west of the survey area. Linear anomalies within the main enclosure indicate partition/sub- division. Other smaller enclosures extend to the east of the main enclosure.	Yes: onshore cable route intersects centre of asset and clips southern edge of APS_039 and will be affected by construction related activities	612658 - 612476	305454 - 305644	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 969, 1358, 1504, 1505, APS_042 & APS_043, NHER 53601, 17345	Post-medieval field system	Low	Post-medieval field system and possible trackway and additional parallel ditch of unknown date.	N/A	Yes: Onshore Cable route intersected centre of field system, and clips edge of parallel ditch (APS_043) and will be affected by construction related activities	612488 - 612577	306256 - 306390	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 465, NHER 19973	Multi-period objects	Low - Medium	N/A	N/A	Yes (Slight): Onshore Cable route intersects western aspect of asset and will be affected by construction related activities	612431	306744	Yes	Yes	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor,	SEPDEP ID 1357, 564, 338, 379, 483, 1508,	Cropmarks of possible settlement	Medium - High	Multi-period cropmarks; former field	Unsurveyable – planted with Christmas trees.	Yes: Onshore cable route and adjoining	612210	307064	Yes	N/A	Yes	N/A	N/A

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Doc. No. C282-RH-Z-GA-00131 9.21

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Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Trenchless crossing and HDD section	APS_046, NHER 115763, 53488, 17924, 17925, 60942	evidence, alongside prehistoric flint finds and early Saxon inhumation cemetery		boundaries, enclosures and possible settlement.		access road intersects centre of asset and will be affected by construction related activities							
Onshore Cable Corridor	SEPDEP ID 680, NHER 25237	Roman Pottery Finds	Medium	N/A	N/A	Yes: Onshore cable route and adjoining access road intersects centre of asset and will be affected by construction related activities	611916	307803	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 460, 1509, APS_047, NHER 25236	Linear ditches	Low	Buried linear ditches of uncertain origin.	N/A	Yes (Slight): Onshore cable route intersects eastern section of asset and will be affected by construction related activities	611666	308314	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 921, NHER 64017	Medieval Coin	Low	N/A	N/A	Yes: Onshore cable route and adjoining access road intersects centre of asset and will be affected by construction related activities	612353	309324	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A



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Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor, Compound, Trenchless crossing and HDD section	SEPDEP ID 418, 705, 431, 509, 867, 422, 1124, 1513, 1514, APS_051 & APS_052, NHER 19755, 53628, 15898, 53679, 25701, 20011, 65215	Cropmarks of enclosures	High	Cropmarks of a possible ring ditch of Bronze Age date and enclosures of Roman date.	PA10: Linear anomalies possibly forming part of field system/enclosures; however, none are of possible or probable archaeological origin.	Yes: Onshore cable route and access roads intersect centre of APS_051 and related assets and will be affected by construction related activities	612441 - 612356	310774 - 310917	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 867, 705, 1513, APS_051, NHER 25701, 53628	Roman cropmarks	Medium	Northern extent of cropmarks of Roman date.	PA11: No anomalies of probable archaeological potential have been identified during the geophysical survey. Discrete anomalies of possible archaeological origin have been identified in the southern part of the access track.	Yes: Onshore cable route and access roads intersect centre of APS_051 and related assets and will be affected by construction related activities	612441	310774	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 877, 1515, APS_053, NHER 28552	Medieval Tofts	Medium	Extant platforms and ditched enclosures relating to former medieval tofts.	PA12: Anomalies possibly indicative of the medieval tofts visible to the western side of the field. North-eastern section of survey data characterised by responses due to deposition of alluvium adjacent to a stream course.	Yes (Slight): Onshore cable route intersects eastern aspect of asset and will be affected by construction related activities	612033	311376	Complete	N/A	To be discussed with NCC HES due to proposed method of construction	Yes	N/A



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Project Element	Asset ID	Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor	SEPDEP ID 444, 1243, 368, NHER 16390, 17163, 23429	Probable Early Neolithic flint- working site, multi-period finds and undated mounds	Low to Medium	N/A	N/A	Yes: Onshore cable route intersects assets and will be affected by construction related activities	612156, 612116, 612180	312117, 311837, 311700	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1380, 1058, 632, 1520, 1521, 487, APS_058 & APS_059, NHER 53678, 23773, 12807	Cropmarks of probable Bronze Age barrow and undated field boundaries and trackways.	High	Cropmarks of probable Bronze Age barrow and undated fragmentary field boundaries and trackways.	PA14: A single ring ditch indicative of a barrow has been identified, corresponding with the cropmarks of a Bronze Age round barrow. Two discrete anomalies of possible archaeological origin are identified towards the southern end of the survey area.	Yes (Slight): Onshore cable route intersect assets and will be affected by construction related activities	612158 - 612199	312706 - 312764	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1372, 1058, 1522, APS_060, NHER 50617	Cropmarks of undated linear ditches	Low - Medium	Cropmarks over a series of undated linear ditches, probably the remains of former field boundaries	N/A	Yes (Slight): Onshore cable route intersect assets and will be affected by construction related activities	611450	313509	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1058, NHER 44183	Honingham Park	Low	N/A	N/A	Yes (Slight): Onshore Cable route intersects north-eastern extent of asset and will be affected by	610997	312525	Yes	N/A	TBC - to be informed by results of geophysical survey	ТВС	N/A



				Results of AP	Deculte of Driority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
						construction related activities							
Onshore Cable Corridor	SEPDEP ID 306, NHER 33261	Prehistoric flint artefacts and post medieval coin, water pipeline at Blackbreck Plantation	Low - Medium	N/A	N/A	Yes (Slight): Onshore cable route intersect assets and will be affected by construction related activities	611841	313839	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 585, 1239, 1058, 1523, APS_061, NHER 50615, 50618, 44183	Possible enclosures	Medium - High	Cropmarks of possible enclosures and associated field boundaries of possible Iron Age to Roman date. Possible rectangular enclosure at western end of survey area.	PA15: No anomalies of likely or possible archaeological potential identified on geophysical data and no correlation with the cropmark data.	Yes (Slight): Onshore cable route intersect eastern aspect of asset and will be affected by construction related activities	611537	313756	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 584, 956, 1524, 1525, APS_062 & APS_063, NHER 50610, 50614	Cropmarks of possible Iron Age to Roman date enclosures	Medium - High	Cropmarks of possible Iron Age to Roman date enclosures and probable former field boundaries.	N/A	Yes: Onshore cable route intersect assets and will be affected by construction related activities	612000 - 611941	314130 - 314286	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1072, 1527, APS_065, NHER 50609	Cropmarks of linear feature	Low	Cropmarks over a series of undated linear ditches, probably the remains of former field boundaries of	N/A	Yes: Onshore cable route intersect assets and will be affected by construction	611704	314510	Yes	N/A	Yes	N/A	N/A



				Results of AP	Doculto of Driority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
				post medieval date		related activities							
Onshore Cable Corridor	SEPDEP ID 1400, NHER 7736	Possible course of old road	Low	N/A	N/A	Yes: Onshore cable route intersect asset and will be affected by construction related activities	611238	315392	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1529, APS_067	Linear marks in crops	Low	Very slight light toned linear marks in crops which may indicate either buried foundations or possibly natural features	N/A	Yes: Onshore cable route intersect asset and will be affected by construction related activities	611431	315120	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1374, 1530, APS_068, NHER 50673	Cropmarks of field boundaries and fragmentary linear ditches	Low	Cropmarks of field boundaries of unknown date, Cropmarks over fragmentary linear ditches of unknown and multi-period date	PA17: No anomalies of likely or possible archaeological potential identified on geophysical data. A former field boundary has been recorded in the data, along with parallel and oblique linear anomalies which are indicative of ploughing.	Yes: Onshore cable route intersects centre of asset and will be affected by construction related activities	612001	315949	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 946, 469, 909, 912, 1532, APS_ 070, NHER 35933, 29962, 7741, 50676	Cropmarks of Medieval building platforms and possible enclosures	High	Cropmarks of medieval building platforms.	PA18: Although no clear pattern, except in northernmost field possible enclosures visible in data. Elsewhere pattern of linear	Yes (Slight): Onshore cable route intersects southern aspect of asset and will be affected by	612518	316645	Complete	N/A	Yes	N/A	N/A



				Results of AP	Doculto of Driority				Post-consent I	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
					and curvilinear anomalies. No evidence of cropmark ring ditch and oval enclosure.	construction related activities, although seems to avoid settlement features from geophysical data							
Onshore Cable Corridor	SEPDEP ID 790, NHER 51714	Roman, medieval and post medieval finds	Medium	N/A	N/A	Yes: Onshore cable route intersect asset and will be affected by construction related activities	613081	316565	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1386, 750, 506, 840, 569, 862, 1537, 1538, 1539, APS_075, APS_076 & APS_077, NHER 54355, 34326, 50657, 50677, 37277, 24418	Medieval enclosures and field boundaries	Medium - High	Medieval enclosures and field boundaries, and cropmarks of fragmentary ditches, former field boundaries and a possible ring ditch.	PA20: Linear anomalies indicative of ditches forming fields and enclosures are identified in southern and central fields. Linear trends in northern field are more likely to be agricultural in origin.	Yes (Slight): Onshore cable route intersects southern and eastern edge of asset (APS _076) and will be affected by construction related activities	613051 613151 - 613090	316937 – 316987 - 317134	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1385, 971, 706, 363, 1542, APS_080, NHER 54354, 54353, 53700, 22887	Ditches and field boundaries	Low	Undated ditches and a former road/trackway and field boundaries of medieval to post-medieval date.	PA21: No anomalies of obvious archaeological interest.	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613339	317595	Complete	N/A	Yes	N/A	N/A

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Doc. No. C282-RH-Z-GA-00131 9.21

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Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 806, 1384, 706, 1543, 1544, APS_081 & APS_082, NHER 51115, 53699, 53700	Fragmentary linear anomalies and possible round barrow	Low	Cropmarks of fragmentary ditches and soilmarks of buried walls of uncertain date.	PA22: Fragmentary linear anomalies of uncertain origin. Possible round barrow on northeastern edge of survey area.	Yes (Slight): Onshore cable route intersects eastern edge of assets and will be affected by construction related activities	613266 - 613252	318111 - 318228	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1383, 823, 753, 1545, APS_083, NHER 53698, 62266, 7712	Cropmarks of possible ditches and a possible ring ditch	Medium – High	Cropmarks of possible ditches and a possible ring ditch.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613686	318561	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 822, 1546, APS_084, NHER 62267	Very eroded bank	Low	Very eroded bank which may be a headland to an area of totally medieval ploughing	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613988	318735	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 914, 1547, APS_085, NHER 53481	Earthworks of probable medieval building platforms	Medium - High	Earthworks of probable medieval building platforms	N/A	Yes: onshore cable access road intersects centre of asset and will be affected by construction related activities	614502	319022	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 563, 558, NHER 51590, 51591	Multi-period findspot, inclusive	Low – Medium	N/A	N/A	Yes: onshore cable route intersects	614423, 614432	319197, 319350	Yes	Yes	Yes	N/A	N/A



Rev. no. B

				Deculto of AD	Deculte of Driority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
		of Anglo-Saxon finds				centre of asset and will be affected by construction related activities							
Onshore Cable Corridor	SEPDEP ID 587, 1548, APS_086, NHER 53482	Cropmarks over ditches, probable former field boundaries & trackway	Medium – High	Cropmarks over ditches, probable former field boundaries & trackway, some of which may be Iron Age to Roman in date	N/A	Yes (Slight): Onshore cable route intersects western aspect of assets and will be affected by construction related activities	614559	319391	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 848, NHER 42549	Late Saxon, medieval and post-medieval metal objects	Medium	N/A	N/A	Yes (Slight): Onshore cable route intersects northern aspect of assets and will be affected by construction related activities	613646	319734	Yes	Yes	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1382, 1128, 1549, APS_087, NHER 53697, 60169	Cropmarks of undated ditches and a possible ring ditch	Medium - High	Cropmarks of undated ditches and a possible ring ditch.	N/A	Yes (Slight): Onshore cable route intersects western aspect of assets and will be affected by construction related activities	613860	319804	Yes	N/A	Yes	N/A	N/A

Status: Final

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Doc. No. C282-RH-Z-GA-00131 9.21

				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor	SEPDEP ID 1342, 983, 1550, 1551, 1552, 974, APS_088 to APS_090, APS_001A, NHER 7465, 60170, 55014	Cropmarks of a trackway and circular feature possibly associated with the former military airfield	Low - Medium	Cropmarks of a trackway and circular feature possibly associated with the former military airfield (Swannington WWII Airfield – NHER 7465).	N/A	Yes (Slight): Onshore cable route intersects western aspect of assets and will be affected by construction related activities	613608 - 614273 - 613689	320412 – 320657 - 320671	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1553, APS_091	Eroded mound	Low	Eroded mound of unknown type and origin.	N/A	Yes: onshore cable route intersects almost the entire asset and will be affected by construction related activities	613673	321669	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 684, NHER 2796	Fen Causeway Roman Road	Medium	N/A	N/A	Yes: onshore cable route intersects asset and will be affected by construction related activities	592398	311250	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 944, 945, 1554, APS_092, NHER 35096, 35098	Trackway	Low	Likely trackway and focus of ditches and possible enclosures	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613817	322176	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 652, 772, 473, 1555, APS_093,	Multi-phased rectilinear ditched enclosures and	Medium - High	A complex of likely multiphased	N/A	Yes (Slight): Onshore cable route	613817	322176	Yes	Yes	Yes	N/A	N/A



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
	NHER 58227, 33889, 39903	pits, multi-period metal finds		rectilinear ditched enclosures and pits, with an outlying D- shaped ditched enclosure to the immediate east of the Order Limits.		intersects eastern aspect of asset and will be affected by construction related activities							
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 844, 1556, APS_094, NHER 32599	Post-enclosure field system, multi-period finds	Low	Likely post- enclosure field system which has been removed	N/A	Yes (Slight): Onshore cable route intersects eastern aspect of asset and will be affected by construction related activities	614334	323114	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 847, 752, NHER 37543, 32042	Late Saxon to post-medieval finds	Medium	N/A	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	614463	324260	Yes	Yes	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 796, 1558, APS_096, NHER 61327	Ladder Settlement – southern end	Medium - High	Cropmarks of ditches and possible enclosures.	PA23: Southern end of 'ladder' settlement extending north/south and continuing into and through PA24 and PA25, approximately 1km in length and at least 200m wide. Comprises a series	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	614734	324654	Complete	N/A	Yes	N/A	N/A



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with N	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
					of rectangular enclosures. Numerous discrete anomalies within the enclosures suggests settlement activity.								
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 671, 370, 405, 560, 3013, 1559, APS_097, NHER 21849, 58762, 7343, 29841	Ladder Settlement – Central part	Medium - High	Cropmarks of enclosures, boundaries and pits. NCC HER records a probable Roman fort.	PA24: Central part of 'ladder' settlement extending north into PA25 and south into PA23, approximately 1km in length and at least 200m wide. Comprises a series of rectangular enclosures. Numerous discrete anomalies within the enclosures suggests settlement activity.	Yes (Slight): Onshore cable route intersects eastern aspect of asset and will be affected by construction related activities, although avoids most anomalies on geophysical data	614739	325024	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1638, APS_004A	Cropmarked ditches of uncertain origin.	Low - Medium	Cropmarked ditches of uncertain origin.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	614848	325521	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 713, NHER 7322	Roman Stew Pans	Low - Medium	N/A	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613793	326820	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A



				Deculto of AD	Deculte of Driegity				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1412, 1637, APS_003A, NHER 14397	Undated Cropmark	Low	N/A	N/A	Yes: onshore cable route encompasses asset and will be affected by construction related activities	614762	325558	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 953, 1562, APS_100, NHER 50073	Ditches	Low	Ditches which may be former boundaries or earlier features	N/A	Yes: onshore cable route intersects and runs parallel to asset and will be affected by construction related activities	613253	327344	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1216, NHER 13581	Route of Midland and Great Northern Joint Railway (Great Yarmouth to Sutton Bridge)	Low	N/A	N/A	Yes: onshore cable route intersects and runs parallel to asset and will be affected by construction related activities	601603	319784	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1217, NHER 13587	Route of East Norfolk Railway, Aylsham Branch, including Bure Valley Railway	Low	N/A	N/A	Yes: onshore cable route intersects asset and will be affected by construction related activities	614270	322755	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1563, APS_101	Cropmarks of pits and ditches	Medium	Cropmarks of pits and ditches which indicate buried tracks and possible	N/A	Yes: onshore cable route intersects centre of asset and will be affected by	612997	327662	Yes	N/A	Yes	N/A	N/A



				Results of AP	Results of Priority				Post-consent I	Evaluation Stage	es to be agreed with N	ICC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
				settlement traces		construction related activities							
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1421, 1640 APS_006A, NHER 36408	Cropmarks of undated enclosures, west of Flag Meadow Plantation	Medium	Undated boundaries and a possible enclosure over a wide area of land.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613011	328206	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 788, 1564, APS_102, NHER 51461	Cropmarks of possible trackways or roadway	Medium – High	Cropmarks of possible trackways or roadway.	PA26 (linked to east of asset): Geophysical survey within study area confirms linear trend of cropmark.	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	612966	328817	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1566, APS_104	Buried ditches	Low - Medium	Buried ditches of unknown date and origin.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613199	329751	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 577, 513, 1567, APS_105, NHER 12987, 6672	Rectilinear enclosure and Bronze Age palstave findspot	Medium	Rectilinear enclosure and Iron Age chariot fitting, and cropmarks of ditches of a possible former field system.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	612977	330516	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor,	SEPDEP ID 1079, 787, 1568, APS_106,	Linear ditches and pits, multi- period finds	Low - Medium	Buried linear ditches which may be	N/A	Yes (Slight): onshore cable route and	612203	331581	Yes	N/A	Yes	N/A	N/A



