

Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Outline Written Scheme of Investigation (Onshore)

August 2022 Document Reference: 9.21 APFP Regulation: 5(2)(q)









Title: Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects DCO Application Outline Written Scheme of Investigation (Onshore)				
PINS no.: 9.21				
Document no.: C282-RH-Z-GA-0	0131			
Date:	Classification			
August 2022	Final			
Prepared by:				
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Approved by:		Date:		
Johiris Rodriguez Tablante, Equinor		August 2022		

Page 2 of 81

Classification: Open

Status: Final



Rev. no.1

Table of Contents

1	Introduction	10
1.1	General Project Background	10
1.2	Purpose of the Outline Onshore WSI Structure and Purpose	10
1.3	Broad Approach to Developing the Detailed WSI	11
2	Legislation Policy and Guidance	11
2.1	Legislation and Planning Policy	11
2.2	Standards, Guidance and Good Practice	12
3	Archaeological and Historical Baseline Summary	13
3.1	Introduction	13
3.2	Designated Heritage Assets	13
3.3	Non-designated Heritage Assets	14
3.4	Non-designated Heritage Assets	16
4	Schedule of Archaeological Requirements	16
5	Survey-specific WSIs	17
5.1	Introduction	17
5.2	Aims and Objectives	18
5.3	Monitoring	18
5.4	Health and Safety	18
6	Methodologies (Initial Informative Stages of Mitigation)	19
6.1	General Approach	19
6.2	Additional Project-wide Archaeological Geophysical Survey	19
6.3	Targeted Archaeological Metal Detecting Survey	20
6.4	Archaeological Trial Trenching	21
6.5	Earthwork Condition (GPS/topographic) Survey	21
6.6	Investigation and Recording of Standing Buildings or Structures	22
6.7	Geoarchaeological Assessment/Palaeoenvironmental Survey	22
7	Methodologies (Subsequent, Additional Mitigation Measures)	22
7.1	Introduction	
7.2	Archaeological Excavation Methodology	23
7.3	Archaeological Monitoring/Watching Brief	24
7.4	Preservation In-Situ	24
7.5	Sensitive and Precautionary Approaches to Construction Works	24
7.6	Protocol for Archaeological Discoveries	25
7.7	Reinstatement of Field Boundaries and Hedgerows	26
8	Conclusion/Summary	27
9	References	28
APPE	ENDIX 1 EXAMPLE (MODEL) CLAUSES - MITIGATION WORKS SPECIF	ICATION
	ARCHAEOLOGICAL EXCAVATION AND ARCHAEOLOGICAL MONITORING/W	ATCHING
	BRIEF	31
1.1	Introduction	31
1.2	General Approach	31



Outline	Written	Scheme	of	Investigation
(Onshor	۵۱			

Rev. no.1

1.3	Site Briefings (Toolbox Talks)	32
1.4	Archaeological Monitoring of Soil Stripping	32
1.5	Hand Excavation of Archaeological Features	33
1.6	Archaeological Recording	34
1.7	Artefact Recovery	35
1.8	Soil Sampling Strategy	36
1.9	Human Remains	37
1.10	Treasure	38
1.11	Completion of Archaeological Fieldwork	38
1.12	Reporting Requirements	38
1.13	Archive Preparation and Deposition	39
1.14	Monitoring Progress and Site Visits	40
1.15	Security, Confidentiality and Publicity	41
1.16	Copyright	42
1.17	Resources and Timetable	42
1.18	Health and Safety	42
1.19	General Provisions	43
APPE	NDIX 2 OUTLINE SCHEDULE OF ARCHAEOLOGICAL REQUIREMENTS	44
APPE	NDIX 3 HEDGEROW ASSESSMENT	75
APPE	NDIX 4 FIGURES	80
APPE	NDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY	81
Table	e of Tables	
Table	3-1: Possible Above Ground Heritage Assets Within Order Limits	16



Outline Written Scheme of Investigation

(Onshore) Rev. no.1

Glossary of Acronyms

AC	Alternating Current
AD	Anno Domini
ALGAO	Association of Local Government Archaeological Officers
BC	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.1

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
SPE	Set Piece Excavation
SMS	Strip, Map and Sample
UK	United Kingdom
UPD	Updated Project Design
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation
WWII	World War Two

Page 6 of 81



Rev. no.1

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.1

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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.1

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.		

Page 9 of 81



Rev. no.1

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 Purpose of the Outline Onshore WSI Structure and Purpose

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

Page 10 of 81



Rev. no.1

1.3 Broad Approach to Developing the Detailed WSI

- 9. 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).
- 10. 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 16**), which will provide further survey-specific details in line with this Outline WSI (Onshore).
- 11. 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 16). 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.
- 12. 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

1.1 Legislation and Planning Policy

- 13. 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.
- 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.

Page 11 of 81



Rev. no.1

1.2 Standards, Guidance and Good Practice

- 15. 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 (CIfA, 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).
- 16. 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);
 - 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).



Rev. no.1

3 Archaeological and Historical Baseline Summary

1.1 Introduction

- 17. 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).
- 18. 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).
- 19. 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.

1.2 Designated Heritage Assets

- 20. 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.



Rev. no.1

- 21. Details of the designated assets are presented in ES **Appendix 21.1**; **Annex 21.1.1** (document reference 6.3.21.1.1).
- 22. 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.

1.3 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).
- 24. 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).
- 25. 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

- 26. 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.
- 27. 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.
- 28. 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)).
- 29. 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.
- 30. 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).



Rev. no.1

3.3.3 Archaeological Potential of the Order Limits

- 31. 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.
- 32. 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).
- 33. 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

- 34. The archaeological monitoring of geotechnical works identified deposits of palaeoenvironmental and geoarchaeological interest at three separate locations:
 - River Bure, north of Oulton (BH6-15);
 - Swannington Beck (BH9-25); and
 - River Wensum, south of Attlebridge (BH10-31).
- 35. 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).
- 36. 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.



Rev. no.1

- 37. 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.
- 38. 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.
- 39. These areas of moderate to high palaeoenvironmental and geoarchaeological potential could be affected by construction activities both directly and indirectly.

1.4 Non-designated Heritage Assets

3.3.5 Above Ground Archaeological Remains and Heritage Assets

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

Table 3-1: Possible Above	Cround Haritaga	Accete Within	Order Limite
I able 3-1. I USSIDIE Abuve	Gioulia i lelitade	ASSELS VVILIIIII	Oluci Lillii

SEP/DEP ID	NHER PrefRef	APS ID		Priority Geophysical Survey Area	Des	scription	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	9	Low - Medium	

- 41. 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.
- 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

42. 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.



Rev. no.1

- 43. The location of these known and potential archaeological remains are presented on Figures 1-15 in APPENDIX 4 FIGURES.
- 44. 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**).
- 45. 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.
- 46. 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).
- 47. 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.
- 48. 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.
- 49. 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 7.7).

5 Survey-specific WSIs

1.1 Introduction

- 50. 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.
- 51. 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 undertaken at targeted locations to inform the DCO application, is included as **Appendix 3** to this Outline WSI (Onshore));



Rev. no.1

- Targeted Metal Detecting Survey;
- Targeted Archaeological Trial Trenching;
- Targeted Earthwork Condition (GPS/topographic) Survey; and
- Targeted Geoarchaeological Assessment/Palaeoenvironmental Survey.
- 52. Details on the methodologies for each initial informative stage of mitigation work is presented in **Section 6**.

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.

1.2 Aims and Objectives

- 53. 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
 - 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.

1.3 Monitoring

- 54. 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.
- 55. 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).

1.4 Health and Safety

56. Health and Safety considerations would be of paramount importance in conducting all archaeological fieldwork. Safe working practices will override archaeological considerations at all times.



Rev. no.1

- 57. 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.
- 58. 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.
- 59. 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)

1.1 General Approach

60. 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).

1.2 Additional Project-wide Archaeological Geophysical Survey

- 61. 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).
- 63. 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.
- 64. The location of the onshore substation was surveyed as part of the Hornsea Project Three EIA assessment (Orsted, 2018).
- 65. 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.

Page 19 of 81



Rev. no.1

- 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.
- 67. 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).
- 68. 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).
- 69. 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.
- 70. 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).
- 71. 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).

1.3 Targeted Archaeological Metal Detecting Survey

- 72. 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.
- 73. 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.

Page 20 of 81



Rev. no.1

1.4 Archaeological Trial Trenching

- 74. 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.
- 75. 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.
- 76. 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.
- 77. Further mitigation requirements may include:
 - set-piece (open-area) excavations (normally undertaken within the preconstruction programme as part of an early works programme for instance);
 - strip, map and sample excavations (sometimes fitted into/alongside the construction programme or undertaken in advance); 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).
- 78. 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).

1.5 Earthwork Condition (GPS/topographic) Survey

- 79. 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.
- 80. 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).

Page 21 of 81



Rev. no.1

1.6 Investigation and Recording of Standing Buildings or Structures

81. 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.

1.7 Geoarchaeological Assessment/Palaeoenvironmental Survey

- 82. 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.
- 83. 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.
- 84. For example, any identified areas of peat-rich soils, with the potential for organic preservation and which would be impacted by the connection works.
- 85. 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.
- 86. A post-consent approach to geoarchaeology and the palaeoenvironment would be formulated and agreed, in consultation with NCC HES (and HE, as required).

7 Methodologies (Subsequent, Additional Mitigation Measures)

1.1 Introduction

- 87. 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).
- 88. 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.

Page 22 of 81



Rev. no.1

- 89. 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.

1.2 Archaeological Excavation Methodology

- 90. 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.
- 91. 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.
- 92. 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.
- 93. 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);
 - 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.
- 94. NCC HES would be consulted on the proposals included in the UPD prior to issue.
- 95. 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.

Page 23 of 81



Rev. no.1

1.3 Archaeological Monitoring/Watching Brief

- 96. 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.
- 97. 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.
- 98. 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.
- 99. 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.

1.4 Preservation In-Situ

- 100. 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.
- 101. 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).
- 102. 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.

1.5 Sensitive and Precautionary Approaches to Construction Works

103. 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.



Rev. no.1

104. 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.

105. 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.

1.6 Protocol for Archaeological Discoveries

- 106. 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).
- 107. 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."
- 108. 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.
- 109. Should previously unknown buried archaeological remains of a significant nature be encountered during construction works, the temporary suspension of intrusive groundworks may be required.
- 110. 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.



Rev. no.1

- 111. 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.
- 112. 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.
- 113. 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.
- 114. 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.
- 115. 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.
- 116. 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.

1.7 Reinstatement of Field Boundaries and Hedgerows

- 117. 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).
- 118. 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.
- 119. 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.



Rev. no.1

8 Conclusion/Summary

- 120. 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.
- 121. 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.
- 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 7).

Page 27 of 81

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

Rev. no.1

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Page 30 of 81



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Outline Written Scheme of Investigation (Onshore)

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

Rev. no.1

1.1 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.
- The information provided is specific to the location of the project within Norfolk, as 3. well as more general local, regional and national-type approaches.
- This appendix relates mainly to archaeological excavation and recording 4. approaches and associated requirements to be undertaken.

1.2 **General Approach**

Classification: Open

- 5. All WSIs would be prepared in accordance with:
 - Chartered Institute for Archaeologists (CIfA): Standard and guidance for an archaeological watching brief (ClfA, 2014c);
 - ClfA: Standard and guidance for archaeological excavation (ClfA, 2014d);
 - CIfA: Code of Conduct (CIfA, 2021);

Status: Final

- 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.1

1.3 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.

1.4 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.
- 10. 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.1

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.

1.5 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.1

- 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.

1.6 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.1

- 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.
- 34. 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.

1.7 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.

Page 35 of 81



Rev. no.1

- 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).

1.8 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).

Page 36 of 81



Rev. no.1

- 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.

1.9 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.

Page 37 of 81



Rev. no.1

1.10 Treasure

- 61. 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.

1.11 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.

1.12 Reporting Requirements

- 65. 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.
- 67. 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.1

- 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 http://www.oasis.ac.uk/. An OASIS form would be included as part of all reports produced. The Archaeological Contractor(s) would be responsible for ensuring this is done.

1.13 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.1

- 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.

1.14 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.

Page 40 of 81



Rev. no.1

- 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.

1.15 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.1

1.16 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.

1.17 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.

1.18 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.
- 105. 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.1

- 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.

1.19 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.1

APPENDIX 2 OUTLINE SCHEDULE OF ARCHAEOLOGICAL REQUIREMENTS

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

Page 44 of 81

Classification: Open Status: Final



Doc. No. C282-RH-Z-GA-00131 9.21 Rev. no.1

Outline Schedule of Archaeological Requirements

				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
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



Rev. no.1

				Deculte of AD	Deculte of Priority				Post-consent	Evaluation Stag	es to be agreed with l	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
						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	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
		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	Deculto 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	Results of Priority 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

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

				Results of AP	Deculto of Priority				Post-consent	Evaluation Stag	es to be agreed with l	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

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

				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
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	Medium	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	N/A	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



				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 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

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
					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 lron 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 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 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

				Results of AP	Deculte 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	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	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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Doc. No. C282-RH-Z-GA-00131 9.21

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

				Results of AP	Describe of Deignity				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
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, 44183, 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, 44183	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	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	611841	313839	Yes	N/A	TBC - to be informed by results of geophysical survey	N/A	N/A

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

				Results of AP	Results of Priority				Post-consent	Evaluation Stag	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
						related activities							
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 post medieval date	N/A	Yes: Onshore cable route intersect assets and will be affected by construction related activities	611704	314510	Yes	N/A	Yes	N/A	N/A
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

Doc. No. C282-RH-Z-GA-00131 9.21 Rev. no.1



				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	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 and curvilinear anomalies. No evidence of cropmark ring ditch and oval enclosure.	Yes (Slight): Onshore cable route intersects southern aspect of asset and will be affected by construction related activities, although seems to avoid settlement features from geophysical data	612518	316645	Complete	N/A	Yes	N/A	N/A

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
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
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 north- eastern 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

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
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 of Anglo-Saxon finds	Low – Medium	N/A	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	614423, 614432	319197, 319350	Yes	Yes	Yes	N/A	N/A
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,	N/A	Yes (Slight): Onshore cable route intersects western	614559	319391	Yes	N/A	Yes	N/A	N/A

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
				some of which may be Iron Age to Roman in date		aspect of assets and will be affected by construction related activities							
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
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	613608 - 614273 - 613689	320412 – 320657 - 320671	Yes	N/A	Yes	N/A	N/A

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

				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
						related activities							
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, NHER 58227, 33889, 39903	Multi-phased rectilinear ditched enclosures and pits, multi-period metal finds	Medium - High	A complex of likely multiphased rectilinear ditched enclosures and pits, with an outlying D-shaped ditched enclosure to the immediate east of the Order Limits.	N/A	Yes (Slight): Onshore cable route intersects eastern aspect of asset and will be affected by construction related activities	613817	322176	Yes	Yes	Yes	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, 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 of rectangular enclosures. Numerous discrete anomalies within the enclosures suggests settlement activity.		614734	324654	Complete	N/A	Yes	N/A	N/A
Onshore Cable Corridor,	SEPDEP ID 671, 370, 405, 560, 3013,	Ladder Settlement – Central part	Medium - High	Cropmarks of enclosures, boundaries and	PA24: Central part of 'ladder' settlement	Yes (Slight): Onshore cable route	614739	325024	Complete	N/A	Yes	N/A	N/A

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

				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
Trenchless crossing and HDD section	1559, APS_097, NHER 21849, 58762, 7343, 29841			pits. NCC HER records a probable Roman fort.	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.	intersects eastern aspect of asset and will be affected by construction related activities, although avoids most anomalies on geophysical data							
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
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

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

				Results of AP	Deculte 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	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 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 settlement traces	N/A	Yes: onshore cable route intersects centre of asset and will be affected by construction related activities	612997	327662	Yes	N/A	Yes	N/A	N/A
Onshore Cable Corridor, Trenchless crossing	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	N/A	Yes: onshore cable route intersects centre of asset and will	613011	328206	Yes	N/A	Yes	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 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
and HDD section				a wide area of land.		be affected by construction related activities							
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, Trenchless crossing and HDD section	SEPDEP ID 1079, 787, 1568, APS_106, NHER 51456, 51457	Linear ditches and pits, multi- period finds	Low - Medium	Buried linear ditches which may be boundaries and some fragmentary ditches and pits which may indicate an area of past settlement	N/A	Yes (Slight): onshore cable route and access roads intersects eastern aspect of asset and will be affected by construction	612203	331581	Yes	N/A	Yes	N/A	N/A

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
						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, NHER 28024, 28026, 18099	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. Other fragmentary linear anomalies possibly locate parts of an associated field system.	Yes (Slight): onshore cable route intersects western aspect of asset and will be affected by construction related activities	613427	332374	Complete	N/A	Yes	N/A	N/A

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

				Results of AP	Deculto 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	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 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
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	613727	335752	Yes	N/A	Yes	N/A	N/A

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

	Asset ID	Name/Description	Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey		Easting	Northing	Post-consent Evaluation Stages to be agreed with NCC HES					
Project Element						Interaction			Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
						related activities								
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	
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,	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	Yes: onshore cable route intersects assets and will be affected by construction	612515- 612304	340909- 341091	Complete	N/A	Yes	N/A	N/A	

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

Project Element			Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey			Northing	Post-consent Evaluation Stages to be agreed with NCC HES					
	Asset ID	Name/Description				Interaction	Easting		Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording	
	NHER 27993, 22883, 53757, 51434				fragmentary linear and discrete anomalies, however all anomalies are extremely weak and tentative.	related activities								
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 related activities	612083	341813	Yes	N/A	Yes	TBC	N/A	
Onshore Cable Corridor, Trenchless crossing and HDD section	SEPDEP ID 332, 903, 1604, 1606, 497, APS_142 & APS_144	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	Yes: onshore cable route intersects assets and will be affected by construction	611203 - 611100 - 610959	341995 – 342338 - 342517	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		n Easting		Post-consent Evaluation Stages to be agreed with NCC HES						
Project Element	Asset ID	Name/Description				Interaction		Northing	Geophysical Survey	Targeted Metal Detecting	Trial Trenching	Earthwork Survey	Historic Building Recording		
	NHER 32047, 51432, 62305, 32048				anomalies of possible archaeological origin are identified in the east of survey area. Former field boundary has been recorded.	related activities									
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 modern farming.	N/A	Yes (Slight): onshore cable route and access road intersects southern aspect of assets and will be affected by construction related activities	611492 - 611822	342335 - 342393	Yes	N/A	Yes	N/A	N/A		
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	PA35: Access denied at time of writing.	Yes (Slight): onshore cable route intersects south-western aspect of assets and will be	610959- 610803	342517 - 342689	Yes	Yes	Yes	N/A	N/A		



