



AQUIND Limited

PEIR CHAPTER 20

Heritage and Archaeology

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20 HERITAGE AND ARCHAEOLOGY

20.1 SCOPE OF THE ASSESSMENT

20.1.1 INTRODUCTION

- 20.1.1.1 This chapter provides the preliminary information regarding the impacts associated with the historic environment as a result of the Proposed Development. The historic environment comprises potential buried heritage assets (archaeological remains and palaeoenvironmental deposits) and above ground heritage assets (structures and landscapes of heritage interest and their setting) within or immediately around the Proposed Development (hereafter the 'Site'). This includes designated heritage assets and assets identified by the local planning authority (including local listing), which are protected by law or local policy.
- 20.1.1.2 Whilst comprehensive desk-based research has been carried out to inform this preliminary assessment, it is recognised that in order to clarify the presence, nature, date, extent and significance of possible archaeological remains potentially affected by the Proposed Development, targeted site-based archaeological investigation will be required, the scope and form of which is to be agreed with LPA archaeological officers. The results of the site-based investigations will enhance current understanding of archaeological potential, and will be used to support the forthcoming ES.
- 20.1.1.3 Whilst it is recognised that hedgerows considered 'important' in accordance with the Hedgerows Regulations 1997 may be present within the Site Boundary, these are not considered within this Chapter. The preliminary assessment of impacts to hedgerows is considered in Chapter 16 - Onshore Ecology.
- 20.1.1.4 The Proposed Development that forms the basis of this assessment is described in Chapter 3 Description of the Proposed Development.
- 20.1.1.5 The supporting appendices to this chapter comprise:
- Heritage and Archaeology Baseline, including Historic Environment Gazetteer (Appendix 20.1);
 - Heritage and Archaeology Impact Tables (Appendix 20.2); and
 - Heritage and Archaeology Residual Effects Tables (following mitigation) (Appendix 20.3).

20.2 STUDY AREA

- 20.2.1.1 The study area varies depending on the receptors being considered. For below ground (archaeological) remains an area of 500 m from the Site Boundary was used (at both the Converter Station Area and across the Onshore Cable Corridor). A plan showing the study area can be seen on Figures 20.1a-c. The 500 m archaeological assessment study area is based on the Site Boundary presented in the Scoping Report. A broad range of sources were consulted, including documentary and cartographic sources and the results from past archaeological investigations.
- 20.2.1.2 Where appropriate, there may be reference to assets beyond the 500 m study area, e.g., where such assets are of a particularly high heritage significance and/or where they are large contributors to the understanding of the historic environment.
- 20.2.1.3 In respect of the potential impacts on above ground heritage assets, a study area of 2 km from the indicative Converter Station location was used for the identification of heritage assets. In conjunction with the WSP Landscape team, a ZTV was used to identify designated heritage assets beyond the radial 2 km where long-distance views of the Converter Station may have an impact on their setting (Figure 20.2).
- 20.2.1.4 The Onshore Cable Route is to be constructed entirely below ground, with no upstanding elements, as such, the assessment of potential impacts on the setting of above ground heritage assets at this stage has been confined to the Converter Station Area (within Section 1).
- 20.2.1.5 FOC infrastructure is anticipated to be located adjacent to the Converter Station (up to two Telecommunications buildings) and within approximately 1 km of Landfall (up to two Optical Regeneration Stations), and other associated equipment for auxiliary power supply, and security fencing, as described in Chapter 3. However, as the locations are not yet confirmed, the assessment of these elements of the Proposed Development will be considered in the ES when further details are available.

20.2.2 IMPACTS SCOPED INTO THE ASSESSMENT

- 20.2.2.1 The preliminary assessment of impacts on the historic environment considers the potential for impacts associated with the following activities:

Construction Stage

- Partial or complete loss to buried heritage assets (known or possible archaeological remains), if present, where ground disturbance is proposed. Such impacts may be caused by the excavation of the trench for the Onshore Cable Route, construction activities at the proposed Landfall along with topsoil removal within the cable trench 'working width'. Impact associated with the removal of topsoil are also considered for the Converter Station Area, and for temporary/permanent access roads and construction compounds. For the Converter Station itself, impacts on buried heritage assets associated with the

proposed landscaping, earthworks, planting, and foundations are also considered.

Operational Stage

- Permanent changes to the setting of above ground designated assets (e.g. listed buildings, conservation areas, and registered parks and gardens) within the vicinity of the Converter Station, due to the presence of permanent above ground structures.

20.2.3

IMPACTS SCOPED OUT OF THE ASSESSMENT

20.2.3.1

The following effects have been scoped out of the assessment for the reasons set out below:

- Construction Stage and Operational Stage effects on above ground designated heritage assets along the Onshore Cable Corridor and at the Landfall site. This is on the basis the works comprise only below-ground disturbance. Consequently, there would be no effects to the setting of heritage assets. This includes temporary construction stage impacts as these are unlikely to be significant considering the short duration of the construction stage. It should be noted that design will be kept under review as some elements such as the FOC infrastructure are yet to be determined, and may require potential for above ground impacts to be revisited.
- Operational Stage impacts to the setting of undesignated above ground heritage assets which are not of high or very high significance has been scoped out. In line with proportionality set out in the overarching National Policy Statement for Energy (EN-1) such assets are not considered significant enough to warrant a settings assessment.
- Operational Stage impacts to buried archaeological remains will not be considered on the basis that there would be no further ground disturbance following completion of the construction stage and no additional archaeological impact.
- Cumulative effects in relation to below-ground archaeological remains. Cumulative effects are 'elevated' effects which occur where the combined effect of the Proposed Development with other proposed schemes in the vicinity, on a discrete and significant shared asset/resource, is more severe than that reported along the Onshore Cable Corridor. For intangible and deeply buried heritage assets it is not feasible to quantify accurately the nature of the resource across the whole study corridor, which would enable the identification of a cumulative impact and potential elevated effect, along with the localised nature of the impact proposed.

20.3 LEGISLATION, POLICY AND GUIDANCE

20.3.1.1 This assessment has considered current legislation, policy and guidance relevant to the historic environment. These are listed below.

20.3.2 LEGISLATION

Scheduled Monuments

- Nationally important archaeological sites (both above and below-ground remains) may be identified and protected under the Ancient Monuments and Archaeological Areas Act 1979. An application to the Secretary of State is required for any works affecting a Scheduled Monument. Prior written permission, known as Scheduled Monument Consent ('SMC') is required from the Secretary of State for works physically affecting a scheduled monument. SMC is separate from the statutory planning process.

Listed Buildings and Conservation Areas

- The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the legal requirements for the control of development and alterations which affect buildings, including those which are listed or in conservation areas. Buildings which are listed or which lie within a conservation area are protected by law. Grade I are buildings of exceptional interest. Grade II* are particularly significant buildings of more than special interest. Grade II are buildings of special interest, which warrant every effort being made to preserve them.

Human Remains

- The exhumation of any human remains requires approval from either the Secretary of State or the Church of England, depending on the current location of the remains. Exhumations from land which is subject to the Church of England's jurisdiction will need the Church's authorisation (a Faculty or the approval of a proposal under the Care of Cathedrals Measure 2011). This includes consecrated ground in cemeteries.
- Exhumations from land which is not subject to the Church of England's jurisdiction will need a licence from the Secretary of State, under Section 25 of the Burial Act 1857 as amended by the Church of England (Miscellaneous Provisions) Measure 2014. A Burial Licence is required from the Secretary of State if the remains are not intended for reburial in consecrated ground (or if this is to be delayed - for example where archaeological or scientific analysis takes place first).
- Under the Town and Country Planning (Churches, Places of Religious Worship and Burial Grounds) Regulations 1930, the removal and re-interment of human remains should be in accordance with the direction of the local Environmental Health Officer.

20.3.3

PLANNING POLICY

National Policy

National Policy Statement

- The National Policy Statement for Energy (EN-1), Department of Energy and Climate Change, published in July 2011 sets out the overarching national policy for major energy infrastructure projects within England and Wales in order to meet future demand, deliver on obligations to reduce greenhouse gas emissions and ensure a secure energy supply through a diverse range of energy sources.
- Section 5.8 contains the following statements which are of key relevance:
 - *The construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment (paragraph 5.8.1);*
 - *The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, landscaped and planted or managed flora (paragraph 5.8.2);*
 - *The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents (paragraph 5.8.10);*
 - *In considering the impact of a proposed development on any heritage assets, the IPC should take into the account the particular nature of the significance of the heritage assets and the value they hold for this and future generations (paragraph 5.8.12);*
 - *Any harmful impact on the significance of a designated heritage asset should be weights against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss (5.8.15);*
 - *Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost (paragraph 5.8.20).*

National Planning Policy Framework

- The Government issued a revised version of the NPPF in July 2018 (Department for Communities and Local Government 2018) and supporting revised Planning Practice Guidance in 2018 (ibid).