				Results of AP	Describe of Delocity				Post-consent	Evaluation Stag	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
Trenchless crossing and HDD section	NHER 51456, 51457			boundaries and some fragmentary ditches and pits which may indicate an area of past settlement		access roads intersects eastern aspect of asset and will be affected by construction related activities							
Onshore Cable Corridor	SEPDEP ID 608, NHER 28973	Iron Age Coin	Low - Medium	N/A	N/A	Yes (Slight): onshore cable route intersects eastern aspect of asset and will be affected by construction related activities	612578	331135	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 315, 333, 596, 1569, APS_107, APS_008A, APS_007A, NHER 51455, 63420, 11339	Settlement enclosures	Medium - High	Settlement enclosures with a central trackway and outlying enclosures and boundaries.	PA28: Southern half unsurveyed due to crop cover, however northern half contains settlement enclosures and trackway very similar to ladder settlement located in PA23-25 in south of study area. Possible field system extends east into PA29.	Yes (Slight): onshore cable route and access roads intersects eastern aspect of asset and will be affected by construction related activities	612775	332147	Partially complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 749, 759, 1570, 1643, 1642, 491, 1641, APS_108, APS_009A, APS_008A,	Cropmarks of enclosures, ring ditch and former field system	Medium	Cropmarks of enclosures, ditches and pits, and former field system.	PA29: Possible single large square enclosure straddling the boundary between the northern and southern fields.	Yes (Slight): onshore cable route intersects western aspect of asset and will	613427	332374	Complete	N/A	Yes	N/A	N/A



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agreed with I	NCC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording
	NHER 28024, 28026, 18099				Other fragmentary linear anomalies possibly locate parts of an associated field system.	be affected by construction related activities							
Onshore Cable Corridor	SEPDEP ID 477, 951, 789, 783, 1644, 1465, 1572, 1573, 942, APS_110, APS_111, APS_010A, and APS_011A, NHER 28025, 40482, 51479, 44076, 34281	Continuation of a former ditched field system, Neolithic and post-medieval finds	Low - Medium	Continuation of a former ditched field system with an integral trackway. Ring ditch which may be the remains of a Bronze Age funerary site, ditches and extensive hydrological features and pits across the site.	N/A	Yes: onshore cable route intersects assets and will be affected by construction related activities	613724 - 613452	333036 - 333181	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor	SEPDEP ID 1366, 1575, APS_113, NHER 36779	Ditches, pits and boundaries	Medium	Ditches, pits and boundaries indicative of field and settlement features in this area, possible prehistoric site.	PA30: Two overlapping L- shaped anomalies located west of DCO may indicate parts of single large enclosure in centre of area.	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613765	333771	Complete	Yes	yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1576, APS_114	Pits and possible buried ditches	Low - Medium	Pits and possible buried ditches	N/A	Yes (Slight): onshore cable route intersects western aspect of asset and will be affected by construction related activities	613671	334755	Yes	N/A	Yes	N/A	N/A

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Doc. No. C282-RH-Z-GA-00131 9.21

			Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction			Post-consent Evaluation Stages to be agreed with NCC HES					
Project Element	Asset ID	Name/Description					Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1020, 1577, APS_115, NHER 51446	Cropmarks of pits and possible buried ditches, and medieval and post-medieval finds	Low - Medium	Cropmarks of pits and possible buried ditches of unknown date.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613727	335752	Yes	N/A	Yes	N/A	N/A	
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1418, 959, 1578, 1645, APS_116, APS_011A, NHER 30317, 51442	Cropmarks of buried ditches and trackway	Low - Medium	Cropmarks of buried ditches and a possible ditched trackway.	N/A	Yes (Slight): onshore cable route access roads intersects western aspect of asset and will be affected by construction related activities	613206	337147	Yes	N/A	Yes	N/A	N/A	
Onshore Cable Corridor	SEPDEP ID 1579, APS_117	Buried ditches	Low	Buried ditches	N/A	Yes (Slight): onshore cable route intersects western aspect of asset and will be affected by construction related activities	613688	337860	Yes	N/A	Yes	N/A	N/A	
Onshore Cable Corridor	SEPDEP ID 1580, APS_118	NMP ring ditch and enclosures	Medium - High	NMP records a ring ditch and enclosures.	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	613089	339096	Yes	N/A	Yes	N/A	N/A	



	Asset ID		Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction			Post-consent Evaluation Stages to be agreed with NCC HES					
Project Element		Name/Description					Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 1362, 390, 476, 1424, 1583, 1584, 1585, 1586,APS_121, APS_122, APS_123 & APS_124, NHER 27993, 22883, 53757, 51434	Elongated mortuary enclosure, ring ditch, linear ditches and possible mounds.	Medium - High	Cropmarks of elongated mortuary enclosure, ring ditch, linear ditches and possible mounds.	PA32: Two parallel linear trends correlate with the cropmark data, alongside a small barrow and small square enclosure, alongside fragmentary linear and discrete anomalies, however all anomalies are extremely weak and tentative.	Yes: onshore cable route intersects assets and will be affected by construction related activities	612515- 612304	340909- 341091	Complete	N/A	Yes	N/A	N/A	
Onshore Cable Corridor access road	SEPDEP ID 1250, 1589, APS_127, NHER 30708	Large, adapted type 20V pillbox, no longer extant	Medium	Large, adapted type 20V pillbox, no longer extant	N/A	Yes: onshore cable route access road intersects asset and will be affected by construction related activities	611964	341347	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A	
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID: 1391, 837, 1304, 1390, 1593, APS_131 NHER 6282, 38640, 38642, 6281	Earthwork iron procurement pits	Low	Group of earthwork iron procurement pits, likely Medieval.	N/A	Yes: onshore cable route intersects asset and will be affected by construction related activities	612466	341442	Yes	N/A	Yes	N/A	N/A	
Onshore Cable Corridor	SEPDEP ID 1052, 1594, APS_132 NHER 38638	Slight earthworks of embanked rectilinear enclosure	Low	Possible slight earthworks of an embanked rectilinear enclosure with sunken interior.	N/A	Yes (Slight): onshore cable route intersects eastern aspect of asset and will be affected by construction	612083	341813	Yes	N/A	Yes	TBC	N/A	



		Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction			Post-consent Evaluation Stages to be agreed with NCC HES					
Project Element	Asset ID						Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
						related activities								
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 332, 903, 1604, 1606, 497, APS_142 & APS_144 NHER 32047, 51432, 62305, 32048	Probable Bronze Age round barrow, and part of medieval moated complex	High	Probable Bronze Age round barrow, and part of medieval moated complex.	PA34: No anomalies of probable archaeological potential identified on geophysical data. Discrete anomalies of possible archaeological origin are identified in the east of survey area. Former field boundary has been recorded.	Yes: onshore cable route intersects assets and will be affected by construction related activities	611203 - 611100 - 610959	341995 – 342338 - 342517	Yes	N/A	Yes	N/A	N/A	
Onshore Cable Corridor	SEPDEP 687, NHER 30046	Roman pottery finds	Medium	N/A	N/A	Yes (Slight): onshore cable route access road intersects northern aspect of asset and will be affected by construction related activities	611854	341746	To be discussed with NCC HES due to nature of proposed construction activities	NA	To be discussed with NCC HES due to nature of proposed construction activities	N/A	N/A	
Onshore Cable Corridor	SEPDEP ID 1263, 603, 1603, 1605, APS_141 & APS_143 NHER 34181, 31088	WWII Searchlight battery and associated features	Medium	WWII Searchlight battery and associated fences and structures, and post-enclosure boundaries which have been removed to facilitate	N/A	Yes (Slight): onshore cable route and access road intersects southern aspect of assets and will be affected by construction	611492 - 611822	342335 - 342393	Yes	N/A	Yes	N/A	N/A	

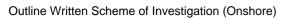


	Asset ID	Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey	Interaction		Northing	Post-consent Evaluation Stages to be agreed with NCC HES					
Project Element							Easting		Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
				modern farming.		related activities								
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 784, 322, 1607, 334, APS_145 NHER 51430, 60330, 63388	Medieval moated complex	High	Medieval moated complex with enclosures, fishponds, old road and field system. Adjacent to Scheduled moated site – NHLE 1013097.	PA35: Access denied at time of writing.	Yes (Slight): onshore cable route intersects south-western aspect of assets and will be affected by construction related activities	610959- 610803	342517 - 342689	Yes	Yes	Yes	N/A	N/A	
Onshore Cable Corridor Access Route	SEPDEP ID 1609, 949, APS_147, NHER 38272	Cropmarks over linear features of unknown date and type	Low	Cropmarks over linear features of unknown date and type	N/A	Yes (Slight): onshore cable corridor access road intersects western aspect of asset and will be affected by construction related activities	612152	342817	To be discussed with NCC HES due to nature of proposed construction activities	NA	To be discussed with NCC HES due to nature of proposed construction activities	N/A	N/A	
Onshore Cable Corridor, Landfall, Compound, HDD section and Access Routes to Landfall	SEPDEP ID 335, 1228 APS_159, APS_160, APS_161, APS_162, APS_163, NHER 11335, 51724	Site of Weybourne Camp	Low - Medium	Weybourne Camp, military defensive site. Barbed wire defences around Weybourne Camp (APS_163), plus two rectangular structures, possibly pillboxes. A long slightly curvilinear	PA36: Access denied at time of writing.	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	610409	343592	Yes	N/A	Yes	N/A	N/A	

Doc. No. C282-RH-Z-GA-00131 9.21 Rev. no. B



				Results of AP	Results of Priority				Post-consent	Evaluation Stage	es to be agr	eed with N	ICC HES	
Project Element	Asset ID	Name/Description	Heritage Importance	and LiDAR	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Tre	enching	Earthwork Survey	Historic Building Recording
				feature which could possibly be part of an early airfield or a more modern service (APS_159).										
Onshore Cable Corridor, Landfall, Compound, HDD section and Access Routes to Landfall	SEPDEP ID 694, NHER 39345	Roman coin finds	Low	N/A	N/A	Yes: onshore cable route, and landfall (and associated compound and access) intersects the asset and will be affected by construction related activities	610322	343413	Yes	Yes	Yes	N/A	N/A	
Onshore Cable Corridor, HDD section and Access Routes to Landfall	SEPDEP ID 810, NHER 63210	Roman and Late Saxon/medieval to post-medieval finds.	Low	N/A	N/A	Yes: onshore cable corridor, HDD section and sections of access route to landfall intersect the asset and will be affected by construction related activities	610755	343227	Yes	Yes	Yes	N/A	N/A	
Onshore Cable Corridor and Access Routes to Landfall	SEPDEP ID 610, NHER 56090	Multi-period finds.	Low	N/A	N/A	Yes: onshore cable corridor and sections of access route to landfall intersect the asset and will be affected by	610749	343400	Yes	N/A	Yes	N/A	N/A	





Doc. No. C282-RH-Z-GA-00131 9.21

Rev. no. B

Project Element	Asset ID	Name/Description	tion Heritage Importance	and LiDAR Geophy	Results of Priority Geophysical Survey	eophysical Interaction	Easting Northing	Post-consent Evaluation Stages to be agreed with NCC HES						
								Northing	Geophysical Survey	Targeted Metal Detecting	Trial Tre	enching	Earthwork Survey	Historic Building Recording
						construction related activities								
Access to Landfall	SEPDEP ID 1233, APS_158, NHER 32502	WWI Pillbox,	Low - Medium	WWI pillbox in hedge within Weybourne Camp,	N/A	Yes: Access to Landfall route intersects the asset and will be affected by construction related activities	610273	343318	N/A	N/A	N/A	N/A	Yes	



Doc. No. C282-RH-Z-GA-00131 9.21

Outline Written Scheme of Investigation

(Onshore) Rev. no. B

APPENDIX 3 HEDGEROW ASSESSMENT

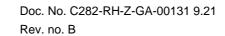
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Page 75 of 81



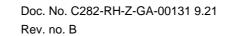
Rev. no. B

						Archaeology and histo	ory	
				1	2	3	4	5
New Hedgerow Reference	Old Hedgerow Reference	JNCC Code	Hedge Description	The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.	The hedgerow incorporates an archaeological feature which is — (a)included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979; or (b) recorded at the relevant date in a Sites and Monuments Record.	The hedgerow — (a) is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and (b) is associated with any monument or feature on that site.	The hedgerow — (a)marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Sites and Monuments Record or in a document held at that date at a Record Office; or (b) is visibly related to any building or other feature of such an estate or manor	The hedgerow — (a)is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts(8); or (b) is part of, or visibly related to, any building or other feature associated with such a system, and that system — (i) is substantially complete; or (ii) is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.
H0003	H0001	J2.3.3	Defunct hedge with trees - native species-rich			х		
H0002	H0002	J2.3.3	Defunct hedge with trees - native species-rich			Х		
H0004	H0003	J2.3.3	Defunct hedge with trees - native species-rich			Х		
H0007	H0008	J2.3.1	Hedge with trees - native species-rich			х		
H0001	H0009b	J2.3.4	Defunct hedge with trees - species-poor			х		
H0011	H0011	J2.1.1	Intact hedge - native species-rich			х		
H0006	H0012	J2.3.1	Hedge with trees - native species-rich			Х		
H0012	H0014	J2.3.3	Defunct hedge with trees - native species-rich			х		
H0015	H0023	J2.3.1	Hedge with trees - native species-rich					Х
H0016	H0027	J2.3.1	Hedge with trees - native species-rich	х				Х
H0018	H0032	J2.1.2	Intact hedge - species-poor					Х
H0024	H0034a	J2.3.4	Defunct hedge with trees - species-poor	х				
H0030	H0040	J2.2.1	Defunct hedge - native species-rich			х		
H0031	H0041	J2.1.1	Intact hedge - native species-rich			х		
H0037	H0045b	J2.1.1	Intact hedge - native species-rich			х		
H0038	H0045c	J2.3.3	Defunct hedge with trees - native species-rich			Х		
H0039	H0045d	J2.2.1	Defunct hedge - native species-rich			х		
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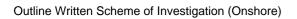


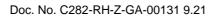
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H0065 H0062 J2.1.2 Intact hedge - species-poor x	
H0083 H0077 J2.3.3 Defunct hedge with trees - native species-rich x	
H0085 H0080 J2.3.1 Hedge with trees - native species-rich x	
H0086 H0081 J2.1.1 Intact hedge - native species-rich x	
H0087 H0082 J2.1.1 Intact hedge - native species-rich x	
H0089 H0083 J2.3.3 Defunct hedge with trees - native species-rich x	
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H0095 H0090 J2.3.1 Hedge with trees - native species-rich x	
H0096 H0093 J2.3.1 Hedge with trees - native species-rich x	X
H0097 H0094 J2.3.3 Defunct hedge with trees - native species-rich x	
H0098 H0095 J2.3.3 Defunct hedge with trees - native species-rich x	
H0100 H0098 J2.3.3 Defunct hedge with trees - native species-rich	X
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H0105 H0106 J2.1.1 Intact hedge - native species-rich x	
H0106 H0108 J2.1.1 Intact hedge - native species-rich x	
H0107 H0109 J2.3.3 Defunct hedge with trees - native species-rich x	
H0108 H0111 J2.1.2 Intact hedge - species-poor x	
H0109 H0112 J2.2.2 Defunct hedge - species-poor x	
H0110 H0113 J2.1.1 Intact hedge - native species-rich x	Х
H0111 H0114 J2.2.2 Defunct hedge - species-poor x	
H0111 H0115 J2.3.3 Defunct hedge with trees - native species-rich x	
H0112 H0116 J2.1.1 Intact hedge - native species-rich x	X
H0113 H0117 J2.3.3 Defunct hedge with trees - native species-rich x	
H0124 H0130 J2.3.3 Defunct hedge with trees - native species-rich x	





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H0125		J2.1.1	Intact hedge - native species-rich			Х		
H0126	H0132	J2.3.2	Hedge with trees - species-poor			X		
H0130	H0140	J2.3.1	Hedge with trees - native species-rich			Х		
H0132	H0142	J2.1.1	Intact hedge - native species-rich			Х		
H0139	H0152a	J2.3.3	Defunct hedge with trees - native species-rich			Х		
H0142	H0155	J2.3.4	Defunct hedge with trees - species-poor			Х		
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H0153	H0162	J2.3.1	Hedge with trees - native species-rich	х		х		
H0154	H0163	J2.3.3	Defunct hedge with trees - native species-rich	х		х		
H0159	H0171	J2.3.2	Hedge with trees - species-poor	х				
H0170	H0184	J2.3.3	Defunct hedge with trees - native species-rich			Х		
H0171	H0185	J2.3.1	Hedge with trees - native species-rich			х		
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H0175	H0188	J2.1.1	Intact hedge - native species-rich			х		
H0177	H0191	J2.3.1	Hedge with trees - native species-rich	х		х		
H0180	H0196	J2.3.1	Hedge with trees - native species-rich			х		Х
H0181	H0197	J2.3.4	Defunct hedge with trees - species-poor	х		х		х
H0182	H0198	J2.3.1	Hedge with trees - native species-rich			х		
H0190	H0199	J2.3.3	Defunct hedge with trees - native species-rich	х				
H0195	H0201	J2.3.1	Hedge with trees - native species-rich			х		
H0196	H0202	J2.3.1	Hedge with trees - native species-rich			х		
H0202	H0208	J2.3.4	Defunct hedge with trees - species-poor	Х				
H0210	H0225	J2.3.2	Hedge with trees - species-poor					Х
H0212	H0226	J2.3.2	Hedge with trees - species-poor					х
H0216	H0231	J2.1.1	Intact hedge - native species-rich			х		
H0217	H0234	J2.3.3	Defunct hedge with trees - native species-rich					
H0218	H0235	J2.1.2	Intact hedge - species-poor					
H0219	H0236	J2.3.4	Defunct hedge with trees - species-poor	Х				
H0222	H0255	J2.3.3	Defunct hedge with trees - native species-rich			х		Х
H0223	H0262	J2.2.2	Defunct hedge - species-poor			х		
H0233	HR03				х	х		
H0229	HR05					х		
H0228	HR06					х		
H0226	HR08							х
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Rev. no. B