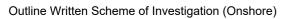
Doc. No. C282-RH-Z-GA-00131 9.21 Rev. no.1

Project Element			Heritage Importance	Results of AP and LiDAR Assessment	Results of Priority Geophysical Survey		Easting		Post-consent Evaluation Stages to be agreed with NCC HES					
	Asset ID	Name/Description				Interaction		Northing	Geophysical Survey	Targeted Metal Detecting	Trial Tren	ching	Earthwork Survey	Historic Building Recording
				Scheduled moated site – NHLE 1013097.		affected by construction related activities								
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 disc with NCC due to na proposed constructi activities	HES ture of	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 feature which could possibly be part of an early airfield or a more modern service (APS_159).	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
Onshore Cable Corridor,	SEPDEP ID 694, NHER 39345	Roman coin finds	Low	N/A	N/A	Yes: onshore cable route, and landfall	610322	343413	Yes	Yes	Yes	N/A	N/A	

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



				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 Assessment	Geophysical Survey	Interaction	Easting	Northing	Geophysical Survey	Targeted Metal Detecting	Trial Tre	enching	Earthwork Survey	Historic Building Recording
Landfall, Compound, HDD section and Access Routes to Landfall						(and associated compound and access) intersects the asset and will be affected by construction related activities								
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 construction related activities	610749	343400	Yes	N/A	Yes	N/A	N/A	
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	610273	343318	N/A	N/A	N/A	N/A	Yes	





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

					Results of AP	Results of Priority				Post-consent Evaluation Stages to be agreed with NCC HES					
Project Elemer	ASSET	et 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
							related activities								



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

Outline Written Scheme of Investigation

(Onshore) Rev. no.1

APPENDIX 3 HEDGEROW ASSESSMENT

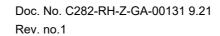
Page 75 of 81

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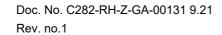


						Archaeology and histo	ory	
				1	2	3	4	5
New Hedgerow Reference	Old Hedgerow Reference	JNCC Code	Hedge Description	The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.	The hedgerow incorporates 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		
H0035	H0046	J2.3.1	Hedge with trees - native species-rich					Х
H0036	H0047	J2.1.1	Intact hedge - native species-rich			х		



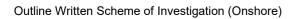


H0041	H0048	J2.3.1	Hedge with trees - native species-rich		х	1	
H0042	H0048g	J2.3.1	Hedge with trees - native species-rich	х	X		
H0055	H0049	J2.3.1	Hedge with trees - native species-rich	^	X		
H0050	H0049b	J2.3.1	Hedge with trees - native species-rich	х	^		
H0052	H0049b	J2.3.1	Hedge with trees - native species-rich	^	v		
H0057	H0054	J2.3.1			X		
	H0054	J2.2.2 J2.3.1	Defunct hedge - species-poor		X		
H0058			Hedge with trees - native species-rich		X		
H0059	H0056	J2.3.1	Hedge with trees - native species-rich		X		
H0060	H0057	J2.3.3	Defunct hedge with trees - native species-rich		Х		
H0061	H0058	J2.3.3	Defunct hedge with trees - native species-rich		Х		
H0065	H0062	J2.1.2	Intact hedge - species-poor	Х			
H0083	H0077	J2.3.3	Defunct hedge with trees - native species-rich	Х			
H0085	H0080	J2.3.1	Hedge with trees - native species-rich		Х		
H0086	H0081	J2.1.1	Intact hedge - native species-rich		X		
H0087	H0082	J2.1.1	Intact hedge - native species-rich		Х		
H0089	H0083	J2.3.3	Defunct hedge with trees - native species-rich		Х		
H0090	H0084	J2.1.1	Intact hedge - native species-rich		х		
H0091	H0085	J2.3.1	Hedge with trees - native species-rich	х	Х		
H0092	H0086	J2.1.1	Intact hedge - native species-rich		Х		
H0093	H0087	J2.1.2	Intact hedge - species-poor		Х		
H0095	H0090	J2.3.1	Hedge with trees - native species-rich		х		
H0096	H0093	J2.3.1	Hedge with trees - native species-rich		х		Х
H0097	H0094	J2.3.3	Defunct hedge with trees - native species-rich		х		
H0098	H0095	J2.3.3	Defunct hedge with trees - native species-rich		х		
H0100	H0098	J2.3.3	Defunct hedge with trees - native species-rich				х
H0103	H0104	J2.1.1	Intact hedge - native species-rich		Х		
H0104	H0105	J2.3.3	Defunct hedge with trees - native species-rich		Х		х
H0105	H0106	J2.1.1	Intact hedge - native species-rich		Х		
H0106	H0108	J2.1.1	Intact hedge - native species-rich		Х		
H0107	H0109	J2.3.3	Defunct hedge with trees - native species-rich		Х		
H0108	H0111	J2.1.2	Intact hedge - species-poor		Х		
H0109	H0112	J2.2.2	Defunct hedge - species-poor		Х		
H0110	H0113	J2.1.1	Intact hedge - native species-rich		Х		Х
H0111	H0114	J2.2.2	Defunct hedge - species-poor		Х		
H0111	H0115	J2.3.3	Defunct hedge with trees - native species-rich		Х		
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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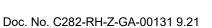
H0125	H0131	J2.1.1	Intact hedge - native species-rich			х		
H0126	H0132	J2.3.2	Hedge with trees - species-poor			х		
H0130	H0140	J2.3.1	Hedge with trees - native species-rich			x		
H0132	H0142	J2.1.1	Intact hedge - native species-rich			x		
H0139	H0152a	J2.3.3	Defunct hedge with trees - native species-rich			X		
H0142	H0155	J2.3.4	Defunct hedge with trees - species-poor			X		
H0143	H0156	J2.3.3	Defunct hedge with trees - native species-rich			^		X
H0153	H0162	J2.3.1	Hedge with trees - native species-rich	v		V		
H0153	H0163	J2.3.1 J2.3.3	Defunct hedge with trees - native species-rich	X		X		
		+	· ·	X		X		
H0159	H0171	J2.3.2	Hedge with trees - species-poor	X				
H0170	H0184	J2.3.3	Defunct hedge with trees - native species-rich			X		
H0171	H0185	J2.3.1	Hedge with trees - native species-rich			Х		
H0172	H0186	J2.3.1	Hedge with trees - native species-rich			Х		
H0174	H0187	J2.3.1	Hedge with trees - native species-rich			Х		
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			x		
H0190	H0199	J2.3.3	Defunct hedge with trees - native species-rich	x				
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		<u> </u>		х	х		
H0229	HR05					x		
H0228	HR06					X		
H0226	HR08							X
H0187	HR015					X		
H0186	HR018							
HR024	HR024					X		
ΠΝυ24	ППUZ4	<u> </u>				Х	<u> </u>	





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H0165	HR025		х	
H0068	H0068		х	
H0173	H0173		Х	



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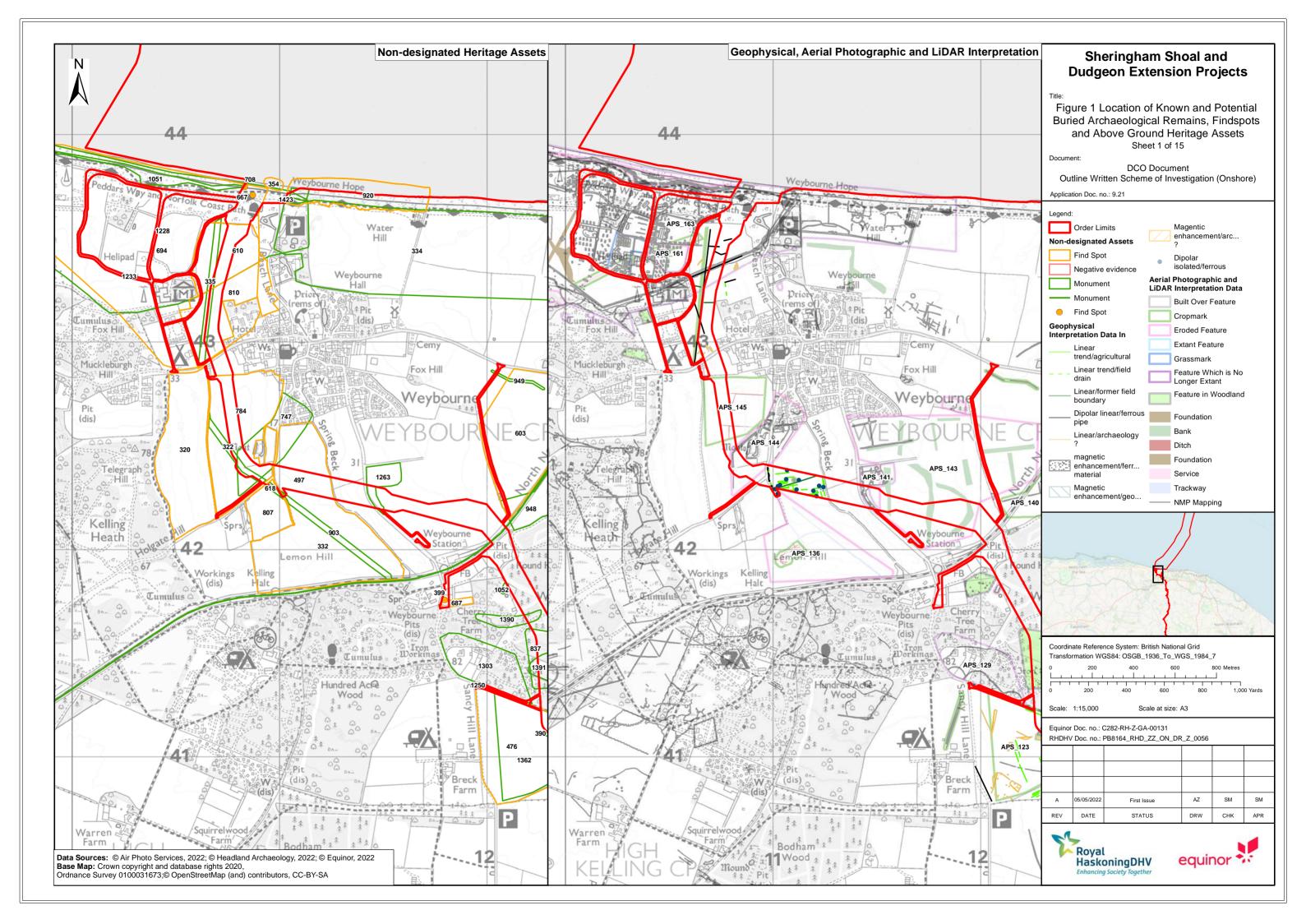
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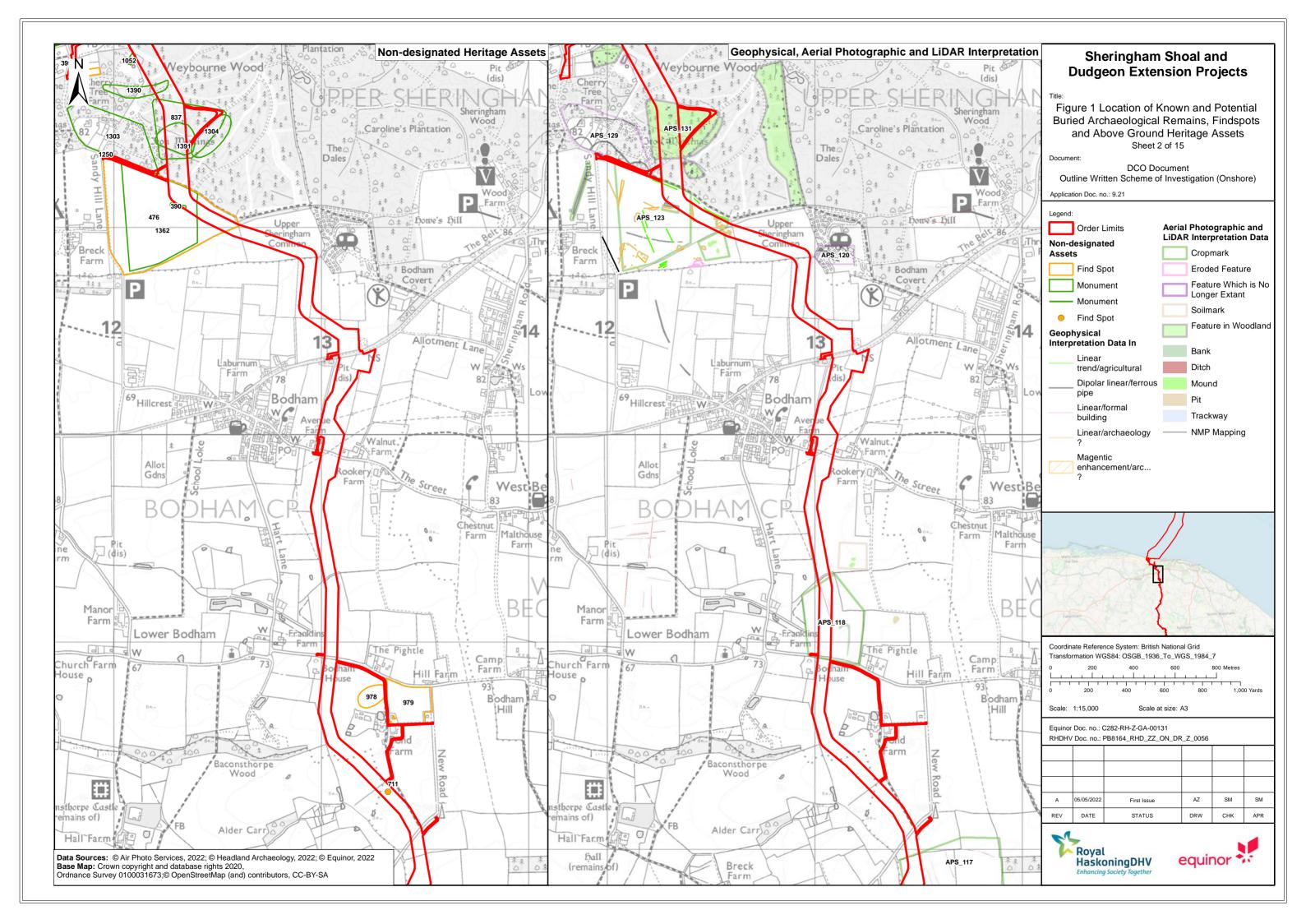
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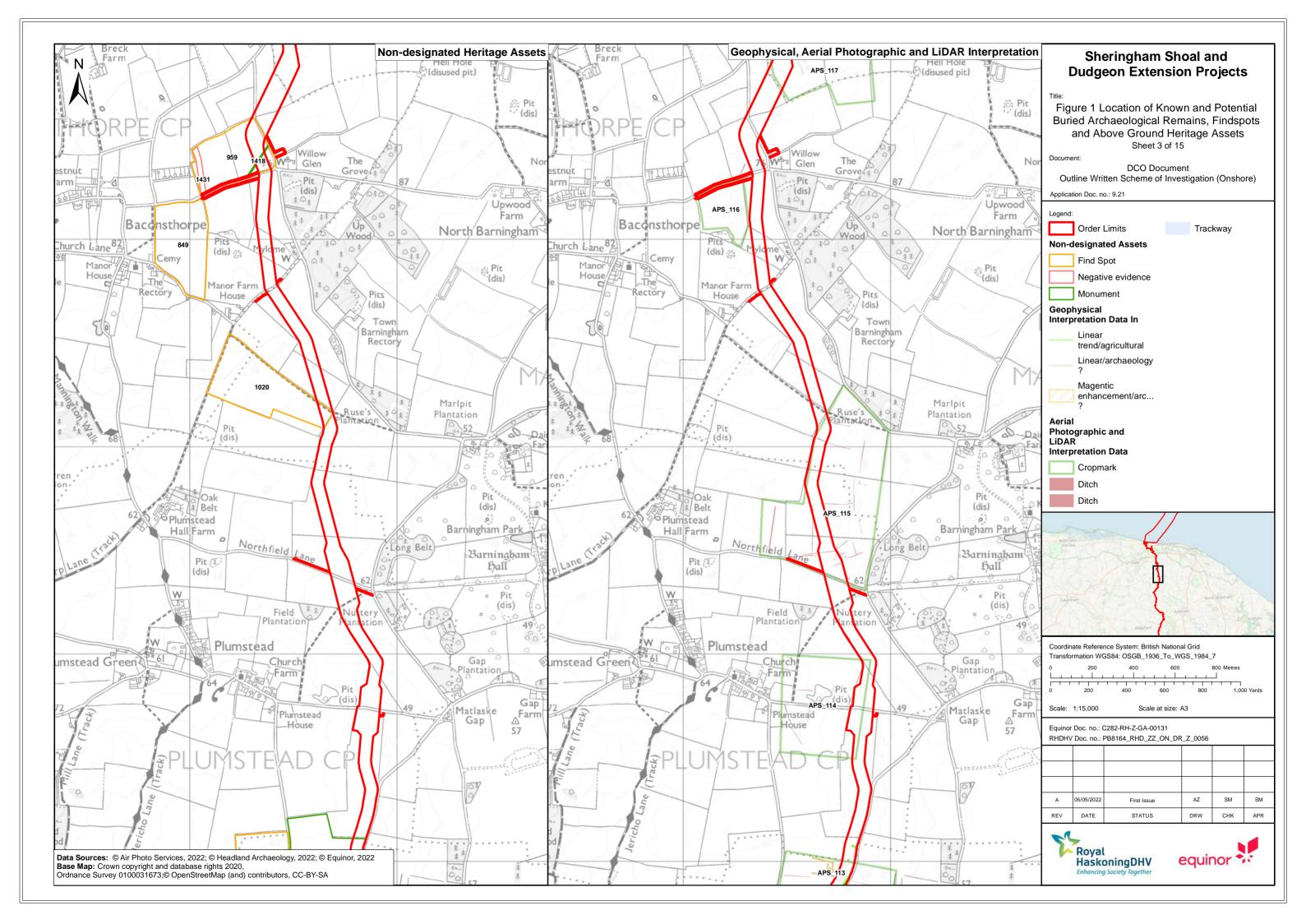
APPENDIX 4 FIGURES

