

3F Archaeological Mitigation Written Scheme of Investigation

National Grid (Richborough Connection Project) Order

*Regulation (5)(2)(a) of the
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and
TEN-E Regulation EU347/2013*



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Richborough Connection Project

Volume 5

5.4 Environmental Statement Appendices

5.4.3F Archaeological Mitigation Written Scheme of Investigation

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Table of Contents

| | | |
|-----------|--|-----------|
| 1. | THE RICHBOROUGH CONNECTION PROJECT | 1 |
| 1.1 | The applicant | 1 |
| 1.2 | The national transmission system | 1 |
| 1.3 | The need for new infrastructure and the Richborough Connection project | 2 |
| 1.4 | Overview of the proposed development | 3 |
| 1.5 | Planning Act 2008 and TEN-E Regulation EU 347/2013 | 3 |
| 2. | THE WRITTEN SCHEME OF INVESTIGATION | 5 |
| 2.1 | This Document | 5 |
| 2.2 | Archaeological Assessment | 5 |
| 2.3 | Identified Heritage Assets | 9 |
| 2.4 | Outline Mitigation Strategy | 10 |
| 2.5 | Project Roles | 11 |
| 3. | AIM AND OBJECTIVES | 13 |
| 3.1 | Aim | 13 |
| 3.2 | Objectives | 13 |
| 3.3 | Archaeological Research Agenda | 15 |
| 4. | SCOPE OF WORK | 23 |
| 5. | STANDARDS FOR ARCHAEOLOGICAL WORK | 37 |
| 5.1 | Archaeological monitoring | 37 |
| 5.2 | Standards for Monitoring | 37 |
| 5.3 | Strip, map and sample | 38 |
| 5.4 | Palaeoecological and Geoarchaeological investigation | 39 |
| 5.5 | Standards for Archaeological Fieldwork | 40 |
| 5.6 | Procedures in respect of statutorily designated remains | 46 |
| 5.7 | Post-Excavation work, Reporting and Dissemination | 47 |
| 6. | HEALTH, SAFETY AND ENVIRONMENT | 51 |
| 7. | MONITORING | 53 |

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1. THE RICHBOROUGH CONNECTION PROJECT

1.1 The applicant

- 1.1.1 The role of National Grid Electricity Transmission plc (National Grid), as the national electricity transmission network operator across Great Britain, is one of the four main elements that make up the UK electricity industry including generators, suppliers and distributors. Generators produce electricity from (amongst others) coal, gas, oil and nuclear power plants, hydroelectric plants, wind farms and other sources of renewable energy. Energy suppliers then sell this electricity to consumers, using transmission and distribution networks to pass the electricity to homes and businesses.
- 1.1.2 National Grid owns and maintains the network in England and Wales and is responsible for the operation of parts of the transmission system in Scotland that are owned by other transmission licensees (Scottish Power and Scottish & Southern Electricity), providing electricity supplies from generating stations and interconnectors to local distribution companies. National Grid does not distribute electricity to individual domestic premises, but its role in the wholesale market is fundamental to ensuring a reliable and quality supply to all.
- 1.1.3 National Grid has a statutory duty to develop and maintain an efficient, coordinated and economical system of electricity transmission under the Electricity Act 1989 (the Electricity Act). This includes a statutory obligation to offer to connect any new generating stations or interconnectors applying to connect to the transmission system.

1.2 The national transmission system

- 1.2.1 The UK has a competitive electricity market guided by mechanisms for the trading of electricity between generators and suppliers. Generators produce electricity from a variety of fuel sources (including coal, gas, nuclear and wind), which is sold in the electricity wholesale market. Suppliers purchase electricity wholesale with most of them providing retail services to their customers.
- 1.2.2 Transmission of electricity in the UK requires permission by a licence granted under Section 6(1) (b) of the Electricity Act. National Grid has been granted a transmission licence and is therefore bound by the legal obligations primarily set out in the Electricity Act and the transmission licence.
- 1.2.3 At generating stations/interconnectors, electricity that is produced/available is connected to the high voltage transmission system. National Grid is responsible for operating the high voltage transmission system which carries electricity between the generators and suppliers. National Grid's high voltage electricity transmission system operates at 275,000 volts (275kV) and 400,000 volts (400kV). The system is made up of approximately 22,000 pylons with a combined overhead line and underground cable route length of approximately 7,890km, connecting together a network of 377 substations across the country.
- 1.2.4 The primary transmission voltages of 275kV or 400kV are then transformed to lower voltages at the substations for separate regional Distribution Network Operators (DNOs), who own and operate the electricity distribution networks that comprise substations, overhead lines and underground cables which operate at 132,000 volts

(132kV) and below. It is the role of these companies to distribute electricity to homes and businesses. The DNO for the region within which the proposed development is located is UK Power Networks.

- 1.3 The need for new infrastructure and the Richborough Connection project**
- 1.3.1 National Grid is connecting new nuclear, wind farm and other energy sources around the UK. One of these new sources of energy is the Nemo Link®.
- 1.3.2 The Nemo Link is the high voltage direct current (HVDC) electricity interconnector project of approximately 1,000MW (or 1GW) capacity, which will join the UK and Belgium. This project will allow the distribution of electricity between the UK and Belgium via a subsea cable and requires a connection to the National Grid high voltage National Electricity Transmission System (NETS) in the Richborough area where it makes landfall (comes out of the sea and onto the land).
- 1.3.3 Nemo Link is a joint venture between National Grid Nemo Link Limited, a subsidiary company of National Grid, and the Belgian Elia Group, the Belgian transmission system operator.
- 1.3.4 The Nemo Link interconnector will consist of subsea and underground cables connected to a converter station and an electricity substation in each country. The Nemo Link convertor station and National Grid substation are proposed at the former Richborough power station site and have been granted planning permission by Thanet and Dover District Councils in December 2013. The link would connect the electricity systems of the two countries, and will allow electricity to flow between the UK and Europe, helping to provide a secure supply of electricity to homes and businesses for years to come.
- 1.3.5 Interconnectors are a fundamental part of the developing European energy infrastructure. Greater interconnection will not only contribute to the achievement of a properly functioning European energy market but it will also enhance security of supply in both Great Britain and Europe. Further to this, interconnection will provide an important mechanism for responding to and managing both intermittency and excess power associated with renewable generation.
- 1.3.6 As detailed in the Need case, (**Volume 7, Document 7.3, Chapter 4**) there is no National Grid high voltage transmission network in the Richborough area. Therefore in order to provide a transmission connection, new transmission infrastructure is required between Richborough and the existing National Grid high voltage transmission network. This new infrastructure project is called the Richborough Connection project.
- 1.3.7 There are existing pylons that run west from the former Richborough Power Station site. The existing pylons are owned by UK Power Networks, a separate company to National Grid. These pylons operate at a lower voltage of 132kV, and are not capable of carrying the additional 1000MW of power the Nemo Link will provide.
- 1.3.8 To connect Nemo Link to the existing National Grid high voltage NETS, the Richborough Connection project proposes a new high voltage 400kV electricity connection between Richborough and Canterbury North Substation in Kent.

1.4 Overview of the proposed development

1.4.1 National Grid has submitted an application for development consent to the Secretary of State (delegated to the Planning Inspectorate (PINS)) to build a new high voltage 400kV overhead line connection between Richborough 400kV Substation and Canterbury North 400kV Substation in Kent. The proposed development, falls within the administrative boundaries of Kent County, Canterbury City, Thanet District and Dover District Councils in the south east of England.

1.4.2 The proposed development consists of the following principal components and activities:

- A new 400kV overhead line between Richborough and Canterbury North¹ Substations (to be known as the PC route). This would be approximately 20km long and would be built using 45 standard lattice pylons and 15 low height lattice pylons (60 pylons in total).
- A permanent diversion of an existing lower voltage 132kV overhead line (known as the PY route) to enable the new 400kV overhead line to be constructed above the existing lower voltage overhead line. This would be done by building 6 new pylons, 4 of which are of a different height so the new 400kV overhead line can then be built. The removal of 2 pylons of existing lower voltage 132kV overhead line on the PY route due to the permanent diversion.
- Three temporary diversions of another existing lower voltage 132kV overhead line (known as the PX route). The PX route has to remain in operation (energised) whilst the new 400kV overhead line is being built, so in order to maintain local electricity supplies, three temporary diversions of the existing PX route would be needed where the new 400kV overhead line crosses over it. This would be done by transferring the PX route onto wooden poles so that the new 400kV overhead line can be built.
- The removal of 20.6km (79 pylons) of existing lower voltage 132kV overhead line, the PX route (and its temporary diversions) which runs between Richborough 132kV Substation and Canterbury South 132kV Substation.
- Other works, for example, temporary access roads to reach pylon construction and demolition areas, bridge structures, highway works, construction compounds, protective scaffold structures, pylon work sites and ancillary works.

1.5 Planning Act 2008 and TEN-E Regulation EU 347/2013

1.5.1 The project is a Nationally Significant Infrastructure Project (NSIP), as defined by the Planning Act 2008 (the Act) and The Planning Act 2008 (Nationally Significant Infrastructure Projects) (Electric Lines) Order 2013, as it involves the installation of an electric line above ground of more than 2km, which will operate at 400kV.

1.5.2 As an NSIP, the project requires the grant of development consent by the making of a Development Consent Order (DCO) under the Act.

¹ There are three substations in Canterbury. Canterbury North which comprises two substations: a 400kV substation operated by National Grid and a 132kV substation operated by UK Power Networks; and Canterbury South a 132kV substation operated by UK Power Networks.

² Planning Act 2008, Chapter 29 sets out what development constitutes a Nationally Significant Infrastructure Project.