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Classification: Open Status: Final





Outline Written Scheme of Investigation

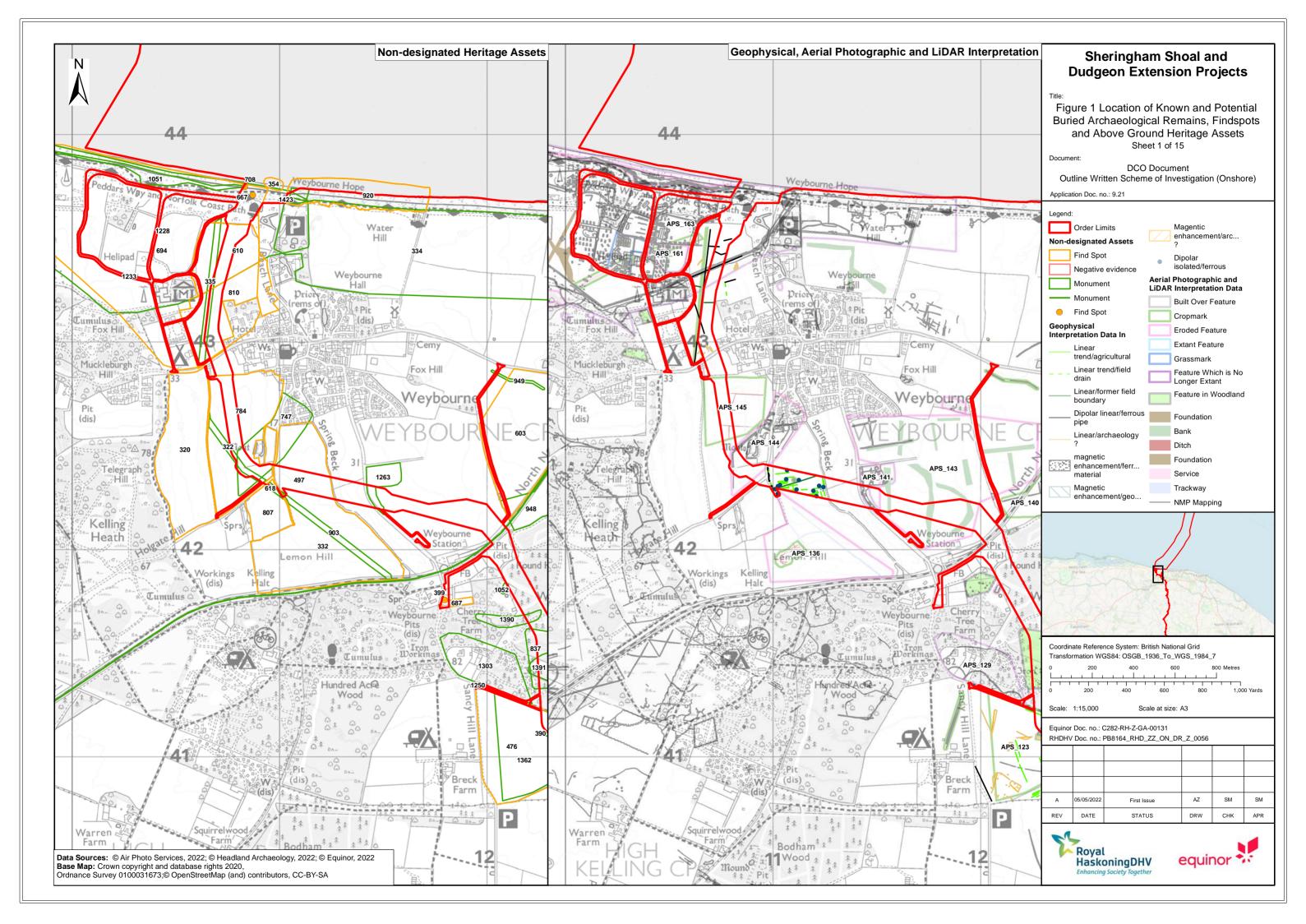
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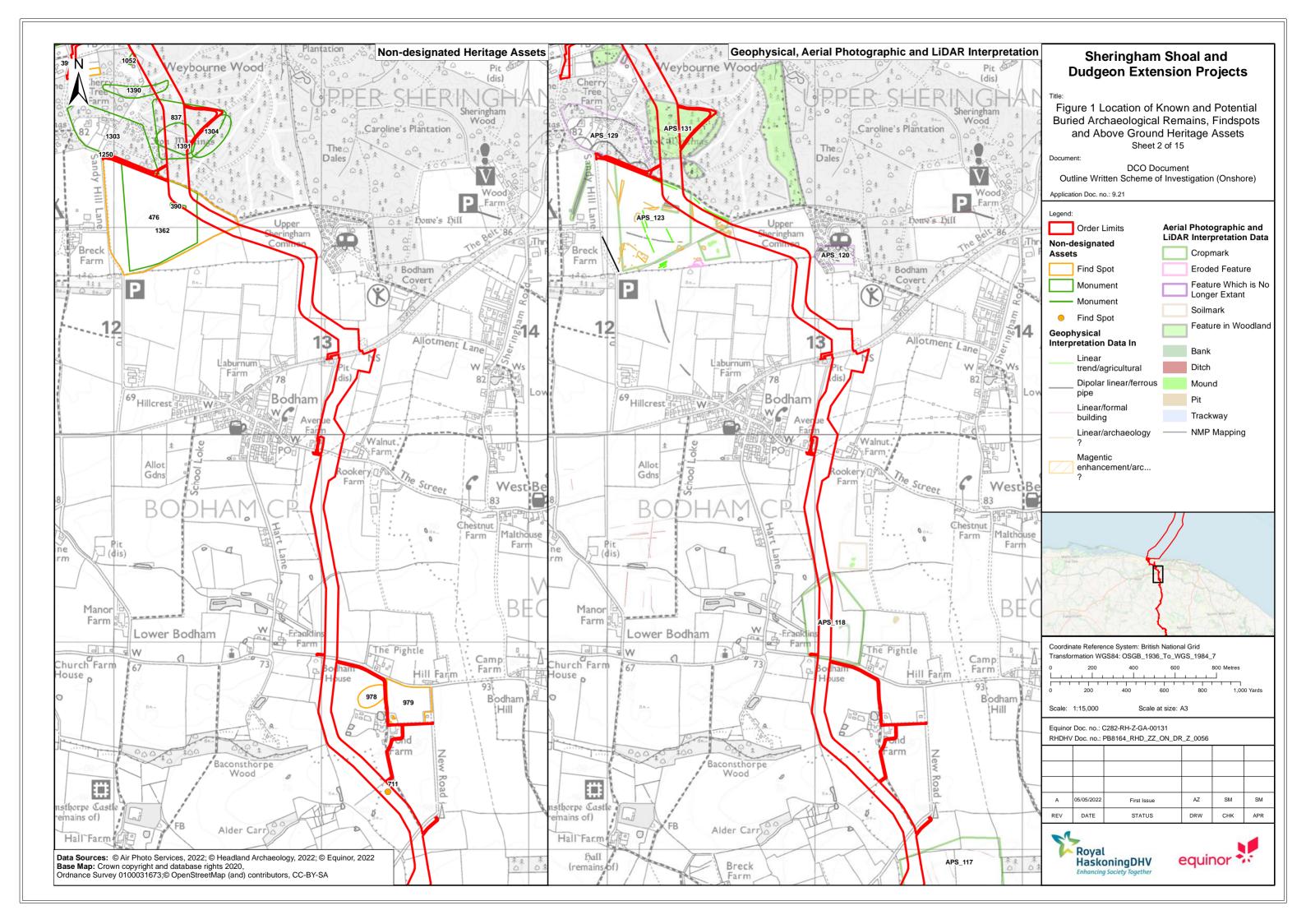
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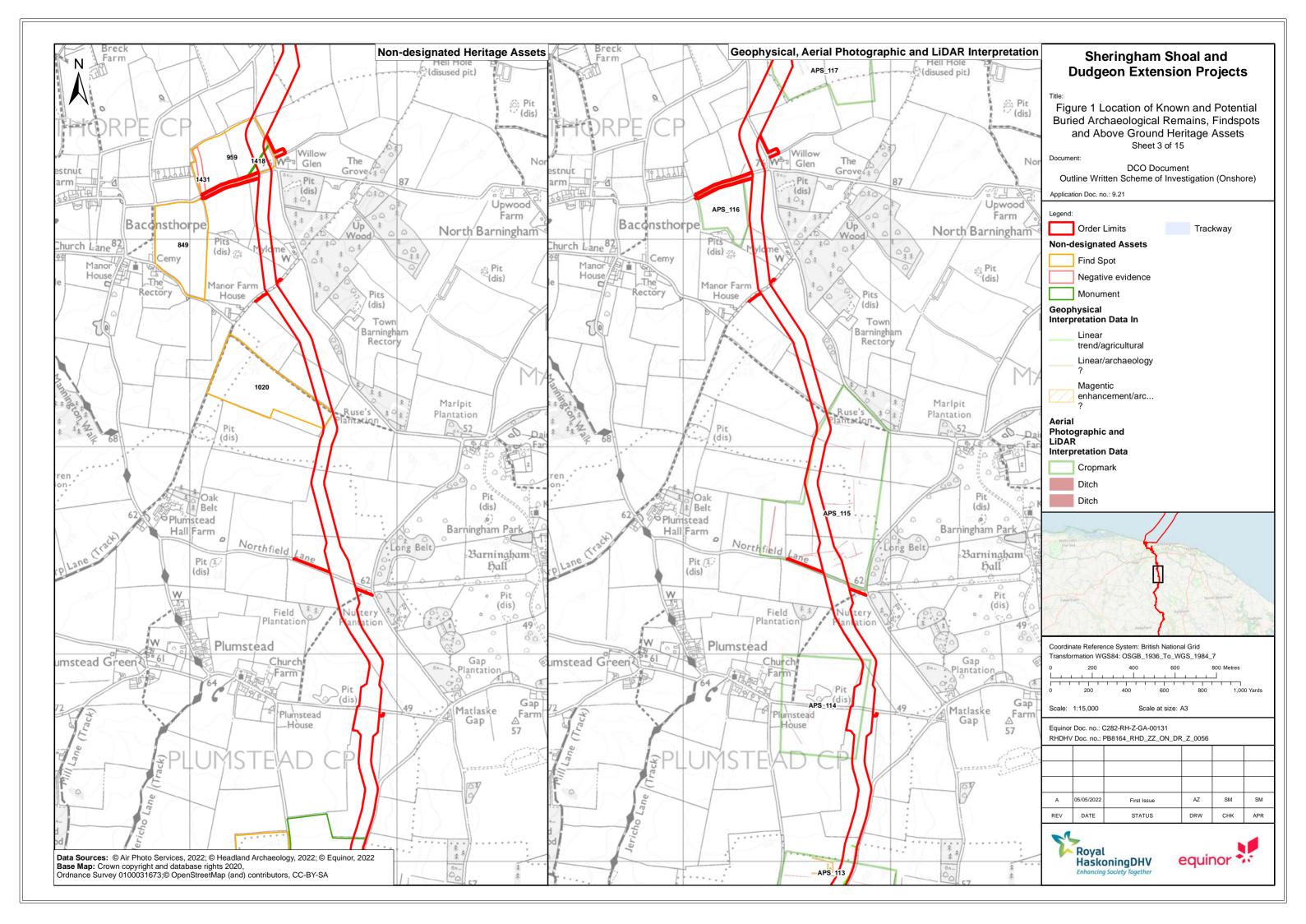
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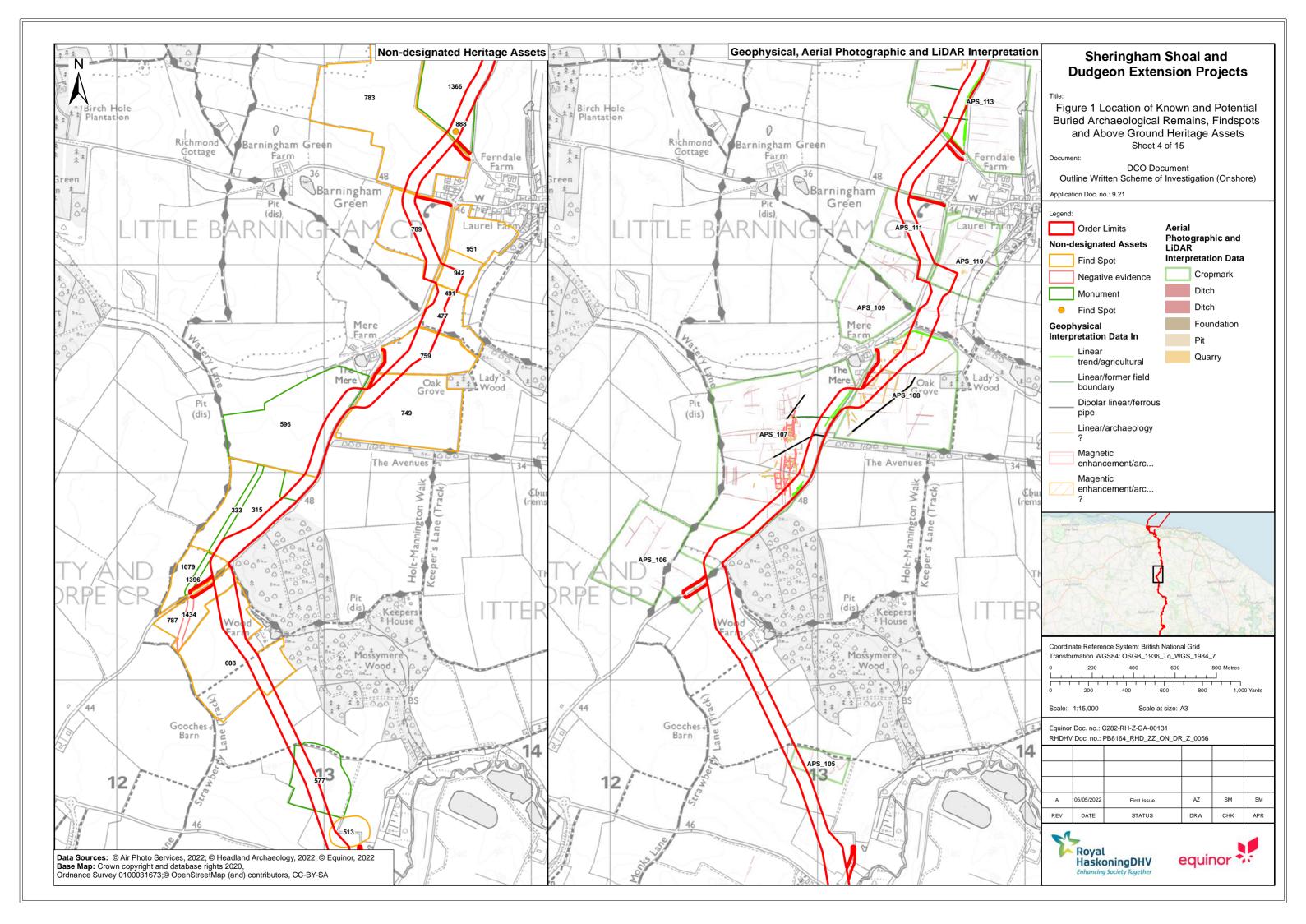
APPENDIX 4 FIGURES