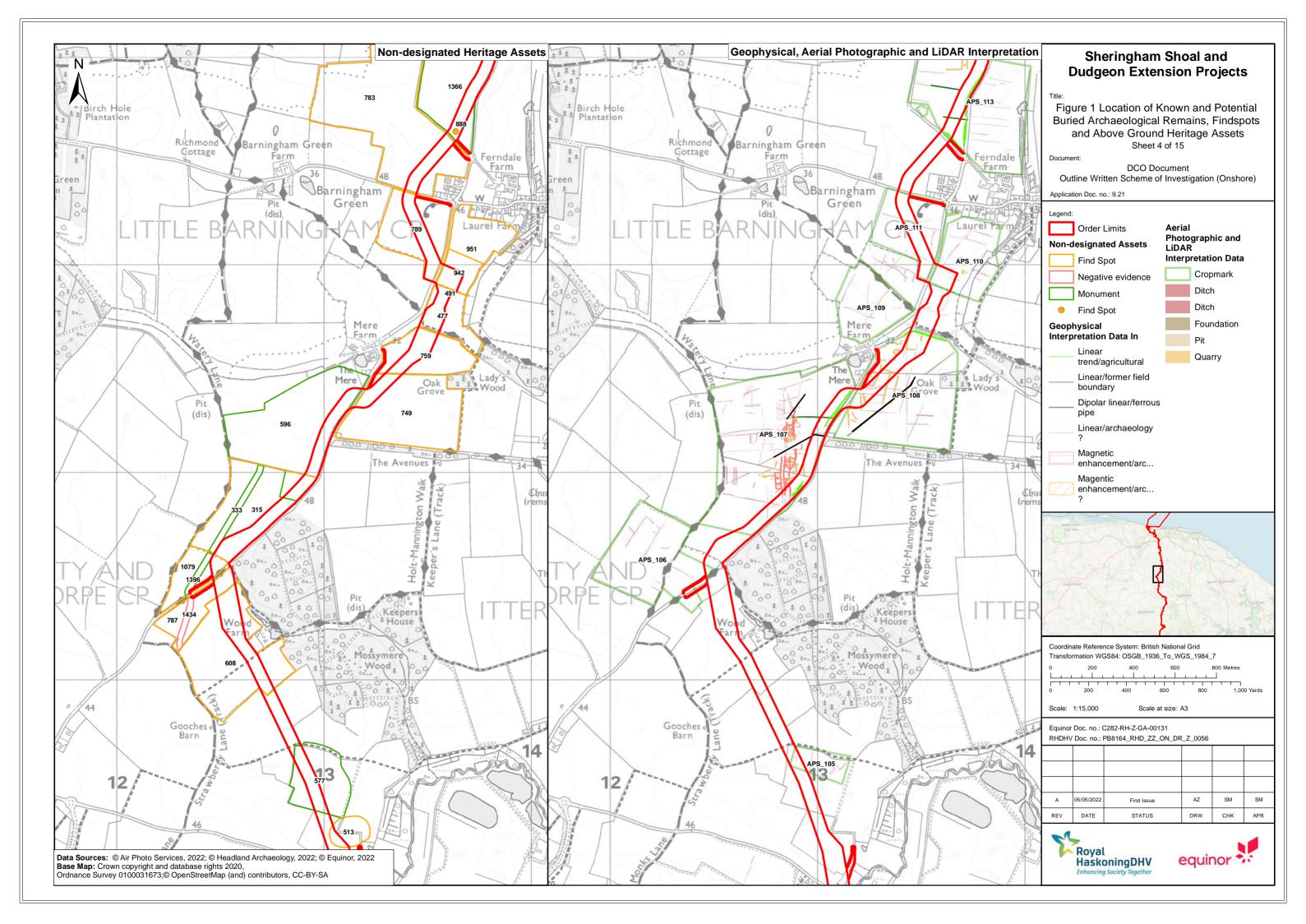


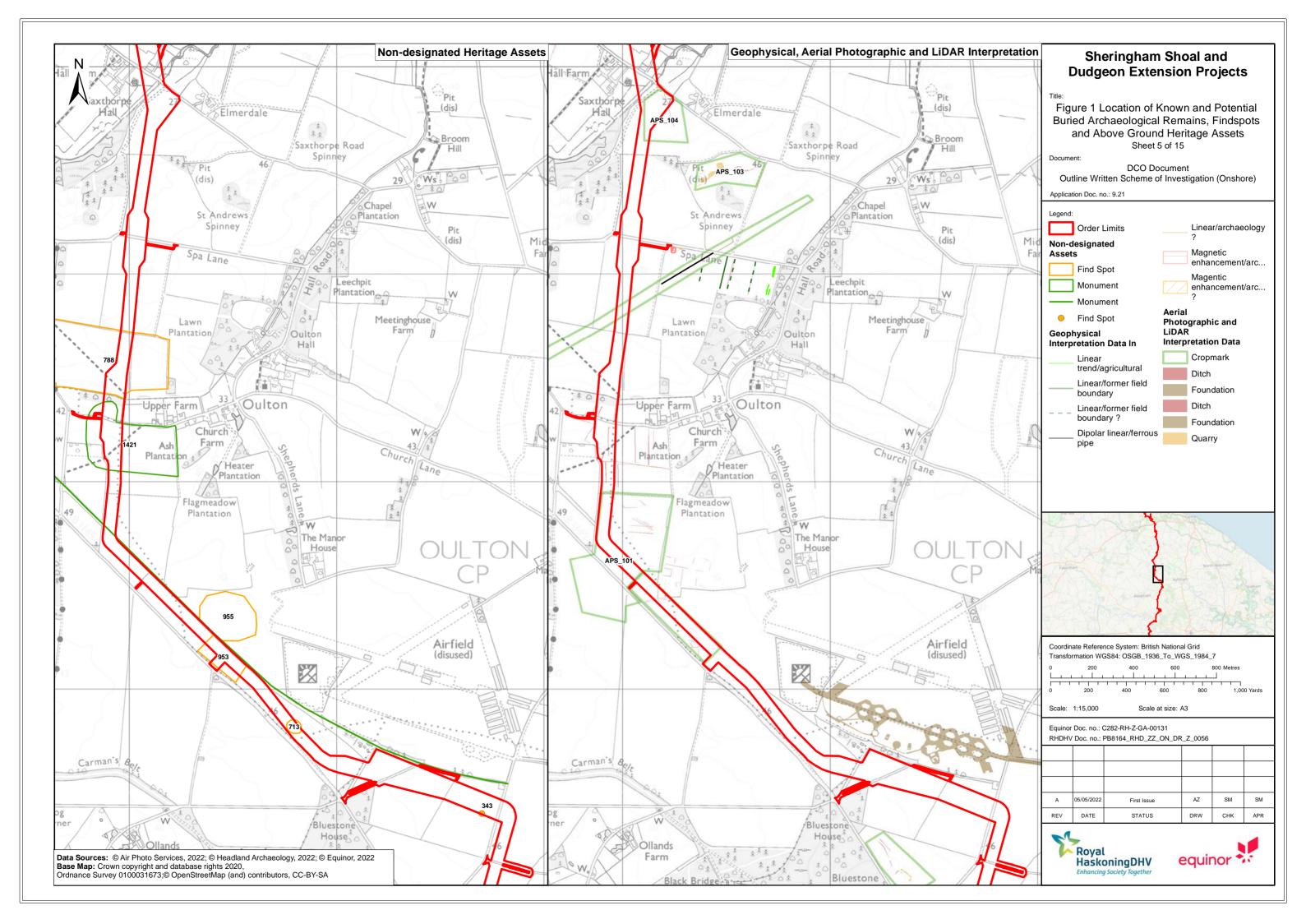
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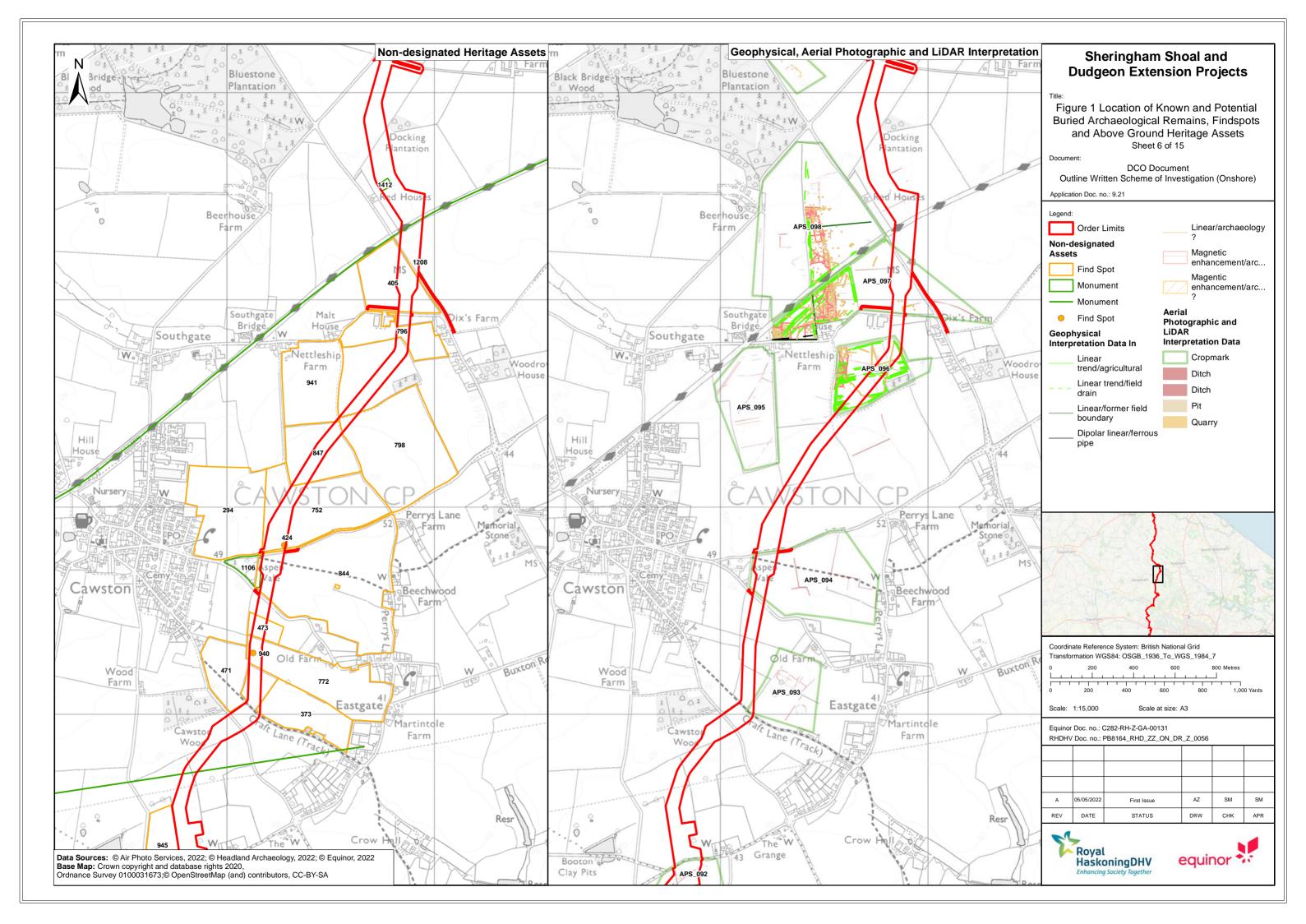