- 1.5.3 Further to the requirements under the Act, the European Commission has adopted guidelines to assist in the development of energy networks within Europe. These guidelines are known as the TEN-E Regulation (guidelines for trans-European energy infrastructure EU 347/2013). The TEN-E Regulation sets out guidelines for streamlining the permitting process for major energy infrastructure projects that contribute to European energy networks, such projects are referred to as Projects of Common Interest (PCI). The Richborough Connection project is a 'Project of Common Interest' due to its role in providing a connection between the proposed Nemo Link and the existing UK National electricity transmission network.
- 1.5.4 In the case of the UK and the Richborough Connection project, the National Competent Authority responsible for ensuring the requirements of the TEN-E Regulation are fulfilled is the Department for Energy and Climate Change (DECC).
- 1.5.5 For the Richborough Connection project, DECC has delegated tasks relating to the TEN-E Regulation to PINS alongside their consideration of the application for development consent under the Act.

2. THE WRITTEN SCHEME OF INVESTIGATION

2.1 This Document

2.1.1 This document sets out a scheme of archaeological investigation which is intended to mitigate the adverse effects of the construction of the Proposed Development.

2.1.2 This document comprises four principal elements:

- a statement of the aims and objectives of the investigative works, including an archaeological research agenda (**Section 3**);
- a description of the scope of the proposed investigative work (**Section 4**);
- standards for completion of the proposed investigative work, any post excavation analysis of artefactual material and dissemination of the results (**Section 5**); and
- project management procedures (**Sections 6 and 7**).

2.2 Archaeological Assessment

2.2.1 An archaeological desk-based assessment was produced as part of the EIA process (see **Volume 5, Document 5.4.8A, Appendix 8A**). This assessment presented records of designated heritage assets and previously identified non-designated heritage assets. In order to characterise the potential presence of heritage assets within the Order Limits, the assessment divided the area within the Order Limits into parcels based on the Kent Historic Landscape Characterisation (HLC) data, and set out an assessment of the potential for archaeological remains to be present and a separate assessment of the likely heritage significance of those remains.

2.2.2 The results of the assessment are summarised at **Table 1.1** (some parcels considered at the statutory consultation stage and reported in the Preliminary Environmental Information Report were subsequently excluded from the DCO Order Limits following design iterations).

Table 2.1 Summary of Archaeological Desk-based Assessment

| Parcel | Comments | Potential ³ | Significance ⁴ |
|-----------|---|------------------------|---------------------------|
| 5 | Roman road, possible Roman invasion camp, medieval settlement, machine gun emplacement, undated features at Kings End Cottage, chance finds (prehistoric, Iron Age). Area within site boundary is limited to access along Whitehouse Drove. | High | High |
| 7 | Possible prehistoric occupation, projected line of Roman road, listed buildings Area within site boundary is limited to access along Whitehouse Drove. | High | High |
| 8 | Medieval water management features, evidence of agricultural practices, post-medieval sheep grazing, possible post-medieval oval enclosure, modern military features (stores depot, defences and drainage work, bomb damage), Deal Branch Railway). | Medium | Low to medium |
| 9 | Post-medieval sheep pen, 20 th century military features (camps, sidings, salvage dump), Deal Branch Railway. | Medium | Low |
| 10 | Modern 20 th century features (Richborough Port, sidings, camp and East Kent light railway). | High | Low |
| 11 | Richborough power station, port, sidings, WWI defensive features. Potential for deposits of palaeoenvironmental and geoarchaeological interest. | High | Low |
| 12a and b | Richborough port and sidings, medieval Abbot's Wall, medieval/post-medieval enclosures, hay stack stances. Potential for Romano-British funerary activity. Potential for geoarchaeological interest. | High | Low to medium |
| 13 | Early medieval to medieval salt workings, possible medieval settlement of Sarre, post-medieval agricultural activity, Modern Ashford and Margate Railway, WWII military defensive features, chance find of a post-medieval coin. | High | Medium to High |
| 14 | Possible medieval settlement of Sarre, Post-medieval heritage assets (disused chalk pit, railway). | High | Low to Medium |

³ Potential is rated on a scale of negligible – high. Negligible refers to areas where archaeological remains have demonstrably been disturbed, low is where there is no specific evidence for the presence of archaeological remains, Medium acknowledges the documented presence of nearby remains which could influence the presence of features in the parcel and high reflects the presence of identified remains.

⁴ Significance is rated on a scale of Low to High. Low relates to non-designated heritage assets of primarily local significance. Medium to more significant non-designated heritage assets or locally designated features. High relates to nationally designated heritage assets or non-designated heritage assets of equivalent significance.

| Parcel | Comments | Potential³ | Significance⁴ |
|---------------|---|------------------------------|---------------------------------|
| 15 | No recorded assets within parcel, deposits of potential geoaerchaeological interest. | High | Low |
| 16 | Listed buildings, chance finds (Iron Age, Roman, Early medieval), former medieval trackway. | High | Low to medium |
| 17 | Possible medieval settlement, medieval road, medieval causeway, WWII road block. Deposits of potential geoaerchaeological interest. | High | Low to medium |
| 18 | WWII pill box and road block. | High | Low to medium |
| 20 | Post-medieval outfarm, medieval saltmounds, geoaerchaeological interest. | High | Low to medium |
| 21 | Medieval to post-medieval salt-working mounds, undated cropmarks of an oval feature, cropmarks of WWII trenches, Sarre Wall, Peat recorded as present. | High | Medium |
| 22 | Listed building, medieval saltmounds and associated drainage nearby. | High | High |
| 23 | Chance find (Early medieval). | Medium | Low to medium |
| 24 | Post-medieval farmstead. | Medium | Low |
| 25 | Prehistoric or Roman enclosure, two ring ditches, four ditches possibly relating to the Late Bronze Age to Early Iron Age , A post-medieval sandpit, Post-medieval gravel pit, cropmarks relating to a WWI trench. Deposits of potential geoaerchaeological interest. | High | Medium |
| 26 | Possible Bronze Age barrows. | Medium | Medium |
| 27 | Post-medieval farmstead. | High | Low |
| 28 | Cropmarks relating to possible trackways and enclosures, a Roman trackway and rectilinear enclosure, Roman road, chance finds (Bronze Age, Roman to Early medieval, Post-medieval). | High | Low to medium |
| 29 | Roman Road, WWII reinforced concrete pill box. | High | Low to medium |
| 30 | Chislet Colliery, parcel is adjacent to a Roman road. | Low | Unknown |
| 31 | Post-medieval listed building and barn, chance find (Bronze Age hoard). | High | High |
| 32 | No recorded assets within parcel. | Low | Unknown |
| 33 | No recorded assets within parcel. | Low | Unknown |
| 34 | No recorded assets within parcel. | Low | Unknown |

| Parcel | Comments | Potential³ | Significance⁴ |
|---------------|--|------------------------------|---------------------------------|
| 35 | Cropmarks (unknown date), Roman road, chance finds (Roman and medieval). | High | Low |
| 36 | No recorded assets within parcel. | Negligible | Negligible |
| 37 | Roman road. | High | Low to medium |
| 38 | No recorded assets within parcel. | Medium | Low |
| 39 | Field systems. | Medium | Low to medium |
| 40 | No recorded assets within parcel. | Medium | Low to Medium |
| 41 | Early medieval occupation site. | Medium | Medium to high |
| 42 | No recorded assets within parcel. | Low | Unknown |
| 43 | Roman British stone coffin, chance finds (Prehistoric and medieval). | Medium | Medium to high |
| 45 | No recorded assets within parcel. | Low | Unknown |
| 46 | Listed buildings within village. | High | High |
| 47 | Chance find (Roman). | Low | Unknown |
| 48 | Chance find (Bronze Age founders hoard). | Medium | Low to medium |
| 49 | Listed and locally important buildings within village. | High | High |
| 50 | Listed buildings. | High | High |
| 51 | No recorded assets within parcel. | Low | Unknown |
| 52 | No recorded assets within parcel. | Low | Unknown |
| 53 | No recorded assets within parcel. | Low | Unknown |
| 54 | Late Bronze Age/Early Iron Age activity, Roman pits and post holes, Roman pits and post holes, WWII Roadblock, chance finds (Prehistoric, Early medieval). | Medium | Low to medium |
| 55 | No recorded assets within parcel. | Low | Unknown |
| 56 | No recorded assets within parcel. | Low | Unknown |
| 57 | WWI bomber crash site, chance finds (Palaeolithic), River Stour Navigation. | Negligible | Negligible |
| 58 | No recorded assets within parcel. | Low | Unknown |
| 59 | No recorded assets within parcel. | Negligible | Negligible |
| 60 | No recorded assets within parcel. | Negligible | Negligible |

| Parcel | Comments | Potential ³ | Significance ⁴ |
|--------|---|------------------------|---------------------------|
| 61 | No recorded assets within parcel. | Negligible | Negligible |
| 62 | Listed building, WWII fortification, chance finds (late 17 th -century). | High | High |
| 63 | Conservation area, Grade II listed buildings, historic farmstead | High | High |

2.3 Identified Heritage Assets

2.3.1 In general, the areas of highest potential for the survival of archaeological remains can be summarised as:

- Deposits of palaeoenvironmental or geoarchaeological interest located within land reclaimed from the Wantsum Channel, the Sarre Penn Valley and associated estuarine marshes. These are likely to be of low heritage significance where only silt deposits are identified, rising to medium where extensive or deep peat deposits preserving significant palaeoenvironmental material are present.
- First and Second World War (WWI and WWII) military features, particularly around Sarre, south of Chislet, on the outskirts of Canterbury and in the vicinity of Richborough Port. These are likely to be of low to medium significance for historic and archaeological interest.
- Features associated with the Saxon Shore Fort and Amphitheatre at Richborough. These features are likely to be of medium or high significance for archaeological and historic interest depending on preservation, nature and extent.
- Features associated with post-medieval agricultural settlement and activity, particularly in the Chislet Marshes and Ash Level. These features are likely to be of low significance for archaeological interest.
- Features associated with Roman occupation of the mainland, particularly along the network of Roman Roads in the area, specifically Hoath Road and Island Road. These features are likely to be of low to medium significance for archaeological interest.
- Features associated with prehistoric occupation of the area within the site boundary. Potential features are located at various points, most notably south of Chislet and around Shalloak Quarry. These features are likely to be of medium to high significance for archaeological interest.
- Features associated with early medieval settlement, primarily near Vale Farm and south of Sarre. These features are likely to be of medium to high significance for archaeological interest.
- Features associated with Early medieval and medieval exploitation and reclamation of the saltmarsh in the mouth of the Sarre Penn Valley and through the marshes south and east of Sarre. These features are likely to be of low to medium significance for archaeological interest.