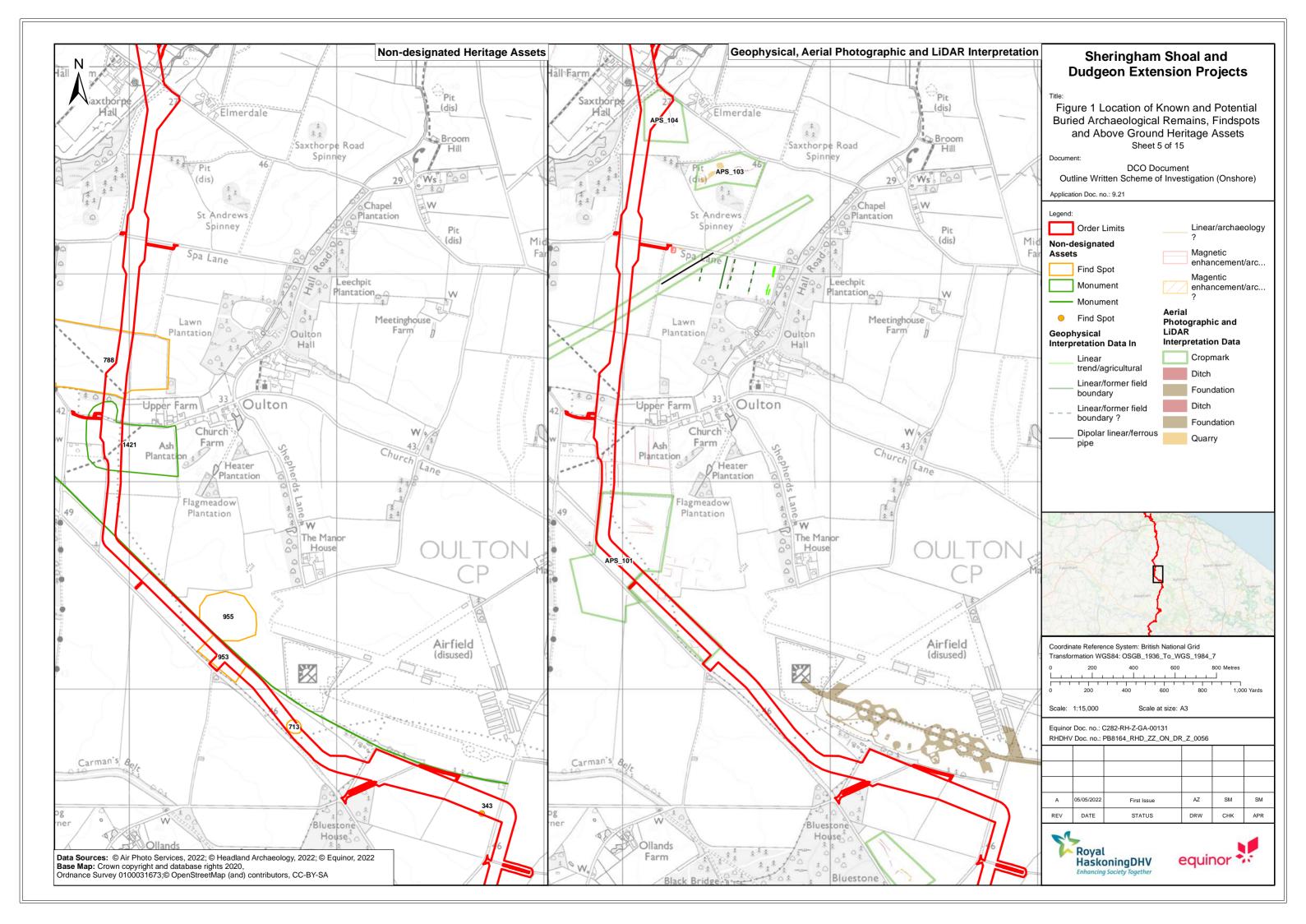
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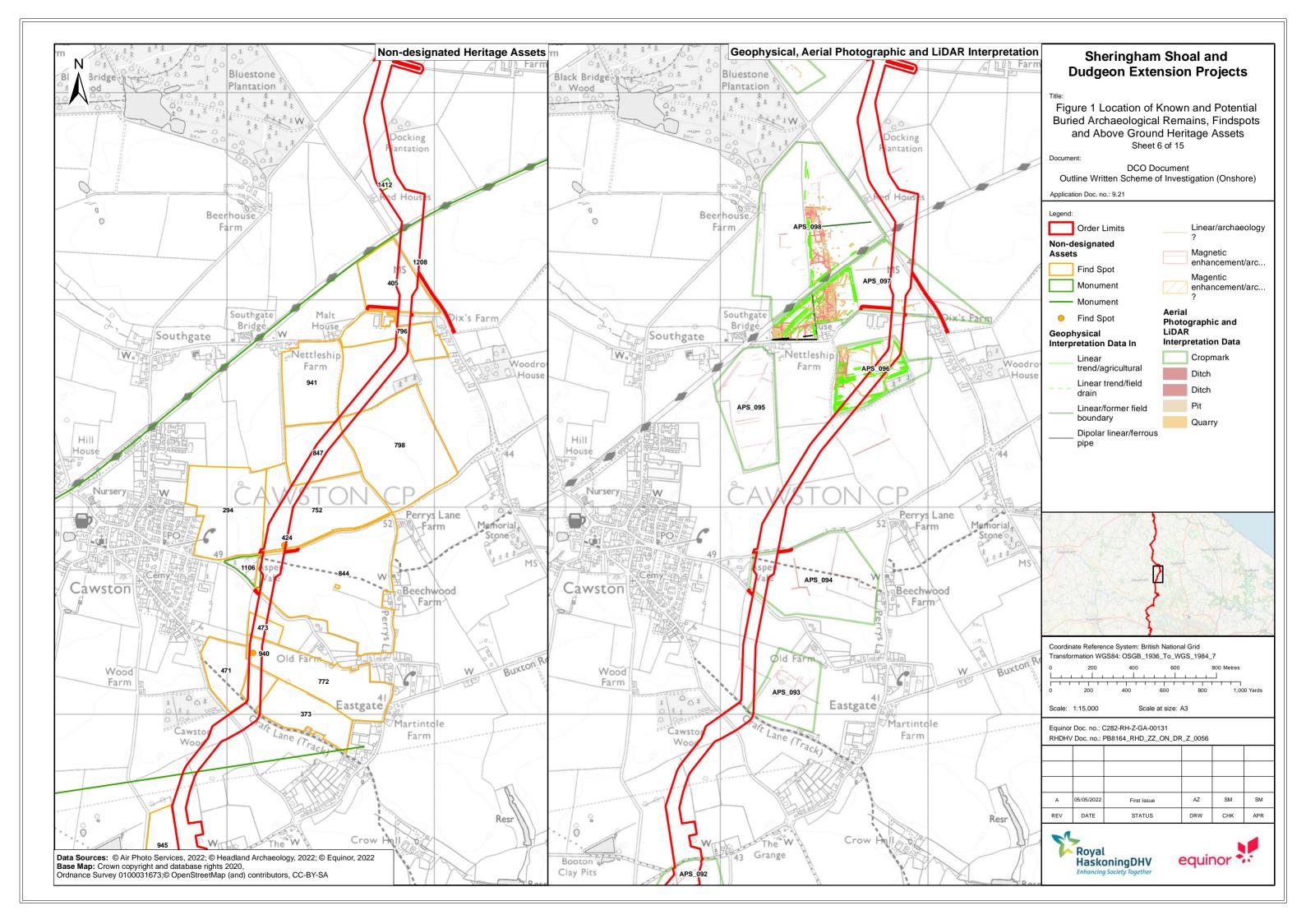