- The NPPF does not contain specific policies for NSIPs, which are determined in accordance with the Planning Act 2008 and relevant national policy statements for major infrastructure as well as matters that are relevant. In this context, the NPPF may contain information which is relevant to the determination of an NSIP.
- Section 16 of the NPPF deals with 'Conserving and Enhancing the Historic Environment'. The NPPF recognises that heritage assets are an irreplaceable resource which 'should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations' (para 184). The NPPF requires the significance of heritage assets to be considered in the planning process, whether designated or not.

Local Policy

20.3.3.1 Following the Planning and Compulsory Purchase Act 2004, Planning Authorities have replaced their Unitary Development Plans, Local Plans and Supplementary Planning Guidance with a new system of Local Development Frameworks. In most cases heritage policies are likely to be 'saved' because there have been no significant changes in legislation or advice at a national level.

20.3.3.2 The relevant local policies are listed below, in all cases they reflect the overarching National Planning Statement (EN-1).

Portsmouth City Council

- The southern section of the Site Boundary falls within Portsmouth City LPA. The Portsmouth Plan (Portsmouth's Core Strategy and spatial plan) was adopted in January 2012 (PCC, 2012). The Plan recognises the city's strong maritime heritage. Objective 1 notes that new development should protect the local architectural heritage (para 2.7), and policy PCS23 Design and Conservation provides the approach to the historic environment.

Havant Borough Council

- The central section of the Site Boundary lies within Havant Borough. The Havant Borough Core Strategy was adopted in March 2011 (HBC, 2011). Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough relates to the historic environment.
- Policy CS11 states that planning permission will be granted for development that protects and where appropriate enhances the borough's statutory and non-statutory heritage designations.

Winchester City Council

- The northern section of the Site Boundary lies within Winchester City LPA. The Winchester City Council Local Plan Joint Core Strategy was adopted in March

2013 (WCC, 2013). Policies relevant to the historic environment are included as part of the ‘saved policies’ from the 2006 Local Plan (HE 1-8).

- The main objective of these policies is to conserve the historic environment by ensuring that ‘the essential character and special interest of its assets are protected or enhanced whenever development takes place’ (ibid).

East Hampshire District Council

- The north-east section of the Site Boundary lies within East Hampshire District. The East Hampshire District Local Plan Joint Core Strategy was adopted in June 2014 (EHDC, 2014). Policy CP30 is relevant to the historic environment; it states that ‘development proposals must conserve and, where possible, enhance the District’s historic environment’ (ibid).

20.3.4 GUIDANCE

20.3.4.1 The preliminary assessment undertaken in this chapter adheres to professional standards and guidance as set out in the following documents:

- Standards and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists (‘CIfA’) Dec 2014);
- The setting of heritage assets. Historic Environment Good Practice Advice in Planning Note 3 (Historic England, 2016,); and
- Conservation principles, policies and guidance. Consultation Draft. (Historic England, 2017).

20.4 SCOPING OPINION AND CONSULTATION

20.4.1 SCOPING OPINION

20.4.1.1 As detailed within Chapter 1 Introduction, a Scoping Opinion was received by the Applicant from PINS (on behalf of the SoS) on 7 December 2018, including formal responses from statutory consultees and the MMO. The responses from PINS in relation to Historic Environment and how those requirements should be addressed by the Applicant, are set out below in Table 20.1.

20.4.1.2 Appendix 5.3 provides a complete set of responses in the PEIR to the contents of the Scoping Opinion.

Table 20.1 - Scoping Opinion Response

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
PINS	4.18.1	The Inspectorate agrees that given the nature of the Proposed Development that impacts on the settings of above ground designated heritage assets along the cable route can be scoped out of the ES.	n/a
	4.18.1	Due to the proximity of the landfall and to the scheduled ancient monument of Fort Cumberland and listed buildings, together with the limited information provided within the Scoping Report with regards to the nature of the works at the landfall site, the Inspectorate does not agree to scope out impacts on the setting of above ground heritage assets at the landfall. The ES should include an assessment of any significant effects on heritage receptors that are likely to occur.	<p>Setting impacts at the Landfall site during the Construction Stage will be scoped out based on the detailed proposals. This is on the basis the works comprise only below-ground disturbance.</p> <p>The predicted short-term effects on the setting of these assets during the Construction Stage (e.g. dust and noise) is considered negligible and the environmental effect insignificant. The Onshore Cable Route would entail localised disturbance, with no physical impacts within or near the scheduled monument constraint area.</p> <p>In terms of Operational Stage impacts, the Inspectorate has agreed that this can be scoped out (ID 4.18.3).</p> <p>Design will be kept under review for any changes which have potential to affect the scheduled monument.</p>

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
	4.18.2	The Inspectorate agrees that given the nature of the Proposed Development impacts to buried archaeological remains during operation can be scoped out of the ES.	n/a
	14.8.3	The Inspectorate agrees that given the nature of the Proposed Development, impacts during operation on the settings of above ground designated heritage assets at the landfall and throughout the cable route can be scoped out of the ES.	n/a
	14.8.4	The Scoping Report does not make clear whether the Applicant intends to scope out an assessment of any cumulative impact to heritage and archaeological assets along the cable route and landfall and this matter is not included in Table C1 of Appendix C.	This is confirmation that cumulative effects for above-ground heritage assets at the indicative Converter Station location will be included in the ES chapter.
	14.8.4	The Inspectorate considers that cumulative effects on heritage and archaeological receptors that could be significantly affected by the Proposed Development should be included in the ES.	Cumulative effects elsewhere along the route will be considered, where this is appropriate, and will be scoped out where it is not.

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
	Section 4.18.5	It is noted that a ZTV is proposed for the assessment of impacts on above ground settings arising from the Converter Station and that this has not yet been established for the Proposed Development. The impact assessment should ensure that the determination of baseline receptors is appropriately informed by the ZTV, and the study area/ZoI clearly justified. The study area for the assessment of the entire Proposed Development should also be based on the likely ZoI rather than an arbitrary distance.	The rationale for the study area for the historic environment assessment and also for the setting assessment at the indicative Converter Station location has been determined by the use of a ZTV in the PEIR.
	4.18.6	The Inspectorate notes the intention to undertake a site walkover inspection at selected locations to inform the ES. The Inspectorate considers that the proposed baseline assessment at the landfall should be informed by a geophysical and geotechnical survey undertaken in accordance with recognised methods. The Applicant should seek to agree the scope and extent of such surveys with the relevant consultation body, including	A Geophysical Survey is not considered appropriate at Landfall site as the area of impact for the Joint Bay would be located within an existing car park in an area of hardstanding. Based on existing geotechnical information survival may be low in this area. This will be further considered in the ES.

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
		Hampshire County Archaeology/Conservation Officers.	
	4.18.7	It is noted that reference is made to obtaining desk-based information from the principal source of Berkshire Historic Environmental Record (HER); however, the Inspectorate assumes this is a typographical error and that the Hampshire HER will be consulted to inform the ES.	This has been corrected in the PEIR.
	Section 4.18.8	The Inspectorate considers that the ES should address impacts to drainage and groundwater movement where these may result in significant impacts to heritage assets and below ground archaeological remains. Cross reference should be made to the relevant assessments (eg Ground Conditions and Water Resources and Flood Risk chapters).	Cross reference will be made to other reports where appropriate. Alterations to drainage and ground water are not however considered significant, taking into account the nature of the details of the Proposed Development, which is a 1.0–1.5 m cable trench with localised disturbance for temporary Joint Bays.
EHDC (Hampshire County Council Archaeologist)	Letter dated 25 April 2018	Potential impacts on non-designated heritage assets should be assessed;	An assessment of potential construction impacts on non-designated assets has been carried out. Operational Stage impacts to the setting of undesignated above ground heritage assets which are not of high or very high significance has been scoped out. In line with proportionality set out in

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
			the overarching National Policy Statement for Energy (EN-1) such assets are not considered significant enough to warrant a settings assessment.
		Assessment should demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected have been properly assessed;	The rationale for the study area for the historic environment assessment is considered appropriate to define the baseline conditions. The rationale for the settings assessment study area at the indicative Converter Station location has been determined by the use of a ZTV in the PEIR.
		Needs to be an understanding of what makes the designated heritage assets special and how the proposal would impact on significance;	This has been included in the PEIR.
		Assessment should take account of potential impact of development activities.	All aspects of the Proposed Development have been assessed in the PEIR.
WCC	Letter dated 04 May 2018 (re-submitted scoping opinion)	<p>Comments as above.</p> <p>The EIA assessment stage should include further site surveys (such as geophysical survey) and site investigations (trial trenching) for those areas of the cable route which lie outside</p>	<p>See responses as above.</p> <p>Site-based surveys are proposed post-PEIR with the results feeding into the ES Chapter.</p>

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
		the existing road network and for the proposed site of the sub-station.	
HBC	Letter dated 25 April 2018 (re-submitted scoping opinion)	Comments all included above.	Responses as above.
PCC	June 2018 (re-submitted joint scoping opinion)	Particular concern for Fort Cumberland or areas in close proximity to the Fort;	The Proposed Development would entail no physical impacts within or near the scheduled monument constraint area. The Onshore Cable Route would be buried with no setting impacts.
		An appropriate level of engagement with the Hampshire County Archaeologist and Conservation Officer is encouraged;	Further consultation will be carried out once the PEIR is made available.
		Ensure that the DBA sets out the nature of the archaeological potential, impact on this potential and a mitigation strategy as anticipated in the scoping report;	Comments on scope, potential and study area and drainage impacts, as above.