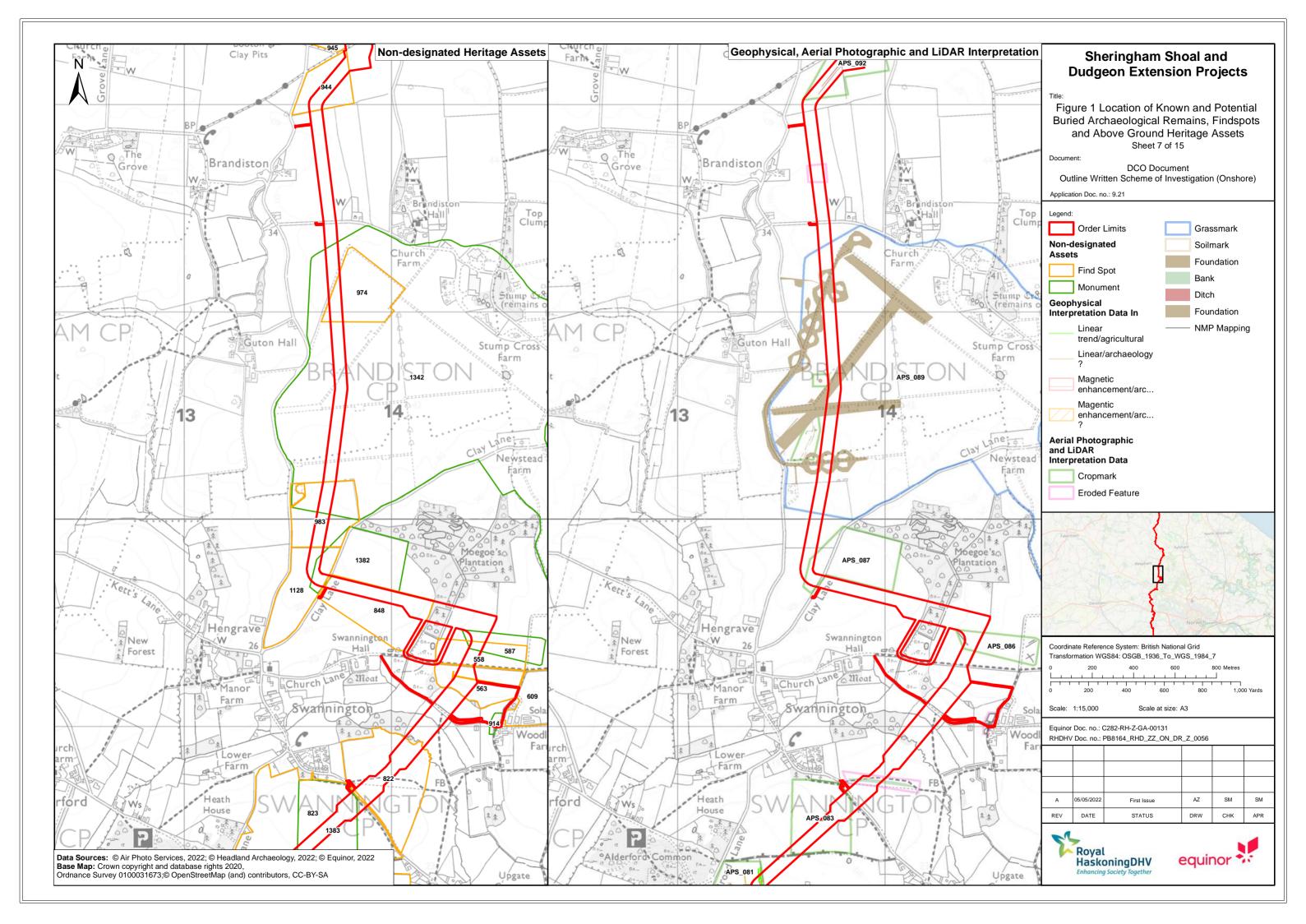


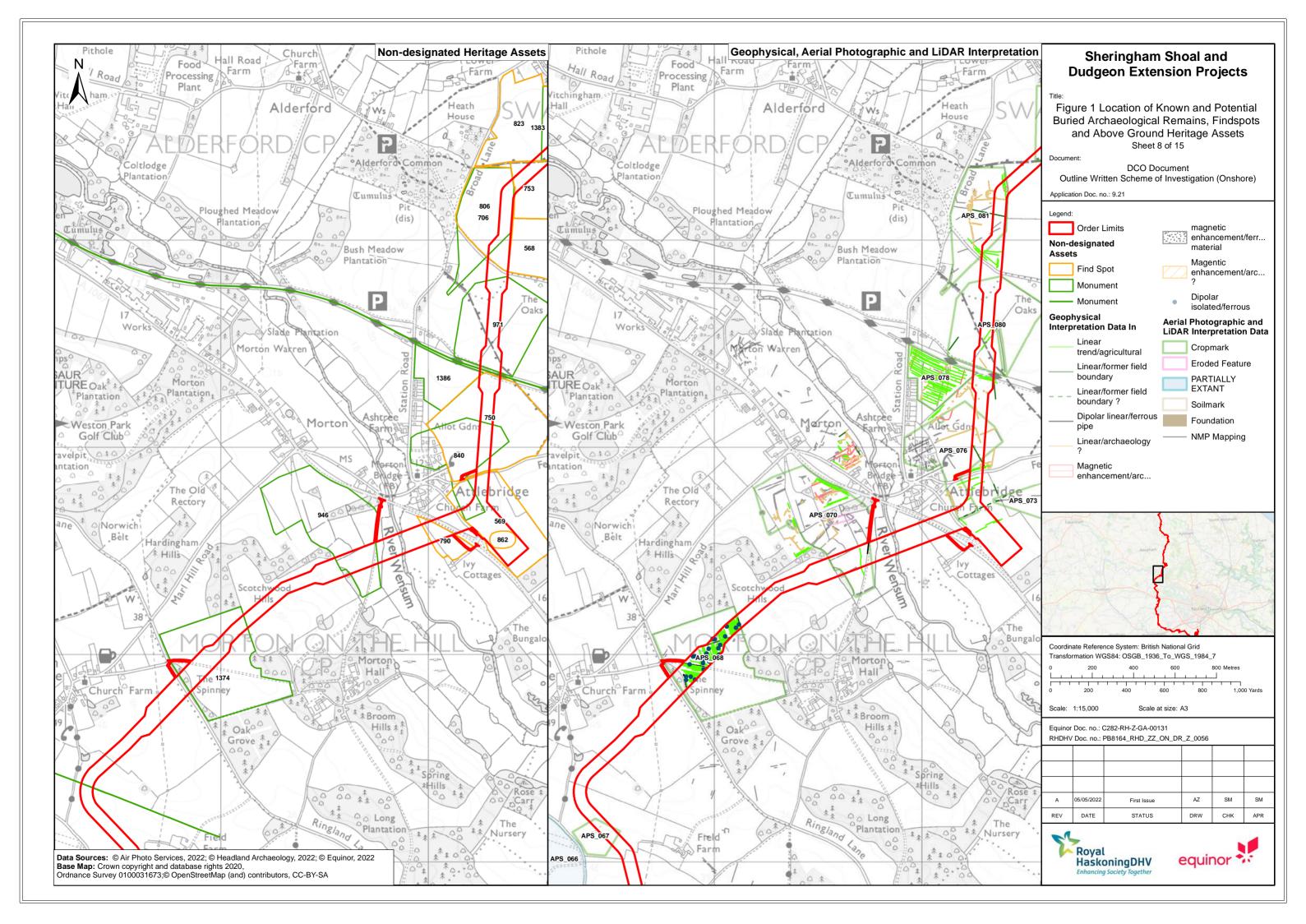


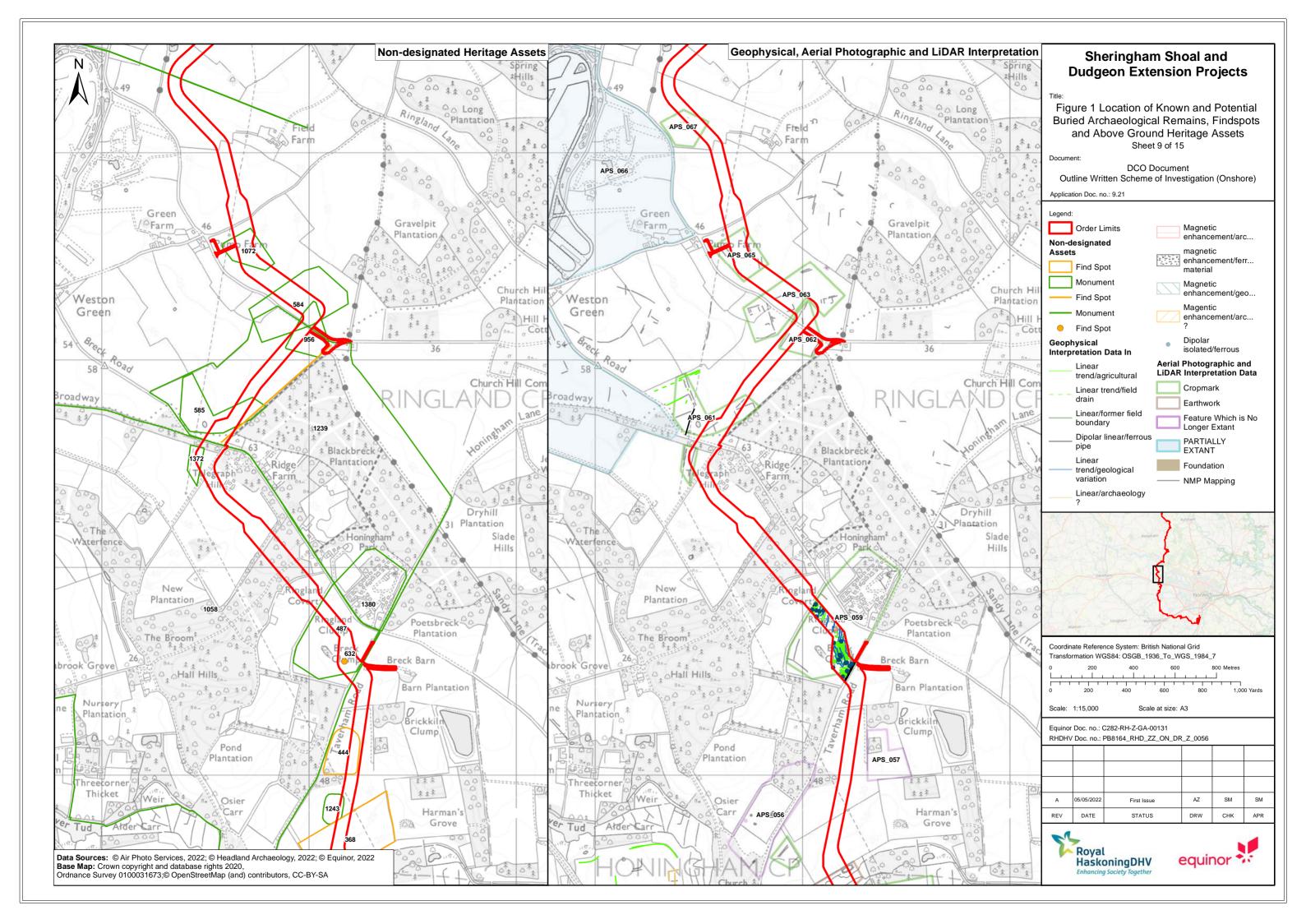


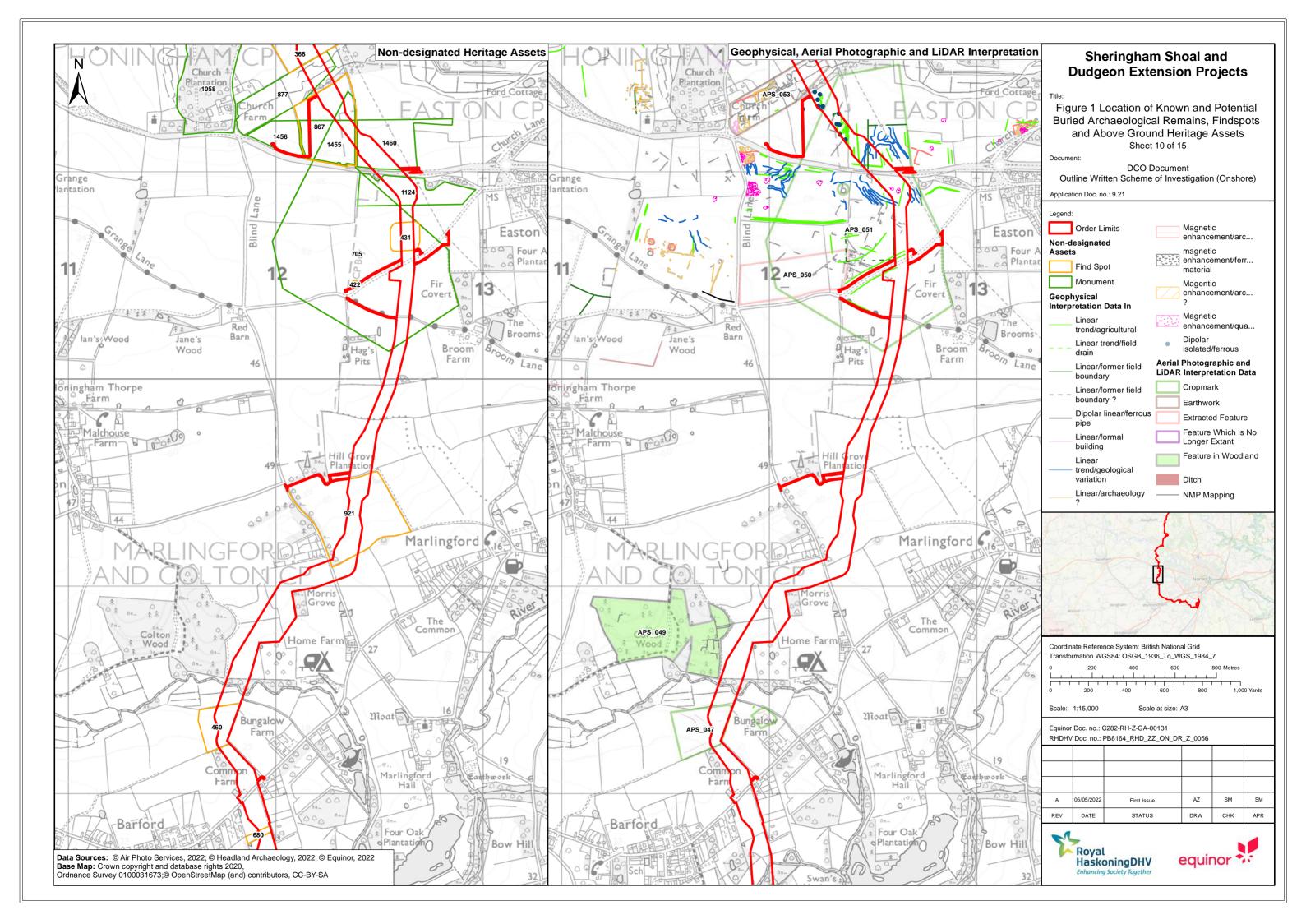


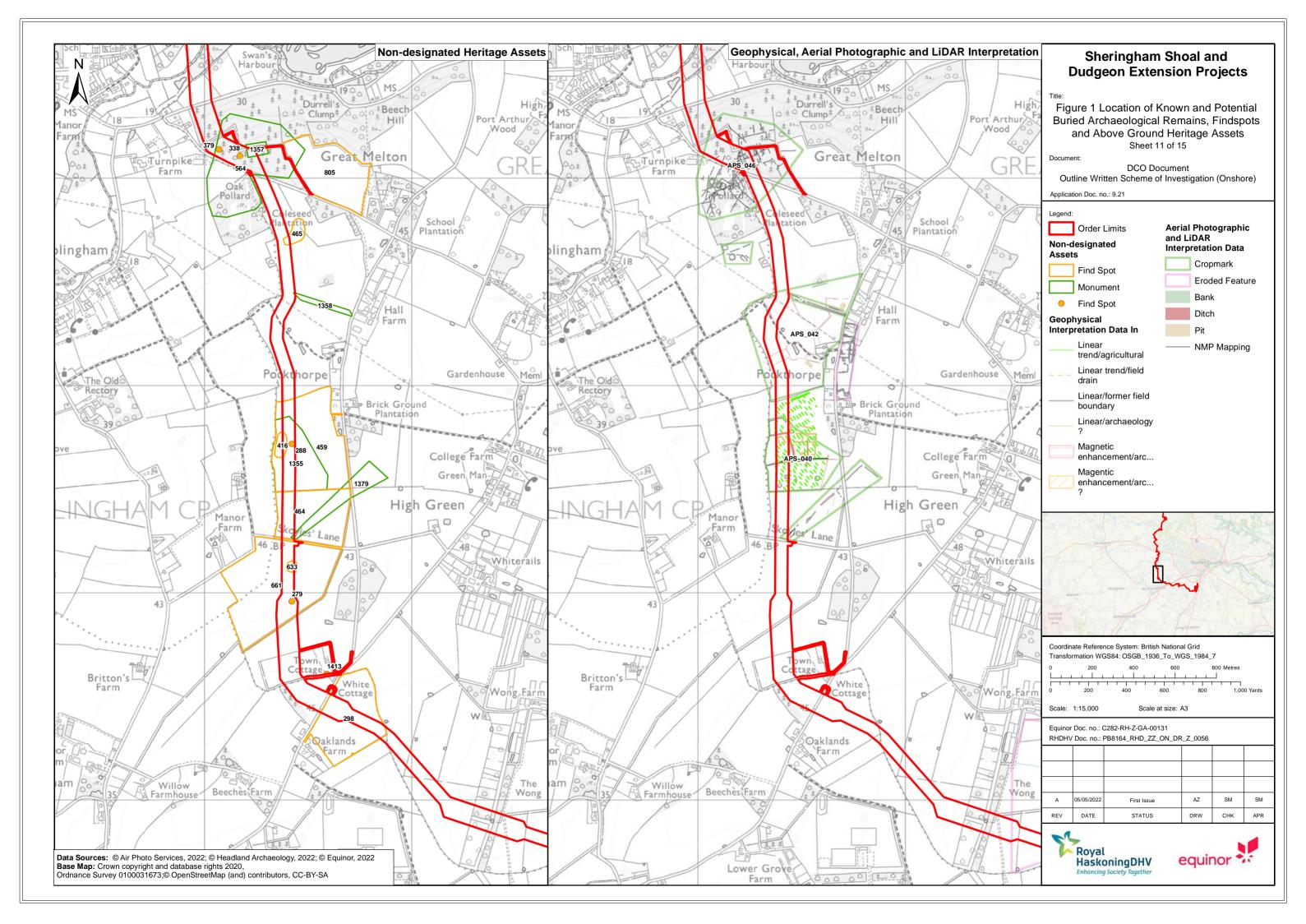


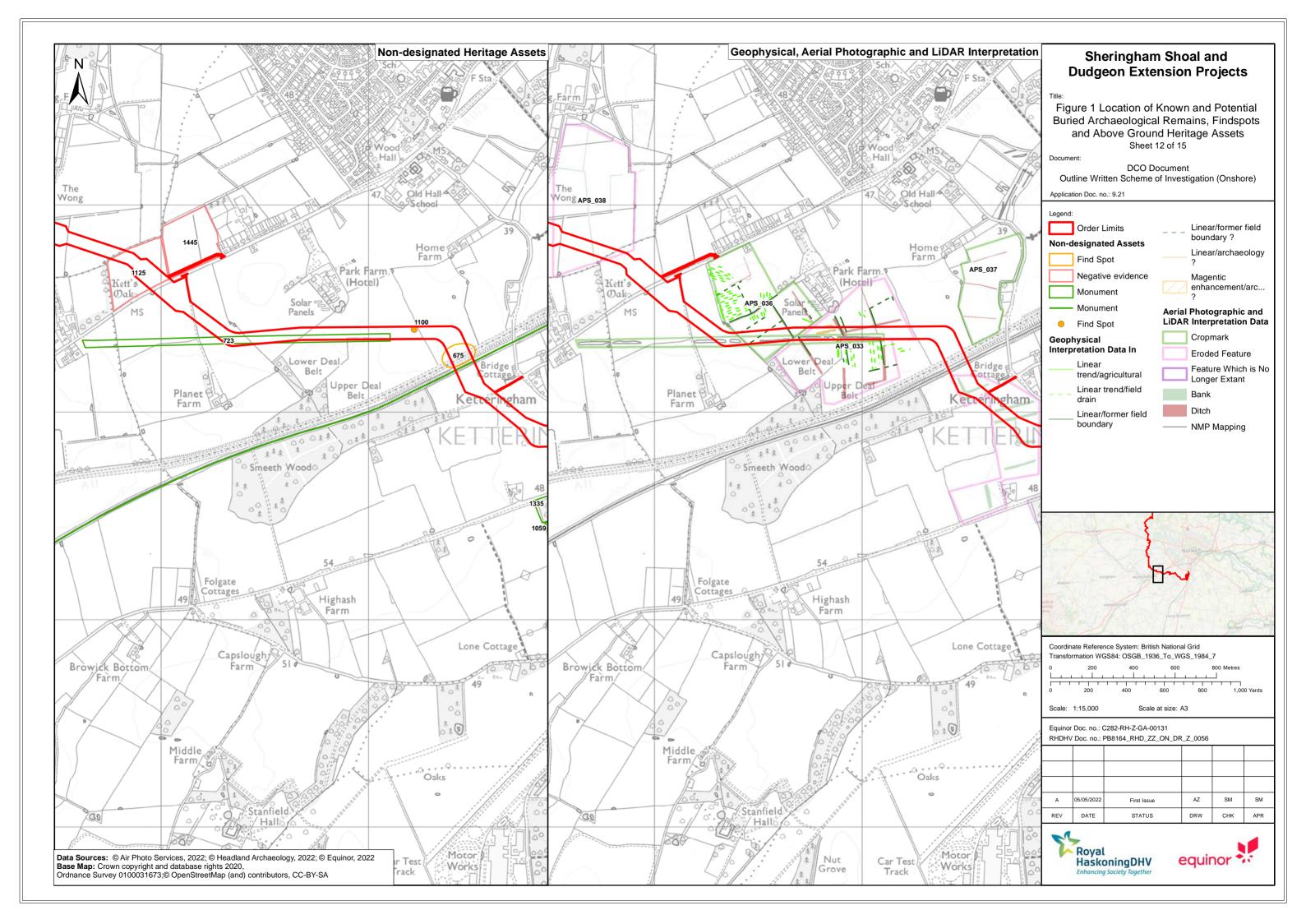


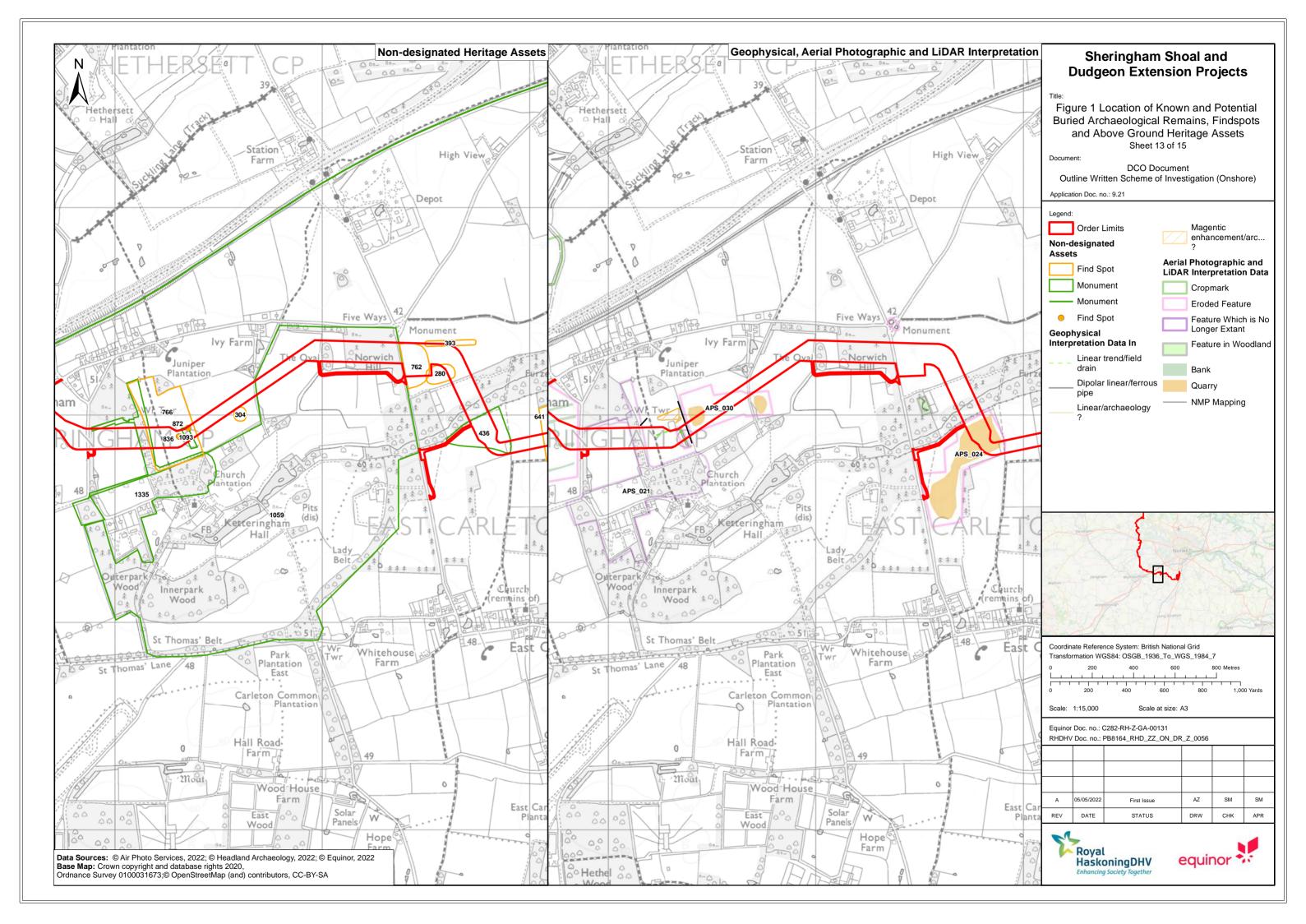


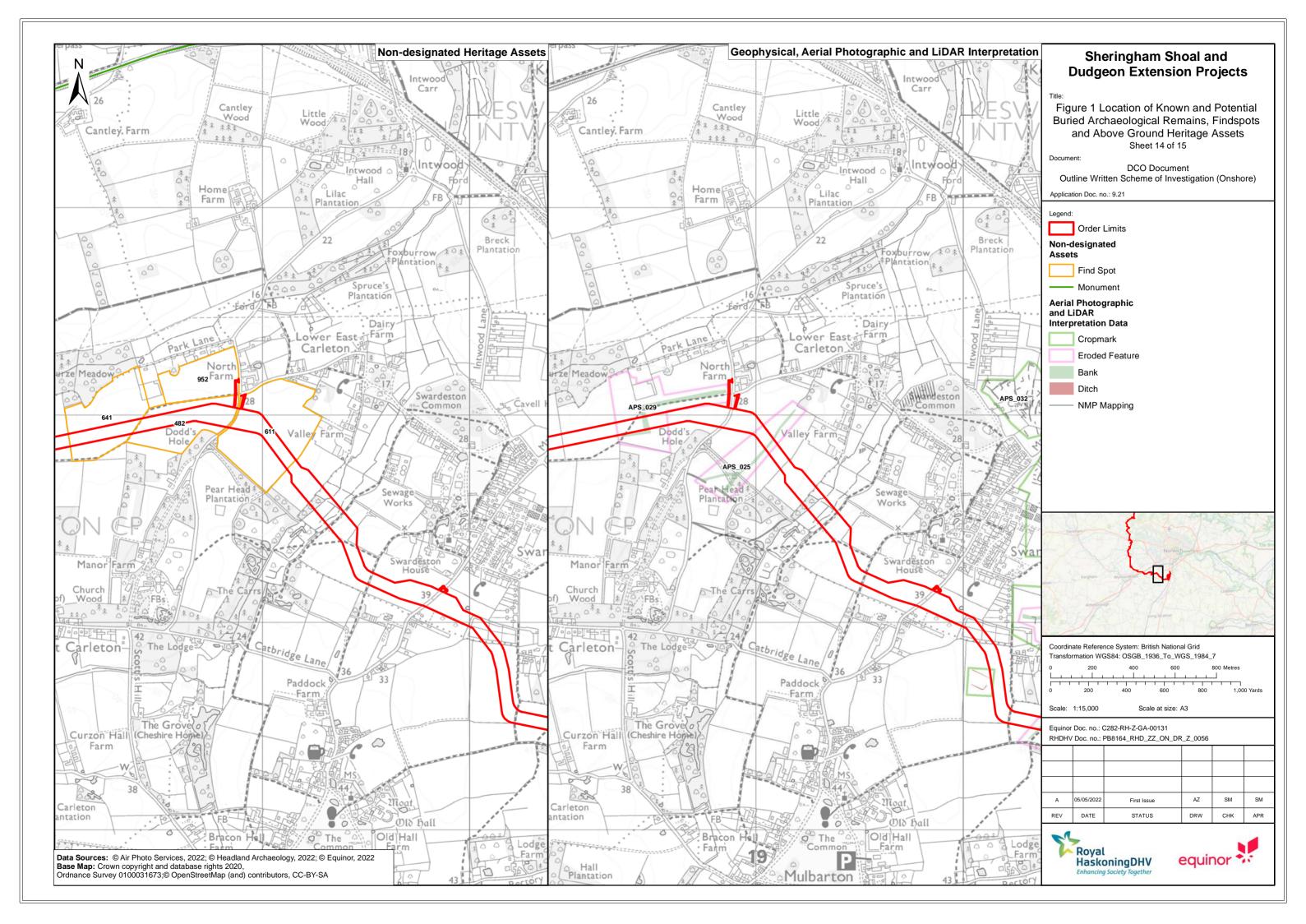


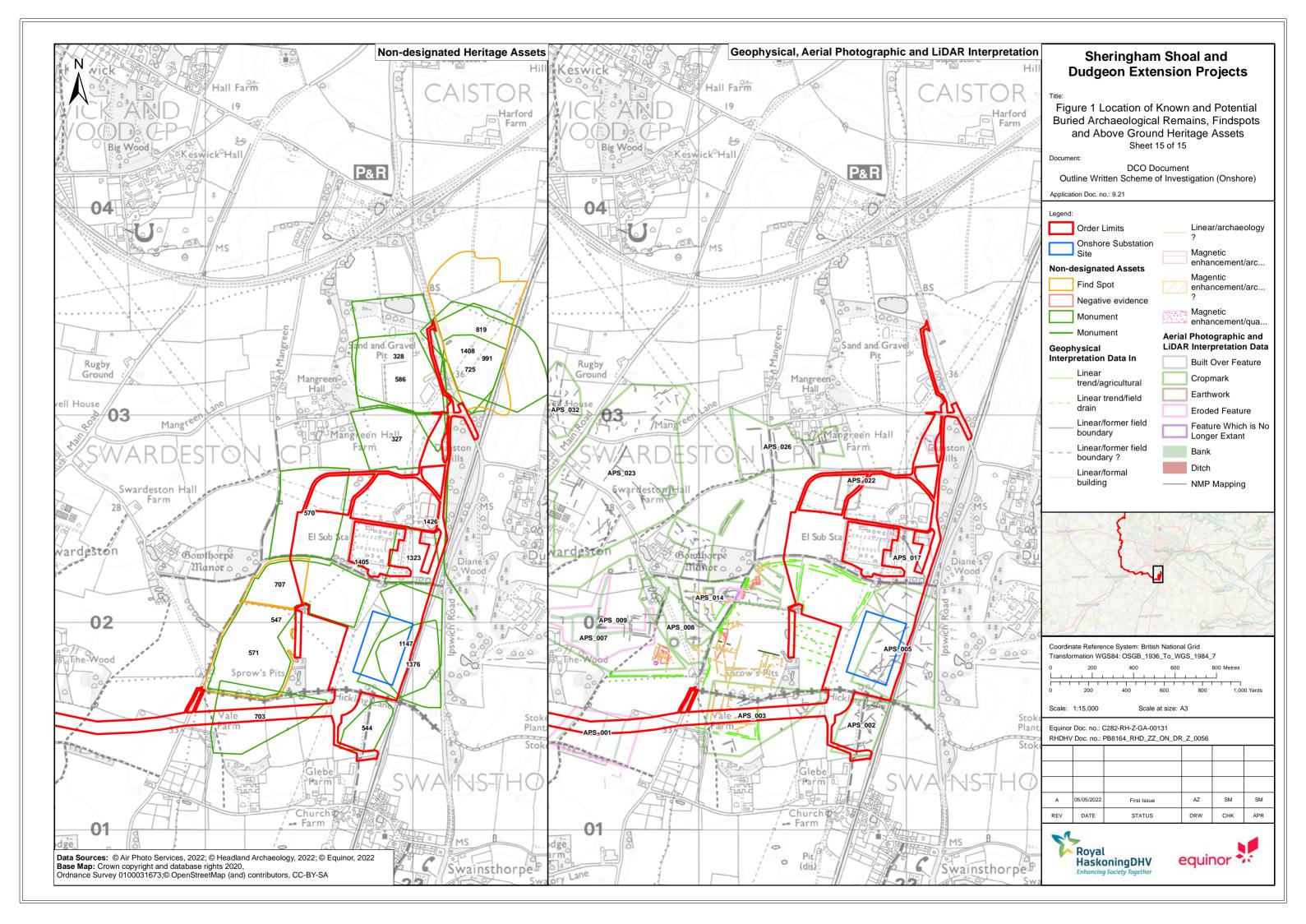














Outline Written Scheme of Investigation (Onshore)

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

Rev. no.1

APPENDIX 5 WSI FOR PRIORITY ARCHAEOLOGICAL GEOPHYSICAL SURVEY

Page 81 of 81 Classification: Open Status: Final





Written Scheme of Investigation for Archaeological and Geoarchaeological Monitoring

Client: Equinor

Project: Dudgeon and Sheringham Shoal Offshore Wind Farm

Extensions - Onshore Date: August 2021





Project Name:	Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions – Onshore
Scheme Number	195811
Report Number	003

Prepared by:	
Name	Nick Daffern
Date	August 2021

Approved by:	
Name	Dave Hodgkinson
Date	August 2021





CONTENTS

1	Intro	duction	1
	1.1	Circumstances of the Scheme	1
	1.2	Definition of terms	1
	1.3	Geo/Archaeological Watching Brief	1
2	Back	ground	3
	2.1	Site Location	3
	2.2	Geology	3
	2.3	Archaeological and Historical Background	4
3	Aims	and Objectives	7
4	Meth	odology	8
	4.1	General Methodology	8
	4.2	Monitoring and Liaison	8
	4.3	Geo/archaeological Monitoring and Sampling	9
	4.4	Finds and Artefacts	11
	4.5	Treatment of Treasure	11
	4.6	Human Remains	12
	4.7	Environmental Archaeology	12
	4.8	Post-Excavation and Reporting	13
	4.9	Archive Preparation, Deposition and Dissemination	13
	4.10	Health and Safety	14
	4.11	Staffing and Standards	15
Rihl	ioarar	ahv.	16

APPENDICES

Appendix 1: Gazetteer of Designated Heritage Assets



DRAWINGS

195811/WB/1.0	Overview of borehole locations	1: 500,000
195811/WB/2.0	Borehole locations with monitoring requirements	1: 35,000
195811/WB/3.0	Borehole locations with monitoring requirements	1: 45,000
195811/WB/4.0	Borehole locations with monitoring requirements	1: 10,000
195811/WB/5.0	Borehole locations with monitoring requirements	1: 20,000
195811/WB/6.0	Borehole locations with monitoring requirements	1: 20,000
195811/WB/7.0	Borehole locations with monitoring requirements	1: 20,000
195811/WB/8.0	Borehole locations with monitoring requirements	1: 15,000
195811/WB/9.0	Borehole locations with monitoring requirements	1: 17,500
195811/WB/10.0	Borehole locations with monitoring requirements	1: 22,500



1 Introduction

1.1 Circumstances of the Scheme

- 1.1.1 Dalcour Maclaren has been commissioned by Equinor New Energy Limited (hereafter referred to as 'the Client') to prepare a Written Scheme of Investigation (WSI) for archaeological and geoarchaeological monitoring and recording during ground investigations, comprising boreholes and test pits, associated with the onshore element of the Sheringham and Dudgeon Shoal Offshore Wind Farm Extensions.
- 1.1.2 The Client is proposing to extend the existing operational Dudgeon and Sheringham Offshore Wind Farms, named the Dudgeon Offshore Wind Farm Extension Project (DEP) and Sheringham Offshore Wind Farm Extension Project (SEP). DEP and SEP will consist of a number of offshore and onshore elements including the offshore wind turbines and subsea array cables, up to two offshore substations, offshore and onshore export cables, and a new area for up to two onshore substations to accommodate the connection of DEP and SEP to the transmission grid.

1.2 Definition of terms

- 1.2.1 The term 'geo/archaeological' is used throughout the report to combine the terms archaeological, geoarchaeological and palaeoenvironmental for ease of reading and understanding. Where appropriate, the individual specific terms will be used.
- 1.2.2 The term 'Site' is used throughout the report to refer to land within the red line boundary.

1.3 Geo/Archaeological Watching Brief

- 1.3.1 An archaeological watching brief is defined as 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, in an inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive' (CIfA 2014a).
- 1.3.2 As the known remains are a buried structure, where appropriate the standard and guidance for the archaeological investigation and recording of standing buildings or structures, will also be adhered to. Archaeological building investigation and recording is defined as 'a programme of work intended to establish the character, history, dating, form and archaeological development of a specified building, structure, or complex and its setting, including buried components, on land, in an inter-tidal zone or underwater' (CIfA 2014b).