- Undated features evidenced by cropmarks, principally to the west of Broadoak. It is difficult to make an assessment of the potential significance of these features without further investigation, but it is likely that these features are of low to medium significance for archaeological interest.

2.3.2 The presence of previously unrecorded archaeological remains may be suggested by location of surface finds of archaeological material, although these records could also reflect chance loss and do not presuppose the presence of related archaeological features. While it is difficult to predict the extent and significance of these deposits, comparison with the remains observed elsewhere in the site boundary suggests that any such remains are likely to represent previously unrecorded elements of asset types discussed above, and to be relatively widely distributed and to be of low or medium significance for archaeological value.

2.4 **Outline Mitigation Strategy**

2.4.1 Mitigation will in this case be achieved through archaeological investigation. This would comprise three key elements. These would be:

- Archaeological monitoring of intrusive works:
 - This technique is most appropriate where the extent of disturbance is restricted and/or where remains are anticipated to be of limited significance.
 - It will comprise an archaeologist being present during intrusive groundworks so that the presence or absence of archaeological remains could be confirmed, and any such remains be appropriately recorded.
 - This mitigation technique will be implemented where a potential for archaeological remains to be present has been identified but where disturbance would be limited and/or where archaeological remains are expected to be of low complexity or significance.
- Strip, map and sample:
 - This technique allows a greater degree of archaeological control and is more appropriate for more extensive disturbance as a result of development or more complex and significant archaeological remains.
 - It will comprise the topsoil stripping of working areas under archaeological supervision in advance of construction works commencing, followed by a period of initial identification and mapping of archaeological remains which could then be excavated in a controlled manner.
 - This technique will be used to investigate areas where more extensive disturbance is anticipated in areas where more significant and/or complex archaeological remains are anticipated, specifically around the area of areas of archaeological interest between pylons PC22 and PC28.
- Palaeoenvironmental and geoarchaeological investigation which will comprise two key elements:
 - a combination of largely opportunistic sampling undertaken to support the recording and interpretation of archaeological remains identified in monitoring or strip, map and sample mitigation, procedures for which are

set out at **Section 4** for archaeological monitoring and strip, map and sample mitigation; and

- a planned scheme of works based on augering aimed to investigate the Holocene alluvial deposits within the order limits, specifically within the Sarre Penn valley and across the former Wantsum Channel (between pylons PC21 and PC60).

2.4.2 Any investigative work will follow the project-specific research agenda set out at **Section 3**.

2.4.3 Specific protocols for action to be taken in the event that human remains, remains which may comprise Protected Military Remains under the terms of the 1986 Act or remains which may be considered Treasure under the Treasure Act 1996 are set out at **Section 4**.

2.5 Project Roles

2.5.1 All archaeological works will be managed by the Archaeological Clerk of Works, appointed by and acting for National Grid. The Archaeological Clerk of Works will ensure that the WSI is implemented, will review any archaeological method statements, sampling/finds policies and reporting, and will lead any necessary consultation with KCC and other relevant bodies.

2.5.2 Archaeological works will be undertaken by the Archaeological Contractor, acting under the supervision of the Archaeological Clerk of Works. The Archaeological Contractor will have appropriate experience and be able to maintain appropriate staffing for the proposed work. The Archaeological Contractor shall be a Registered Organisation of the ClfA, or have equivalent experience and expertise. The Archaeological Contractor shall be responsible for supplying any specialist technical or analytical services required for specific archaeological procedures.

2.5.3 Before Archaeological work commences, the appointed Archaeological Contractor will provide a detailed method statement to set out how they intend to implement the WSI. This will be agreed with the Archaeological Clerk of Works.

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3. AIM AND OBJECTIVES

3.1 Aim

3.1.1 The aim of the archaeological mitigation strategy is to mitigate any loss of archaeological interest arising from disturbance or removal of archaeological remains during the construction of the Richborough Connection project.

3.2 Objectives

3.2.1 The objectives of the archaeological mitigation strategy are to:

- identify archaeological remains which may be disturbed by the proposed scheme;
- where reasonably practicable, ensure that such remains are appropriately protected from disturbance during works;
- ensure that any remains which are disturbed are appropriately recorded;
- investigate Holocene sediments within the Sarre Penn valley and former Wantsum Channel;
- carry out appropriate post-excavation analysis to allow site records and analysis of archaeological material to be synthesised into an appropriate interpretative report; and
- disseminate the findings of the archaeological investigations at a level commensurate with their significance.

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3.3 Archaeological Research Agenda

Table 3.1 Archaeological Research Agenda

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|--|--|---|---|---|
| A – Deposits of palaeoenvironmental or geoarchaeological interest | <p>1) Understand the Pleistocene and Holocene environments to contextualise presently poorly-understood artefact scatters and develop a clearer understanding of the earliest human occupation of this part of Kent.</p> <p>2) Investigate the changing landform of the area, particularly the silting of the Wantsum and deliberate reclamation of the Ash Level and Chislet Marshes from</p> | <p>1A.SO1 - Understanding Pleistocene environmental and climatic change</p> <p>1A. SO2 - Understanding the Pleistocene evolution of the Thames and Medway drainage systems.</p> <p>1A.SO3 - Identifying key areas where primary context sites might be preserved.</p> <p>1C.SO1 - Characterising key stratigraphic units and establishing the vertical sequence of buried land-surfaces and other deposits.</p> <p>1C.SO2 - Developing understanding of</p> | <p><i>Draft research agenda 2013-7:</i></p> <ul style="list-style-type: none"> – Improved mapping, longitudinal correlation and dating of terrace systems within major river valley and tributary systems (Lower Thames, Stour, Medway, Arun, Rother eastern Solent Basin, Wealden rivers). <p><i>SERF Research Agenda conference discussion points for the Upper Palaeolithic/Mesolithic:</i></p> <ul style="list-style-type: none"> – Colonisation and occupation issues: to what degree is the region a crossroads or a backwater in terms of UP | <p><i>Theme 1 – Coastal Processes and Landscapes:</i></p> <ul style="list-style-type: none"> – Evidential value of deposits and features within the former Wantsum Channel. – Landscape of the former Wantsum channel is illustrative of process of inning and influence of monastic land management from Canterbury. |