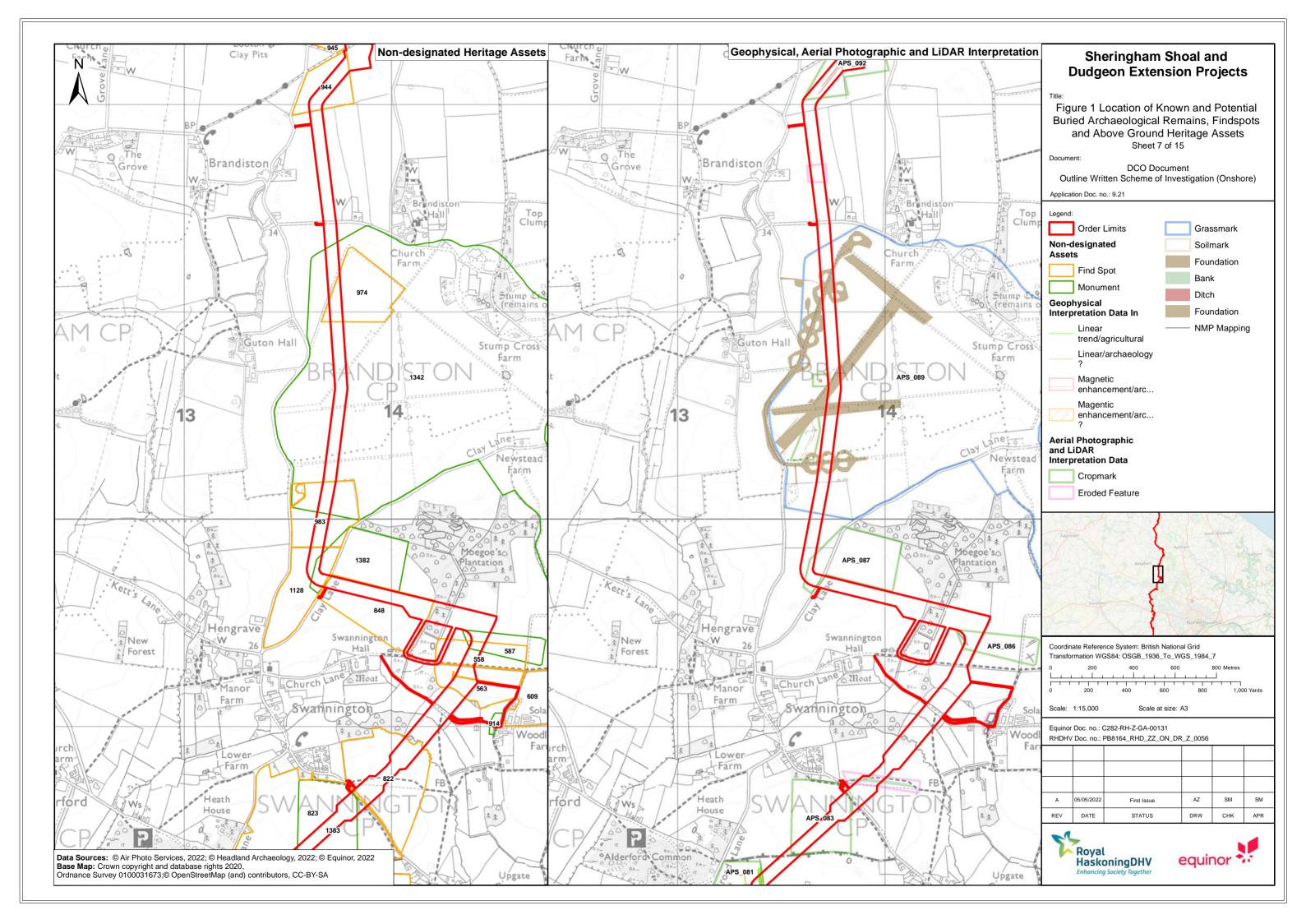


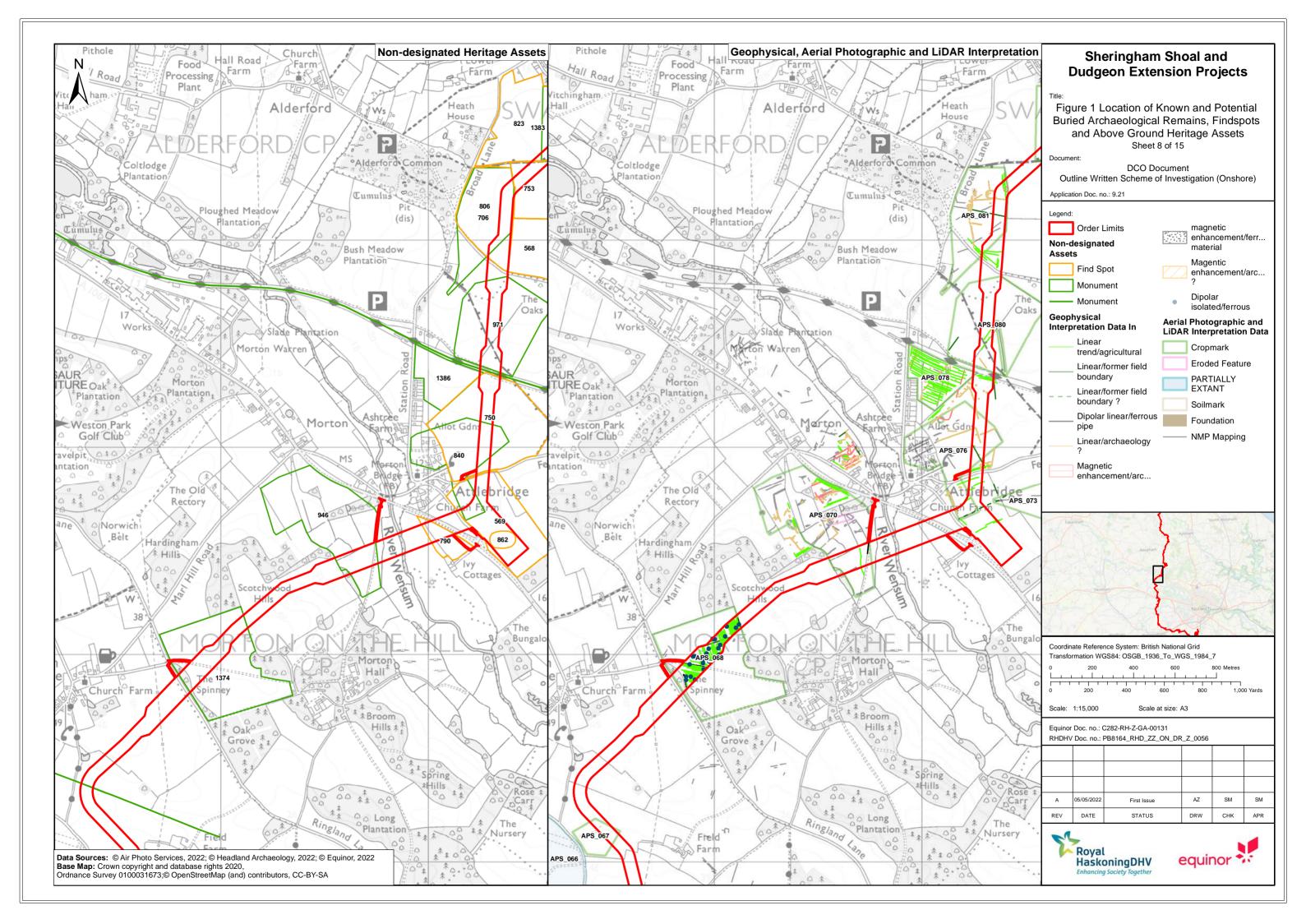


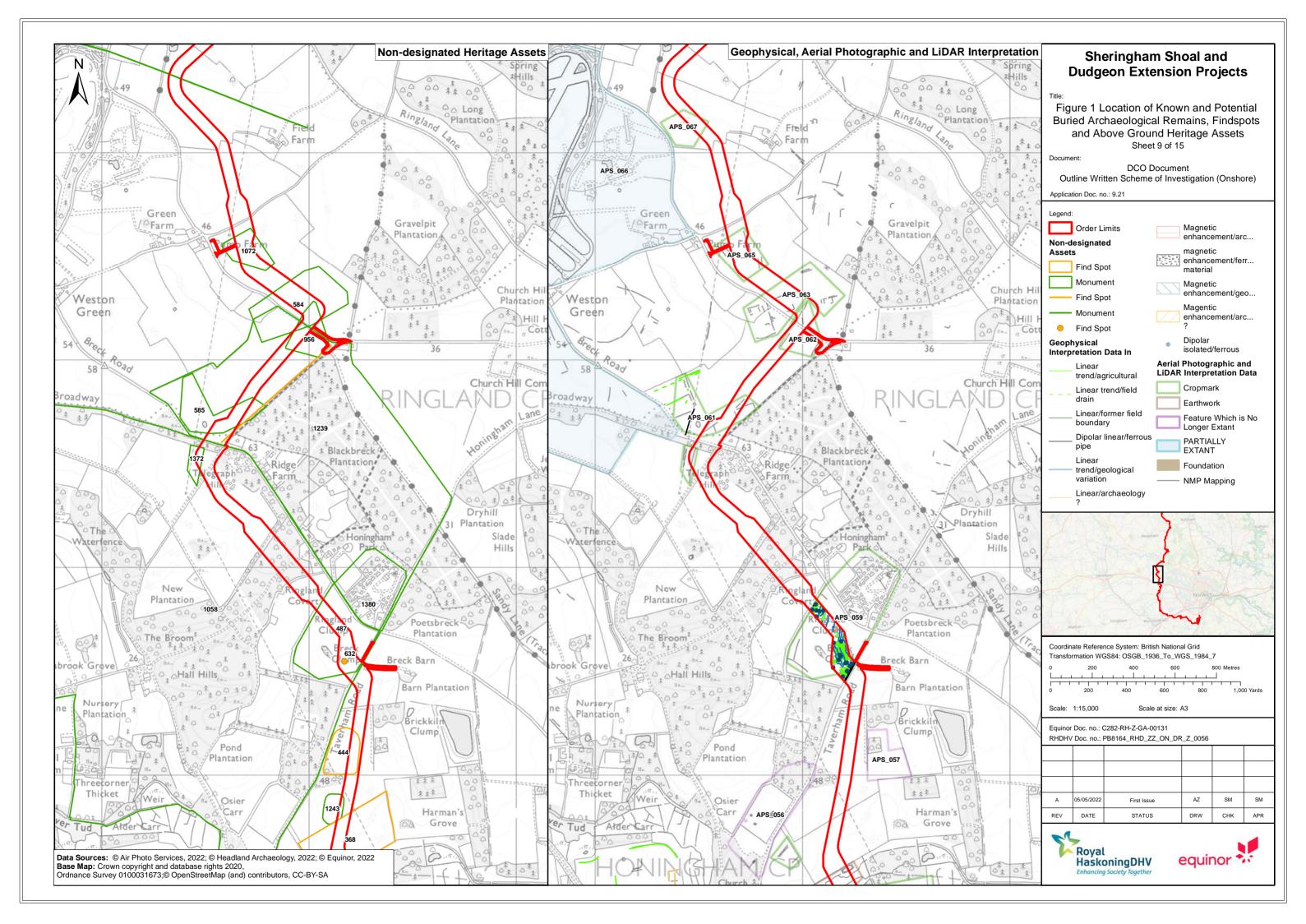


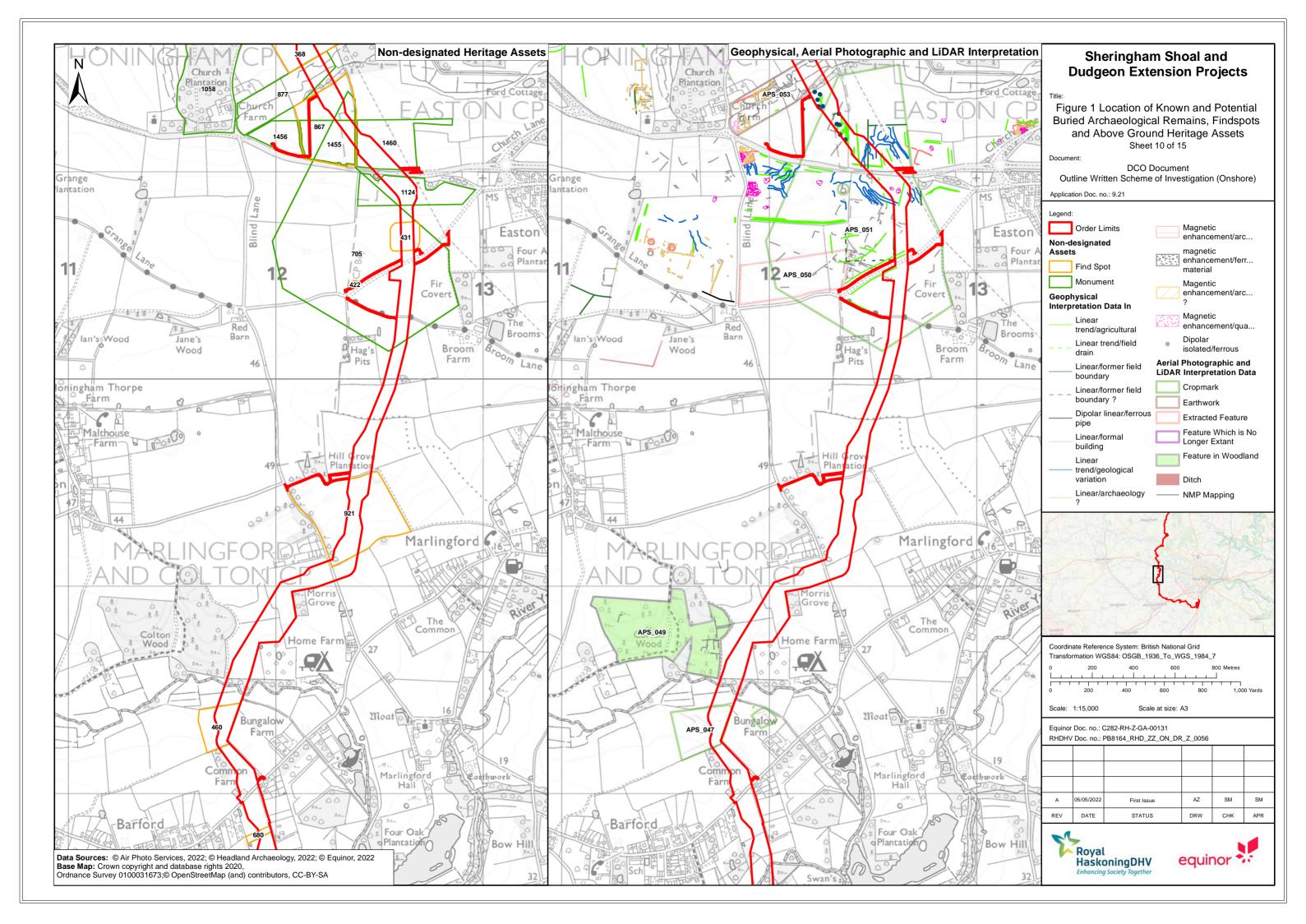


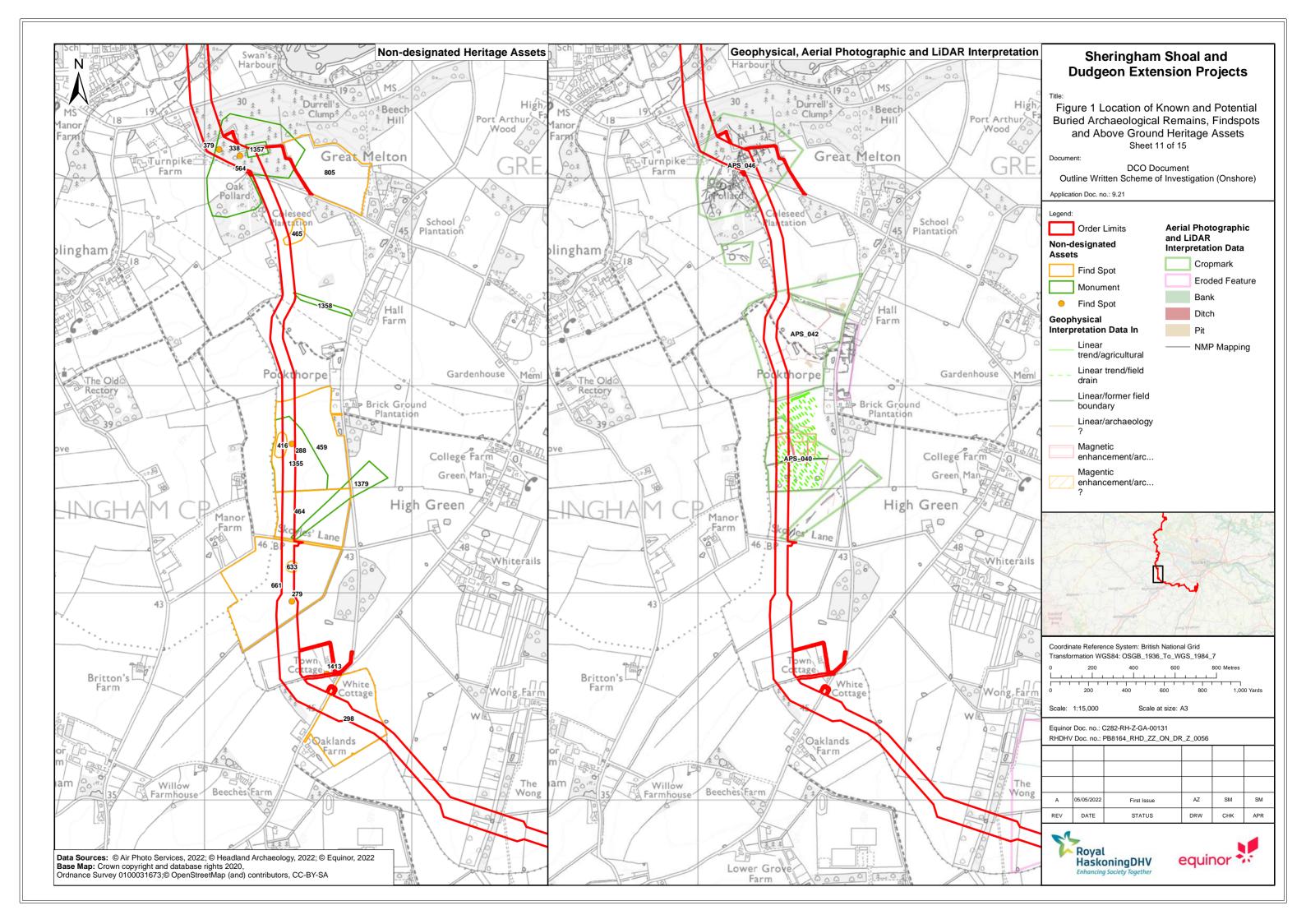


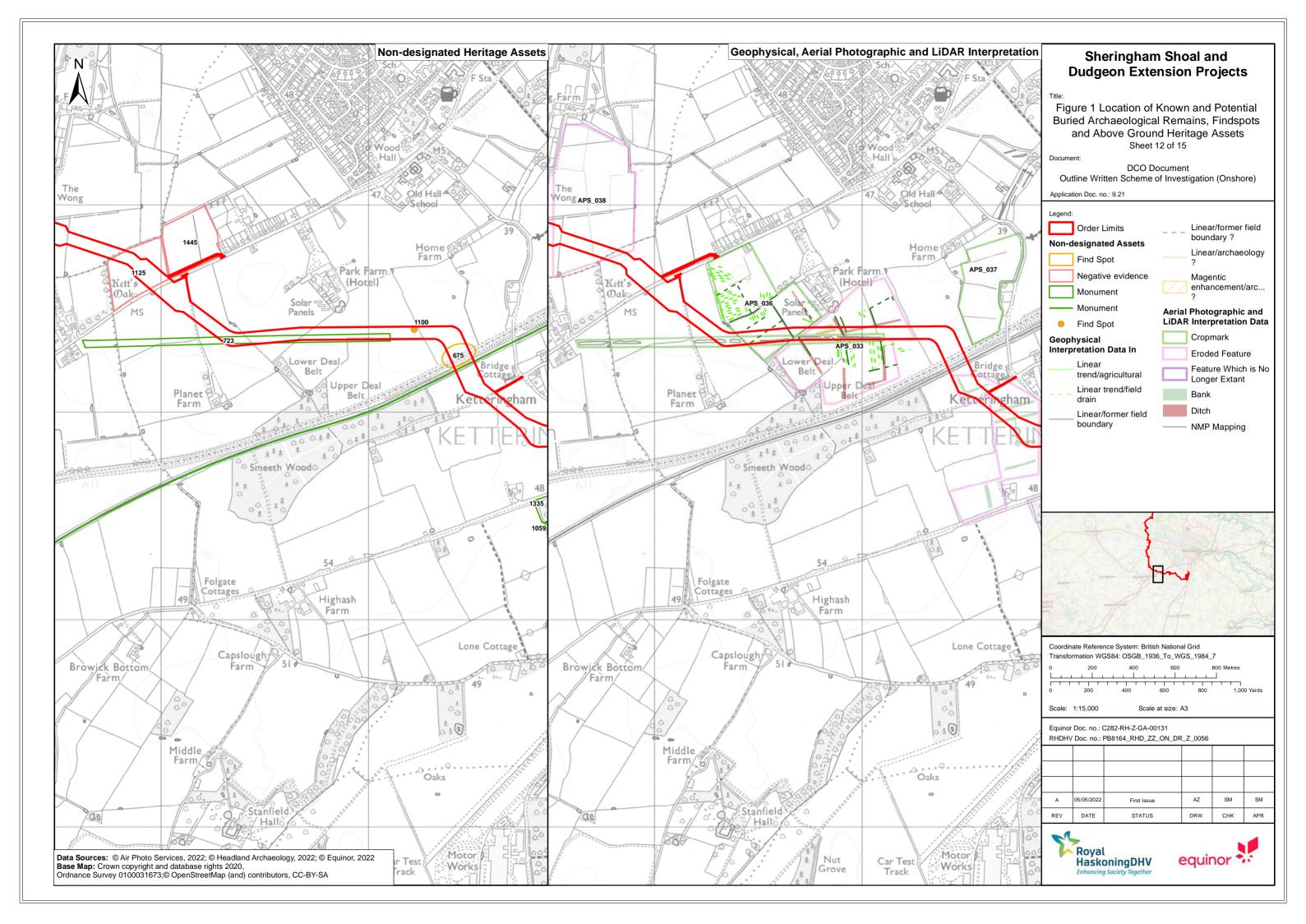


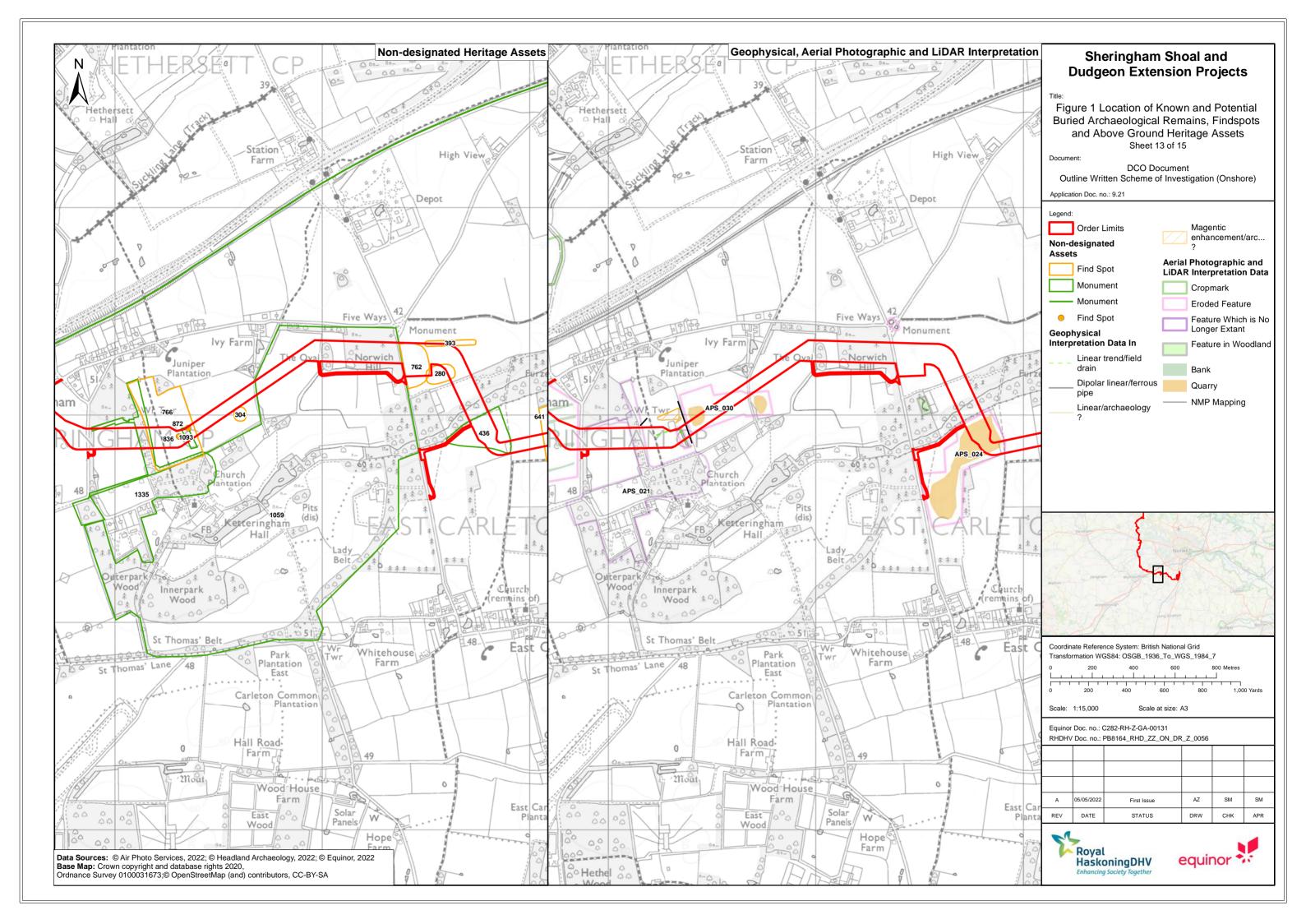


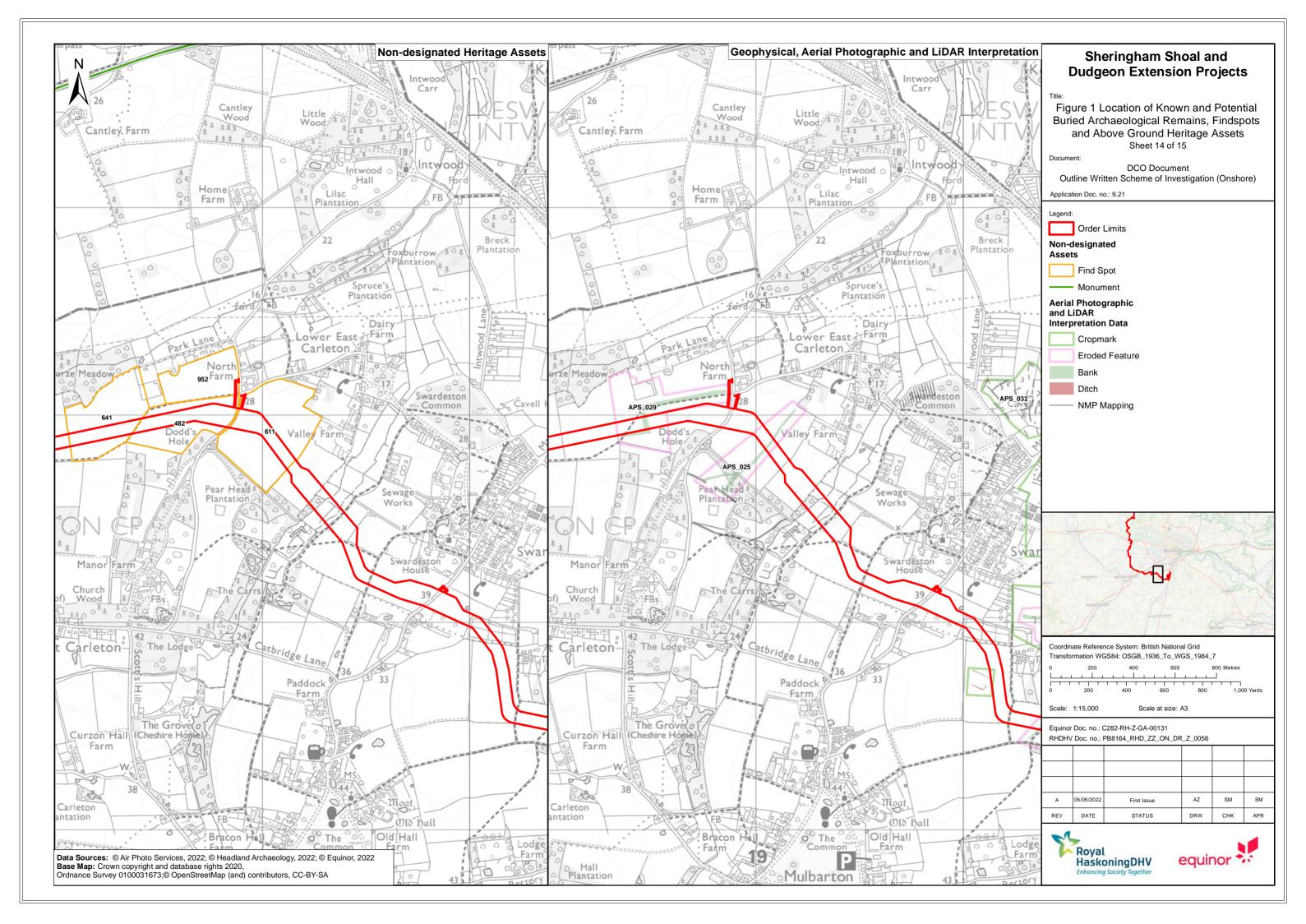


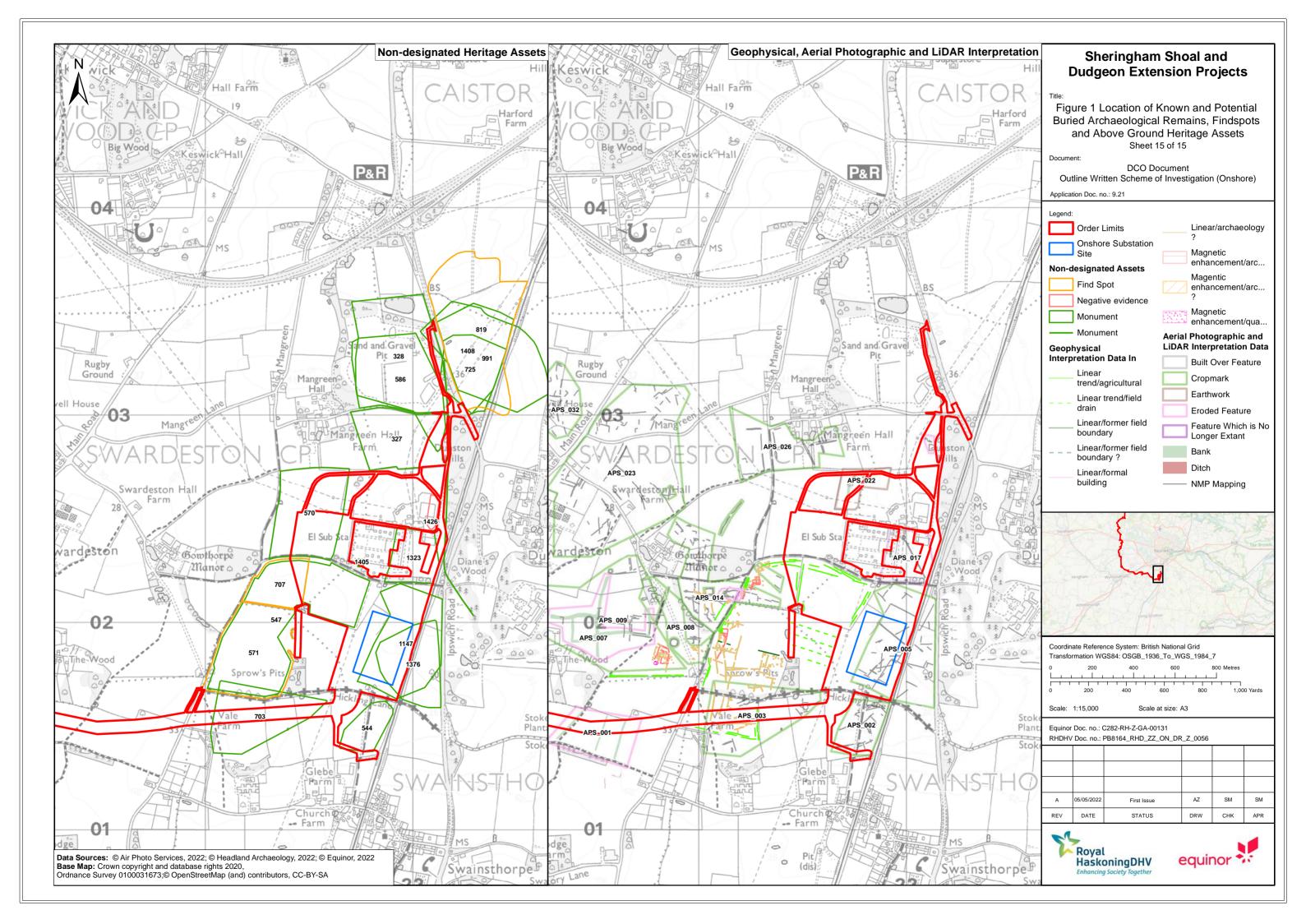














Outline Written Scheme of Investigation

(Onshore)

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Rev. no. B

APPENDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY: **PHASE TWO**

Classification: Open Status: Final



Page 1 of 33

Sheringham and Dudgeon Offshore Wind Farm Extensions Projects

Written Scheme of Investigation for Priority Archaeological Geophysical Survey: Phase Two



Page 2 of 33

Title:		
		e Wind Farm Extension Projects: Written Archaeological Geophysical Survey: Phase
Document no.: PB8164-RHD-ZZ-ON-RP-Z-0	0190	
Date:	Classific	ation
26/09/2022	Draft	
Prepared by:		
Royal HaskoningDHV		
Approved by:		Date:
Johiris Rodriguez, Equinor	•	26/09/2022



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Executive Summary

This iteration of the Written Scheme of Investigation (WSI) has been prepared by Royal HaskoningDHV (RHDHV) to provide details and methodologies for a second programme of Priority Archaeological Geophysical Survey associated with the onshore elements of Sheringham and Dudgeon Offshore Wind Farm Extension Projects. This WSI has been updated to reflect Phase Two of the geophysical survey.

All (non-intrusive) archaeological geophysical survey work will be undertaken in line with the Chartered Institute for Archaeologists' (ClfA) Standard and guidance for archaeological geophysical survey, as well as other specific and relevant heritage guidance documentation, including EAC Guidelines for the Use of Geophysics in Archaeology (Schmidt et al., 2016) and Standards for Development-led Archaeological Projects in Norfolk (Norfolk County Council Environment Service, 2018).

This WSI, detailing the proposals for the Phase Two Priority Archaeological Geophysical Survey work, has been submitted to Norfolk County Council (NCC) Historic Environment Service (HES), as the relevant historic environment consultee with respect to the proposed survey work, for review, comment and approval in advance of commencement of survey.

The document also provides the methodology, scope of work and other information and requirements that must be strictly adhered to by the appointed archaeological contractor (Headland Archaeology) in undertaking and reporting on the Phase Two Priority Archaeological Geophysical Survey.

This second phase of Priority Archaeological Geophysical Survey has been discussed with NCC HES, including the individual areas being proposed for priority survey on an area-by-area basis, and the methodology broadly follows the same requirements and approaches undertaken on other recent linear schemes of a similar/comparable nature in Norfolk.



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Table of Contents

1	Introduction	8
1.1	Project Background	8
1.2	Archaeological and Historical Background	10
1.3	Results of the Phase One Priority Archaeological Geophysical Survey	11
1.4	Geology and Topography	12
2	Survey Aims and Objectives	12
3	Methodology	13
3.1	Geophysical Survey Methodology	13
3.2	Access	14
3.3	Monitoring	15
3.4	Reporting	15
3.5	Archive Preparation and Deposition	16
4	Resources	17
5	Health and Safety	18
6	General Provisions	18
Referen	nces	19
APPENI	DIX A - POTENTIAL HERITAGE ASSETS (RECORDED FEATURES AND	ANOMALIES)
IDENTIF	FIED AS REQUIRING PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY	20
APPENI	DIX B – FIGURES 1 TO 89	33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Glossary of Acronyms

ADS	Archaeology Data Service
ALSF	Norfolk Aggregates Levy Sustainability Fund
BGS	British Geological Survey
CIfA	Chartered Institute for Archaeologists
DBA	Desk Based Assessment
DCO	Development Consent Order
DGPS	Differential Global Positioning System
DEP	Dudgeon Offshore Wind Farm Extension Project
DOW	Dudgeon Offshore Wind Farm
EA	Environment Agency
EIA	Environmental Impact Assessment
ES	Environmental Statement
GIS	Geographical Information System
LiDAR	Light Detection and Ranging
NCC HES	Norfolk County Council Historic Environment Service
NHLE	National Heritage List for England
NHER	Norfolk Historic Environment Record
OASIS	Online Access to the Index of Archaeological Investigations
OD	Ordnance Datum
OS	Ordnance Survey
OWF	Offshore Wind Farm
PA	Priority Area
PPE	Personal Protective Equipment
RAMS	Risk Assessment Method Statement
SEP	Sheringham Shoal Offshore Wind Farm Extension Project
WSI	Written Scheme of Investigation



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Glossary of Terms

Order Limits	The area subject to the application for development consent, including all permanent and temporary works for SEP and DEP.
Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP onshore site	The Dudgeon Offshore Wind Farm Extension onshore area consisting of the DEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the EIA and HRA for certain topics.
Horizontal directional drilling (HDD) zones	The areas within the onshore cable route which would house HDD entry or exit points.
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to the onshore cables at the transition joint bay above mean high water
Onshore cable corridor	The area between the landfall and the onshore substation sites, within which the onshore cable circuits will be installed along with other temporary works for construction.
Onshore Substation	Compound containing electrical equipment to enable connection to the National Grid.
PEIR boundary	The area subject to survey and preliminary impact assessment to inform the PEIR.
Sheringham Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
SEP wind farm site	The offshore area of SEP within which wind turbines, infield cables and offshore substation platform/s will be located and the adjacent Offshore Temporary Works Area.
SEP onshore site	The Sheringham Shoal Wind Farm Extension onshore area consisting of the SEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.

Page 6 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Study area	Area where potential impacts from the project could occur, as defined for each individual Environmental Impact Assessment (EIA) topic.
The Applicant	Equinor New Energy Limited.



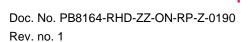
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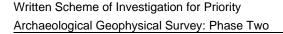
1 Introduction

1.1 Project Background

- 1. This iteration of the Written Scheme of Investigation (WSI) has been updated to reflect the second phase of Priority Archaeological Geophysical Survey, which relates to two offshore wind farm projects and their associated onshore connections:
 - Sheringham Shoal Offshore Wind Farm Extension (Sheringham Extension Project); and
 - Dudgeon Offshore Wind Farm Extension (Dudgeon Extension Project).
- 2. Equinor New Energy Limited (the Applicant) is proposing to extend the existing operational Sheringham Shoal and Dudgeon Offshore Wind Farms, named Sheringham Shoal Offshore Wind Farm Extension Project (hereafter SEP) and Dudgeon Offshore Wind Farm Extension Project (hereafter DEP). SEP and DEP will consist of several offshore and onshore elements. The key onshore components comprise:
 - Landfall and associated transition joint bay(s);
 - Onshore export cables installed underground from the landfall to the onshore;
 substation and associated joint bays and link boxes;
 - Onshore substation and onward 400 kilovolt (kV) connection to the existing Norwich Main substation;