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
Historic England		Potential impacts on non-designated heritage assets should be assessed;	<p>The Proposed Development would entail no physical impacts within or near the scheduled monument constraint area. The Onshore Cable Route would be buried with no setting impacts.</p> <p>Comments on scope, potential and study area and drainage impacts, as above.</p>
		We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.	
		Particular attention should be paid to Fort Cumberland (scheduled monument and Grade II* listed building). We would expect that all options to choose a route that will not impact the Fort (either physically impact or impact it through development within its setting) will be explored.	

Consultee	Scoping Opinion Section	Summary of Comment Received	Response
		<p>The assessment should also take account of the potential impact which associated development activities (such as construction, servicing, and maintenance) might have upon perceptions, understanding, and appreciation of any heritage assets in the area.</p> <p>The assessment should also consider the likelihood of alterations to drainage and ground water patterns that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.</p>	

20.4.2 CONSULTATION

20.4.2.1 Consultation is a key part of the DCO application process. Further consultation will be undertaken after this PEIR has been made available. This will include consultation with the archaeological officer(s) at relevant Local Authorities.

20.5 METHODS OF ASSESSMENT

20.5.1 ESTABLISHING THE HISTORIC ENVIRONMENT BASELINE

Desk-based assessment – Key Sources

20.5.1.1 In order to establish the historic environment within the study area with the potential to be impacted by the Proposed Development, a broad range of sources were consulted, including documentary and cartographic sources and the results from archaeological investigations within a 500 m archaeological assessment study area centred on the Site Boundary (see paragraph 20.2.1.1 for study area description). This information was examined in order to determine the likely nature, extent, preservation and significance of any known or possible heritage assets that may be present within or adjacent to the Site Boundary.

20.5.1.2 The table below provides a summary of the key data sources.

Table 20.2 - Baseline Data Sources

Source	Data	Comment
Historic England	National Heritage List ('NHL') with information on statutorily designated heritage assets	Statutory designations (scheduled monuments; statutorily listed buildings; registered parks and gardens; historic battlefields) can provide a significant constraint to development.
Portsmouth City Council	Historic Environment Record ('HER')	Primary repository of archaeological information. Includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources.
Winchester City Council	HER	
Hampshire County Council	HER	
Historic England	National Record of the Historic Environment ('NRHE')	National database maintained by Historic England. Not as comprehensive as the HER but can occasionally contain additional information. Accessible via pastscape

Source	Data	Comment
		website. This was consulted for the Site and its immediate vicinity only.
Hampshire County Council	Archaeological Alert Areas	Areas marked out as having potential archaeological interest, managed by the LPA to flag potential sites.
Local Planning Authority	Archaeological priority area	Area of interest identified by the local authority. There is likely to be a requirement for archaeological investigation (initially a desk-based assessment) as part of any planning application.
Local Planning Authority	Conservation area	An area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance.
Local Planning Authority	Locally listed building	Heritage asset identified by the authority which are of local importance due to their architectural and/or historic significance and make a positive contribution to the character of an area. Whilst not statutorily protected, a building's inclusion on the list means that it is a material consideration in the planning process.
British Geological Survey (BGS)	Solid and drift geology digital map; online BGS geological borehole record data.	Subsurface deposition, including buried geology and topography, can provide an indication of potential for early human settlement, and potential depth of archaeological remains.
Landmark Information Group	Ordnance Survey maps from the 1st edition (1860–	Provides a good indication of past land use and impacts

Source	Data	Comment
	70s) to present day, and Goad fire insurance maps from the 19th century onwards	which may have compromised archaeological survival. Provides an indication of the possible date of any buildings on the Site. Goad maps can indicate the presence of basements if these were surveyed.
Hampshire Record Office	Historic maps (e.g. Tithe, enclosure, estate), published journals and local history	Baseline information on the historic environment
Historic England Archive, Swindon	Vertical and specialist (oblique) aerial photographs	Cropmarks formed by moisture variations due to subsurface features can indicate the presence of archaeological remains. Aerial photographs can also sometimes provide information on ground disturbance.
Web-published local history	Archaeological Data Service, British History Online	Many key documentary sources, such as the Victoria County History, and local and specialist studies are now published on the web and can be used to inform the archaeological and historical background. The Archaeological Data Service includes an archive of digital fieldwork reports.
AECOM	Environmental Impact Assessment Lovedean Substation	An Environmental Impact Assessment (2010) and Written Scheme of Investigation (2013) was carried out by AECOM in advance of works which took place at Lovedean substation.
WSP Environment Teams	Ecology (Historic Hedgerows and Ancient	Liaison with other teams working on the project to

Source	Data	Comment
	Woodland); Landscape and Visual (ZTV); Ground Investigation	ensure a joined-up approach which shares information.
AQUIND Ltd	Project acquired geotechnical data	The information can be very useful in enhancing understanding of the nature and depth of natural geology (see above) and any made ground, whether it is modern or of potential archaeological interest.
	Topographical survey data	Survey data can provide an indication of the impact of past land use, e.g. ground raising or lowering, which is useful for understanding possible truncation and likely depth of archaeological remains.

- 20.5.1.3 Figure 20.1 (a–c) shows the location of known historic environment features within the study area, as identified by the sources above, visits to the Site, and during the course of research carried out for this assessment. Each feature of the historic environment identified has been allocated a unique 'assessment' reference number (A1, A2, etc.), which is listed in the gazetteer contained in Appendix 20.1.
- 20.5.1.4 Although scoped out of the assessment along the Onshore Cable Corridor, information on listed buildings has been provided so that a complete historical baseline is presented. Where appropriate, these are included to help inform and characterise the surrounding historic environment. Due to the considerable number of listed buildings in the vicinity of the Site Boundary and because setting issues for the Onshore Cable Route and Corridor is not a concern, the study area only includes listed buildings within 50 m, unless their inclusion is considered relevant to the study. There are no conservation areas assessed, consequently these are not shown. All distances quoted in the text are approximate (within 5 m).
- 20.5.1.5 Archaeological Priority Zones ('APZ') are not shown (as these are not 'designated assets'). APZs are used to flag sites of potential archaeological potential for local planning authorities or developers and are not a heritage asset. As such, they are not assessed.

Site Visit

- 20.5.1.6 A site visit to the Converter Station Area (Section 1) was carried out on the 14th of May 2018 to determine the topography and existing land use, identify any visible heritage assets (e.g. structures and earthworks), and assess any possible factors which may affect the survival or condition of any known or potential heritage assets.
- 20.5.1.7 The site visit also extended beyond the Converter Station Area for the purposes of scoping designated heritage assets for an assessment of their settings, where this might be affected by the proposed development (as per Historic England Guidance, 2017) and for the settings assessment itself.
- 20.5.1.8 A site walkover inspection will be carried out of the greenfield sections of the Site Boundary, where feasible, to further inform the assessment of effects on the historic environment, subject to land access arrangements. No site walkovers are proposed to be carried out for the majority of the Onshore Cable Corridor where the route crosses brownfield/developed land (i.e. along pavements/roads/hardstanding), as impacts on above ground heritage assets along the Onshore Cable Corridor have been scoped out.

Archaeological monitoring of geotechnical investigations

- 20.5.1.9 Archaeological monitoring of geotechnical trial pits was carried out in April–May 2018. These were undertaken in the area of the indicative Converter Station location, near Lovedean (Sections 1 and 2). The work consisted of monitoring the excavation of 20 geotechnical test pits, and seven California Building Ration (CBR) test pits. The results of the investigation identified only a limited number of archaeological features: a single shallow linear feature aligned east-west likely an undated field boundary. A number of geotechnical trial pits and boreholes were carried out at intervals along the remainder of the Onshore Cable Corridor, much of which lies within brownfield land. Due to the highly localised nature of these and their broad spacing, the data from them would be of very limited use and these were not archaeologically monitored. Information from the logs and pit descriptions has however been considered in this assessment.