- 1.3.3 The Written Scheme of Investigation has been developed following guidance and best practice presented within the following documents:
 - Standards and Guidance for Archaeological Watching Brief, Chartered Institute for Archaeologists: Reading (ClfA 2014a);
 - Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials, Chartered Institute for Archaeologists: Reading (ClfA 2014b);
 - Code of Approved Conduct for the Regulation of Arrangements in Field Archaeology, Chartered Institute for Archaeologists: Reading (ClfA 2019);
 - Standards for Development-led Archaeological Projects in Norfolk (Norfolk County Council 2018);
 - Environmental archaeology and archaeological evaluations. Recommendations concerning the environmental component of archaeological evaluations in England (AEA 1995);
 - Geoarchaeology: using earth sciences to understand the archaeological record (Historic England 2015a);
 - Environmental archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation, 2nd edition (English Heritage 2011);
 - Guidance on Assessing the Risk Posed by Land Contamination and its Remediation on Archaeological Resource Management (English Heritage 2005).
 - Preserving Archaeological Remains: Decision-Taking for Sites under Development, Historic England: London (Historic England 2016);
 - Management of Research Projects in the Historic Environment (MoRPHE), (Historic England 2015b).



2 Background

2.1 Site Location

- 2.1.1 The onshore cable route is approximately 60km in length from Weybourne in the north to an existing substation, near Swainsthorpe, to the south of Norwich.
- 2.1.2 Drawing 195811/WB/1.0 provides an overview of the route but also highlights the ten individual areas where ground investigations will be monitored.
- 2.1.3 Individual borehole and trial pit locations are shown on Drawings 195811/WB/2.0 10.0 with the respective type of monitoring i.e. archaeological or geoarchaeological, illustrated.

2.2 Geology

- 2.2.1 The majority of the proposed route is mapped by the British Geological Survey (BGS 2021) as being underlain by solid geology comprising undifferentiated chalk of the Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation deposited during the Cretaceous Period 72 94 Ma (Million Years Ago).
- 2.2.2 The exception to this occurs between Saxthorpe and Swannington where the Wroxham Crag Formation is mapped. These deposits comprise interbedded gravels, sands, silts and clays which are distinguishable from the Norwich Crag Formation by the presence of a significant proportion of quartz and quartzite pebbles in the gravels (McMillan et al 2011, 136 137).
- 2.2.3 Rose et al (2001) defines the Wroxham Crag as including 'all marine strata deposited in the area from the start of the influx of substantial quantities of quartz and quartzite, during the Pre-Pastonian, to the onset of glaciation represented by the Happisburgh Formation. The Wroxham Crag Formation thus includes strata previously included in either the Norwich Crag Formation or the Cromer Forest-bed Formation' (McMillan et al 2011, 136).
- 2.2.4 The Formation is widely overlain by mid-Pleistocene glacial deposits and has therefore been widely dated between Marine Isotope Stage (MIS) 67? 17 (McMillan et al 2011, 137).
- 2.2.5 To the south and southwest of Norwich, undifferentiated Crag Group deposits are mapped which are likely to either comprise further deposits of the Wroxham Crag Formation or be the older, Norwich Crag Formation (BGS 2021).
- 2.2.6 Overlying the bedrock geology is an extensive and complex patchwork of superficial deposits. At the northern end of the route, in the vicinity of Weymouth is dominated



by the Weybourne Town Till Member and the Briton's Lane Sand and Gravel Member. The former is a highly calcareous silt and chalk-rich matrix-supported diamicton which pre-dates the glaciofluvial deposits of the Britons Lane Formation composed of several coarse-grained sand and gravel outwash lithofacies that are believed to date to the Mid-Pleistocene, possibly MIS 6. Lesser deposits identified within the area including the sands and gravels of the Marine Beach Deposits along the foreshore and undifferentiated head deposits.