 - Trenchless crossing zones (e.g. Horizontal Directional Drilling (HDD));
 - Construction and operational accesses; and
 - Construction compounds.
- 3. As the owners of SEP and DEP, Scira Extension Limited and Dudgeon Extension Limited are the named undertakers that have the benefit of the DCO. References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of SEL and DEL as the undertakers of SEP and DEP.
- 4. When operational SEP and DEP combined would have the potential to generate renewable power for up to 785,000 United Kingdom (UK) homes. Power would be generated from up to 23 wind turbines at SEP and up to 30 wind turbines at DEP.
- 5. Electricity will flow from the wind turbines via infield (array) cables to offshore substation platform(s). There would be up to two offshore substations with one in SEP and one in DEP North, located to optimise the length of the offshore cables.
- 6. Interlink cables will link the separate project areas. At the offshore substation(s), the generated power would be transformed to a higher alternating current (AC) voltage. The power would be exported through two export cables, in two separate trenches, to a landfall in Weybourne on the North Norfolk coast.

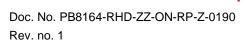


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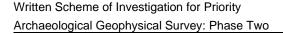


7. At the landfall location the offshore export cables will meet and be joined up with the onshore export cables in a transition joint bay. From there, the onshore export cables travel approximately 60km inland to a high voltage alternating current (HVAC) onshore substation near to the existing Norwich Main substation. The onshore substation would be constructed to accommodate the connection of both SEP and DEP to the transmission grid.

- 8. With respect to the onshore cable route, an initial route selection exercise identified a 1,000m (1km) wide onshore cable corridor (to inform scoping), which was subsequently refined down to a c. 200m wide corridor for surveys (with certain areas retained wider than this e.g. at landfall and around key crossing locations), and has been further reduced to a 60m wide cable corridor for the Development Consent Order (DCO) application, increasing to a width of 100m for trenchless crossings.
- 9. This iteration of the WSI has been updated to reflect the results of the Phase One Priority Archaeological Geophysical Survey, and the requirements for Phase Two.
- The results of the Phase One Priority Archaeological Geophysical Survey were used 10. to support the Environmental Statement (ES) Chapter 21 Onshore Archaeology and Cultural Heritage (document reference 6.1.21). The results and reporting from the Phase One survey formed a technical appendix to the ES Chapter (Appendix 21.6) and has been submitted as part of the DCO application. The results of the Phase One survey are summarised in Section 1.2 below.
- This second phase of the Priority Archaeological Geophysical Survey is being 11. undertaken within the 60m onshore cable corridor and will include elements of the landfall and the substation location. The information and results obtained from the second phase of geophysical survey will be submitted during the examination process as further supporting evidence to inform the DCO decision.
- The results of the Aerial Photographic (AP) and LiDAR Data and Historic Map 12. Regression Analysis (Air Photo Services, 2020) and the results of the subsequent Addendum (APS, 2022) have been reviewed alongside the Norfolk Historic Environment Record (NHER) data for the projects with a view to identifying areas within the onshore Order Limits in which buried archaeological remains may be present and may require further investigation.
- 13. The features identified in the AP and LiDAR overview assessment have formed the basis of the Priority Archaeological Geophysical Survey areas (see Appendix A – Table 1 and Appendix B - Figures 1 to 89), and have been included where these features were mapped as either intersecting or located wholly within the onshore Order Limits. For the majority, these AP/LiDAR features are also encapsulated within the NHER, with a few instances in which the AP/LiDAR features have identified potential 'new' sites not previously recorded on the NHER.
- 14. For Phase One, a total of 37 areas, covering approximately 546 hectares (ha), were identified as requiring a priority archaeological geophysical survey. These areas were targeted based on known locations of recorded heritage assets relating to buried archaeology within the NHER and as identified from AP data.



equinor



15. Phase One of the priority archaeological geophysical was carried out by Headland Archaeology in three phases: between 7th September, 2020, and 15th December, 2021. 28 survey areas were completed or partially completed (due to constraints such as crop cover or land access restrictions), covering approximately 426ha, including areas previously surveyed for other projects.

- 16. The total area identified as requiring Priority Geophysical Survey for Phase Two equates to approximately 181.52 ha. These areas are based on the onshore Order Limits (see Figure 1, Appendix B). Details of each priority survey area and the potential heritage assets of archaeological interest are presented in Table 1, Appendix A, and the locations are presented on Figures 1-89, Appendix B.
- 17. Data collected from both phases of the priority archaeological geophysical surveys will inform the micro-siting process of the cables within the onshore Order Limits, and ultimately directly inform archaeological trial trench locations and a survey specific WSI for trial trenching. Trial trenching is, however, proposed to be undertaken post-consent when for example land access rights are more strongly in favour of required intrusive project surveys being granted access.

1.2 Archaeological and Historical Background

- 18. An Archaeological Desk-Based Assessment (ADBA) (Appendix 21.1) has been produced by Royal HaskoningDHV to inform ES Chapter 21 Onshore Archaeology and Cultural Heritage. Designated and non-designated heritage data has been obtained from Historic England's National Heritage List for England (NHLE) and from the NHER for assessment.
- 19. Alongside the production of the ADBA, Air Photo Services (APS) undertook a staged approach to AP and LiDAR assessment due to the closure of archives and records offices as a result of Coronavirus. As such, a three-staged approach was undertaken with the results of Stage 1 (an overview assessment of currently available online aerial imagery) informing the locations targeted by the Phase One Priority Archaeological Geophysical Survey. For Stage 1, the sources available for assessment included the National Mapping Programme (NMP) for Norfolk Coast and Norfolk Thetford A11, Norfolk Aggregates Levy Sustainability Fund (ALSF), Environment Agency (EA) Lidar data, Google Earth and Bing Aerial Maps.
- 20. The results of the Stage 2 AP and LiDAR assessment and the subsequent addendum was researched and produced in 2021-2022. The sources available for these assessments included updates to the assessment of aerial photographs from specific data sources which were not available for consultation during 2020, and updates to the historic map regression using pre-19th century cartographic sources available for consultation at the Norfolk Record Office (NRO), and in one case as digital data. The information from the Stage 2 assessment has informed the locations of the Phase Two Priority Archaeological Geophysical Survey, along with the NHER data.
- 21. The appointed archaeological contractor Headland Archaeology will thoroughly review these documents prior to commencing phase two of the priority archaeological geophysical survey.