20.5.2 ASSESSING HERITAGE SIGNIFICANCE

- 20.5.2.1 The Overarching National Policy Statement for Energy (EN-1) defines significance as 'The sum of the heritage interests that a heritage asset holds'. That interest may be historic, archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.'
- 20.5.2.2 The determination of the significance is based on statutory designation and/or professional judgement against the below values, identified in Historic England Conservation Principles (revised consultation draft Nov 2017):
- Historic Interest: the ways in which the asset can illustrate the story of past events, people and aspects of life (illustrative value, or interest). It can be said to

hold communal value when associated with the identity of a community. Historical interest considers whether the asset is the first, only, or best surviving example of an innovation of consequence, whether related to design, artistry, technology or social organisation. It also considers an asset's integrity (completeness), current use/original purpose, significance in place making, associative value with a notable person, event, or movement.

- **Archaeological Interest:** the potential of the physical remains of an asset to yield evidence of past human activity that could be revealed through future archaeological investigation. This includes above-ground structures and landscapes, earthworks and buried or submerged remains, palaeoenvironmental deposits, and considers date, rarity, state of preservation, diversity/complexity, contribution to published priorities (research value), supporting documentation, collective value and comparative potential, and sensitivity to change.
- **Architectural and Artistic Interest:** derive from a contemporary appreciation of an asset's aesthetics. Architectural interest can include the design, construction, craftsmanship and decoration of buildings and structures. Artistic interest can include the use, representation or influence of historic places or buildings in artwork. It can also include the skill and emotional impact of works of art that are part of heritage assets or assets in their own right.

20.5.2.3 These values encompass the criteria that Historic England are obliged to consider when statutorily designating heritage assets. Each asset has to be evaluated against the range of criteria listed above on a case by case basis. Unless the nature and exact extent of buried archaeological remains within any given area has been determined through prior investigation, significance is often uncertain.

20.5.2.4 In relation to designated heritage assets, the assessment considers the contribution which the historic character and setting makes to the overall significance of the asset.

20.5.2.5 The table below provides a guide to how heritage significance has been assigned.

Table 20.3 - Criteria for Significance of Heritage Assets

Heritage Asset Description	Heritage Significance
World Heritage Sites Scheduled Monuments Grade I and II* listed buildings Grade I and II* listed registered parks and gardens Designated historic battlefields Protected Wrecks Undesignated heritage assets of high national importance	Very High

Heritage Asset Description	Heritage Significance
Grade II listed buildings Grade II registered parks and gardens Conservation areas Burial Grounds Protected heritage landscapes (e.g. ancient woodland or historic hedgerows) Undesignated heritage assets of lower national, regional or county importance	High
Heritage assets with a district value or interest for education or cultural appreciation Locally listed buildings	Medium
Undesignated heritage assets with a local (i.e. parish) value or interest for education or cultural appreciation	Low
Item with no significant value or interest	Negligible
Heritage assets that have a clear potential, but for which current knowledge is insufficient to allow significance to be determined	Uncertain

The setting of designated assets

- 20.5.2.6 In relation to heritage assets, the assessment takes into account the contribution that setting makes to the overall significance of the asset.
- 20.5.2.7 Setting is the way in which the asset is understood (i.e. evidential and historical values) and experienced (aesthetic and communal values). It is not an asset in itself. It differs from curtilage (historic/present property boundary); context (association with other assets irrespective of distance) and historic character (sum of all historic attributes, including setting, associations, and visual aspects).
- 20.5.2.8 Guidance produced by Historic England (HE 2016) and the Landscape Institute and Institute of Environmental Management and Assessment (2013) has been used to adopt a stepped approach for settings assessment. The former sets out five steps, or which the first four are relevant:
- Step 1: asset identification. The NPPF requires an approach that is proportional to the significance of the asset, and for this reason only the settings of the most sensitive (i.e. designated) heritage assets are considered in this assessment. A scoping exercise filters out those assets which would be unaffected, typically where there are no views to/from the site;

- Step 2: assess the contribution of setting. This stage assesses how setting contributes to the overall significance of a designated asset;
- Step 3: assess change. This stage identifies the effects the proposals may have on setting and considers the resultant harm or benefit to the significance of the heritage asset. It is noted however that it can be difficult to quantify such change to the overall significance of a designated heritage asset (for example, significance would rarely be downgraded from ‘high’ to ‘medium’ due to changes in setting). For this reason, the impact is reported in this assessment in terms of the extent to which the proposals would change how the asset is understood and experienced (in terms of no harm, less than substantial harm, substantial harm or total loss of significance);
- Step 4: mitigation. This explores the way to maximise enhancement and avoid or minimise harm. This is typically considered at the design stage (i.e. embedded design mitigation); and
- Step 5: reporting. Making and documenting decisions and outcomes. This reports the assessment of effects.

20.5.2.9

The assessment has taken into account the physical surroundings of the asset, including topography and intervening development and vegetation. It also considers how the asset is currently experienced and understood through its setting, in particular views to and from the asset and the Site, along with key views, and the extent to which setting may have already been compromised.

20.5.3

MAGNITUDE OF CHANGE

20.5.3.1

Determination of magnitude of change upon known or potential heritage assets is based on the deviation from baseline conditions (e.g. physical activity that would entail ground disturbance, ground reduction, etc., or the permanent presence of new structures etc. that result in changes to historic character and setting). The criteria for magnitude of change are set out in the table below.

Table 20.4 - Criteria for Magnitude of Change

Magnitude of change	Description of change
Large	<p>Complete removal of asset</p> <p>Change to asset significance resulting in a fundamental change in our ability to understand and appreciate the resource and its historical context, character and setting. The transformation of an asset’s setting in a way that fundamentally compromises its ability to be understood or appreciated. The scale of change would be such that it could result in a designated asset being undesignated or having its level of designation lowered.</p>

Magnitude of change	Description of change
Medium	Change to asset significance resulting in an appreciable change in our ability to understand and appreciate the asset and its historical context, character and setting. Notable alterations to the setting of an asset that affect our appreciation of it and its significance; or the unrecorded loss of archaeological interest.
Small	Change to asset significance resulting in a small change in our ability to understand and appreciate the asset and its historical context, character and setting.
Negligible	Negligible change or no material change to asset significance. No real change in our ability to understand and appreciate the asset and its historical context, character and setting.
Uncertain	Level of survival/condition of resource in specific locations is not known: magnitude of change is therefore not known.

20.5.4 SIGNIFICANCE OF ENVIRONMENTAL EFFECTS

- 20.5.4.1 The assessment of likely significant environmental effects as a result of the Proposed Development has taken into account both the Construction and Operational Stages. The construction stage includes enabling works, earthworks and other construction activities.
- 20.5.4.2 The significance level attributed to each effect has been assessed based on the magnitude of change due to the Proposed Development and the heritage significance of the affected receptor.
- 20.5.4.3 The matrix used to determine the significance of environmental effects within this Chapter is outlined in Table 20.5. Effects may be either negative or positive and are defined initially without additional mitigation measures. Whilst the matrix was originally derived from the DMRB assessment table produced in 1993, it has been modified to allow a greater scope for professional judgement and is a guide only, so that the process is transparent, and the rationale for the effect scores is provided in the relevant sections. Where the resulting effect comprises two levels (i.e. 'moderate or minor'), professional judgement has been applied to select the most appropriate significance of effect.
- 20.5.4.4 Where information is insufficient to be able to quantify either the resource significance or magnitude of change with any degree of certainty, the effect is given as 'uncertain'.

Table 20.5 - Significance of Environmental Effects Matrix

Magnitude of Change	Heritage Asset (receptor) Heritage Significance				
	Very High	High	Medium	Low	Negligible
Large	Major	Major	Major or Moderate	Moderate or minor	Negligible
Medium	Major or Moderate	Moderate	Moderate or Minor	Minor	Negligible
Small	Moderate or Minor	Moderate or Minor	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

20.5.4.5

The following terms have been used to define the significance of the effects identified:

- Major effect: where the Proposed Development could be expected to have a considerable effect (either positive or negative) on heritage assets (receptors). For the historic environment, in terms of the NPPF, this equates to substantial harm to, or loss of, significance of an asset of very high, high or medium heritage significance, as a result of changes to its physical form or setting;
- Moderate effect: where the Proposed Development could be expected to have a noticeable effect (either positive or negative) on heritage assets (receptors). For the historic environment this equates to less than substantial harm to the significance of an asset of very high, high, medium or low heritage significance, as a result of changes to its physical form or setting;
- Minor effect: where the Proposed Development could be expected to result in a small, barely noticeable effect (either positive or negative) on heritage assets (receptors). For the historic environment this equates to limited harm to the significance of an asset of very high, high or medium heritage significance, as a result of changes to its physical form or setting, or substantial harm to, or the loss of, significance of an asset of low heritage significance; and
- Negligible: where no discernible effect is expected as a result of the Proposed Development on heritage assets (receptors).

20.5.4.6

In EIA terms, a moderate or major effect is considered 'significant'.