- 2.2.7 In the vicinity of Oulton, in addition to the undifferentiated alluvium, head and terrace deposits associated with the River Bure, the Britons Lane Formation is mapped as overlying the Lowestoft Formation, an extensive suite of outwash deposits and tills deposited during the Anglian Glaciation (MIS 12).
- 2.2.8 To the south of Swannington and for the remainder of the route to the south and southwest of Norwich, the mapping of superficial deposits is dominated by the Lowestoft Formation, the Sheringham Cliffs Formation (variously dated as MIS 12 or MIS 10) and the Leet Hill Sand and Gravel (MIS 16?), a sub-division of the Happisburgh Glaciogenic Formation. All of these Mid-Pleistocene units are composed of tills, diamicton, sands and gravels and clays of glacial origin.
- 2.2.9 Interdigitating these glacial deposits are the undifferentiated alluvial and sand and gravel terrace deposits of the River Wensum, River Tud, River Yare and River Tas; these are late Pleistocene and Holocene date and have incised into the earlier Pleistocene strata

2.3 Archaeological and Historical Background

- 2.3.1 A Preliminary Environmental Information Report (Royal HaskoningDHV (2021a) and Onshore Archaeological Desk-Based Assessment (Royal HaskoningDHV 2021b) have been previously been prepared for the route.
- 2.3.2 Due to the scale of the route and the extensive quantity of archaeological remains identified by these studies, the summary of the desk-based assessment (Royal HaskoningDHV 2021b, 39 41) is presented below and the reader should refer to the original documents for further information.

Summary of Heritage Potential

2.3.3 The archaeological evidence in the 500m and 1km study areas reflects a human presence from the Palaeolithic period to the present day. Finds and sites dating to the prehistoric period suggest that the study area presented an environment suitable for exploitation during the Palaeolithic and Mesolithic period. The archaeological record suggests a prevalence of activities associated with subsistence, reflective of a nomadic existence of a hunter-gatherer lifestyle. Should further remains from this



early period exist within the study area, they will most likely comprise artefactual lithic finds.

- 2.3.4 Activity of an increasingly sedentary nature is represented by the archaeological record from the Neolithic period onwards. Should further currently unrecorded heritage assets be discovered to exist within the study area dating from the Neolithic to the Romano-British period, such sites would likely be representative of land-use in association with settlement, subsistence (including farming activities) and spiritual / religious activities. The archaeological record also indicates the presence of military-related activity in the study area from the Romano-British period. As such, the potential for currently unrecorded heritage assets of a military nature dating to this period should not be discounted within the study area.
- 2.3.5 Settlement, agricultural and religious activities continued to dominate the archaeological record within the study area from the Saxon period onwards. These elements of past land-use may thus be represented amongst potential heritage assets that are as yet undiscovered in the study area. In addition to those outlined above, potential heritage assets from the medieval period onwards may also be of a commercial or industrial nature. The growth of a number of trading centres surrounding the study area saw a marked increase in heritage assets associated with industry and production in the archaeological record, an element which intensified in the post-medieval period with the Industrial Revolution. Commercial and industrial expansion drew people to the towns, which in turn, saw an increase in more concentrated settlement patterns in and surrounding various towns along the route of the study area. Despite this, agricultural activities continued to be the predominant activity and is likely to be reflected in the potential archaeological record (e.g. in the form of field boundaries).
- 2.3.6 Currently unknown archaeological remains dating to the 20th century in the study area are likely to be predominantly representative of defence measures (e.g. tank traps, anti-aircraft infrastructure, pill boxes that are no longer extant) or may provide direct evidence of hostilities (e.g. bomb craters).

Potential for Buried Archaeological Remains

- 2.3.7 The PEIR boundary is considered to contain a high potential for the further discovery of buried archaeological sites/features. A large proportion of heritage assets recorded in the NHER relate to cropmark sites, some of which are extensive and complex, indicative of a multi-period buried archaeological landscape dating from earlier prehistoric through to modern periods.
- 2.3.8 Within the Landfall location, there is potential for further archaeological discoveries associated with medieval and post-medieval field systems, and WWII coastal defences and military training activity.



- 2.3.9 Key areas along the onshore cable corridor for potential archaeological discoveries include:
 - 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 northwest of Great Melton;
 - 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.
- 2.3.10 Within the onshore substation site options, there is the potential for archaeological remains associated with Roman field systems and agricultural activity, as well as medieval settlement activity potentially associated with the medieval village of Gowthorpe to the immediate west.



3 Aims and Objectives

- 3.1.1 The purpose of the requested geo/archaeological watching brief is to monitor the intrusive works associated with the development and, where geo/archaeological remains are present, to investigate, characterise and interpret them. In instances where the watching brief remit is not sufficient to deal with the potential archaeological resource, then it will highlight this and provide sufficient data to allow the Stakeholders and Client to make an informed decision on the requirement for further mitigation strategies.
- 3.1.2 The general aims of the geo/archaeological monitoring are to:
 - determine the presence or absence of buried or upstanding geo/archaeological remains within the proposed development site;
 - allow the monitoring archaeologist to signal that potentially significant geo/archaeological has been revealed before it is destroyed;
 - provide the opportunity for an appropriate resource allocation to deal with the geo/archaeological under the watching brief remit;
 - determine the character, date, extent and distribution of any geo/archaeological deposits revealed as well as their potential significance;
 - determine levels of disturbance to any geo/archaeological deposits from plough damage or from any other agricultural/industrial practices or later building activities;
 - sufficiently investigate and record all deposits and features of potential geo/archaeological interest within the areas to be disturbed during the current development;
 - disseminate the results of the fieldwork through an appropriate level of recording.



4 Methodology

4.1 General Methodology

- 4.1.1 A scheme of geo/archaeological monitoring has been designed in order to satisfy the stated objectives of the project as set out under Section 3 above and the goals of the advisory document previously prepared by Royal HaskoningDHV (2021c).
- 4.1.2 The geo/archaeological watching brief is intended to monitor intrusive works during the course of the ground investigations at locations identified as having archaeological and/or geoarchaeological potential.
- 4.1.3 The perceived potential and justification for the choice of boreholes to be monitored and the type of monitoring that has been proposed can be found in Appendix 1. This is derived from the Royal HaskoningDHV (2021c) advisory document for site investigation and is informed by the findings of the Desk-Based Assessment (Royal HaskoningDHV 2021b) and the earlier geophysical survey (Headland Archaeology 2020).
- 4.1.4 The purpose of the monitoring is to allow for any potential geo/archaeological features or deposits present to be highlighted, investigated and recorded. If this is unable to be completed within the remit of the watching brief, then this will be flagged to the Client and LPA so an appropriate programme of archaeological mitigation can be discussed and agreed.
- 4.1.5 In advance of any fieldwork, Dalcour Maclaren will request the Client has demonstrated that all reasonable measures have been taken to identify any constraints and that they have provided all reasonable information regarding the presence of services, any ecological constraints, the presence of Public Rights of Way, any areas of potentially contaminated land and/or any other known risks to health and safety.
- 4.1.6 All intrusive works appropriate will be monitored by a suitably experienced geoarchaeologist or archaeologist, as appropriate, who will highlight any potential geo/archaeological features revealed to the groundworkers. Should this occur then the client will provide the geoarchaeologist sufficient time to allow suitable investigation by hand. All surfaces will be cleaned, inspected and potential features/deposits excavated to retrieve artefactual and ecofactual material, as well as determine their character, significance and date.

4.2 Monitoring and Liaison

4.2.1 Dalcour Maclaren will liaise closely with the Client and throughout the course of the Scheme to ensure that the works are undertaken as per the methodology outlined within this Written Scheme of Investigation and to inform key decisions.



4.2.2 All elements of the site archive and records will be available for inspection at any reasonable time during the programme of geo/archaeological fieldwork or the post-excavation assessment by the Client and/or any other approved, designated representative of a key stakeholder.

4.3 Geo/archaeological Monitoring and Sampling

- 4.3.1 All of the sequences subject to geoarchaeological recording be monitored by a suitably trained and experienced geoarchaeologist.
- 4.3.2 All of the sequences subject to geoarchaeological recording will be investigated and recorded using standard geological criteria (Tucker 1982; Jones et al 1999; Munsell Color 2000) whilst archaeological deposits and features will be investigated and recorded as per the standards and strategy below.
- 4.3.3 In the event that archaeological features and/or deposits are encountered, they will be investigated and sampled sufficiently to characterise, date them, understand their relationships and determine their significance. Features are to be excavated as follows:
 - All early prehistoric features will be 100% excavated;
 - All structural features (e.g. postholes and hearths), burials, industrial features (e.g. ovens and kilns) etc. will be 100% excavated;
 - Other discrete features (e.g. pits) of late prehistoric or late date will be excavated to a minimum of 50% based on the potential for the recovery of important material or ecofactual assemblages;
 - Features of possible natural origin (e.g. variations in the geology) will be excavated until a full characterisation of the feature type, profile, fill and any other characterisations have been demonstrated adequately;
 - Linear features (e.g. ditches and gullies) will be excavated to a minimum of 10% or until a full understanding of the feature is ascertained. All intersections will be sampled to establish relationships and a higher percentage of excavation will occur in areas of potential domestic activity;
 - Occupational layers will be excavated to a minimum of 50% with a higher percentage for prehistoric layers as required to gain a full understanding of the various functions and variations.
- 4.3.4 Measures will be taken to protect particularly significant, valuable or sensitive archaeological remains from exposure, accidental damage and/or theft.



- 4.3.5 Archaeological deposits and features will be recorded according to accepted professional standards and the standards of Dalcour Maclaren, a CIfA Registered Archaeological Organisation. Sufficient data will be recorded to allow for a full characterisation of the context and its relationships to be made and allow for future studies to guery and compare the dataset with confidence.
- 4.3.6 Archaeological contexts will be recorded and numbered individually on pro-forma context sheets with all relevant data such as drawings, photographic images, finds, environmental samples, height values and any other information cross-referenced. In addition, a further, more general record of the work comprising descriptions and discussions of the archaeology is to be maintained as appropriate. Context sheets are to be primarily filled in by the archaeologist excavating the feature/deposit.
- 4.3.7 All features will first be recorded in plan using a GPS unit with sub-centimetre accuracy with each point recorded in relation to the OSGB36 geod model, this plan will also provide a three-dimensional geo-referenced visual representation on the archaeology present.
- 4.3.8 Hand drawn sections will be drawn at an appropriate scale, primarily 1:10. Likewise, plans of archaeological features will be drawn at a suitable scale to record them in detail. If appropriate a larger site plan will be produced at a scale between 1:100 and 1:1,250 to show the location of monitored works, if required, this plan would indicate the boundaries of the excavated area, the site grid and location and numbers of any smaller detailed plans and sections produced along with any other appropriate information appropriate. All plans will be accurately related to the National Grid with a minimum of three reference points undertaken in an L shape.
- 4.3.9 All plans and sections will be levelled in respect to AOD and are to be drawn on polyester based drafting film and clearly labelled in relation to a site-specific drawing register. All levels taken are to be clearly labelled on all drawings with any calculations and final height values provided and cross referenced with a sitespecific levels register.
- 4.3.10 A complete digital photographic record of the work is to be kept. All images are to be taken using a digital SLR camera with a suitable megapixel resolution. The photographic record is to be regarded as part of the site archive and digital files will be appropriately filed, saved, labelled and cross-referenced in relation to a site-specific photography register.
- 4.3.11 The complete site archive, including finds and palaeoenvironmental samples, will be kept securely throughout the fieldwork and during all post-excavation activities.



4.4 Finds and Artefacts

- 4.4.1 All artefacts recovered during the archaeological mitigation are the property of the landowner/Client. They will be suitably bagged, boxed and marked in accordance with the Standards and Guidance for the Collection, Conservation and Research of Archaeological Materials (ClfA 2014b), and the Standard and Guide to Best Practice for Archaeological Archiving in Europe (Perrin et al. 2014).
- 4.4.2 All artefacts revealed will be recovered regardless of date so that the provisional dating of as many contexts as possible can be ascertained, as in line with Historic England guidance (2015a). In circumstances where the quantity of finds present preclude total recovery then a representative sample will be taken, and this noted on the context sheet.
- 4.4.3 Any finds that are considered potentially significant will be provided a unique artefact identification number, as provided by a site-specific registered artefact register. The location of the item will be recorded in three dimensions and marked on any relevant drawings as appropriate before being lifted. Also, if required, the item will be photographed, and an appropriate specialist will be on hand to ensure the object is lifted and transported in the most stable and suitable fashion to stop any potential degradation.
- 4.4.4 On completion of the project, modern material, unstratified remains and objects that have been assessed as having no obvious grounds for retention will be discarded after a period of six months, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository and the ClfA selection and retention toolkit if adopted by the local depository).
- 4.4.5 The primary archive records will clearly state how all artefact assemblages have been recovered, sub-sampled and processed.

4.5 Treatment of Treasure

- 4.5.1 Finds falling under the statutory definition of treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the landowner, Client and LPA. A treasure receipt (obtainable from either the Finds Liaison Officer (FLO) or the Department for Digital, Culture, Media and Sport (DCMS) website) will be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding that the find is treasure. Failure to report within 14 days of discovery is a criminal offence.
- 4.5.2 The treasure receipt and report will include the date and circumstances of the discovery in addition to the identity of the finder (will be assigned as the Appointed Archaeological Contractor) and the location of the find in relation to Ordnance Survey.



4.6 Human Remains

- 4.6.1 In the unlikely event that human remains, both inhumations and/or cremations, are exposed during the course of the archaeological investigations then all works are to cease immediately, and the local police and coroner informed. The area will be screened from view and discussions will be held with the Dalcour Maclaren and LPA on options for their appropriate preservation in situ or for their removal in accordance with professional standards and guidelines once the antiquity of the remains has been suitably proven.
- 4.6.2 If it is decided that removal of the remains is the most appropriate option, a Ministry of Justice License will be required (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Ministry of Justice Licence applies to both inhumation and cremated remains. The application for a Licence will be made by Dalcour Maclaren.

4.7 Environmental Archaeology

- 4.7.1 The strategy and methodology for the sampling of deposits will be in accordance with English Heritage (Now Historic England) Centre for Archaeology Guidelines "Environmental Archaeology A guide to the theory and practice of methods, from sampling and recovery to post-excavation" (2011).
- 4.7.2 All samples will be assigned a unique identification number accompanied with an appropriate sample form that will provide justification for sampling, the research questions which could be addressed and the methodologies to be employed to ensure that the appropriate techniques are used to maximise potential.
- 4.7.3 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths and floors. Each context will be sampled in isolation. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts.
- 4.7.4 Samples will not be taken from the intersection of features or where context horizons are not fully defined.
- 4.7.5 Mollusc samples of two litres each will be taken vertically from appropriate sections to investigate the changes of vegetation through time.
- 4.7.6 Where deposits are wet, waterlogged or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods and foraminifera. The numbers to be taken will be agreed with Dalcour Maclaren and LPA. Where bulk samples are to be taken a minimum of 20 litres will be taken from visible layers or spits for the retrieval of plant macro remains and insects.



- 4.7.7 Environmental samples from dry deposits will normally by processed by floatation following the fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions.
- 4.7.8 Where guidance is relevant the appropriate English Heritage (Now Historic England) papers will be followed (EH 2005, 2007 & 2011).

4.8 Post-Excavation and Reporting

- 4.8.1 Upon completion of the archaeological fieldwork Dalcour Maclaren will produce a post-excavation assessment report that will interrogate the quality, quantity, character and potential of the archaeological and geoarchaeological remains envounte4ed. The Post-Excavation report will identify and specify the need for further analysis of material with the view of producing a final report, which addresses regional research objectives for wider dissemination/publication.
- 4.8.2 A draft of this assessment document will be supplied to the Client for comment in the first instance. Once approved by the Client, a copy of the report will be provided to the Local Planning Authority to ensure their satisfaction and, in cooperation with the Client, determine the need and scope of any further mitigation, post-excavation assessment and/or analysis.
- 4.8.3 At the assessment stage of post-excavation, external specialists will only be called upon if the nature of the archaeological resource cannot be adequately determined without their input.

4.9 Archive Preparation, Deposition and Dissemination

- 4.9.1 The archive will be retained by Dalcour Maclaren or the Client until a suitable depository for the archive can be identified.
- 4.9.2 The site archive will include all project records and cultural material produced by the archaeological mitigation and will be prepared and deposited in accordance with Guidelines for the Preparation of Excavation Archives for Long Term Storage (Brown 2011), and Preparation and A Standard Guide to Best Practice for Archaeological Archiving in Europe (Perrin et al 2014).
- 4.9.3 A unique site code will be used during the course of the archaeological fieldwork and will be referenced through post-excavation reporting, on all documents, artefacts and any other items that may be associated with the project.
- 4.9.4 A unique Historic Environment Record Event number has been requested from Norfolk Historic Environment team and will be referred to throughout the archaeological fieldwork and reporting.



- 4.9.5 Dalcour Maclaren will register the works with the Online AccesS to the Index of archaeological investigationS (OASIS). A digital copy of the archaeological report and any appropriate associated documentation from the archive will be made available upon its completion.
- 4.9.6 Should the results warrant it, a summary of the work, in addition to the findings from the wider archaeological works across the Scheme, will be compiled and submitted to an appropriate local journal and any relevant journals agreed with the Stakeholders.
- 4.9.7 In the unlikely event that no archaeology be revealed then the final report will be provided to the local HER and uploaded to OASIS.

4.10 Health and Safety

- 4.10.1 The Archaeological Contractor will prepare a site-specific risk assessment and method statement outlining the potential health and safety.
- 4.10.2 All site staff will have an appropriate level of training to enable them to carry out fieldwork safely and appropriate personal protective (PPE) clothing will be worn by all staff and any visitors at all times.
- 4.10.3 All staff will assist the Client in maintaining the site in a safe condition. Hazards will be appropriately identified and managed including identification of buried and above ground services/utilities.
- 4.10.4 The Archaeological Contractor will abide by the Client's Health and Safety methodology as well as abiding by any other site-specific and task-specific risk assessments and toolbox talks which may be provided/undertaken. Once on site, these documents will be assessed, and any variations will be highlighted and added to the appropriate assessment. These will be re-evaluated periodically during the course of the fieldwork to make sure that they remain consistent to the site-specific risks.
- 4.10.5 If there is conflict between the Client's risk assessment and that of the Dalcour Maclaren, then the Client's will take priority, unless it is perceived to be placing the staff of the Dalcour Maclaren at greater risk.
- 4.10.6 In addition to the risk assessment and method statement, where appropriate a COSHH assessment will also be undertaken.
- 4.10.7 All members of staff of the Archaeological Contractor and any visitors will be required to be inducted on first arrival. Daily signing in sheets will be maintained to site to show that they have attended and understood a safety message conducted at the start of shift. Any variations will be communicated as required.