Page 10 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190 Rev. no. 1

- 22. The archaeological evidence collated so far reflects a human presence from the prehistoric to the present day.
- 23. The AP and Lidar assessment revealed a series of cropmark sites indicative of settlement, farming and military activity dating from the Iron Age through to modern periods. The majority of cropmark sites correspond with those recorded on the NHER with a few additional potential 'new' sites revealed.
- 24. The addendum overview assessment revealed additional features at some known archaeological sites, additional mapping at sites where just the image location was identified by the NHER, and additions to the recording of residual buried surface features at three military airfields at Swannington, Oulton and within the western part of Weybourne Camp.
- 25. The potential for buried archaeological remains to be present across the onshore Order Limits is considered to be high.

1.3 Results of the Phase One Priority Archaeological Geophysical Survey

- 26. The Phase One surveys were located within the 200m wide PEIR onshore boundary and covered 37 Priority Areas (PAs). Amendments to the PAs were made during the fieldwork with some PAs expanded to establish the full extent of the archaeological anomalies within the PEIR boundary. As the preferred route was refined, PA's were descoped meaning that some of the data presented within this WSI is currently beyond the refined Order Limits. Some PAs were not surveyed during the fieldwork window due to unsuitable ground cover (primarily unharvested sugar beet) or restricted access.
- 27. In addition to identifying anomalies of agricultural (drains, former boundaries, ridge and furrow and modern ploughing), modern (pipes, demolished buildings) and geological origin, the survey identified clear anomalies of probable and possible archaeological origin in nearly all the PAs, successfully defining the extent of features previously identified as cropmarks. As indicated by the preliminary research, these anomalies are indicative of activity ranging from the Bronze Age (a possible round barrow cemetery in PA9), medieval tofts in PA12, through to post-medieval brick manufacture (PA4) and World War II infrastructure (PA37). Most notable perhaps is the extended 'ladder' settlement which extends north/south through PA23, PA24 and PA25. A similar pattern of enclosure is identified in PA28. The possible line of a Roman road and a mortuary enclosure are also tentatively identified.
- 28. The fieldwork carried out to date within the onshore cable corridor has successfully evaluated those PAs where survey has been possible. In almost all areas the surveys have added significantly to the level of detail of the archaeological resource, as indicated by the cropmarks, which were the main determining factor in the selection of the PAs. The surveys have also better defined the extent of the resource in each PA.

Page 11 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

1.4 Geology and Topography

- 29. The British Geological Survey (BGS) online viewer shows that the solid geology beneath the onshore project area in respect to the onshore cable corridor comprises White Chalk and Crag Group deposits.
- 30. The Chalk is a white or grey limestone, which principally outcrops as a low, rolling plateau in west Norfolk, along the north Norfolk coast and near Norwich where the Rivers Yare and Wensum have cut down through overlying beds to expose it. The Crag Group deposits are a sequence of sandy, marine deposits which outcrop in the eastern parts of the onshore project area.
- 31. The solid deposits are overlain predominantly by glacial till dating from the Anglian glaciation, interspersed with sheets of glacial sands and gravels. Small, isolated pockets or channels of superficial deposits exist over the Glacial Till Alluvium where watercourses are crossed.
- 32. The majority of the onshore Order Limits is agricultural land, interspersed with predominantly small rural settlements, including the towns of Weybourne, Bodham, Little Barningham, Brandiston, Morton, Attlebridge, Weston Longville, Colton, and Ketteringham, as well as watercourses, areas of woodland and hedgerows.

2 Survey Aims and Objectives

- 33. The aims and objectives of the phase two priority archaeological geophysical survey are to:
 - Undertake a programme of priority (targeted) detailed magnetometry across the areas highlighted in Table 1, Appendix A and presented on Figures 1-89, Appendix B;
 - Corroborate, identify and characterise sub-surface anomalies that may have an archaeological origin (including defining the spatial limits of already known or suspected heritage assets);
 - Discount areas within the survey area that are found to have been subject to previous 'modern' disturbance, for example where the geophysical survey data indicate the presence of 'made' or previously heavily disturbed ground;
 - Provide an interpretation of all recorded geophysical anomalies in order to inform the design of a scheme-wide programme of archaeological evaluation trial trenching, proposed to be undertaken post-consent; and
 - Prepare a fully illustrated report on the results of the priority archaeological geophysical survey that is compliant with all relevant standards, guidance and good practice (see Sections 3 and 7 below).



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

3 Methodology

- 34. All archaeological geophysical survey work will be carried out in accordance with accepted good practice, including 'Standard and guidance for archaeological geophysical survey' (ClfA, 2014a) and the ClfA 'Code of Conduct' (ClfA, 2014b), as well as Historic England's recommended guidance 'EAC Guidelines for the Use of Geophysics in Archaeology' (Schmidt *et al.*, 2016) and NCC's 'Standard for Development for Development-Led Archaeological Projects in Norfolk' (2018).
- 35. The anticipated commencement of the priority archaeological geophysical survey work is Autumn 2022.
- 36. In addition to this survey-specific WSI, Headland Archaeology have produced a separate health and safety Risk Assessment Method Statement (RAMS) document with respect to the geophysical survey for review by the Applicant.
- 37. Due to the linear nature of the project, predominantly arable fields and the need to regularly move from plot to plot (field to field), in order to continue survey work across the outlined areas, the instrumentation to be used will be hand-held gradiometers, rather than a cart-based system.

3.1 Geophysical Survey Methodology

- 38. The geophysical survey will be carried out across the footprint of the onshore Order Limits highlighted for Phase Two priority archaeological geophysical survey, an area of approximately 181.52ha.
- 39. After consultation with Headland Archaeology, Magnetometry is the geophysical survey method and technique that has been and will continue to be used for this large-scale survey.
- 40. Magnetometry is the most widely used geophysical survey technique in archaeology as it can quickly evaluate large areas and, under favourable conditions, identify a wide range of archaeological features including infilled cut features such as large pits, gullies and ditches, hearths and areas of burning and kilns and brick structures. It is therefore good at locating settlements of all periods, prehistoric field systems and enclosures and areas of industrial or modern activity, amongst others. It can be less successful in identifying smaller features such as post-holes and small pits (except when using a non-standard sampling interval), unenclosed (prehistoric) settlement sites and graves/burial grounds especially if the prevailing geological and pedological conditions are unfavourable. However, magnetometry is by far the single most useful technique and was assessed as the best non-intrusive evaluation tool for this site.
- 41. The survey will be undertaken using four Bartington Grad601 sensors mounted at 1m intervals (allowing for a 1m traverse interval) onto a rigid carrying frame. The system will be programmed to take readings at a frequency of 10Hz (allowing for a 10-15cm sample interval) on roaming traverses spaced 4m apart. These readings will be stored on an external weatherproof laptop and later downloaded for processing and interpretation. MLGrad601 and MultiGrad601 (Geomar Software Inc.) software will be used to collect and export the data. Terrasurveyor V3.0.32.4 (DWConsulting) software will be used to process and present the data.

Page 13 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

- 42. The magnetometer system will be linked to a Trimble R8s Real Time Kinetic (RTK) differential Global Positioning System (dGPS) and a Trimble R2 receiver outputting in NMEA mode to ensure a high positional accuracy of each data point.
- 43. A series of temporary sight markers will be established within each survey area using a Trimble dGPS system. The markers will guide the operator and ensure full coverage with the magnetometer system within the survey corridor within each plot.
- 44. The survey will be carried out by experienced surveyors (site-based geophysicists) in order to provide quality, consistent results with regard to pattern recognition and to initially screen out any noise produced by local magnetic 'pollution' and/or any recent ferrous disturbance.
- 45. On completion of each day's site operations, the survey results will be processed and reviewed.
- 46. A record will be maintained of surface conditions and of possible sources of modern geophysical interference that may have a bearing on subsequent interpretation of field data. The surveyors on site will have access to and will have read all relevant previous archaeological desk-based reporting in order to ensure an informed data review and ultimately interpretation of the results.
- 47. The interpretation of the survey data will be undertaken by an experienced archaeological geophysicist. This specialist will also be knowledgeable of the prevailing conditions across the large survey area that could affect the interpretation of the results. See **Section 4** for further information on staffing and resources. Reference to the underlying geological conditions should also be made.
- 48. Any areas where it is considered to be unsafe to work will be excluded from the survey. If any problems are encountered during the geophysical survey these will be reported immediately to the Applicant's Landowner Team, the Applicant and RHDHV.
- 49. Due to potential access restrictions/constraints it is unlikely that the priority survey areas will occur sequentially from one end of the survey route to the other, and as a result interim reports may be required. The most appropriate approach to reporting will be agreed with Headland Archaeology in consultation with the Applicant, RHDHV and NCC HES.

3.2 Access

- 50. Access will initially be arranged through the Applicant's Landowner Team and will be from public access points or from private access points previously agreed with the landowner and/or land occupier (tenant). Headland Archaeology will also be required to progress specific access arrangements on a day-to-day and week-to-week basis, including direct contact (phone calls) with landowners, prior to gaining access.
- 51. Vehicles must be parked off the road, safely and appropriately within and at designated locations. No vehicles are to be parked across field accesses or blocking any other form of access route. A surveyor's vehicle sheet must be placed in the windscreen of any vehicle on site during surveying work, which should include a contact name and number.

Page 14 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

52. Contact details, including names, company address and vehicle registration, of those attending site must be provided to the Applicant's Landowner Team in advance of the site survey.

3.3 Monitoring

- 53. RHDHV will monitor the priority archaeological geophysical survey fieldwork progress alongside the Applicant.
- 54. A minimum of one week's notice will be given to NCC HES (who hold curatorial responsibility for the geophysical survey), in advance of survey works commencing.
- 55. If required, arrangements for NCC HES to visit site and monitor the geophysical survey in progress will be made through the Applicant and RHDHV.

3.4 Reporting

- Verbal progress reports and brief written weekly progress reports will be provided to RHDHV and the Applicant during the course of the survey, and also at any juncture upon request.
- 57. Raw greyscale imagery and draft interim plots (greyscales and interpretations), including brief summaries of results (as they become available) will be submitted to RHDHV, the Applicant and NCC HES on a regular basis.
- 58. 'Headlines' and in particular any results of a significant nature will be communicated in a timely manner.
- 59. The formal draft report on the geophysical survey will be submitted to RHDHV for review within four-six working weeks of the completion of fieldwork. The report will consist of a fully illustrated text and accompanying figures containing the following information:
 - Site code/project number; dates for fieldwork visits; grid references; location plan, and a plan showing the limits of the survey area (accurately located to the national grid);
 - A non-technical summary of the reason, aims and main results of the survey;
 - An introduction to outline the circumstances leading to the commission of the project and any restrictions encountered;
 - Aims and objectives of the survey;
 - Site location and description;
 - Geology, soils and land use;
 - Planning background;
 - Archaeological and historical background;
 - The methodology used;
 - Detailed survey results of individual fields (plots) and interpretation;

Page 15 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

- Plans showing detailed and summary interpretation of results, including both processed and unprocessed data (at appropriate scales). Figures will also include cross reference to and correlation with relevant HER, LiDAR and aerial photographic data, where appropriate. The summary and synthesis of the archaeological results in relation to the methods used shall be supported by survey location plans and plots of minimally processed (X-Y traceplot) and fully processed (greyscale) data at a minimum scale of 1:2500 with larger scale (1:1000) plots of all areas of archaeological significance. Each plan/plot will have a scale bar and accurately oriented north arrow;
- An assessment of the importance of anomalies (potential features) within the survey area against a background of national, regional or local importance;
- Recommendations regarding the future treatment of the potential remains and/or any further archaeological work necessary on site in advance of, or during, construction;
- References to all primary and secondary sources consulted; and
- A review of the effectiveness of the methodology, within different areas, locations and 'landscapes' (i.e. differing geology and topography encountered).
- 60. All figures will be reproduced from Ordnance Survey mapping with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

3.5 Archive Preparation and Deposition

Classification: Open

- The project will be archived in-house (at Headland Archaeology's offices) in accordance with the good practice guidelines

 The data will be stored in an indexed archive and migrated to new formats when necessary.
- 62. The archive will consist of the final priority archaeological geophysical survey report within which documentary, raw and processed digital data records generated during the fieldwork will be presented. This will include a georeferenced .dxf or MapInfo .tab file copy of the interpretation of the results for the NHER.
- 63. The documentation and records generated by the project will also be assembled in accordance with the national guidelines in 'Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation' (AAF, 2007), and as specified by NCC in 'Standards for Development-Led Archaeological Projects in Norfolk' (NCC, 2018).
- 64. The archiving requirements for this phase of work are to be discussed by Headland Archaeology with the Norfolk Museums and Archaeology Service ahead of works and an accession number and deposition date will be requested, as necessary.
- 65. Headland Archaeology will also contact the NHER in advance of survey to obtain an HER Event number specific to the survey. The HER can be contacted via (heritage@norfolk.gov.uk). GIS shapefiles of the priority archaeological geophysical survey areas are to be supplied with the event number request.

Status: Draft

Page 16 of 33



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

- 66. In addition to submitting a copy of the geophysical survey results and reporting during the DCO examination process, copies of the final geophysical survey report will be supplied separately to the NHER. This will consist of one unbound hardcopy (if required) and a PDF/A on CD upon the completion of the survey, following relevant internal reviews and the Applicant sign off, as well as external reviews by NCC HES.
- 67. In addition, Headland Archaeology will make their work accessible to the wider research community by submitting digital data and copies of the report online to OASIS (Online Access to the Index of Archaeological Investigations) at -, upon approval by the Applicant

4 Resources

- 68. Headland Archaeology will adhere to all national, regional and local standards and guidance as identified throughout this document and referenced below in Section 7.
- 69. Headland Archaeology will ensure that:
 - All personnel involved in the project are suitably qualified and experienced professionals.
 - All equipment, instrumentation and tools required (and to be supplied by the Headland Archaeology) are in good working and functioning order.
- 70. Headland Archaeology will ultimately be responsible for the compliant delivery of this survey-specific WSI.
- 71. The works will be staffed by between 1 and 3 geophysical survey teams, each team comprising two surveyors. For the initial stages, two teams will be deployed. Team numbers may increase or decrease according to staff availability and land access.
- 72. Headland Archaeology will be directly responsible for all setting out and the surveying in of all grid points, as appropriate, and for ensuring that the correct (and only the required) survey areas within the onshore project area are subject to survey.
- 73. Pen portrait (concise short-form style) CVs can be provided for Headland Archaeology's survey personnel to NCC HES in advance of survey work commencing, upon request.
- 74. A standard working day will involve driving to site, condition surveys of the survey area, survey area setting out and detailed geophysical survey. Data will be sent back to Headland Archaeology's Office on a regular basis and regular progress reports provided to the Applicant, RHDHV and NCC HES, as noted above in Section 3.4.
- 75. Key Contacts for Headland Archaeology include:

Status: Draft

- Alistair Webb Head of Geophysics/Project Manager;
- Sam Harrison Project Manager;
- Ross Bishop Project Officer;

Classification: Open



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

- Neil Paveley Site Supervisor; and
- Peter Heykoop Site Supervisor.

5 Health and Safety

- 76. Headland Archaeology has produced and will strictly adhere to their own (the Applicant reviewed) Health and Safety focused Risk Assessment Method Statement (RAMS) documentation, specific to the priority archaeological geophysical survey works. Headland Archaeology will also strictly follow any site-specific health and safety requirements and protocols as outlined by the Applicant.
- 77. Point of Work (Dynamic) Risk Assessments will be carried out by Headland Archaeology's survey team once on site and when moving between/changing work locations.
- 78. All geophysical survey personnel must adhere to the Applicant's site safety policies at all time and shall wear/use the correct (most appropriate) safety clothing and equipment. The following Personal Protective Equipment (PPE) is anticipated to be considered mandatory during site survey work:
 - High visibility vest / jacket;
 - Non-metallic boots with ankle support, or wellington boots at Headland Archaeology's survey personnel's own risk; and
 - Due to surveying restrictions and in order to maintain the effectiveness of the instrumentation (no metal is to be present on the survey team during survey).
- 79. In undertaking the work all geophysical survey personnel are to abide by all statutory provisions and by-laws relating to the work in question, and in particular the Health and Safety at Work Act 1974.

6 General Provisions

- 80. Headland Archaeology will leave all work sites and areas accessed for survey in a tidy and workmanlike condition. Headland Archaeology shall remove any material brought onto site, including grid pegs and other markers. The use of spray paint or similar means of marking will not be permitted.
- 81. In the event of any enquiries by the public, Headland Archaeology will refer all enquiries to the Applicant's Landowner Team, the Applicant and RHDHV without making any unauthorised statements or comments.
- 82. Headland Archaeology will not disseminate information or images associated with the project for publicity or information purposes, without the prior consent of the Applicant.