- 20.5.4.7 Rather than apply the test of the NPS when considering the impact of the Proposed Development on designated assets, the language used in the NPS (i.e. substantial or less than substantial harm) has been correlated with the standard EIA methodology. A Major effect equates to ‘substantial harm’ and whilst a minor effect is considered ‘less than substantial harm’. Moderate effects may be either, and professional judgement is applied to conclude which.
- 20.5.4.8 An appropriate mitigation strategy would aim to offset or reduce any negative effect. Measures to mitigate effects would normally consist of design adjustments, to allow significant resources to be protected and retained (preservation in situ) or, where this is not feasible, investigation and recording in advance of development (e.g. targeted archaeological excavation) and during development for remains of lesser significance (e.g. archaeological watching brief), with dissemination at an appropriate level (preservation by record).
- 20.5.4.9 As heritage assets are an irreplaceable resource it is generally considered as standard practice within the planning system to implement mitigation measures in order to reduce or offset any level of negative effect on a heritage asset where the proposed change would physically alter or remove the asset, including minor negative. This is to ensure that finite and irreplaceable remains are not removed/lost without record. The level of mitigation proposed is, in each case, proportionate to the significance of the asset being affected.
- 20.5.5 ASSUMPTIONS AND LIMITATIONS**
- 20.5.5.1 Data from the HER comprises secondary information derived from varied sources. It is assumed that this data, as well as that derived from other secondary sources, is reasonably accurate. Due to the limitations identified above, it is possible that previously unrecorded archaeological sites will have survived within the Site Boundary.
- 20.5.5.2 Due to the buried and invisible nature of below ground archaeological remains, there is an element of uncertainty regarding the survival, condition, nature and extent of the known assets identified within the Site Boundary. This will be addressed by site-based archaeological investigation.
- 20.5.5.3 Notwithstanding the limitations, the methodology is robust, utilising available information, and conforming to the requirements of local and national guidance and planning policy. A range of sources have informed the desk-based assessment, including documentary sources, cartographic evidence and archaeological evaluation results from within the Site Boundary. As such, a reasonable assessment of the potential archaeological resource has been presented.

20.6 DETAILED BASELINE BY ROUTE SECTION

20.6.1 INTRODUCTION

- 20.6.1.1 As set out in Chapter 3, the Site Boundary has been divided into 10 Sections. These are shown on Figures 20.1 (a-c). The detailed Baseline Environment Overview is contained within Appendix 20.1, along with the Historic Environment Gazetteer (which lists the detailed descriptions of all historic environment features referred to hereafter, A2, 2 etc.).
- 20.6.1.2 In Appendix 20.1, the Sections have been divided into three broad groups, which equate with the northern end of the Site and the Converter Station Area, the main Onshore Cable Corridor, and the Onshore Cable Corridor at Eastney (Landfall), for the purposes of providing a broad archaeological and historical background narrative. This includes mention of any past archaeological investigations that have been carried out. The grouping is as follows:
- Section 1 – Lovedean (Converter Station Area) at the northern end of the Site Boundary;
 - Sections 2–9 – the majority of the Onshore Cable Corridor from Anmore to Bransbury Road, Eastney; and
 - Section 10 – the Onshore Cable Corridor at Eastney (Landfall), at the southern end of the Site Boundary.
- 20.6.1.3 This PEIR chapter contains a more specific baseline assessment for each of the Sections, describing the known designated and undesignated heritage assets along with the likely archaeological potential and significance. For Section 1, this also includes Designated heritage assets and their setting. This chapter is also supported by a number historic maps; which include the Ordnance Survey 1”: mile map of 1810 (Figure 20.3) and Ordnance Survey 1st edition 6”: mile maps of 1867-75 (Figures 20.4 – 6). These provide a general historical overview of the study area and the main areas of settlement, and an indication of historical land use and past impact which may have affected archaeological survival.
- 20.6.1.4 Across the study area, there have been 28 past investigations, consisting primarily of evaluations and watching briefs; considering the extent of the Proposed Development this is a relatively small number. As such, the current understanding of the nature and distribution of archaeological activity, in particular for the prehistoric, Roman and early Saxon period, for which there is no documentary record, is very limited. Archaeological survival across the Site Boundary is also anticipated to be highly variable, given the scale of the area and the landscape it crosses.

20.6.2 SECTION 1 – LOVEDEAN (CONVERTER STATION AREA): ASSETS, POTENTIAL AND SIGNIFICANCE

Designated heritage assets and their setting

20.6.2.1 This section does not contain any designated heritage assets such as scheduled monuments or listed buildings. There are several heritage assets within the vicinity which have been scoped in for setting assessment.

Rookwood

20.6.2.2 The pair of buildings at Rookwood include Rookwood (Grade II*) (A87) and Granary 5 Metres West of Rookwood (Grade II) (A125). They are situated approximately 1.4 km to the west of the Site Boundary.

20.6.2.3 Rookwood is a Norman hall dated to 1200 AD with later extensions from the medieval period and the 16th, 19th and 20th centuries. It is described by Historic England as a ‘first-floor hall’, and is a rare building type. Originally the main living space would have been on the first-floor and would have been reached via an external staircase, the ground floor would have been used for storage.

20.6.2.4 The Granary at Rookwood dates to the 17th century, it is of timber frame construction with a thatched roof.

20.6.2.5 The setting of Rookwood and The Granary contributes to their heritage significance. As a pair, they form a strong historic group and their relationship to each other is an important factor in their setting. Furthermore, the assets are still based in a rural agricultural landscape, prominent in views out from the assets towards the south which also contributes to their significance.

20.6.2.6 Rookwood is an asset of **very high** significance, derived from its historical and architectural interest. The Granary at Rookwood is an asset of high significance, derived from its historical and architectural interest. Their setting makes a moderate contribution to their significance, derived from their value as a pair of associated assets and in their views of the surrounding agricultural landscape.

Ludmore Cottages

20.6.2.7 Ludmore Cottages (A1i), 460 m to the north east of the Site Boundary is Grade II listed and dates to the late-17th century. It was originally one dwelling which was split into two cottages in the late-20th century. It is likely to be of timber-frame construction with a later brick façade.

20.6.2.8 Ludmore Cottages was originally a farmhouse which continues to exist in a historic agricultural landscape. This contributes to its significance as a heritage asset and it helps understand its historic context.

20.6.2.9 Ludmore Cottages is an asset of **high** significance, derived from its historic and architectural interest. Its setting makes a moderate contribution to its significance.

Barn Cottage

- 20.6.2.10 Barn Cottage (A102) is listed at Grade II and is located 60m to the west of the Site Boundary. It is a 16th century barn constructed of timber frame and brick infill with some early 19th century weatherboarding, 20th century west extension and a hipped thatched roof. The brick walls are of Flemish bond with part exposure of the frame.
- 20.6.2.11 Originally a barn, the asset remains in a historic agricultural landscape and has significant views of the surrounding fields. Primary views are to the north, east and south. Those to the west are screened by vegetation in the form of hedges along Edney's Lane.
- 20.6.2.12 Barn Cottage is an asset of **high** significance, derived from its historic and architectural interest. Its setting makes a moderate contribution to its significance.

Denmead Farm

- 20.6.2.13 This group of assets which are located 50 m to the west of the Site Boundary includes Denmead Farmhouse (Grade II) (A109), the Granary (Grade II) (A109) and the Cottage at Denmead Farm (Locally Listed).
- 20.6.2.14 Denmead Farmhouse dates to the 18th century, it is constructed of brick with flint and brick dressings. The Granary is located 20m west of the main farmhouse. Dating from the early-19th century, it is constructed from timber frame with weatherboarding and a corrugated iron roof. The Cottage at Denmead Farm was originally a malt house of an unknown date.
- 20.6.2.15 Denmead Farmhouse and the Granary at Denmead Farm are assets of **high** significance, derived from their historic and architectural interest. The Cottage at Denmead farm is an asset of medium significance, derived from its historic and architectural interest.

Little Denmead Farm & Bleak Cottage

- 20.6.2.16 This group of assets includes the Farmhouse at Little Denmead (Grade II) (A101), the Barn at Little Denmead (Grade II) (A101) and Bleak Cottage (Grade II) (A93). These assets are located approximately 480 m to the west of the Site Boundary.
- 20.6.2.17 Little Denmead Farmhouse is dated to the mid-17th century, it is built of flint with red brick dressings and has a half hipped thatched roof. The Barn at Little Denmead dates to the 18th century, it is constructed of timber-frame with weatherboarding and a corrugated iron roof.
- 20.6.2.18 Located adjacent to Little Denmead Farmhouse to the south, Bleak Cottage is a 16th century timber frame farmhouse with 20th century renovations. The walls are of exposed timber framing with painted brick infill, it has a half hipped tiled roof.

20.6.2.19 This group of assets is situated in a rural agricultural landscape which is reflective of their historic farming associations. Views of this landscape contribute to the setting of the farm houses and associated ancillary buildings. Furthermore, their value as a group also contributes to setting, especially the relationship between the Farmhouse at Little Denmead and the Barn at Little Denmead as surviving assets belonging to the same historic farm.