⁵ GTRF – Greater Thames Research Framework

⁶ SERF – South-East Research Framework,

⁷ DDHS – Dover District Heritage Strategy

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|---|--|--|---|--|
| | <p>the medieval period onwards.</p> <p>3) Better understand the landscape context of pre-medieval sites, most notably Anglo-Saxon settlement and funerary activity and Richborough Port.</p> | <p>coastline and sea-level change in the estuary through time.</p> <p>1C.SO3 - Developing models for environmental change related to the evolution of the estuary's geometry.</p> <p>1C.SO4 - Developing appreciation of human interaction with this environment.</p> <p>1C.AR1 - Development of palaeogeographic maps illustrating the physical evolution of the coastline in relation to sea-level change.</p> <p>1C.AR5 - Detailed investigation of selected areas by means of palynological, soil micro-morphological, molluscan and plant macrofossil analyses.</p> | <p>and early Mesolithic occupation patterns.</p> | |
| <p>B – Features associated with prehistoric occupation</p> | <p>1) Better understand the extent and nature of prehistoric activity within the area.</p> <p>2) Compare archaeological evidence for</p> | <p>4A.SO1 - Analysing the adaptation and evolution of settlement patterns in response to coastal change.</p> <p>4A.SO9 - Analysing the pattern of settlements of</p> | <p><i>SERF Research Agenda conference discussion points for the Middle Bronze Age/Iron Age:</i></p> <ul style="list-style-type: none"> – The evolution of settlement: there are major problems such as | <p><i>Theme 8 – Settlement:</i></p> <ul style="list-style-type: none"> – Understanding changing settlement patterns. – Understanding past settlements. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|---|--|--|---|--|
| | <p>prehistoric activity within the Sarre Penn valley with evidence from the ridge-line to the north investigated as part of the East Kent Access Road investigation.</p> | <p>all types through time as evidence of the social, economic and political evolution of the study area.</p> | <p>the long-term history of the land divisions laid out in the MBA/LBA; the problem of MIA settlements; the hiatus between earlier sites and those of the LIA.</p> <ul style="list-style-type: none"> – The transition to the Late Iron Age: how are we to understand the important changes from MIA to LIA, including the emergence of a southern kingdom centred on west Sussex? What was the role of Kent and Surrey with regard to the emerging political structure of South-East England? | |
| <p>C – Features associated with the Saxon Shore Fort and Amphitheatre at Richborough</p> | <p>1) Understanding the nature and extent of the settlement around Richborough Fort.</p> | | <p><i>Draft research agenda for Anglo-Saxon period 2013:</i></p> <ul style="list-style-type: none"> – Harness the potential of the historic landscape to inform an understanding of the Romano-British/Anglo-Saxon transition. <p><i>SERF Research Agenda conference discussion points for the Roman period:</i> Defence: ‘Saxon Shore’ fort purpose?</p> | <p><i>Theme 3.1 – The Roman Gateway:</i></p> <ul style="list-style-type: none"> – Evidence for social activity and military/governmental organisation at Richborough Fort. – Evidence for Iron Age-Roman and Roman – Early Medieval transitions. – Evidence for Roman navigation practices. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|--|---|--|--|---|
| | | | | <ul style="list-style-type: none"> – Richborough Fort illustrative of Roman governmental/military architecture/activity. – Associative links with past landscape. |
| D – Features associated with Roman occupation of the mainland | <ol style="list-style-type: none"> 1) Consider nature of past landform and influence on settlement. 2) Understand the extent and nature of recorded activity along Island Road and the extent to which activity extended down into the Sarre Penn valley. | <p>4A.SO4 - Examining the impact of the Roman Conquest on settlement patterns and the social, economic and political articulations of the landscape.</p> <p>4A.SO8 - Examining the role of the town from the Roman period onwards.</p> | <p><i>SERF Research Agenda conference discussion points for the Roman period:</i></p> <ul style="list-style-type: none"> – Clarification of the characteristics of the lesser nucleated settlements, and their role in relationship to surrounding rural settlements. – The relationship of villa and non-villa settlements to each other and to the landscape. <p><i>SERF Research Agenda conference discussion points for the Urban Theme:</i></p> <ul style="list-style-type: none"> – How did towns relate to their hinterland? Do towns have a separate, distinctive role? | <p><i>Theme 3.1 – The Roman Gateway:</i></p> <ul style="list-style-type: none"> – Evidence for Iron Age-Roman and Roman – Early Medieval transitions. – Evidence for Roman navigation practices. – Associative links with past landscape. <p><i>Theme 8 – Settlement:</i></p> <ul style="list-style-type: none"> – Understanding changing settlement patterns. – Understanding past settlements. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|---|--|---|---|--|
| E – Features associated with Early Medieval settlement | 1) Understand extent and nature of early medieval settlement, particularly at Sarre and understand relationship with Wantsum/Stour estuaries. | 1C.SO4 - Developing appreciation of human interaction with this environment, particularly with regard to the exploitation and management of woodland and marshes. | | <p><i>Theme 9 – agriculture and Farmsteads:</i></p> <ul style="list-style-type: none"> – Understanding historic farming. – Understanding the origins of the agricultural landscape. – Associations with existing farmsteads. – Association with agricultural traditions of Kent. – Contribution to local distinctiveness. |
| F – Features associated with Early Medieval and Medieval exploitation and reclamation of the saltmarsh | <p>1) Understanding the process and chronology of reclamation.</p> <p>2) Understanding how the natural resources of the saltmarsh were exploited.</p> <p>3) Understanding links between settlement, transport routes and activity sites.</p> | <p>4A.SO1 - Examining the impact of the church on the historic landscape in medieval times.</p> <p>4A.SO5 - Examining the chronology of the Anglo-Saxon migrations into the areas surrounding the Thames Estuary and the impact on existing settlement and material culture.</p> <p>4A.SO6 - Examining the development in the Anglo-Saxon period of new organisational and administrative frameworks based on secular and</p> | <p><i>Draft research agenda for Anglo-Saxon period 2013:</i></p> <ul style="list-style-type: none"> – Address a lack of knowledge on the process of village formation. – Broaden an understanding of settlement hierarchy and patterns of dependency between settlements. | <p><i>Theme 3.2 – Arrival of the Saxons:</i></p> <ul style="list-style-type: none"> – Understanding transition from Roman Britain to Saxon England. – Understanding the context and form of rural settlement. – Burial remains illustrative of changing culture. – Associative links with Augustinian mission. <p><i>Theme 8 – Settlement:</i></p> <ul style="list-style-type: none"> – Understanding changing settlement patterns. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|---|---|--|---|---|
| G – Features associated with post-medieval agricultural settlement and activity, particularly in the Chislet Marshes and Ash Level | <ol style="list-style-type: none"> 1) Better understand changing agricultural practices and land use within the saltmarsh area during the period of Improvement. 2) Investigate evidence for human habitation and non-agricultural activities in the saltmarsh, either as seasonal or permanent occupation. | <p>ecclesiastical estates and “territories”.</p> <p>4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area.</p> <p>4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area.</p> | <p><i>SERF Research Agenda conference discussion points for the Post-medieval and Modern period and Industrial theme:</i></p> <p>Rural landscape and settlement:</p> <ul style="list-style-type: none"> – An understanding of the multifaceted landscape. – The ecology of hedgerows and woods (i.e. to shed light on the original planting schemes). – The chronology and typology of farm buildings and other lesser noticed post-medieval agricultural features, such as dew ponds and sheepfolds. – The impact the Dissolution had on the | <ul style="list-style-type: none"> – Understanding past settlements. <p><i>Theme 8 – Settlement:</i></p> <ul style="list-style-type: none"> – Understanding changing settlement patterns. – Understanding past settlements. <p>Theme 9 – agriculture and Farmsteads:</p> <ul style="list-style-type: none"> – Understanding historic farming. – Understanding the origins of the .agricultural landscape. – Associations with existing farmsteads. – Association with agricultural traditions of Kent. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|--|---|---|--|--|
| | | | <p>region's landscape and society.</p> <ul style="list-style-type: none"> – Social aspects of rural housing and material culture, especially for the poor from the 16th to mid-20th centuries. More isolated rural sites need to be excavated. – Temporary accommodation/shanty towns of the poor, from squatters and iron workers to navvies. <p>Agriculture:</p> <ul style="list-style-type: none"> – Environmental evidence has an important role in the study of improved animal husbandry and the introduction of new plants. – More hop-pickers huts to be studied archaeologically. | |
| H – First and Second World War (WWI and WWII) military features | <p>1) Better understand network of anti-invasion defences, particularly around the Defended Location at Sarre and the WWI stop line at Chislet.</p> | <p>6A.SO1 - Examining the impact of changes in military technology and tactical and strategic approaches on individual defence sites and defence systems.</p> | <p><i>Research signposts from conference:</i></p> <ul style="list-style-type: none"> – Understand more fully provision for Operation Overlord and British Fortitude deception plan. – Determining scope of post-Second World War | <p><i>Theme 3.6 – The Great War:</i></p> <ul style="list-style-type: none"> – Associative values of assets. |

| Anticipated remains | Key Issues | Mapping to GTRF ⁵ | Mapping to SERF ⁶ | Mapping to DDHS ⁷ |
|--------------------------------------|---|--|--|--|
| | 2) Better understand former use of outlying areas of Richborough Port. 3) Ensure that surviving remains of crashed aircraft are not disturbed inappropriately. | 6A.SO2 - Developing understanding of the evolution of the estuary's defences in relation to political change. 6A.SO3 - Developing interpretations of these defences integrated with wider patterns of settlement, commerce and landscape. | anti-aircraft gun defence and survival of sites (especially new ones). | <i>Theme 3.7 – Second World War Defences:</i> <ul style="list-style-type: none"> – Understanding military and civil defence of Kent. – Association with invasion scare. Battle of Britain. |
| I – Undated cropmark features | 1) Identify date, character and significance of these assets. 2) Consider features in terms of relevant aspects of the research agenda. | 4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area. | | <i>Theme 8 – Settlement:</i> <ul style="list-style-type: none"> – Understanding changing settlement patterns. – Understanding past settlements. |