4.10.8 The Client will be asked to provide all information reasonably obtainable on contamination and the location of live services before the archaeological works commence.

4.11 Staffing and Standards

- 4.11.1 The project will be directly managed by a full Member of the Chartered Institute for Archaeologists or an archaeologist of equivalent standing.
- 4.11.2 The standards and codes of conduct of the Chartered Institute for Archaeologists (2014a & 2019) and standards of Norfolk County Council (2018) will be adhered to at all times.
- 4.11.3 Dalcour Maclaren will provide appropriate specialists as required and their details and experience can be provided on request.



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APPENDICES



Appendix 1
Gazetteer of Designated Heritage Assets

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH1- 01	1274	11335, 788	N/A	N/A	Weybourne Camp, Roman coin finds	Medium – with the BH being located just off the intertidal/ beach area – there will be low potential for archaeological remains related to the military camp. Low-Risk for micrositing.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to the potential across the Norfolk coast.
BH10- 28	692 & 920	50677, 37277	APS_ 113	PA20	Cropmarks of fragmentary ditches and soil marks of buried walls of uncertain date. Fragmentary linear anomalies of uncertain origin. Possible round barrow on north-eastern edge of survey area. Metal detecting survey also found several multi-period metal finds, dating from the roman, medial and post-medieval periods, with unidentified metal fragments of late Bronze Age to post-med date.	Low – the BH is located just outside of the NHER indicated area (south-west), with no geophysical anomalies present within the immediate area. Low-risk for micrositing.	Archaeological watching brief at this BH due to the identified archaeological remains, and geophysical surveys.
BH10- 29	875	51714	N/A	N/A	Roman, medieval and post medieval finds: metal detecting discovered a Roman ring, a vessel, Medieval strap fitting, and post med coin weight.	Low - the BH is located just outside of the NHER indicated area (north-east). Low-risk for micrositing.	Archaeological watching brief at this BH due to finds and nearby geophysical results.
BH10- 30	875	51714	N/A	N/A	Roman, medieval and post medieval finds: metal detecting discovered a Roman ring, a vessel, Medieval strap fitting, and post med coin weight.	Low - the BH is located just outside of the NHER indicated area (north-western edge). Low-risk for micrositing.	Archaeological watching brief at this BH due to finds and nearby geophysical results.
BH10- 31	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH10- 32	1046	35933	APS_ 101	PA18	Cropmarks of ring ditch and oval enclosure of possible Bronze Age date, and medieval building platforms.	High – with BH is on the very edge of the indicated area of both the APS and NHER data for the archaeological remains. High-risk for micrositing.	Archaeological Watching Brief at this BH due to HER and APS records and nearby geophysical results.
BH11- 33	1670	50673	APS_ 095	PA17	Cropmarks of field boundaries of unknown date. Unsurveyed for geophysical survey at the time of writing – under crop of sugar beet.	Medium – the BH is within the centre of the recorded data on the NHER, although it has not been confirmed as archaeological remains. Low-risk for micrositing.	Archaeological watching brief at this BH due to cropmarks that have been identified across the site. As this has not been confirmed by geophysical survey, no alternative has been offered.
BH11- 34	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH11- 35	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH12- 36	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH12- 37	1215	50609	N/A	N/A	Cropmarks of possible post-medieval date, field boundaries.	Low – the BH is within the south-east of the indicative boundary of the site on the NHER.	No recorded heritage assets or unknown archaeological remains perceived within available data.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH12- 38	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH13- 39	1200	44183	N/A	N/A	Within Post-medieval Honingham Park.	Low – the BH is located near to the centre of post-medieval asset Honingham Park, although no other assets within the immediate vicinity. Low-risk for micrositing.	Archaeological watching brief at this BH as located within Post-Med park recorded on HER.
BH13- 40	1200	44183	N/A	N/A	Within Post-medieval Honingham Park.	Low – the BH is located near to the centre of post-medieval asset Honingham Park, although APS_072 to the south-east of undated cropmarks of field boundaries. Low-risk for micrositing.	Archaeological watching brief at this BH as located within Post-Med park recorded on HER.
BH14- 41	402	23429	N/A	N/A	Area of multi-period prehistoric worked flints and Iron Age, medieval and post med pottery sherds.	Low to medium – BH is within field indicated by NHER as area of multi-period finds, however to the adjacent south-west is APS_67 (extant platforms and ditched medieval tofts – also confirmed by geophysical anomalies (PA12)). Low to medium-risk for micrositing.	Archaeological watching brief at this BH due to multiperiod finds and nearby geophysical result.
BH14- 42	948, 801	25701, 53628	APS_ 064	PA10	Cropmarks of a possible ring ditch of Bronze Age date and enclosures of Roman date. Linear anomalies possibly forming part of field system/enclosures.	Medium to high – whilst BH is at northern extent of area, it is located within/close to an area of high archaeological potential, although geophysical survey provided no anomalies of possible or probable origin. High-risk for micrositing.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to possible settlement evidence. No alternative provided, as current location seems best option.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH15- 43	N/A	N/A	APS_ 064 & 065	PA10	Northern extent of cropmarks of Roman date	Medium to high – BH within area of suspected Roman cropmarks, although geophysical survey provided no anomalies of possible or probable origin High-risk for micrositing.	Archaeological watching brief at this BH. No alternative provided, as current location considered best option.
BH15- 44	N/A	N/A	APS_ 064 & 065	PA10	Cropmarks of a possible ring ditch of Bronze Age date and Roman enclosures	Medium to high – BH within area of suspected Roman cropmarks, although geophysical survey provided no anomalies of possible or probable origin High-risk for micrositing, although the APS data is showing to the south of the BH.	Archaeological watching brief at this BH. No alternative provided, as current location considered best option.
BH15- 45	N/A	N/A	APS_ 064 & 065	PA11	Cropmarks of a possible ring ditch of Bronze Age date and Roman enclosures	High – BH within area of suspected Roman cropmarks, although unsurveyable by geophysical survey to confirm extent of remains. High-risk for micrositing, although the APS data is showing to the south of the BH.	Archaeological watching brief at this BH. No alternative provided, as current location considered best option.
BH16- 46	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to proximity to linear features and waterway and proximity of probable ditched enclosures to adjacent south.
BH16- 47	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data, although be aware that field to the adjacent south is APS_054: probable ditched enclosures forming focus of prehistoric settlement. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to proximity to linear features and waterway and proximity of probable ditched enclosures to adjacent south.
BH17- 48	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to proximity to linear features and waterway.
BH17- 49	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to proximity to linear features and waterway.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH17- 50	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring at this BH due to proximity to linear features and waterway.
BH18- 51	759	22643	N/A	N/A	Site of Roman Brooch Findspot.	Low – BH's located within area recorded on NHER as site of a Roman Brooch findspot. Low-risk for micrositing.	None
BH18- 52	759	22643	N/A	N/A	Site of Roman Brooch Findspot.	Low – BH's located within area recorded on NHER as site of a Roman Brooch findspot. Low-risk for micrositing.	Archaeological Watching Brief focussed on the central BH as within the centre of HER polygon.
BH18- 53	759	22643	N/A	N/A	Site of Roman Brooch Findspot.	Low – BH's located within area recorded on NHER as site of a Roman Brooch findspot. Low-risk for micrositing.	None
BH18- 54	N/A	N/A	N/A	N/A	N/A	Low – to south of BH's there is APS_033: post- enclosure boundaries, which have been removed to facilitate modern farming, and to the immediate north: Norfolk Railway line. Low-risk for micrositing.	N/A
BH18- 55	N/A	N/A	N/A	N/A	N/A	Low – to south of BH's there is APS_033: post-enclosure boundaries, which have been removed to facilitate modern farming, and to the immediate north: Norfolk Railway line. Low-risk for micrositing.	N/A
BH18- 56	N/A	N/A	N/A	N/A	N/A	Low – to south of BH's there is APS_033: post- enclosure boundaries, which have been removed to facilitate modern farming, and to the immediate north: Norfolk Railway line. Low-risk for micrositing.	N/A
BH19- 57	1201	44333	N/A	N/A	Within post-medieval Ketteringham Park.	Medium – BH is located within a post-medieval park, although be aware of nearby heritage assets ranging from prehistoric periods. Medium-risk for micrositing.	Archaeological watching brief at this BH, due to surrounding area being recorded locations for multiperiod finds, and aware of SM's to nearby east.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH19- 58	840	28161	N/A	N/A	Within area of multi-period finds.	Medium – BH within area indicated by NHER as site of multi-period finds. Medium-risk for micrositing.	Archaeological Watching brief at this BH, as located withing HER asset of multi- period finds, and aware of SM's to nearby north.
BH2- 02	788	39345	APS_ 247	N/A	Roman coin finds, site of Weybourne Camp	Low to Medium – BH located of edge of areas indicated on available data as archaeological presence. Low to Medium risk for micrositing.	Archaeological Watching Brief, although not much info on this area, due to no geophysical data. No alternative provided due to these reasons, and currently best placed.
BH2- 03	367	63388	APS_ 209 & APS_ 210	PA35	Medieval moated complex with enclosures, fishponds, old road and field system. Adjacent to Scheduled moated site – NHLE 1013097.	Medium – to the north of Scheduled Monument NHLE 1013097, although not much info on this area, due to no geophysical data. Medium risk of micrositing.	Archaeological Watching Brief. No alternative as currently best position.
BH20- 59	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to linear features and waterway
BH20- 60	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to linear features and waterway

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH21- 61	1081, 1692	52080, 52079	APS_ 005	N/A	Cropmarks of fragmentary ditches of unknown date and post-medieval field boundaries.	Low to medium due to proximity to some settlement anomalies identified to geophysical surveys to west – BH to south, and cropmarks of unknown date.	Archaeological Watching Brief. No alternative as currently best position.
						Low risk for micrositing.	
BH21- 62	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH21- 63	1081, 1692	52080, 52079	APS_ 005	N/A	Cropmarks of fragmentary ditches of unknown date and post-medieval field boundaries.	Low to medium due to proximity to some settlement anomalies identified to geophysical surveys to west– BH to south, and cropmarks of unknown date. Low risk for micrositing.	Archaeological Watching Brief. No alternative as currently best position.
BH21- 64	1081	52080	APS_ 005	N/A	Post-medieval field boundaries.	Low to medium due to proximity to some settlement anomalies identified to geophysical surveys to west – BH near northern edge of heritage extent, and cropmarks of unknown date.	Archaeological Watching Brief. No alternative as currently best position.
BH21- 65	1572	52077	APS_ 017	N/A	Probable site of WWII searchlight battery	Low risk for micrositing. Medium – BH to south-west corner of field, although no immediate identified features.	Archaeological Watching Brief. No alternative as currently best position based on known data from APS report
BH21- 66	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH3- 04	N/A	N/A	N/A	N/A	N/A	Not located within recorded heritage assets or unknown archaeological remains perceived within available data, however immediately adjacent to several recorded heritage assets/finds of Saxon date	Archaeological watching brief at this BH.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH-3- 05	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH4- 06	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH4- 07	1527	38639	APS_ 129	N/A	Within area of military site – confirmed as no longer extant.	Low – BH within area recorded on NHER as WWII barbed wire enclosures, confirmed as no longer extant.	none
BH4- 08	407	6259	N/A	N/A	Within area of Multi-period finds (Neolithic, Mesolithic, roman, medieval/post-med)	Low – BH within area recorded on NHER as site of multi period finds. Low risk for micrositing.	Archaeological Watching Brief. No alternative as currently best position based on known data from APS report
BH4- 09	1712	6281	N/A	N/A	Undated possible iron extraction pits.	Low- BH within area recorded on NHER as site of possible undated iron extraction pits. Low risk of micrositing, although alternative provided.	Alternative provided, no watching brief. Note: outside of DCO limits now.
BH4- 10	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH4- 11	917, 1528	38640, 38642	APS_ 131	N/A	Site of late Saxon to medieval earthwork pits, and site of WWII weapons pits.	Medium – BH within area recorded as multiperiod pits. Medium risk for micrositing, have provided alternative.	Archaeological Watching Brief.
BH5- 12	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH5- 13	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH6- 14	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data.	N/A
BH6- 15	N/A	N/A	N/A	N/A	N/A	No micrositing required. No recorded heritage assets or unknown archaeological remains perceived within available data, although to the adjacent south is APS_104 (buried ditches of unknown date and origin). No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway.
BH6- 16	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data, although to the adjacent east is APS_104 (buried ditches of unknown date and origin).	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway.
BH7- 17	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH7- 18	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH7- 19	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH7- 20	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH7- 21	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A

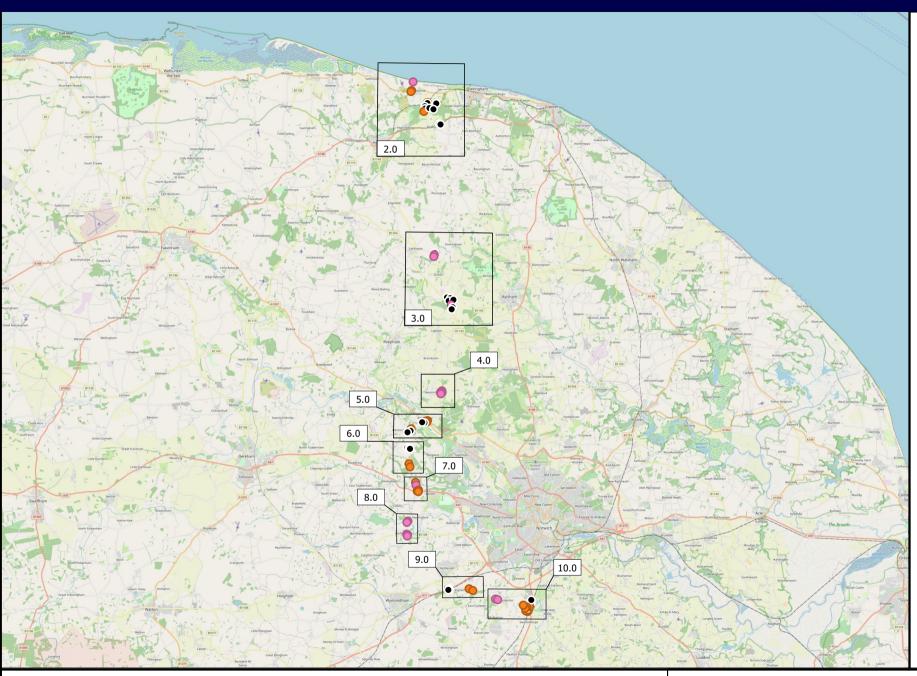
BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
BH8- 22	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. No micrositing required.	N/A
BH8- 23	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data, although be aware of linear geophysical anomalies indicative of settlement to the adjacent west. No micrositing required.	N/A
BH9- 24	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. Adjacent records include Multi period finds, including early Saxon period. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway. No alternative provided due to current location being best placed.
BH9- 25	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. Adjacent records include Multi period finds, including early Saxon period. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway. No alternative provided due to current location being best placed.
BH9- 26	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. Adjacent records include Multi period finds, including early Saxon period. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway. No alternative provided due to current location being best placed.
BH9- 27	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data. Adjacent records include Multi period finds, including early Saxon period. No micrositing required.	Archaeological Watching Brief and Geoarchaeological Monitoring due to proximity to archaeological features and waterway. No alternative provided due to current location being best placed.

BH_ID	DEP/SEP ID	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
TP21- 01	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeologic al remains perceived within available data. Close proximity to Gowthorpe manor settlement and geophysical settlement anomalies.	Archaeological watching brief due to proximity to geophysical anomalies and settlement of Gowthorpe manor.
						No micrositing required.	
TP21- 02	1081, 1692	52080, 52079	APS_ 05	N/A	Cropmarks of fragmentary ditches of unknown date and post-medieval field boundaries.	Low – TP towards centre of recorded data, and cropmarks of unknown date.	Archaeological watching brief due to proximity to geophysical anomalies and
						Low risk for micrositing.	settlement of Gowthorpe manor.
TP21- 03	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data.	N/A
						No micrositing required.	
TP21-	1081	52080	APS_	N/A	Post-medieval field boundaries.	Low – TP close to northern edge, and cropmarks of unknown date.	Archaeological watching brief due to proximity to geophysical anomalies and
04			05			Low risk for micrositing, although alternative provided.	settlement of Gowthorpe manor.
TP21- 05	N/A	N/A	N/A	N/A	N/A	No recorded heritage assets or unknown archaeological remains perceived within available data.	N/A
						No micrositing required.	
TP21- 06	N/A	N/A	N/A	PA2	Site of medieval village of Gowthorpe, and cropmarks of ring ditches and sub-rectangular enclosures. 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	No recorded heritage assets or unknown archaeologic al remains perceived within available data. Close proximity to Gowthorpe manor settlement and geophysical settlement anomalies.	Archaeological watching brief due to proximity to geophysical anomalies and settlement of Gowthorpe manor.
					settlement.	No micrositing required.	
TP21- 07	589, 590, 1611, 727, 931, 1063, 936, 1514	54877, 57922, 52071, 55197, 52069, 9750,	APS_ 012 & APS_ 014 to 016	PA2	Site of medieval village of Gowthorpe, and cropmarks of ring ditches and sub-rectangular enclosures. 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	No recorded heritage assets or unknown archaeologic al remains perceived within available data. Close proximity to Gowthorpe manor settlement and geophysical settlement anomalies.	Archaeological watching brief due to proximity to geophysical anomalies and settlement of Gowthorpe manor.
	7011	9717, 52070			settlement.	No micrositing required.	