20.6.2.20 This group of assets are of **high** significance, derived from their historic and architectural interest. Their setting makes a moderate contribution to their significance through their views of the surrounding agricultural landscape and value as a group.

Stoneacre

20.6.2.21 Stoneacre (A120) is a Grade II listed building dated to c 1450 and is located 340 m to the west of the Site Boundary. Originally a hall house, it is constructed of timber frame with a half hipped thatched roof. Historic England describes the building as a rare and an exemplary example of a medieval hall house which retains many original features.

20.6.2.22 Stoneacre has many views onto the surrounding agricultural landscape. Once a farmhouse, these views contribute to the asset's significance as they increase historic understanding.

20.6.2.23 Stoneacre is an asset of **high** significance, derived from its historic and architectural interest. Its setting makes a moderate contribution to its significance as its historic context is increased through its continued views of the surrounding agricultural landscape.

Scotland

20.6.2.24 'Scotland' (A117) is a Grade II listed early-16th century timber framed hall with 18th refacing and a 20th century rear wing, it was later used as a farmhouse. It is located approximately 1.7 km to the north of the Site Boundary.

20.6.2.25 'Scotland' still exists within a rural agricultural landscape and is situated in an isolated position some distance from other properties. Its setting contributes to its significance through wide ranging views of the surrounding fields.

20.6.2.26 'Scotland' is an asset of **high** significance, derived from its historic and architectural interest. Its setting makes a moderate contribution to its significance as it benefits from retaining its historic agricultural landscape.

Hinton Manor House

- 20.6.2.27 Hinton Manor House (A141) is Grade II listed. It is an early-17th century Jacobean E-plan house with 19th and 20th century additions, situated approximately 1.8km to the north east of the Site Boundary. The house is constructed from chalkstone and faced with flints, it has a tile roof with a Victorian Tudor stack and Victorian porch. Once a manor house, Hinton was later used as a farmhouse and remains in an isolated position enclosed within farmland.
- 20.6.2.28 Its views onto the surrounding farmland form its main setting and contribute to its significance.
- 20.6.2.29 Hinton Manor House is an asset of **high** significance, derived from its historic and architectural interest. Its setting makes a moderate contribution to its significance through its views of the surrounding farmland.

Known undesignated heritage assets

- 20.6.2.30 270m to the south-east of the indicative Converter Station location, cropmarks are recorded on the HCC HER (A1u) to the west of Broadways Lane. These cropmarks may be evidence of earlier field systems (likely medieval or post-medieval). Adjacent to the north-east of the Site Boundary further cropmarks have been plotted (A1j), thought to represent a medieval or later field system.

Archaeological Potential/Significance

- 20.6.2.31 The potential for palaeoenvironmental remains is considered low. There are no significant watercourses suggesting the presence of alluvium, which could hold possible palaeoenvironmental information.
- 20.6.2.32 Section 1 has a high potential to contain prehistoric remains. Within the study area, recent excavation to the west of the Lovedean substation revealed evidence of Middle Bronze Age funerary activity, and a later prehistoric or Romano-British ditch or pit feature (A1t). Although uncertain, it is possible that settlement might have been located relatively close by. If present, such remains would be of medium or high significance, depending on preservation and extent of the remains, derived from archaeological interest.
- 20.6.2.33 This Section has a moderate potential to contain Roman remains. Although located at a distance from the known Roman settlements, recent excavation within the vicinity of the indicative Converter Station location, to the west of the current substation at Lovedean, has revealed evidence of a later prehistoric or Romano-British ditch or pit feature, which contained pottery from these periods within its primary fill. If present, such remains would be of medium significance (potentially high for evidence of Roman settlement), depending on preservation and extent, derived from archaeological interest.

20.6.2.34 This Section has an uncertain, but probably low potential for early medieval remains. Whilst the nature of settlement during the early medieval period is not well understood, there are no known finds or features recording within the assessment study area, and the survival of such is rare as the pottery is friable and the features often ephemeral.

20.6.2.35 This Section has a moderate to high potential to contain later medieval or post-medieval agricultural remains. A field system thought likely to be of medieval or later origin (A1j) is visible as cropmarks on aerial photography. Later medieval/post-medieval remains are likely to be restricted to landscape features such as field boundaries and drainage ditches or buried evidence of ridge and furrow cultivation. If present, remains would be of low significance, possibly medium if extensive and well preserved as suggested by the cropmarks, derived from archaeological and historical interest.

20.6.3 SECTION 2 - ANMORE: ASSETS, POTENTIAL AND SIGNIFICANCE

Designated heritage assets and their setting

20.6.3.1 This Section contains one designated asset, the Grade II listed Shafter Farm Barn (A1p). There are also four designated assets within 200 m of the Site Boundary to the west; these include the Grade II listed mid-19th century Denmead Farmhouse with its associated barn and granary (A108), Barn Cottage (A102), a Grade II listed 16th century cottage and The Lower Gardens, a Grade II listed house dated to the 16th or 17th century (A26).

Known undesignated heritage assets

20.6.3.2 The HER also records undated pits with woodland (A1l) (outside of the Site Boundary within open fields). Their origin is unclear, but it is thought they may relate to quarrying activities. This section contains three unlisted buildings of heritage interest recorded on the Winchester HER, two of which lie within the Site Boundary: the 16th century Crossways cottage (A1o) and Homestead on Anmore Road (A1o), a 17th century cottage.

Archaeological Potential/Significance

20.6.3.3 There have been no past investigations within this Section, consequently understanding of the nature of archaeological activity is limited. As the Section has remained undeveloped though, archaeological survival is predicted to be high.

20.6.3.4 The potential for palaeoenvironmental remains is considered generally low in this Section. Alluvium associated with any minor watercourses may contain such remains, however, as the Section lies away from known wetland areas (where Peat deposits can survive) and off of raised beach deposits (which can contain palaeoenvironmental evidence), the potential is low.

- 20.6.3.5 This Section has an uncertain, but possibly moderate potential to contain prehistoric remains. Whilst there are no known prehistoric remains within this Section, chance finds in the surrounding area, and the Bronze Age remains found further north, suggest possible background activity. If present, such remains would be of medium or high significance, depending on preservation and extent, derived from the archaeological and historical interest of the finds.
- 20.6.3.6 This Section has an uncertain, but possibly low to moderate potential to contain Roman remains. Whilst there are no known Roman remains within this Section, this may simply reflect the relative lack of past archaeological investigation. If present, such remains would be of medium or high significance, depending on preservation and extent, from derived from archaeological interest.
- 20.6.3.7 This Section has an uncertain but probably low potential for early medieval remains. Whilst the nature of settlement during the early medieval period is not well understood, there are no known finds or features recording within the assessment study area, and the survival of such is rare as the pottery is friable and the features often ephemeral.
- 20.6.3.8 This Section has a moderate potential to contain later medieval or post-medieval agricultural remains. Mapping evidence shows this section of the Site Boundary as lying in agricultural fields. As such the potential remains from the later medieval or post-medieval period are likely to be limited to landscape features such as field boundaries and drainage ditches or buried evidence of medieval ridge and furrow cultivation. If present, such remains would be of low significance, derived from archaeological and historical interest.

20.6.4 SECTION 3 – DENMEAD/KINGS POND MEADOW: ASSETS, POTENTIAL AND SIGNIFICANCE

- 20.6.4.1 This Section has three options:
- Option 3a): Kings Pond Meadow - Onshore Cable Route running southwards, from land north of Anmore Road, crossing Anmore Road to the east of Kings Pond, and continuing southwards via Kings Pond Meadow to Hambledon.
 - Option 3b): Anmore Road and Kings Pond Meadow - Onshore Cable Route running eastwards and then running south to Anmore Road in the field opposite Clifton Crescent, turning west along Anmore Road, before running southwards via Kings Pond Meadow to Hambledon Road.
 - Option 3c): Highways Route – Onshore Cable Route running eastwards and then running south to Anmore Road in the field opposite Clifton Crescent, turning west along Anmore Road. The Cable Route would then run separately with one circuit turning south along Mill Road, whilst the other circuit would continue along Anmore Road westwards to the junction of Martin Avenue, where it would turn south. Both circuits would reach Hambledon Road, and continue in a south-easterly direction along Hambledon Road.

Designated heritage assets

20.6.4.2 This Section does not contain any designated heritage assets.

Known undesignated heritage assets

20.6.4.3 This Section contains a post-medieval milestone (A130), to the south-east of the B2150. There are no other known undesignated heritage assets within the Site Boundary in this section. Within a 500 m radius, there are eight undesignated historic buildings, as recorded on the Winchester HER, of low significance.

Archaeological Potential/Significance

20.6.4.4 There have been no past investigations within this Section, consequently understanding of the nature of archaeological activity within the section is limited. Survival is predicted to be higher within Option 3a (King Pond Meadow), which is located in open fields. Along Option 3c (Highways), archaeological survival is predicated to be low–moderate as the boundary is confined to existing highways, the construction of which may have truncated any archaeological remains locally to a depth of 0.5 mbgl.