4. SCOPE OF WORK

Table 4.1 Proposed Archaeological Response

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|------------------------------|---|---|--------------------|
| PC3, PC4, PC5 | Archaeological remains relating to prehistoric to prehistoric, Roman and early medieval riverside settlement were noted in previous archaeological investigations to the north at Shelford Farm quarry. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | A1, B1, D1, E1 |
| PC6, PC7 | Undated cropmark features. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | I1 |
| PC8 | Features associated with Palaeolithic and Roman occupation | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | A1, D1 |
| PC9, PC10, PC11, PC12 | Features associated with prehistoric, Roman, early medieval and medieval occupation. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | B1, D1, E1 |
| PC13, PC14 | Features associated with prehistoric, Roman and medieval occupation. Cropmarks of an undated enclosure and medieval findspots recorded in the vicinity of pylon location and access. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | B1, D1, B2, E1, I1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|---|---|------------------------|
| PC15 | Features associated with prehistoric, Roman, early medieval and medieval occupation. Roman, early medieval and medieval findspots near pylon location. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | B1, B2, D1, E1 |
| PC16 | Features associated with prehistoric, Roman, early-medieval and medieval occupation. Roman, early medieval and medieval findspots near pylon location. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | B1, B2, D1, E1 |
| PC17, PC18 | Features associated with prehistoric, Roman, early medieval and medieval occupation. Medieval findspot in the vicinity of pylon and access locations. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | B1, B2, D1, E1 |
| PC19, PC20 | Undated cropmark enclosure recorded approx. 500m northwest of the pylon location. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. | I1 |
| PC21, PC22 | Deposits of geoarchaeological interest. Access crosses an area of possible prehistoric or Roman cropmark features. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, B1, B2, D1, D2 |
| PC23 | Features relating to Palaeolithic, prehistoric, Roman and post-medieval occupation. Features relating to WWII defensive activity could also be present. Access crosses an area of possible prehistoric or Roman cropmark features. Some potential for the presence of deposits of geoarchaeological interest. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, B1, D1, D2 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|---|--|------------------------|
| PC24, PC25 | Deposits of geoarchaeological interest. Possible Bronze Age round barrows identified by cropmarks within 200m of the pylon and access locations. Access crosses an area of possible prehistoric or Roman cropmark features. | Strip, map and sample mitigation of topsoil stripping on accesses and pylon bases. Geoarchaeological investigation. | A1, B1, D1, D2 |
| PC26 | Potential disturbance of deposits of geoarchaeological interest and features associated with wider prehistoric and Romano-British activity. | Strip, map and sample mitigation of topsoil stripping on accesses and pylon bases. Geoarchaeological investigation. | A1, B1, D1 |
| PC27 | Deposits of geoarchaeological interest. Prehistoric or Roman enclosure and ring ditches recorded 240m north of the pylon location on the higher ground. | Strip, map and sample mitigation of topsoil stripping on accesses and pylon bases. Geoarchaeological investigation. | A1, B1, D1 |
| PC28 | Features associated with prehistoric or Roman cropmarks recorded 200m north west of the pylon location. Undated ditches and a cropmark of a WWI trench are also located to the north east. | Strip, map and sample mitigation of topsoil stripping on accesses and pylon bases. Geoarchaeological investigation. | A1, B1, D1, H1 |
| PC29 | Deposits of geoarchaeological interest. Two undated cropmark features were identified during the walkover between PC29 and PC30. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, I1 |
| PC30 | Deposits of geoarchaeological interest. Access crosses cropmark features identified during the walkover between PC29 and PC30. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, I1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|---|--|--|
| PC31 | Deposits of geoarchaeological interest. The pylon is situated on the lower ground representing the Wantsum Channel. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3 |
| PC32 | Deposits of geoarchaeological interest. The pylon is situated on the lower ground within the former Wantsum channel. Pylon and access are near an extant outfarm building. Access crosses Sarre Wall, Medieval salt mounds and associated drainage. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, F1, F2, F3, G1, G2 |
| PC33 | Deposits of geoarchaeological interest. The pylon is situated near a curvilinear feature and mound identified by LiDAR. The access crosses Sarre Wall medieval salt mounds and associated drainage and the Wantsum Channel. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, F1, F2, F3, G1, G2, I1 |
| PC34 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. Access crosses an irregular mound and irregular features possibly representing archaeological remains. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1, I1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|---|---|--|
| PC35 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. The access crosses plough levelled cropmarks of probable late post-medieval boundary earthworks. The pylon location is adjacent to former earthworks. The access is also within the vicinity of medieval salt workings and a WWII pillbox. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC36, PC37 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. The pylon location is near a possible plough levelled hay stack stance. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC38, PC39 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC40 | Deposits of geoarchaeological interest and features relating to Palaeolithic, prehistoric, early medieval, Roman, medieval and post-medieval. The pylon and access are on an area of raised ground possibly a former island, which heightens the potential for archaeological remains. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|--|---|--|
| PC41, PC42 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC43 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. The pylon location is on an area of raised ground identified by LiDAR. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC44 | Deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. Access crosses an area of raised ground which may suggest an increased potential for the presence for archaeological features. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC45, PC46 | Deposits of geoarchaeological interest and features relating to Palaeolithic, Prehistoric, early medieval, Roman, medieval and post-medieval. Location is a former headland into the Wantsum Channel, which heightens the potential for archaeological remains. Undated cropmarks, Iron Age coins and an Early medieval coin have been found on the former headland. | Strip, map and sample mitigation of topsoil stripping on accesses and pylon bases. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|----------------------|--|--|--|
| PC47 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity.</p> <p>The access and pylon location are adjacent to a raised mound identified on LiDAR, ridge and furrow and possible salt mounds.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC48 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity.</p> <p>The pylon and access are adjacent to plough-levelled earthworks and two irregular hollows.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC49 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity.</p> <p>Pylon is near an area of raised ground and three ponds/hollows identified by LiDAR.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC50 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity.</p> <p>Pylon location is near the medieval Abbots Wall. The access crosses a pond/hollow identified by LiDAR.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|---------------|--|---|--|
| PC51 | Potential disturbance of deposits of geoarchaeological interest and features relating to early medieval, medieval, post-medieval and WWII activity. Boxlees Hill is a former island in the Wantsum Channel. Excavation identified cremation burials and the foundation of a structure, possibly Roman. Pylon location is near the medieval Abbots Wall and the pylon access also crosses it. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC52 | Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity. The access crosses medieval to post-medieval water management features and flood bank, WWII enhanced drainage and near a possible plough levelled hay stack stance. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC53 | Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity. The access crosses medieval to post-medieval flood bank, WWII enhanced drainage and possible plough levelled hay stack stance. | Archaeological monitoring of intrusive access works and topsoil stripping around pylon. Geoarchaeological investigation. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|---------------|--|--|--|
| PC54 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon location is within proximity of a medieval to post-medieval flood bank and area of slightly raised ground identified by LiDAR.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC55 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon location and access are within proximity of two possible plough levelled hay stack stances and WWII enhanced drainage.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC56 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC57 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon is located within immediate proximity of WWII enhanced drainage, a possible plough-levelled hay stacks and hollow/ponds identified by LiDAR.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|--|--|--|--|
| PC58 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon and access cross an area of reclaimed land associated with the construction of Richborough Port during WWI.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC59 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon and access cross an area of reclaimed land associated with the construction of Richborough Port during WWI. The access cross near the former Richborough Stores Depot.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| PC60 | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> <p>The pylon and access cross an area of reclaimed land associated with the construction of Richborough Port during WWI. The access cross near the former Richborough Stores Depot.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> <p>Geoarchaeological investigation.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |
| Temporary diversions of PX: Chislet Marshes (PX056-060) | <p>Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity.</p> | <p>Archaeological monitoring of intrusive access works and topsoil stripping around pylon.</p> | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1, I1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|---|--|---|--|
| Permanent diversion of PY: Chislet Marshes (PY19-21) | Potential disturbance of deposits of geoarchaeological interest and features relating to medieval, post-medieval and WWII activity. | Archaeological monitoring of intrusive works. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1, I1 |
| 33kV to be undergrounded east of Vauxhall Road | There may be some heightened potential in this area due to the location at a river bend which appears not to have been affected by the 19 th and 20 th century activities. However, the location has been intensively farmed and landscaped. | Archaeological monitoring of intrusive works. | A1, B1, D1, E1 |
| 11kV to be undergrounded to the north of the railway at Broad Oak off of Shalloak Road (PC3-4) | Potential for features associated with Prehistoric, Roman, early medieval and medieval occupation at pylon and access track. | Archaeological monitoring of intrusive works. | B1, D1, E1 |
| 11kV to be undergrounded south of Lynne Wood (PC5-6) | Potential for features associated with Prehistoric, Roman, early medieval and medieval occupation at pylon and access track. | Archaeological monitoring of intrusive works. | B1, D1, E1 |
| 11kV to be undergrounded north of Lynne Wood (PC5-6) | In a parcel of low potential but some heightened potential at diversion due to undated cropmark feature. | Archaeological monitoring of intrusive works. | I1 |
| 11kV to be undergrounded to the west of Broad Oak off Mayton Lane and Heel Lane (PC7-8) | In a parcel of low potential but some heightened potential at scaffold location due to undated cropmark feature. | Archaeological monitoring of intrusive works. | I1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|--|--|---|--|
| 11kV to be undergrounded to the north of Broad Oak off of Barnets Lane (PC8-9) | Potential for features associated with prehistoric, Roman, early medieval and medieval occupation, but post-medieval orchard planting and the construction of the modern Barnet's Lane road may have diminished this potential at the scaffold location. | Archaeological monitoring of intrusive works. | B1, D1, E1 |
| 11kv to be undergrounded to the east of Bredlands Lane south of Hoath (PC16-17) | Potential for features associated with Prehistoric, Roman, early medieval and medieval occupation. Roman, early medieval and medieval findspots near pylon location. | Archaeological monitoring of intrusive works. | B1, D1, E1 |
| 11kV to be undergrounded to the east of Sandpit Hill/Nethergong Hill at Upstreet (PC26-7) | Potential for the presence of deposits of geoarchaeological interest. | Archaeological monitoring of intrusive works. | A1, A3 |
| 11kV to be undergrounded to the north of the A28, island road at Sarre (PC32-3) | Potential for the presence of deposits of geoarchaeological interest. Potential for features relating to early medieval, medieval, post-medieval and WWII activity. The location is within an area where a number of potential features were identified from the LiDAR data, including a curvilinear feature identified by LiDAR and possibly archaeological mound and a pond/hollow. | Archaeological monitoring of intrusive works. | A1, A2, A3, E1, F1, F2, F3, G1, G2, H1 |

| Work Location | Anticipated remains | Investigative Technique | Research Issues |
|---|---|---|--|
| 11kV to be undergrounded to the south of the water treatment works at Minster (PC51-2) | <p>Potential for the presence of deposits of geoarchaeological interest.</p> <p>Potential for features relating to early medieval, medieval, post-medieval and WWII activity.</p> <p>Boxlees Hill is a former island in the Wantsum Channel. Excavation identified cremation burials and the foundation of a structure, possibly Roman.</p> | Archaeological monitoring of intrusive works. | A1, A2, A3, B1, E1, F1, F2, F3, G1, G2, H1 |
| 11kV to be undergrounded to the south of River Stour on the Ash Level (PC53-4) | <p>Potential for the presence of deposits of geoarchaeological interest.</p> <p>Potential for features relating to medieval, post-medieval and WWII activity.</p> <p>The location is near medieval to post-medieval flood bank, WWII enhanced drainage and a possible relict water channel.</p> | Archaeological monitoring of intrusive works. | A1, A2, A3, B1, E1, F1, F2, F3, G1, G2, H1 |

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5. STANDARDS FOR ARCHAEOLOGICAL WORK

5.1 Archaeological monitoring

General Principles

- 5.1.1 Construction monitoring may be necessary to address specified evidence based research objectives. A suitably experienced archaeologist should provide banksman support to machine operators in areas of the sites for the agreed periods of construction monitoring.
- 5.1.2 Machine excavations will be entered only on agreement with the main construction contractor and only at the maximum safe depth (usually c. 1.2m, but less if loose sands/gravel are present), in order to examine the stratigraphy in exposed sections. After excavation has progressed beyond this depth, recording will take place without entering the trench unless adequate safety measures have been agreed with a competent person.
- 5.1.3 Where the presence of archaeological remains has been established, and where safe to do so, selected faces of the trench will be cleaned with appropriate hand tools, to a degree sufficient to facilitate recording.