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

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Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

APPENDIX A - POTENTIAL HERITAGE ASSETS (RECORDED FEATURES AND ANOMALIES) IDENTIFIED AS REQUIRING PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY

Page 20 of 33

Classification: Open Status: Draft



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Table 1: Potential Heritage Assets (recorded features and anomalies) identified as requiring Priority Archaeological Geophysical Survey

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
Phase One						
PA1	APS_003	52076	SEPDEP ID 703, 1465	Cropmarks of ditches, intersects Roman pits and possible field system south of Mangreen Farm. Figure 6/7	7.1	Complete
PA2	APS_011 & APS_013 to 016	54877, 57922, 52071, 55197, 52069, 9750, 9717, 52070	SEPDEP ID 571, 547, 707, 913, 1007	Site of medieval village of Gowthorpe, and cropmarks of ring ditches and subrectangular enclosures. Figure 6/7	40.3	Complete
PA3	APS_006	52066, 9752, 52069, 52084	SEPDEP ID 1082, 926, 913, 1010	Post-medieval brickworks, and ring ditch, trackway and field boundaries. Figure 6/7/8	9.9	Complete – no longer within the Order Limits
PA4	APS_021 & APS_028	28710, 54604, 54616, 28163, 28164, 28165, 28157, 28158	SEPDEP ID 766, 1335, 1093, 466, 836, 937, 871, 872, 1483, 1490	Former WWII military site / accommodation. Figure 15	4.4	Complete
PA5	APS_033 to 034 & APS_036	19725, 59846	723, 973, 1100, 1495, 1496, 1498	Cropmarks over Roman road from <i>Venta Icenorum</i> to Watton. Figure 17	25.0	Complete
PA6	APS_039 & 040	22038, 18294, 19752, 53602, 19744, 53603, 15277, 19751, 19748	SEPDEP ID 672, 288, 464, 1379, 415, 1355, 430, 459, 1501, 1502, 416	Cropmarks of rectilinear enclosure, ditches and large infilled pits. Figure 21	12.8	Complete



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA7	APS_046	115763, 53488, 17924, 17925, 60942	SEPDEP ID 1357, 564, 338, 379, 483, 1508	Multi-period cropmarks; former field boundaries, enclosures and possible settlement. Figure 24	5.4	Unsuitable for survey
PA8	APS_048	N/A	SEPDEP ID 1510	Probable ditched enclosures forming focus of prehistoric settlement. Figure 27	2.2	Complete - no longer within Order Limits
PA9	APS_060, APS_062 & APS_063 ¹	53682, 56180, 54365, 12809, 20008, 53683		Cropmarks of a Bronze Age barrow cemetery with at least four barrows, an undated rectangular enclosure and ditches. Figure 29	37.5	Complete - no longer within Order Limits
PA10	APS_051 & APS_052	19755, 53628, 15898, 53679, 25701, 20011, 65215	SEPDEP ID 418, 705, 431, 509, 867, 422, 1124, 1513, 1514	Cropmarks of a possible ring ditch of Bronze Age date and enclosures of Roman date. Figure 30	27.7	Complete
PA11	APS_051	25701, 53628	SEPDEP ID 867, 705, 1513	Northern extent of cropmarks of Roman date. Figure 31	28.2	Complete
PA12	APS_053	28552	SEPDEP ID 877, 1515	Extant platforms and ditched enclosures relating to former medieval tofts. Figure 32	8.0	Complete
PA13	APS_068 ²	28684, 53627, 29708		Cropmarks of enclosures and ditches of probable Roman	11.7	Complete - no longer within Order Limits

¹ APS ID numbers no longer relevant to PA9, re-assigned as part of Stage 2 AP Assessment ² APS ID numbers no longer relevant to PA13, re-assigned as part of Stage 2 AP Assessment



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
				date, possible temporary camp or domestic site. Figure 33		
PA14	APS_058 & APS_059	53678, 44183, 23773, 12807	SEPDEP ID 1380, 1058, 632, 1520, 1521, 487	Cropmarks of probable Bronze Age barrow and undated fragmentary field boundaries and trackways. Figure 35	11.9	Complete
PA15	APS_061	50615, 50618, 44183	SEPDEP ID 585, 1239, 1058, 1523	Cropmarks of possible enclosures and associated field boundaries of possible Iron Age to Roman date. Figure 37	5.2	Complete
PA16	APS_093, APS_094 & APS_096 ³	54357, 50607, 50608		Cropmarks of ditches, former field boundaries, trackways and small square enclosure. Figure 40	11.2	Unsuitable for survey – no longer within Order Limits
PA17	APS_068	50673	SEPDEP ID 1374, 1530	Cropmarks of multi- period linear ditches. Figure 42	7.2	Complete
PA18	APS_ 070,	35933, 29962, 7741, 50676	SEPDEP ID 946, 469, 909, 912, 1532	Cropmarks of ring ditch and oval enclosure of possible Bronze Age date, and medieval building platforms. Figure 43	14.0	Complete

³ APS ID numbers no longer relevant to PA16, re-assigned as part of Stage 2 AP Assessment



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA19	APS_107, APS_111 & APS_112 ⁴	21719, 50649, 50648, 50647		Cropmarks of a possible Bronze Age round barrow cemetery. Figure 43/ 45	1.9	Complete – no longer within Order Limits
PA20	APS_075, APS_076 & APS_077	54355, 34326, 50657, 50677, 37277, 24418	SEPDEP ID 1386, 750, 506, 840, 569, 862, 1537, 1538, 1539	Cropmarks of fragmentary ditches and former field boundaries. Figure 46	24.1	Complete
PA21	APS_080	54354, 54353, 53700, 22887	SEPDEP ID 1385, 971, 706, 363, 1542	Undated ditches and a former road/trackway and field boundaries of medieval to postmedieval date. Figure 47	16.1	Complete
PA22	APS_081 & APS_082	51115, 53699, 53700	SEPDEP ID 806, 1384, 706, 1543, 1544	Cropmarks of fragmentary ditches and soilmarks of buried walls of uncertain date. Figure 48	7.2	Complete
PA23	APS_096	N/A	SEPDEP ID 1558	Cropmarks of ditches and possible enclosures. Figure 59	9.3	Complete
PA24	APS_097	21849, 58762, 733, 29841	SEPDEP ID 671, 370, 405, 560, 3013, 1559,	Cropmarks of enclosures, boundaries and pits. NCC HER records a probable Roman fort. Figure 60	7.4	Complete

⁴ APS ID numbers no longer relevant to PA19, re-assigned as part of Stage 2 AP Assessment



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA25	APS_098	7353, 22903, 21154, 7346, 20475	SEPDEP ID 1415, 457	Straight sided enclosures, one visible terminal defined entrance, ditches and pits. Figure 60/ 61	29.0	Complete – no longer within Order Limits
PA26	APS_102	N/A	SEPDEP ID 1564	Cropmarks of ditched boundaries and possible trackways. Figure 66	11.0	Complete – no longer within Order Limits
PA27	APS_103	35935, 37629, 7350	SEPDEP ID 929, 398, 546	An ovoid single ditched enclosure, possibly Neolithic, and linear and curvilinear ditches. Figure 66/ 67	9.1	Not surveyed – no longer within Order Limits
PA28	APS_107, APS_008A, APS_007A	51455, 63420, 11339	SEPDEP ID 315, 333, 596, 1569	Settlement enclosures with a central trackway and outlying enclosures and boundaries. Figure 71	20.4	Partially complete
PA29	APS_108, APS_009A, APS_008A	28024, 28026, 18099	SEPDEP ID 749, 759, 1570, 1643, 1642, 491, 1641	Cropmarks of enclosures and former field system. Figure 72	10.9	Complete
PA30	APS_113	36779	SEPDEP ID 1366, 1575	Single ditched ovoid enclosure and fragmentary ditches, possible prehistoric site. Figure 74	10.6	Complete
PA31	APS_158 & APS_159 ⁵	60308, 51436, 50182		Possible enclosure, ditches and trackway. Figure 80	28.7	Not surveyed – no access and no longer within Order Limits

⁵ APS ID numbers no longer relevant to PA31, re-assigned as part of Stage 2 AP Assessment



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA32	APS_121, APS_122, APS_123 & APS_124	27993, 53757, 22883, 51434	SEPDEP ID 1362, 390, 476, 1424, 1583, 1584, 1585, 1586	Cropmarks of elongated mortuary enclosure, ring ditch, linear ditches and possible mounds. Figure 81	25.6	Complete
PA33	APS_136 & APS_134	32047, 51432, 62305	SEPDEP ID 496, 332, 903	Cropmarks of a possible ditched settlement enclosure and possible oval or round barrow. Figure 82	18.8	Not surveyed – no access, no longer within Order Limits
PA34	APS_142 & APS_144	51432, 62305, 32048	SEPDEP ID 332, 903, 1604, 1606, 497	Probable Bronze Age round barrow, and part of medieval moated complex. Figure 82/84	11.1	Complete
PA35 (now PA87)	APS_145 & APS_144	6304, 51430, 63388	SEPDEP ID 784, 747, 322	Medieval moated complex with enclosures, fishponds, old road and field system. Adjacent to Scheduled moated site – NHLE 1013097. Figure 85/ 86	18.4	Not surveyed – no access at time of survey. Incorporated into Phase Two.
PA36	APS_163	11335, 39345, 51724, 56090, 38626, 51157	SEPDEP ID 1228, 694, 335, 610, 1625, 1300, 1423	Site of Weybourne Camp (NHER MNF11335). Figure 87	16.5	Complete
PA37	APS_163	17818, 38623, 33103, 41015, 38565, 17820, 38566, 38568	SEPDEP ID 1236, 1354, 397, 1297, 1298, 334	WWI and WWII slit trenches. Multi-period findspots. Figure 89	19.4	Not surveyed – no access, no longer within Order Limits



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
Phase Two		•			•	
PA38	APS_18, APS_17	52077	SEPDEP 1323, 1479, 1480	Site of probable WWII searchlight battery. Figure 2	1.9	To be surveyed
PA39	N/A	37651, 9751	SEPDEP 570, 1405	Late bronze age flint scatters, post-med building material, and undated cropmark. Figure 3/4	5.6	To be surveyed
PA40	APS_002	52082	SEPDEP ID 544, 1464	Cropmarks of possible enclosures/ring ditch/ field boundaries, possible Roman date - access road interacts. Figure 4/5	2.3	To be surveyed
PA41	APS_001	N/A	SEPDEP ID1463	Eroded Bank. Figure 8	3.8	To be surveyed
PA42	APS_004	N/A	SEPDEP ID 1466	Cropmarked Ditch. Figure 9	2.4	To be surveyed
PA43	APS_025	58937	SEPDEP ID 611, 1487	Eroded bank with evidence of Anglo-Saxon Finds. Figure	2.8	To be surveyed
PA44	APS_029	30575, 49971, 50006	SEPDEP 641, 952, 482, 1491	Eroded banks and ditches. Figure 11	5.5	To be surveyed
PA45	N/A	28161, 25513, 9477	SEPDEP ID 762, 393, 280	Multi period finds area, with evidence of Anglo-Saxon finds and prehistoric flints. Figure 12	4.4	To be surveyed



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA46	N/A	44333	SEPDEP 1059	Ketteringham Park - cable route intersects northern section. Figure 13	3.5	To be surveyed
PA47	APS_030	N/A	SEPDEP 1492	Extraction site. Figure 14	2	To be surveyed
PA48	N/A	22643	SEPDEP 675	Roman brooch find. Figure 16	2.1	To be surveyed
PA49	APS_038	N/A	SEPDEP 1500	Post-Inclosure boundaries. Figure 18	2.4	To be surveyed
PA50	N/A	20669	SEPDEP 298	Prehistoric worked flints and Iron Age to post-medieval finds, with evidence of Anglo-Saxon period finds. Figure 19	2.3	To be surveyed
PA51	N/A	17473, 23853	SEPDEP 661, 633	Mesolithic flint scatter and later prehistoric worked flints. Figure 20	2.9	To be surveyed
PA52	APS_042, 043	53601, 17345	SEPDEP 969, 1358, 1504, 1505	Post-medieval field system. Figure 22	4.3	To be surveyed
PA53	N/A	19973	SEPDEP ID 465	Multi-period objects, including Anglo- Saxon. Figure 23/24	2.4	To be surveyed
PA54	N/A	25237	SEPDEP 680	Roman Pottery finds. Figure 25	1.8	To be surveyed
PA55	APS_047	25236	SEPDEP 460, 1509	Linear Ditches. Figure 26	1.6	To be surveyed
PA56	N/A	64017	SEPDEP 921	Medieval coin. Figure 28	3.4	To be surveyed



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA57	N/A	16390, 17163, 23429	SEPDEP 444, 1243, 368	Probable Early Neolithic flint-working site, multi-period finds and undated mounds. Figure 31/ 32/ 34	5.1	To be surveyed
PA58	APS_060	50617, 44183,	SEPDEP1372, 1058, 1522	Cropmarks of undated linear ditches. Figure 36/ 37	1.1	To be surveyed
PA59	APS_062, 063	50610, 50614,	SEPDEP 584, 956, 1524, 1525	Cropmarks of possible Iron Age to Roman date enclosures. Figure 37/ 38	7.4	To be surveyed
PA60	APS_065	50609	SEPDEP 1072, 1527	Cropmarks of linear feature. Figure 38/ 39	2.4	To be surveyed
PA61	APS_067	N/A	SEPDEP 1529	Linear marks in crops. Figure 41	1.5	To be surveyed
PA62	N/A	51714	SEPDEP 790	Roman, medieval and post-medieval finds. Figure 44/ 46	2	To be surveyed
PA63	APS_083	53698, 62266, 7712	SEPDEP 1383, 823, 753, 1545	Cropmarks of possible ring ditch. Figure 49	2.9	To be surveyed
PA64	APS_084	62267	SEPDEP 822, 1546	Very eroded bank. Figure 50	3.1	To be surveyed
PA65	N/A	51590, 51591	SEPDEP 563, 558	Multi-period findspot, inclusive of Anglo- Saxon finds. Figure 51	1.3	To be surveyed
PA66	APS_086	53482	SEPDEP 587, 1548	Cropmarks over ditches, probable former field	3.3	To be surveyed



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
				boundaries & trackway. Figure 52		
PA67	APS_087	42549, 53697, 60169	SEPDEP 848, 1382, 1128, 1549	Late Saxon, medieval and post-medieval metal objects, cropmarks of undated ditches and possible ring ditch. Figure 53	4.9	To be surveyed
PA68	APS_091	N/A	SEPDEP 1553	Eroded mound. Figure 54	3.2	To be surveyed
PA69	APS_092	35096, 35098	SEPDEP 944, 945, 1554	Trackway. Figure 55	3.1	To be surveyed
PA70	APS_093	58227, 33889, 39903	SEPDEP ID 652, 772, 473, 1555	Multi-phased rectilinear ditched enclosures and pits, multi-period metal finds inclusive of Anglo-Saxon finds. Figure 56	4.2	To be surveyed
PA71	APS_094	32599	SEPDEP 844, 1556	Post-Inclosure field system, multi-periods finds inclusive of Anglo-Saxon. Figure 57	1.7	To be surveyed
PA72	APS_096	61327	SEPDEP 796, 1558	Late Saxon to post- medieval finds. Figure 58	4.8	To be surveyed
PA73	APS_003A	14397	SEPDEP 1412, 1637	Undated cropmark. Figure 61/ 62	4.8	To be surveyed
PA74	APS_100, 101	50073	SEPDEP 953, 1562, 1563	Cropmarks of pits and ditches. Figure 63	11.9	To be surveyed



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA75	APS_006A	36408	SEPDEP 1421, 1640	Cropmarks of undated enclosures, west of Flag Meadow Plantation. Figure 63/64	3.4	To be surveyed
PA76	APS_102	51461	SEPDEP 788, 1564	Cropmarks of possible trackways or roadway. Figure 65	5.7	To be surveyed
PA77	APS_104	N/A	SEPDEP 1566	Buried ditches. Figure 68	2.8	To be surveyed
PA78	APS_105	12987, 6672	SEPDEP 577, 513	Rectilinear enclosure and Bronze Age findspot. Figure 69	4.5	To be surveyed
PA79	APS_106	51456, 51457, 28973	SEPDEP 1079, 787, 1568, 608	Linear ditches and pits, multi-period finds, Iron Age coin. Figure 70/ 71	5.6	To be surveyed
PA80	APS_110, 111, 010A	28025, 40482, 51479, 44076, 34281	SEPDEP ID 477, 951, 789, 783, 1644, 1465, 1572, 1573, 942	Continuation of a former ditched field system, Neolithic and post-medieval finds. Figure 73	3.8	To be surveyed
PA81	APS_114	N/A	SEPDEP 1576	Pits and possible buried ditches. Figure 75	6	To be surveyed
PA82	APS_115	51446	SEPDEP 1020, 1577	Cropmarks of pits and possible buried ditches, and medieval and post-medieval finds. Figure 76	5.7	To be surveyed



Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

Priority Survey Area	APS ID	NHER PreRef	SEPDEP ID	Brief Description	Hectares (ha)	Completed / To be surveyed
PA83	APS_116, 011A	30317, 51442	SEPDEP 1418, 959, 1578, 1645	Cropmarks of buried ditches and trackway. Figure 77	3.4	To be surveyed
PA84	APS_117	N/A	SEPDEP ID 1579	Buried ditches. Figure 78	1.7	To be surveyed
PA85	APS_118	N/A	SEPDEP ID 1580	NMP ring ditch and enclosures. Figure 79	2.2	To be surveyed
PA86	APS_141, 143	N/A	SEPDEP ID 1603, 1605	WWII Searchlight battery and associated features. Figure 83	5.9	To be surveyed
PA87 (originally PA35)	APS_145, 144	51430, 63388, 41015	SEPDEP ID 784, 322, 1607, 1606, 334	Medieval moated complex (Scheduled Monument). Figure 86/87	3.8	To be surveyed
PA88	APS_163	17649, 6274, 25908, 11335, 39345, 38634, 38626, 51157	SEPDEP ID 667, 708, 1228, 920, 694, 1051, 1300, 1423	WWI and WWII slit trenches and associated coastal defences, and possible part of airfield, inclusive of Roman, Late Saxon and multi-period finds. Figure 88	1.5	To be surveyed



Page 33 of 33

Written Scheme of Investigation for Priority
Archaeological Geophysical Survey: Phase Two

Doc. No. PB8164-RHD-ZZ-ON-RP-Z-0190

Rev. no. 1

APPENDIX B - FIGURES 1 TO 89