20.6.4.5 The archaeological potential of this Section by period is as Section 2 (see above). This Section would have lain outside of main known centres of settlement, in land which has been used for agricultural purposes for much of its history.

20.6.5 SECTION 4 - HAMBLEDON ROAD TO BURNHAM ROAD: ASSETS, POTENTIAL AND SIGNIFICANCE

Designated heritage assets

20.6.5.1 There are no designated assets within this Section of the route. There are a number of Grade II listed building in close vicinity of the Site Boundary, situated along the A3 (London Road). From north to south, these are:

- Purbeck House (early 19th century) (A62);
- 25–27 London Road early 19th century (A83);
- The Church of John (late 19th century) (A60);
- Purbrook First School mid 19th century (A56);
- The Old Rectory (mid 18th century) (A54); and
- Chris Church, London Road (late 19th century) (A11).

Known undesignated heritage assets

20.6.5.2 The current baseline assessment has not identified any undesignated heritage assets within this Section of the route.

Archaeological Potential/Significance

- 20.6.5.3 The potential for palaeoenvironmental remains is considered generally low in this Section. Alluvium associated with any minor watercourses may contain such remains, however, the Section lies away from known wetland areas (where Peat deposits can survive) and off of raised beach deposits (which can contain palaeoenvironmental evidence).
- 20.6.5.4 This Section has a moderate to high potential to contain prehistoric remains, particularly for the Iron Age period. Whilst scattered remains and features have been recorded in the near vicinity from the Mesolithic through to the Bronze Age, the highest density of activity relates to the Iron Age period (A1k, 96, 129, 140), with evidence comprising a Middle to Late Iron Age settlement focused on the chalk ridge of Portsdown Hill and the area to the north, west of Purbrook and Waterlooville. Further evidence of Iron Age settlement would be of medium, or high heritage significance, based on the historical and archaeological interest of the finds.
- 20.6.5.5 This Section has a moderate to high potential to contain Roman remains. The area of land to the west of Waterlooville and Purbrook (Plant Farm), adjacent to the western Onshore Cable Corridor boundary, appears to have been a focus for activity during the Romano-British period (A96; A129; A140). The activity is located just north of Margary's (1973) projected Roman Road '421' (A1h). It is possible that remains of this road lie preserved beneath the section of the Onshore Cable Corridor which it intersects along London Road. Depending on preservation and extent, evidence of Roman settlement or the projected road would be of high, or very high significance, based on the historical and archaeological interest of the finds.
- 20.6.5.6 This Section has a localised, moderate to high potential to contain early medieval (Saxon) remains in the area of the Onshore Cable Corridor which runs across Portsdown Hill. Two Anglo-Saxon inhumation burials and two parallel ditches on an east-west alignment (A1b) were observed during an archaeological evaluation carried out within the Site Boundary. The two ditches were thought to be contemporary with the burials and although their function is not clear it is possible that they formed a boundary to a probable Saxon cemetery (A74) starting further to the west. Anglo Saxon burial remains would be of high or very high significance, based on the historical and archaeological interest of the finds.
- 20.6.5.7 This Section has a moderate potential to contain later medieval or post-medieval agricultural remains. Mapping evidence shows this section of the Site Boundary as lying in agricultural fields. As such the potential remains from the later medieval or post-medieval period are likely to be limited to landscape features such as field boundaries and drainage ditches or buried evidence of medieval ridge and furrow cultivation. If present, such remains would be of low significance, derived from archaeological and historical interest.

20.6.6 SECTION 5 - FARLINGTON: ASSETS, POTENTIAL AND SIGNIFICANCE

20.6.6.1 This Section has two options:

- Option 5a): Farlington Avenue – where the Onshore Cable Corridor follows the alignment of Farlington Avenue and turns east on to Havant Road, then turning south on to the A2030 Eastern Road;
- Option 5b): Farlington Water Works – where the Onshore Cable Corridor includes four sub-options, each of which follow different minor roads or the recreation ground east of Farlington Avenue to access a strip of land belonging to Portsmouth Water. This strip of land runs southwards between the covered reservoir to the east of Farlington Avenue near Ainsdale Road to Havant Road. The Onshore Cable Corridor then turns west along Havant Road and south on to A2030 Eastern Road; and
- Option 5c): Portsdown Hill Road – where the Onshore Cable Corridor would remain in Portsdown Hill Road from the junction with Farlington Avenue, heading eastwards. The Onshore Cable Corridor then turns south through the field to the north of the covered reservoir, via the recreation ground east of Farlington Avenue, to access a strip of land belonging to Portsmouth Water. This strip of land runs southwards between the covered reservoir to the east of Farlington Avenue near Ainsdale Road to Havant Road. The Onshore Cable Corridor then turns west along Havant Road and south on to A2030 Eastern Road.

Designated heritage assets

20.6.6.2 There are no designated heritage assets within the boundary of this Section.

Known undesignated heritage assets

20.6.6.3 The current baseline assessment has not identified any undesignated heritage assets within this Section of the route. There are, however, a number of modern features recorded to the north of Portsdown Hill Road, including the remains of two interdiction batteries, 90m to the north and a WWII anti-tank ditch, 225 m to the north east (Defence of Britain Database).

Archaeological potential/significance

20.6.6.4 The archaeological potential is as Section 4 (see above). Archaeological survival is predicted to be higher within the footprint of Option 5b and 5c, where the Onshore Cable Corridor follows land off of existing roads. There is however, the potential for localised modern disturbance in these areas deriving from utilities associated with former water infrastructure.

20.6.7 SECTION 6 - ZETLAND FIELD AND SAINSBURY'S CAR PARK: ASSETS, POTENTIAL AND SIGNIFICANCE

20.6.7.1 This Section has two options:

- Option 6a): A2030 and Fitzherbert Road – where the Onshore Cable Corridor runs along the A2030 Eastern Road to then turn east along Fitzherbert Road, south in to Sainsbury's Car Park east of the petrol station, and through the car park towards its boundary with the railway line immediately to the south.
- Option 6b): Zetland Field and Fitzherbert Road – where the Onshore Cable Corridor leaves the A2030 to run southwards through Zetland Field, on to Fitzherbert Road, to then turn south in to Sainsbury's Car Park east of the petrol station, and through the Car Park towards its boundary with the railway line immediately to the south.

Designated heritage assets

20.6.7.2 There are no designated heritage assets within the boundary of this Section, nor any within the near vicinity.

Known undesignated heritage assets

20.6.7.3 The current baseline assessment has not identified any undesignated heritage assets within this Section of the Onshore Cable Corridor.

Archaeological potential/significance

20.6.7.4 Due to the lack of archaeological investigations within this area, the nature of activity within this section is relatively unknown, especially for the prehistoric and Roman periods. Historic Ordnance Survey mapping shows much of this Section and the surrounding area within marshland, consequently settlement/farming remains are unlikely. Archaeological survival is predicted to be highest in the triangular field to the east of the A2030 which has not been built on. Based on current evidence consulted at this stage the archaeological potential for Option 6a (West of the Petrol Station) and Option 6b (East of the Petrol Station) is similar.

20.6.7.5 The potential for palaeoenvironmental remains is considered generally low in this Section. Alluvium associated with any minor watercourses may contain such remains, however, the Section lies away from known wetland areas (where Peat deposits can survive) and off of raised beach deposits (which can contain palaeoenvironmental evidence).

- 20.6.7.6 This Section has an uncertain, but possibly low to moderate potential to contain prehistoric remains. Whilst little is known of the nature of archaeological activity during this period due to the lack of investigations, there remains the possibility for remains relating to the exploitation of intertidal resources of Langstone Harbour, 850m to the south east. Isolated flint tool remains (of Mesolithic) date are recorded in the vicinity (400m west) suggesting possible background activity. Further remains of isolated flint tools would be of low significance, derived from the archaeological interest of the finds. Evidence for settlement activity would be of medium or high significance, derived historical and archaeological interest.
- 20.6.7.7 This Section has an uncertain, but possibly low to moderate potential to contain Roman remains. Whilst there are no known Roman remains within this Section, this may simply reflect the relative lack of past archaeological investigation. If present, such remains would be of medium or high significance, depending on preservation and extent, derived from archaeological interest.
- 20.6.7.8 This Section has uncertain but probably low potential for early medieval remains. Whilst the nature of settlement during the early medieval period is not well understood, there are no known finds or features recorded within the assessment study area, and the survival of such is rare as the pottery is friable and the features often ephemeral.
- 20.6.7.9 This Section has a moderate potential to contain later medieval or post-medieval agricultural remains. Mapping evidence shows this section of the Site Boundary as lying in agricultural fields. As such the potential remains from the later medieval or post-medieval period are likely to be limited to landscape features such as field boundaries and drainage ditches or buried evidence of medieval ridge and furrow cultivation. If present, such remains would be of low significance, derived from archaeological and historical interest.