5.2 Standards for Monitoring

Archaeological Observation

- 5.2.1 It is not envisaged that an archaeologist will be present throughout the construction groundworks. The risk that archaeological remains might be present will be well established on the basis of previous stages of evaluation and/or mitigation works. The need to monitor construction works will be predictable and appropriate arrangements for occasional inspection visits will be acceptable in most instances.
- 5.2.2 Where archaeological deposits are encountered, sufficient excavation will take place to allow appropriate records to be compiled, in accordance with the standards and guidelines set out in **Section 6** below, as might be reasonably achieved, taking into account relevant health and safety considerations and within reasonable access terms agreed with the main construction contractor.
- 5.2.3 During and after the excavation, all recovered artefacts will be stored in the appropriate materials and storage conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, and regular monitoring of conditions, immediate selection for conservation of vulnerable material).

Recording

- 5.2.4 The primary record will comprise photographic, drawn and written records of exposed deposits. This record should aim, as far as is reasonably practicable, to demonstrate the extent and method of working, with plans tied to the OS where possible. In some instances, due to logistical factors, records will be limited to photographs; where possible these should be to the standards set out below.

5.2.5 Details of construction working environment and other information related to the limitations of observations should be made.

5.3 Strip, map and sample

5.3.1 The appointed archaeological contractor will submit a Method Statement, including a detailed plan of areas to be subject to strip-map-and-sample, and a Risk Assessment for approval by the Archaeological Clerk of Works, before work commences.

5.3.2 The purpose of strip map and sample is to identify specific archaeological foci within an extensive area of potential or to expose the spatial characteristics of extensive archaeological landscape elements, such as field systems, prior to selecting locations for targeted sample excavation. This work is to be undertaken within a framework of evidence based research objectives.

5.3.3 Following initial machine excavation (which will be directed and monitored by the Archaeological Contractor), the area should be examined and a plan of identified and potential archaeological features and deposits prepared at an appropriate scale. This will inform proposals for sample excavation, to be agreed with the Kent County Archaeologist. Where necessary to allow construction works to continue, the release of a part of an area may be agreed with the Kent County Archaeologist. In this situation, areas which have not been released will be clearly demarcated.

5.3.4 Key stages in strip-map-and-sample are:

- The careful stripping of identified areas to the appropriate level, in order to reveal the site plan;
- Immediate planning (mapping) of the area while the uncovered surface is fresh. The area should be subsequently checked to see if weathering reveals further features and the plan updated as appropriate;

5.3.5 Following planning, investigation of an appropriate sample of identified features drawing on the standards set out in **Section 6**. Key areas and nodes will be investigated in sufficient detail to understand them both in respect of themselves and also in relation to their surroundings. This work will be focused on adding to the spatial, chronological, functional and environmental context of the investigated area.

5.3.6 This requirement will be continually monitored during the course of fieldwork, and amended according to its effectiveness in meeting research objectives. In particular consideration of strip map and sample operations will be discussed with the Kent County Archaeologist, with a view to extending these operations where significant archaeological remains have been observed or scaling them back operations where the potential presence of archaeological features is demonstrably low, based on:

- Identified prior truncation/disturbance;
- Absence of observed features; or
- Confirmation of prior survey results which suggest poor survival of archaeological features.

5.3.7 Any decision to scale back the scope of strip, map and sample mitigation will only be undertaken after agreement of the Kent County Archaeologist has been confirmed.

5.3.8 Following completion of archaeological investigation to the satisfaction of the Kent County Archaeologist the relevant area or agreed parts thereof will be released to the main contractor so that construction works may proceed.

5.4 Palaeoecological and Geoarchaeological investigation

5.4.1 The geoarchaeological element of the archaeological mitigation works will analyse the environmental factors that may have contributed to the development of former communities of the Stour catchment that may have relied on the extensive local wetland resources. The principal objective is to provide an understanding of the environmental context of the extensive record of prehistoric, Romano-British and later settlement that formerly occupied the downland ridges that define the valley, as well as those that occupied the chalk outliers that form 'island' locations within the floodplain, e.g. Boxlees Hill.

5.4.2 A programme of palaeoenvironmental survey will be undertaken along the section of the route where suitable Pleistocene/Holocene deposits occur. This will focus on examining deposits along a transect defined by pylons PC21-60. This transect passes along the Sarre Penn, crossing the Wantsum between Wall End and Sarre, and extends across the Stour to terminate in the vicinity of the former Richborough Power Station at pylon PC60.

5.4.3 The following criteria have been taken into account in the preparation of the initial borehole strategy design:

- target interpretations and recommendations arising from previous work on sub-regional palaeoenvironmental reconstruction;
- avoid locations likely to encounter services, or where there may be previous disturbance of deposits; and

5.4.4 Boreholes will be drilled to recover intact deposit cores at a total of 40 pylon locations (to correspond approximately with proposed pylon locations), in order to generate a baseline lithostratigraphic section. This will provide a c.13.4km longitudinal transect through the valley of the Sarre Penn and will examine the relationship with the Penn deposits and those that characterise the Wantsum and the Stour valleys, taking into consideration the onset, degree and extent of marine influences on the topographic development of the Stour and associated valleys.

5.4.5 The lithostratigraphic section will be further examined through initial laboratory assessment of retained sediment cores. This assessment will determine an optimal strategy for developing a chronological model of deposit formation and analysis of the environmental development of the main phases of deposit formation.

5.4.6 Detailed analysis will be undertaken on a maximum of 10 individual deposit sequences, in part or total, recovered at the 40 pylon locations, representing c25% of the total number of pylon sample locations. A contingency option to extend this sample level will be considered on the initial assessment of the lithostratigraphic section.

5.4.7 Continuous cores from the current ground surface through the superficial/drift deposits into the solid geology will be recorded at each pylon location. Boreholes should investigate the full depth of the Holocene estuarine deposits, but may cease on confirmed contact with gravel terrace or London clay deposits. A written log of the

full sequence will be made. Each borehole will be provided with a full OS grid reference including elevation.

- 5.4.8 Selective representative samples will be retained from each transect for chronostratigraphic and palaeo-fossil assessment. Undisturbed U4/U100 samples and shoe samples or piston samples (1000mm length) of sediment will be recovered within plastic liners. These cores will be taken continuously from the top of alluvium until bedrock is attained. Drillers will ensure that minimal disturbance is made between consecutive samples. All cores will be wax sealed. Cores will be labelled in a continuous sequence from the ground surface downwards. Top and base will be labelled on each core and a brief note made of the sediment at either end of core. In the case of unconsolidated sequences small disturbed samples will be taken every 0.5m through soft sediments until the sediments are firm enough to return to continuous core sampling. Each core should be transported to a suitable location for preparation of samples for analysis.
- 5.4.9 A lithostratigraphic baseline section will be prepared and the main phases of environmental change identified before arrangements for the preparation and analysis of sub-samples that will:
- Determine the range of environmental indicators present throughout the sequence, with particular consideration given to specific environmental proxy indicators for the influence of prehistoric, Romano-British and later populations on local environment; and
 - Provide chronological controls, based on scientific dating, that will aid interpretation of the main phases of environmental development and any significant events likely to correspond with patterns of local settlement activity.
- 5.4.10 Taphonomic considerations should be taken into account when reviewing various options for dating and environmental assessment. Emphasis should be given to developing a strategy for securing high resolution data both across the lithostratigraphic sequence and in relation to any significant events that may contribute to a fuller understanding of the impact of specific environmental events that could have influenced local settlement.
- 5.4.11 All geoarchaeological sampling and assessment processes will be undertaken in accordance with relevant guidance, in particular:
- English Heritage 2007 *Geoarchaeology: using earth sciences to understand the archaeological record* (<https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/>)
 - English Heritage 2011 *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (second edition) (<https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/>)

5.5 Standards for Archaeological Fieldwork

General Methods

- 5.5.1 In all areas identified as requiring archaeological work in this WSI removal of topsoil, overburden and 20th/19th-century and later remains to the first significant

archaeological horizon will be undertaken by a 360° excavator fitted with a wide toothless bucket, under the continuous supervision of the archaeology contractor with the authority to halt and direct machine excavation. Spoil will be temporarily stockpiled on site at a safe distance from the trenches and other constraints, to the satisfaction of the main contractor.

- 5.5.2 Areas subject to machine excavation will be periodically scanned with a metal detector in order to identify the possible presence of metal artefacts.
- 5.5.3 The first significant archaeological horizon and all subsequent archaeological deposits will be cleaned by hand. Excavation of any archaeological deposits identified will proceed by hand except specifically agreed with the Kent County Archaeologist.
- 5.5.4 Arrangements for the processing of bulk samples taken for the recovery of environmental materials and artefacts, especially carbonised plant remains and ceramics, should be confirmed. These arrangements must be sufficient to provide feedback on the character of sample assemblages concurrent with the fieldwork to enable refinement of field sample collection, as necessary to fully realise the research objectives and project aim. It is anticipated there will be on-site processing facilities during excavation and strip, map and sample operations.
- 5.5.5 Following completion of archaeological investigation to the satisfaction of the Kent County Archaeologist and the main contractor, each trench will be backfilled with the spoil and compacted by machine to level fill, unless otherwise instructed by the main contractor. No allowance for further reinstatement or consolidation has been made.
- 5.5.6 The following professional standards apply:
- ClfA 2014 Standard and Guidance for Archaeological Field Evaluation.
 - ClfA 2014 Standard and Guidance for Archaeological Excavation.
 - ClfA 2014 Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials.
 - ClfA 2014 Code of Conduct.