ВН	ID DEP/SE	NHER Pref Ref	APS ID	Geophys Survey Area	Summary of Findings	Perceived Heritage Importance	Suggested Mitigation Measures
TP2 08	589, 590 1611, 1- 727, 931 1063, 936, 1514	54877, 57922, 52071, 55197, 52069, 9750, 9717, 52070	APS_ 012 & APS_ 014 to 016		Linear settlement clearly identified along the western edge of the survey area, which comprises a series of subrectangular enclosures with divisions and multiple discrete anomalies. Low magnitude linear anomalies	No recorded heritage assets or unknown archaeologic al remains perceived within available data. Close proximity to Gowthorpe manor settlement and geophysical settlement anomalies. No micrositing required.	Archaeological watching brief due to proximity to geophysical anomalies and settlement of Gowthorpe manor.



DRAWINGS



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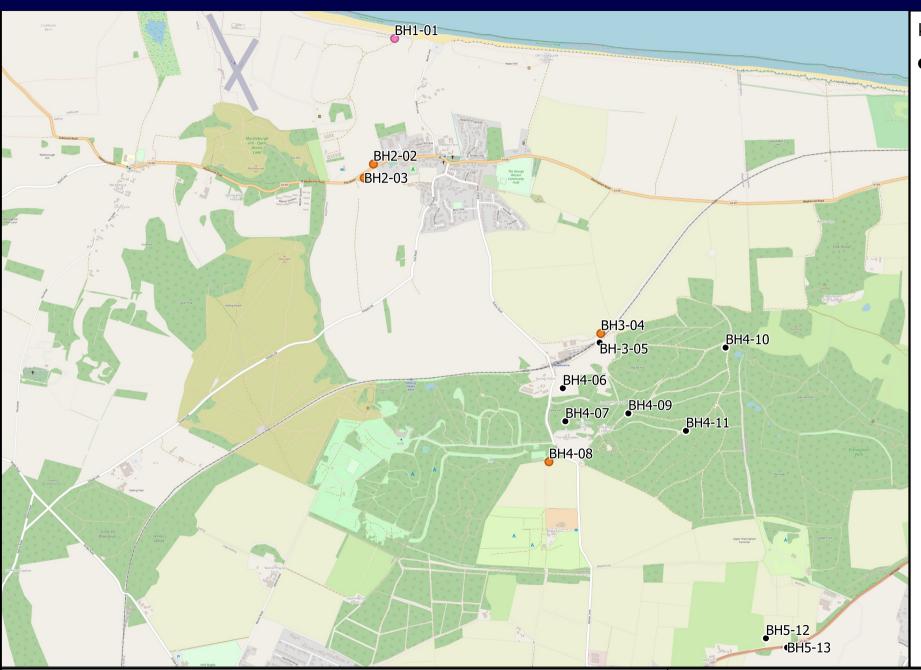
GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
- No Monitoring Required

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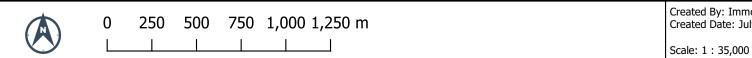


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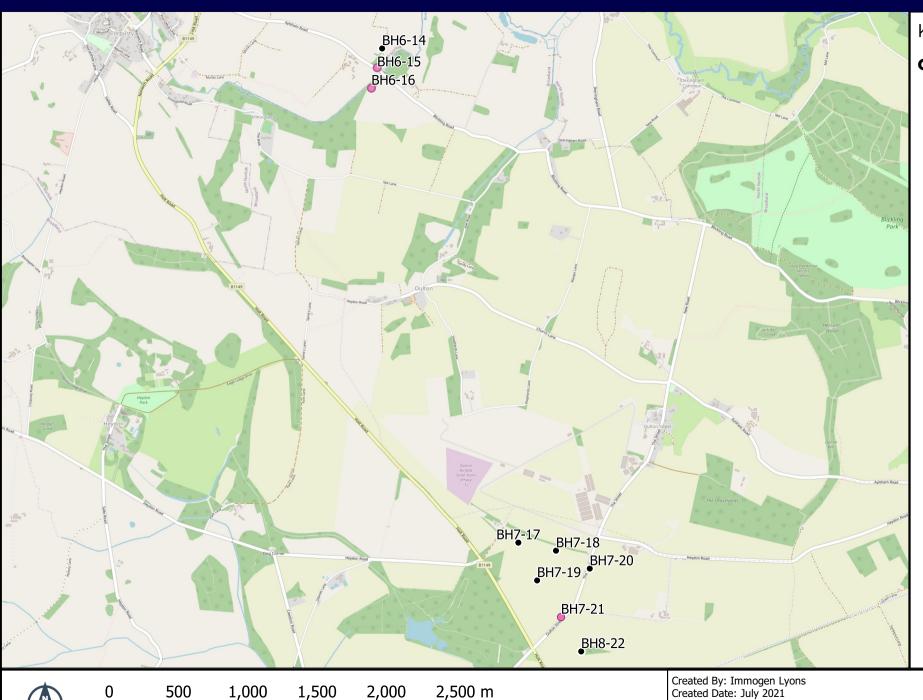
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- Archaeological Watching Brief
- No Monitoring Required

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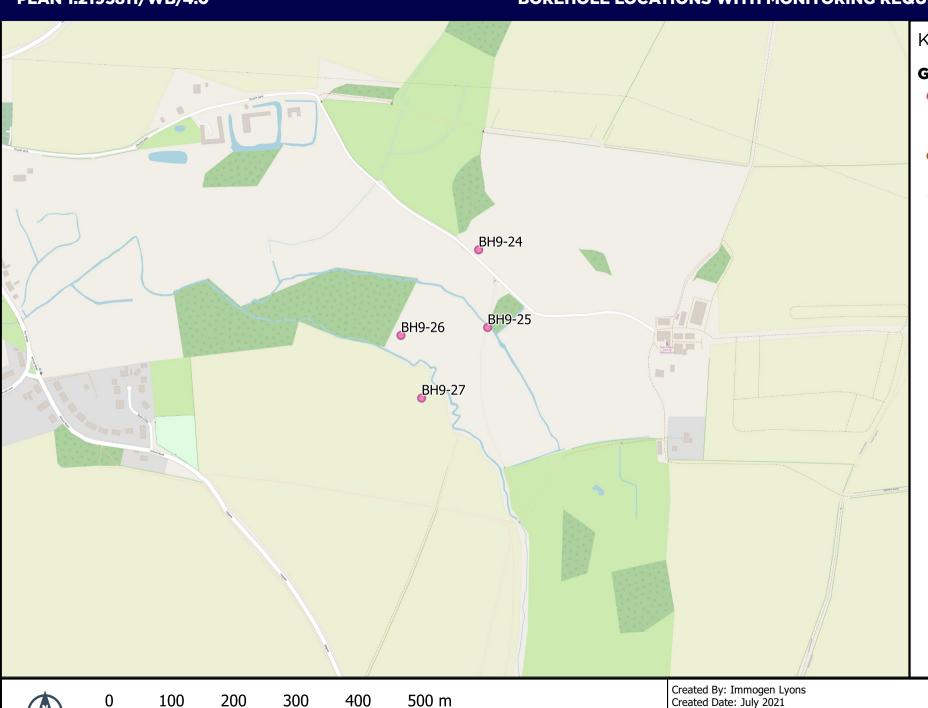
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GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
- No Monitoring Required



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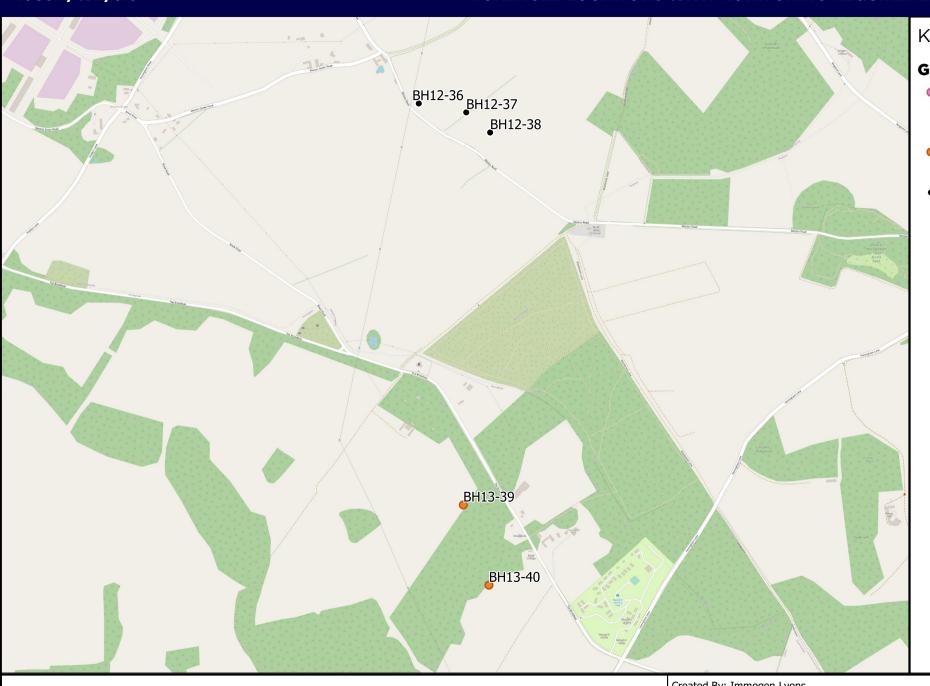
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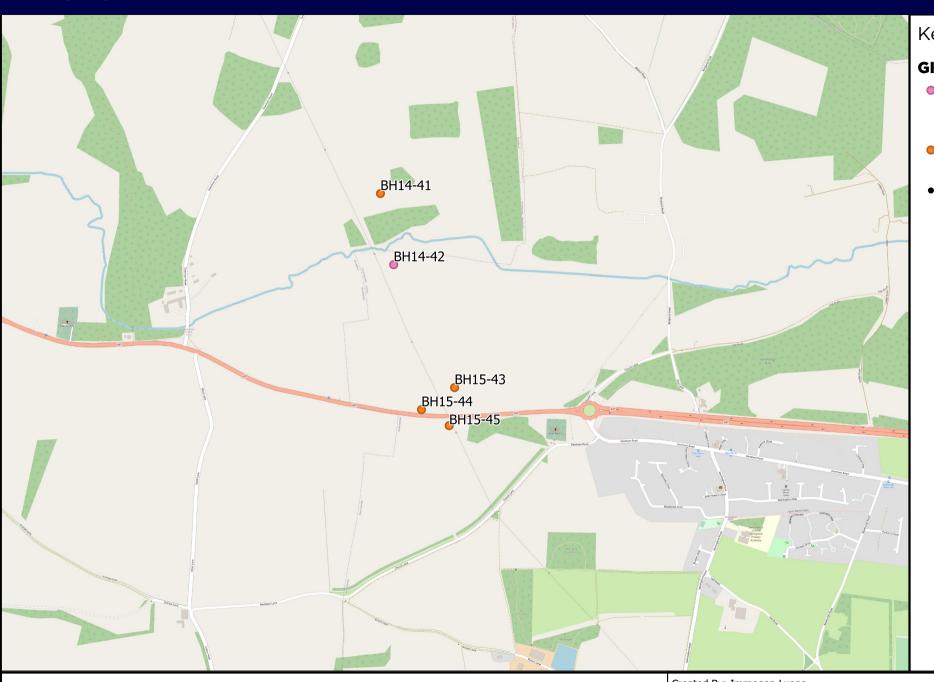
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GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
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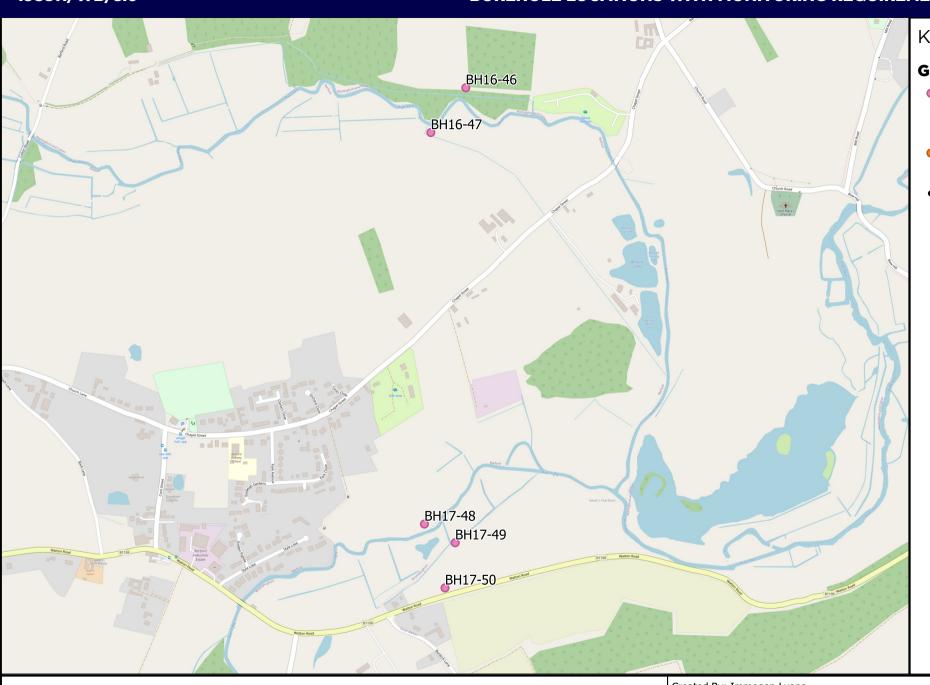
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BOREHOLE LOCATIONS WITH MONITORING REQUIREMENTS



Key:

GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
- No Monitoring Required

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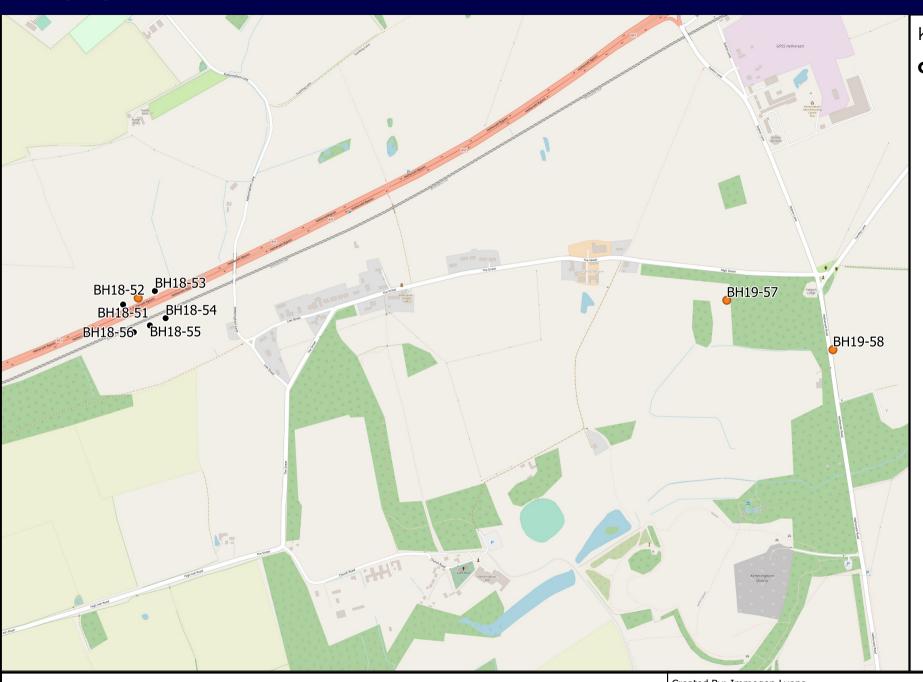
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BOREHOLE LOCATIONS WITH MONITORING REQUIREMENTS

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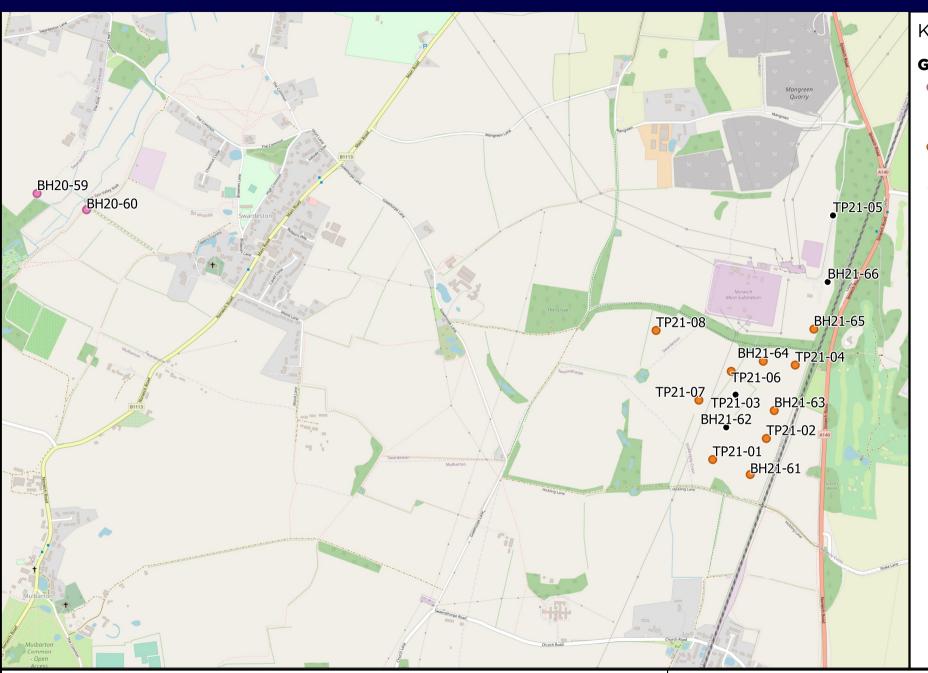


Key:

GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
- No Monitoring Required





Key:

GI Locations

- Archaeological and Geoarchaeological Monitoring
- Archaeological Watching Brief
- No Monitoring Required

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