Sample Excavation

- 5.5.7 Features and deposits will be sectioned and recorded in plan. Archaeological features will be hand cleaned prior to excavation to provide accurate definitions. For linear features such hand cleaning will be targeted at sample excavation points. Deposits interpreted as natural subsoil should be tested by hand or machine excavation to determine the validity of this interpretation.
- 5.5.8 The sampling strategy will be developed throughout the investigation period in consultation with the Kent County Archaeologist or their advisors in the light of the results of the field work. The excavation will normally include as a minimum:
- 5.5.9 A robust spatial framework of excavation to provide an understanding of the distribution of past activities across the investigation area including any ‘special’ deposits and any patterning in artefact distribution. Such a framework will take into account the inter-relationship of major features;
- 5.5.10 The investigation of the intersections of features of archaeological date to obtain a phasing of the site;

- 5.5.11 Structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, ‘special’/ patterned deposits etc.) will be excavated and recorded to a degree whereby their extent, date form, function and relationship to other features and deposits can be established.
- 5.5.12 All burial deposits and associated remains will be fully excavated and recorded in accordance with an agreed methodology (see below).
- 5.5.13 Representative non-structural linear cut features will be sample excavated and recorded to establish the feature's character, date and morphology and to provide information on activities taking place in close proximity to the feature. A 20% sample should be taken of all linear features, up to 5m in length; for features greater than this the sampling requirement can be reduced with the agreement of the Kent County Archaeologist. The junctions and intersections of linear features should be removed over a sufficient length to determine the nature of the relationship. All terminal ends will be investigated. Sections will normally be at least 1m wide.
- 5.5.14 Non-structural pits will be half-sectioned unless the character, number or size of the pits makes this unpractical. For instance, if a pit contains several intersections and re-cuts, it would not always be appropriate to half-section it. In this situation, the Archaeological Contractor will consider 'quadranting' or single context planning. Equally if ‘special’ deposits are expected, pits may need to be excavated in plan rather than being half-sectioned. The strategy will need to be agreed with the Kent County Archaeologist and the Archaeological Clerk of Works.
- 5.5.15 Non-structural post and stake-holes will be half-sectioned sufficiently to clarify character, relationships and chronology.
- 5.5.16 The sampling excavation strategy will be reviewed continuously throughout the course of fieldwork and, if necessary, amended in order to take account of changing circumstances and understanding. Any changes or amendments will be agreed in advance of implementation with the Kent County Archaeologist and the Archaeological Clerk of Works, such as:
- in some cases, it will be sufficient to excavate a representative sample of long linear features (e.g. boundary ditches) or quarry pits in order to record their form, function, and date and recover artefacts and ecofacts; and
 - where insufficient dating material or information has been retrieved from a partially sectioned feature, further sampling may be undertaken, subject to consideration of residuality or other factors that might limit the integrity of archaeological data, with reference to the research objectives and in consultation with the Kent County Archaeologist and the project consultant archaeologist.

Recording

- 5.5.17 A full and proper record (written, graphic and photographic as appropriate) will be made for all work. A continuous numbering system will be used and the following registers kept on standardised forms: contexts; sections; plans; and photographs. The recording system to be used will be stated in the contractor's method statement and if requested copies of the manual to that system will be provided to the Kent County Archaeologist and the project consultant archaeologist. Basic requirements are outlined below:

Geomatics

- 5.5.18 The excavation area will be accurately related to the National Grid and located on an Ordnance Survey map of the area at an appropriate scale not smaller than 1:2500. One or more temporary benchmarks (TBM) related to Ordnance Datum will be established near the archaeological investigation. Vertical control will be established from the nearest Ordnance Survey bench mark (OSBM), with the traverse completed as part of a closed loop and a record of the process will form part of the site archive. Site temporary benchmark(s) (TBM) will be established either by survey-grade GPS (i.e. capable of measurement of elevation to an accuracy of +/-20mm) or through closed traverse from an OS Benchmark. All archaeological deposits and features, representative levels for the current ground surface and base of the trench will be recorded with an above Ordnance Datum (AOD) level.

Site Drawings

- 5.5.19 An overall plan of the individual sites shall be drawn at a scale of not less than 1:200 to show the location of the investigation areas in relation to existing features visible on the ground. Accurate scale plans and section drawings (both sections of features and representative trench sections) will be drawn at 1:20 and 1:10 scales as appropriate. Where archaeological features are not observed or little variation in sequence is apparent, only representative sample sections will be recorded and the trench plan will be recorded in outline at a larger scale. Plotting of small finds in three dimensions (3d) will be undertaken where appropriate. All drawings will feature multiple records of heights related to Ordnance Datum, including levels on current ground level adjacent to the excavation edges.
- 5.5.20 Each plan and section will be located by reference to an established site grid and in elevation by levels above Ordnance Datum, through measurements from the TBM.

Stratigraphic Recording

- 5.5.21 All contexts will be given an individual number and recorded on a pro-forma sheet. A separate block of numbers will be allocated to each investigation area. Context descriptions, comprising both factual data and interpretative elements, will be recorded on standardised record sheets. Where stratified deposits are encountered a "Harris"-type matrix will be compiled during the course of the excavation.
- 5.5.22 Where archaeological deposits are not encountered representative sequence descriptions will be recorded and relevant locations shown on an accurate site plan.

Small Finds

- 5.5.23 The locations of small finds will be recorded. Where the specific location of individual objects other than small finds might provide useful interpretive data, their location will be recorded in 3d, either as coordinates or on a plan as appropriate.

Photography

- 5.5.24 Photography will be by digital photography taken on a digital slr or compact camera capable of imaging in RAW format as well as jpg. Images may be included in the report as appropriate. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork. Photographs should also be used to record interpretive data (e.g. groups of features and the relationships between them rather than individual features) and important artefacts *in situ* where

possible. Other than ‘working’ shots they should include clear metric scales and should only be taken after the relevant features/areas have been hand cleaned.

Environmental Sampling

- 5.5.25 A detailed sampling policy will be decided in consultation with the Historic England (formerly English Heritage) Regional Scientific Advisor⁸. This will detail specific categories of material that are of interest and identify a programme of work to support the research objectives set out in the Project Design, which will be revised as appropriate throughout the excavation and post-excavation phases.
- 5.5.26 The on-site sampling policy will be inclusive, as the significance of individual features may not be fully understood until wider patterns of spatial distribution and phasing are understood. As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of environmental materials should be confirmed. The final sampling and discard policy will be agreed in consultation with the project environmental specialist, the Kent County Archaeologist and the Regional Scientific Advisor.
- 5.5.27 Archaeological deposits will be sampled systematically in bulk samples. In general, coarse sieved samples of 100l or more will be recovered from deposits containing small bone or exploited mollusc assemblages. Flotation samples of 40-60l will be recovered from deposits containing charred materials. All samples will be collected from the fills of cut features, and from any other securely stratified deposits that have the potential to provide environmental or economic information, such as occupation layers or material accumulating on use surfaces. Particular emphasis will be placed on contexts that may supply material suitable for scientific dating of potential early medieval and prehistoric features. Decisions on sampling must also take account of stratigraphic factors and consider the opportunity to employ chronological and spatial controls in the recovery of samples in order to generate environmental information of sufficient quality to meet the research objectives.
- 5.5.28 Provision will be made for column and other appropriate samples to be taken for geoarchaeological assessment and analysis as appropriate and in line with technical guidance⁹. Due consideration will be given to the collection of samples suitable for microfossil analysis and other specialised analysis from suitable deposit sequences, that might inform the pattern of changing environmental conditions over time. Waterlogged and cess deposits will be specifically sampled for microfaunal and invertebrate analysis. Bulk samples will also be taken from any waterlogged deposits present for assessment of organic remains. Any organic artefacts that are retrieved during the excavation will be stored in appropriate conditions and assessed by a qualified archaeological conservator.
- 5.5.29 Industrial residues and waste from craft and manufacturing processes will also be routinely sampled.

Artefact Recovery

- 5.5.30 The recovery of material that can adequately date major archaeological phases is a key requirement. It is recognised that the incidence of artefacts may limit the quality

⁸ EH 2011 *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* <http://www.english-heritage.org.uk/publications/environmental-archaeology/>

⁹ EH 2007 *Geoarchaeology: using earth sciences to understand the archaeological record* <http://www.english-heritage.org.uk/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/>

of datable assemblages, and measures for scientific dating are also set out below. However artefacts remain a key source of dating information.

- 5.5.31 Bulk finds such as pottery and animal bone will normally be collected by context. Where it is appropriate and following additional instruction, soil samples will also be recovered for sieving, specifically for the purpose of:
- Providing statistically controlled samples; and
 - Enhanced recovery techniques.
- 5.5.32 As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of artefacts should be confirmed.
- 5.5.33 Finds will be temporarily stored on site and removed from site to a secure location as required. All finds that are retained will be washed, marked and bagged in a manner suitable for long-term storage.
- 5.5.34 A sampling strategy for the recovery and recording of waterlogged wood and timber will be agreed with the Kent County Archaeologist and the Archaeological Clerk of Works, where significant quantities of such materials are observed.
- 5.5.35 All finds and samples will be exposed, lifted, cleaned, conserved, marked, bagged, boxed and stored in accordance with the ClfA Guidelines for Finds Work, the guidelines in the UKIC *Conservation Guidelines No. 2* and the requirements of the recipient museum.
- 5.5.36 A discard policy acceptable to the relevant receiving museum will only be implemented following quantification, assessment and recommendation from artefactual and environmental specialists. Certain classes of material, such as post-medieval pottery and building material, may be discarded after recording if a representative sample is kept, but no finds will be discarded without the prior approval of the Kent County Archaeologist and the receiving museum.

Conservation

- 5.5.37 Procedures for the recovery, packing and transportation of artefacts will follow *First Aid for Finds* (2nd Edition) and UKIC's Conservation Guidelines No. 2. Where delicate artefacts are uncovered, appropriate immediate measures will be taken, and the artefacts transferred to the appropriate Conservator. Should particularly complex conservation requirements become apparent, the conservator will be called to site to excavate and package the object.

Scientific Dating

- 5.5.38 Achieving a coherent chronology across all phases of activity is a key objective, as this may help resolve problems in the identification of cultural activity during period when ceramics were not generally available to communities in Kent, i.e. later prehistory and early medieval. A strategy for the selection of samples for scientific dating will be required, taking into consideration statistical procedures designed to enhance the accuracy of site chronologies, for instance the use of Bayesian techniques¹⁰.

¹⁰ Bayliss A & Bronk Ramsey C 2004 *Pragmatic Baysians: a decade of integrating radiocarbon dates into chronological models* in Caitlin E Buck and Andrew R Milard Tools for Constructing Chronologies: Crossing Disciplinary Boundaries, Lecture Notes in Statistics 177, 25-42
<http://books.google.co.uk/books?id=2QQFOSAidfoC&pg=PA25&lpg=PA25&dq=bayliss+baysian+dating&source=bl&ots=C>

- 5.5.39 Samples of material suitable for scientific dating techniques including AMS C¹⁴ dating, archaeomagnetism (for example, charred seeds or *in situ* burnt clay from appropriate contexts) or thermoluminescence will be collected where available.
- 5.5.40 Scientific dating will be a significant consideration during the post-excavation assessment and will inform the Updated Project Design.

5.6 Procedures in respect of statutorily designated remains

Human Remains

- 5.6.1 It is not anticipated that human remains will be present within the site, given the prevailing soil conditions in this part of Kent, which are not favourable for the preservation of buried bone and because there is no evidence for the presence of any known or existing cemetery sites.
- 5.6.2 In the event of human remains being encountered they will be left *in situ*, covered and protected and the Coroner, the Kent County Archaeologist and the Archaeological Clerk of Works will be informed.
- 5.6.3 The Archaeological Contractor will arrange receipt of the appropriate documentation and license from the Department of Justice to enable the legal removal of any human remains encountered in the works. The Archaeological Contractor is to comply with the conditions of any issued License.
- 5.6.4 If removal is agreed, all subsequent work will comply with relevant regulations (including local authority environmental health regulations) and technical guidance¹¹.
- 5.6.5 The Archaeological Contractor will have available within the team or on call an appropriately qualified and experienced osteo-archaeologist to supervise the excavation and removal of human remains from the site. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist where appropriate in the lifting of human remains and grave goods / cremation vessels.
- 5.6.6 The potential for chemical analysis of bone and teeth to provide information on past human diet, health, migration and kinship, as well as the age of the skeletal material¹² will be considered during post-excavation.

Protected Military Remains

- 5.6.7 The 1986 Protection of Military Remains Act (POWRA) applies to any aircraft which have crashed while in military service and to certain wrecks of vessels which were wrecked while in military service. POWRA makes it an offence to disturb, move or unearth military remains which have been designated.

[VbRpWV24&sig=OooBBYWL8aTn7Hckc-uGXhzeG3o&hl=en&ei=eMYpTLPEKMOIOI-znbMD&sa=X&oi=book_result&ct=result&resnum=3&ved=0CCIQ6AEwAg#v=onepage&q&f=false](http://www.english-heritage.org.uk/publications/human-bones-from-archaeological-sites/)

¹¹ EH 2004 *Human bones from archaeological sites* <http://www.english-heritage.org.uk/publications/human-bones-from-archaeological-sites/>

¹² Richards M 2004 *Sampling procedures for bone chemistry* in M Brickley and J I McKinley (eds) *Guidelines to the Standards for Recording Human Remains* IFA Paper No. 7, 43-46
<http://www.archaeologists.net/modules/icontent/index.php?page=35>

- 5.6.8 There are no designated protected areas or controlled sites within the Order Limits, and there are no records of military vessels or aircraft having been lost within the order limits.
- 5.6.9 There are records of military aircraft crash site within the immediate vicinity of the Order Limits, although the crash sites at Upstreet and Tile Lodge which are closest to the Order Limits are recorded as having been cleared at the time of the crash. Surviving remains of these or any unrecorded crash sites could be protected under the act and should be treated as controlled sites until their status has been confirmed with the Ministry of Defence and any appropriate licences for excavation granted.
- 5.6.10 Where remains are observed during archaeological investigation or construction work, intrusive work should cease and the site be secured while consultation with the Ministry of Defence is undertaken.

Treasure

- 5.6.11 Any items which are recovered which could be deemed as treasure will be subject to the provisions of the Treasure Act 1996 and the Treasure (Designation) Order 2002. Such material shall normally be removed from site to a secure location at the end of the working day on which it is found. In addition to the statutory authorities the relevant Portable Antiquities Officer should be informed.

5.7 Post-Excavation work, Reporting and Dissemination

Finds

- 5.7.1 All finds processing, conservation work and storage of finds must be carried out in compliance with the ClfA Guidelines for the collection, documentation, conservation and research of archaeological materials (2008) and those set by UKIC (1990).
- 5.7.2 The deposition and disposal of artefacts must be agreed with the legal owner and recipient museum prior to the work taking place. Where the landowner decides to retain artefacts, adequate provision must be made for recording them. Details of land ownership should be provided by the developer.
- 5.7.3 All retained artefacts must be cleaned and packaged in accordance with the requirements of the recipient museum.

Site Archive

- 5.7.4 Before the commencement of fieldwork, contact should be made with the landowners and with Dover Museum to make the relevant arrangements. Details of land ownership should be provided by the developer. Details of the appropriate museum can be provided by the Kent County Archaeologist.
- 5.7.5 The archaeological contractor will specify the receiving museum and confirm that arrangements for receipt of archaeological material and site archives have been agreed before the commencement of fieldwork.
- 5.7.6 The archive and the finds must be deposited in the appropriate local museum, within six months of completion of the post-excavation work and report.
- 5.7.7 The Kent County Archaeologist will require confirmation that the archive has been submitted in a satisfactory form to the relevant museum.

Post-Excavation Assessment

Post-excavation Assessment

5.7.8 A discrete post-excavation assessment (PXA) will be carried out at the end of all excavation and/or strip, map and sample works (as identified at **Section 4**) and submitted to the Kent County Archaeologist within six months of the completion of fieldwork.

Purpose

5.7.9 The intention of carrying out a PXA is to provide a rapid summary of the material recovered during the excavation and to allow costed recommendations to be made for the final reporting, which will be carried out following the completion of all of the archaeological fieldwork.

5.7.10 The PXA is intended to be a summary document rather than a detailed record. As such, the level of reporting will provide sufficient detail to allow recommendations to be made and justified.

Form

5.7.11 The PXA will comprise:

- Introduction:
 - scope of the project;
 - circumstances and dates of fieldwork and previous work; and
 - comments on the organisation of the report.
- Original research aims.
- Summary of the documented history of the site(s).
- Interim statement on the results of fieldwork.
- Summary of the site archive and work carried out for assessment:
 - site records: quantity, work done on records during post-excavation assessment;
 - finds: factual summary of material and records, quantity, range, variety, preservation, work done during post-excavation assessment;
 - environmental material: factual summary of human and animal bone, shell and each type of sample (e.g. bulk organic, dendrochronological, monolith), quantity, range, variety, preservation, work done on the material during post-excavation assessment; and
 - documentary records: list of relevant sources discovered, quantity, variety, intensity of study of sources during post-excavation assessment.

- **Potential of the Data:**
 - an appraisal of the extent to which the site archive might enable the data to meet the research aims of the project, sub-divided according to the research aims of the project rather than the form of the data;
 - a statement of the potential of the data in developing new research aims, to contribute to other projects and to advance methodologies; and
 - a summary statement of the significance of the data.
- **Additional information will normally include:**
 - supporting illustrations at appropriate scales;
 - sufficient supporting data, tabulated or in appendices, and/or details of the contents of the project archive, to permit the interrogation of the stated conclusions; and
 - index, references and disclaimers.

OASIS

- 5.7.12 The overall aim of the Online Access to the Index of Archaeological Investigations (OASIS) project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large scale developer funded fieldwork. The archaeological consultant or contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Once a report has become a public document by submission to or incorporation into the Kent Historic Environment Record (HER), Kent HER will validate the OASIS form thus placing the information into the public domain on the OASIS website. The archaeological contractor must indicate that they agree to this procedure within the method statement submitted to the Archaeological Clerk of Works for approval.

Publication

- 5.7.13 Formal publication of the results of the fieldwork will be required. It is intended that the results of the works as a whole will be reviewed and decisions taken on the scope and level of any publication(s) following the submission of the PXA reports and review.

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6. HEALTH, SAFETY AND ENVIRONMENT

- 6.1.1 Health and Safety will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. All relevant Health and Safety legislation, regulations and codes of practice should be respected and adhered to. Site-specific risk assessments will be carried out in respect of each element of the mitigation fieldwork prior to commencement of the fieldwork and copies sent to the representatives of the client for approval.
- 6.1.2 The project will be carried out in accordance with safe working practices and under the defined Health, Safety and Environmental Policy.
- 6.1.3 Copies of the successful contractor's insurance policies will be required in advance by the client or their nominated representative.
- 6.1.4 The appointed sub-contractor/s will take responsibility for securing the trenches (e.g. by fencing), provision of welfare, backfilling and reinstatement of the trenches and the removal of materials brought onto the site during the evaluation.
- 6.1.5 Service plans and plans of buried restrictions will be supplied by the appointed Principal Contractor. Any archaeological intervention must respect all requirements for safe stand-off distances and working practices in regard of these features. Any resulting changes to the Archaeological Clerk of Works.

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7. MONITORING

- 7.1.1 The Kent County Archaeologist must be informed of the start date and timetable for the evaluation in advance of work commencing.
- 7.1.2 Reasonable access to the site must be afforded to the County Archaeologist or their nominee at all times, for the purposes of monitoring the archaeological evaluation
- 7.1.3 Regular communication between the archaeological contractor, the County Archaeologist, client and other interested parties must be maintained to ensure the project aims and objectives are achieved.

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