20.6.8 SECTION 7 - FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD: ASSETS, POTENTIAL AND SIGNIFICANCE

- 20.6.8.1 South of the Sainsbury' Car Park, it is anticipated that the proposed Onshore Cable Route pass under the railway line using a trenchless installation technique. The Onshore Cable Corridor would head southwards through Farlington Playing Fields. At the southern end of Farlington Playing Fields Cables are proposed to be installed via HDD, to enable the the Cabel Route to continue broadly southwards, passing under the A27 and Langstone Harbour to Kendall's Wharf on Portsea Island. The HDD would emerge in the car park west of Kendall's Wharf. From this car park, the Onshore Cable Corridor would potentially either head west to meet the A2030 Eastern Road where it would turn south to frun south on Eastern Road. Or run southwards from the car park through the western edge of sports grounds to the east of Eastern Road, before joining Eastern Road at the southern end of Langstone Sports Ground.

Designated heritage assets

- 20.6.8.2 There are no designated heritage assets within the Site Boundary in this Section of the Onshore Cable Corridor. The 18th-19th century Hillsea Lines (A59) are located 350 m to the west and are a scheduled monument. Pickett Hamilton Fort (A15), a further scheduled monument is located 75m to the west; the name refers to a type of retractable ‘pillbox’ (military guardhouse or gunpost) in use in the Second World War. The remains are assumed to be buried or covered with vegetation.

Known undesignated heritage assets

- 20.6.8.3 The current baseline assessment has not identified any undesignated heritage assets within this Section of the route.

Archaeological potential/significance

- 20.6.8.4 Archaeological investigations carried out in the section have consisted of geoarchaeological investigations carried out on the edge of the coastline (A1s and A1f). Otherwise the nature of archaeological activity is not well understood in this area.

- 20.6.8.5 This Section has a moderate potential for palaeoenvironmental remains. Such remains will be present in the low-lying intertidal Raised Marine deposits surrounding Langstone Harbour which lies to the east of Onshore Cable Corridor. Minerogenic deposits such as alluvial silts and clays have high potential for diatom preservation, the assessment of which can provide information on the salt or freshwater nature of deposits that would enhance interpretation of the past landscape. Peat deposits preserve pollen and floral and faunal macrofossils such as seeds, plant fragments, molluscs and occasionally ostracods.

- 20.6.8.6 Organic material can also be dated by radiocarbon techniques, important for establishing the chronology for the depositional sequence. In combination with geoarchaeological assessment of the sediments, examination of pollen and diatoms can provide valuable information of contemporary local environmental conditions. Such remains have evidential value for the past environment in which prehistoric and later people lived, and would be of low or medium heritage significance, derived from archaeological interest.

- 20.6.8.7 This Section has an uncertain, moderate potential for prehistoric remains. The Section of the Onshore Cable Corridor located on Portsea Island to the west of Langstone Harbour would have been a suitable location for prehistoric settlement, being located on a natural promontory with close access to wetland intertidal resources of Langstone Harbour and the coast. Finds are likely to be limited to waste flint flakes or pottery sherds, as suggested by discoveries in the area (A1q, A24, 27, 23), of low or possibly medium heritage significance. Evidence of settlement would be of medium or high significance, depending on the nature and extent of the remains.

20.6.8.8 This Section has an uncertain, low to moderate potential for Roman remains. During this period, rising sea-levels would have meant that the previously dry Langstone Harbour would have been marshy wetland – not suitable for settlement nor farming. Roman finds within this section are limited to residual pottery sherds discovered in Langstone Harbour. Whilst it is possible the wetland resources were utilised at this time (i.e. fish traps, salterns) there is not currently any evidence for this within this Section, nor within the vicinity.

20.6.8.9 This Section has an uncertain, but probably low potential for early Medieval remains. Whilst the nature of settlement during the early medieval period is not well understood, there are no known finds or features recording within the assessment study area, and the survival of such is rare as the pottery is friable and the features often ephemeral.

20.6.8.10 This Section has a low potential to contain later medieval or post-medieval remains. Mapping evidence shows this part of the Site Boundary as lying in agricultural fields. As such the potential remains from the later medieval or post-medieval period are likely to be limited to landscape features such as field boundaries and drainage ditches or buried evidence of medieval ridge and furrow cultivation. If present, such remains would be of low significance, derived from archaeological and historical interest.

20.6.9 SECTION 8 - GREAT SALTERNS GOLF COURSE TO VELDER AVENUE/MOORINGS WAY: ASSETS, POTENTIAL AND SIGNIFICANCE

20.6.9.1 This Section has three options:

- Option 8a): Eastern Road;
- Option 8b): Minor Roads and Moorings Way; and
- Option 8c): Milton Common.

Designated heritage assets

20.6.9.2 There are no designated heritage assets within the boundary of this Section. Directly adjacent to the east of the Site Boundary, close to the junction of Eastern Road and Burrfields Road, there is a Grade II listed building, the early 19th century Great Saltern's House and attached walls (A100).

Known undesignated heritage assets

20.6.9.3 The HER records a WWII searchlight battery near Milton Common (A72); adjacent to the east of the Site Boundary. Otherwise there are no known undesignated heritage assets identified within this Section.

20.6.9.4 This Section lies within a ‘yellow’ Archaeological Alert Area, as mapped by Hampshire County Council within Portsmouth. A yellow area refers to a ‘locally important monument of known extent’. The area covers a large area of the coast where former post-medieval/modern salterns were located; these are not evident on Ordnance Survey Historical mapping, however.

Archaeological potential/significance

20.6.9.5 The archaeological potential for this Section is as Section 7 (see above), because the area lies in what was either coastal wetland or agricultural fields.

20.6.9.6 Option 8c Milton Common passes through a former landfill site; modern landfill dumping layers are likely to have sealed any archaeological deposits present at these locations.

20.6.10 SECTION 9 - VELDER AVENUE/MOORINGS WAY TO BRANSBURY ROAD: ASSETS, POTENTIAL AND SIGNIFICANCE

20.6.10.1 This Section has three options:

- Option 9a): Highways Route – the Onshore Cable Corridor continues from Option 8a) and is proposed to progress southwards along Milton Road and eastwards along Bransbury Road up to the junction with Henderson Road;
- Option 9b): Allotments – starting from the southern end of Options 8b) or 8c), the proposed Onshore Cable Corridor would head southwards via Furze Lane or the University of Portsmouth’s Langstone Campus, to reach either Longshore Way and/or Locksway Road, to the allotments, and on to Bransbury Park via Yeo Court or Kingsley Road. The Onshore Cable Corridor would exit Bransbury Park on to Barnsbury Road and head eastwards to the junction with Henderson Road; and
- Option 9c): Ironbridge Lane – this option is similar to Option 9a), however, upon reaching Longshore Way and/or Locksway Road, the Onshore Cable Corridor would continue westwards along Locksway Road to its junction with Ironbridge Lane. At this point the Onshore Cable Corridor would turn south, and continue via Ironbridge Lane and potentially Redlands Grove/Tidesway Gardens. The Onshore Cable Corridor would potentially access Bransbury Park from the southern end of Ironbridge Lane, or via Kinglsey Road/Yeo Court. The Onshore Cable Corridor would head southwards and exit Bransbury Park, turning on to Bransbury Road and heading eastwards to its junction with Henderson Road.

Designated heritage assets

20.6.10.2 There are no designated heritage assets within the Site Boundary at this Section of the route. Directly adjacent to the east of the Site Boundary (Option 9a) there is the Grade II listed Church of St James (A36). Directly to the east of Option 9b and Option 9c there is a Grade II listed Sea Lock and Basin (NHL 1333170).

Known undesignated heritage assets

- 20.6.10.3 This section contains the former Arundel Canal (A1c), which runs laterally through the Site Boundary at the junction of Milton Road and Goldsmith Avenue, and is marked as 'The Old Canal'. The canal opened in 1823 and was built to allow better trading connections into Portsmouth and was entered from Langstone Harbour via a sea lock at Milton. It is not currently known whether any below ground remains (i.e. canal walls) survive below existing housing development but the former entrance of the canal can still be seen at the eastern end of Longshore way, directly to the east of the Site Boundary.
- 20.6.10.4 The Defence of Britain Project notes the presence of an anti-landing trench (now filled in) to the east of the University of Portsmouth playing fields in the eastern part of the Site Boundary (west of Longshore Way).

Archaeological potential/significance

- 20.6.10.5 This Section has a moderate potential for paleoenvironmental remains. Such remains will be present in the low-lying intertidal Raised Marine deposits surrounding Langstone Harbour which lies to the east of Onshore Cable Corridor. Such remains have evidential value for the past environment in which prehistoric and later people lived, and would be of low or medium heritage significance, derived from archaeological interest.
- 20.6.10.6 This Section has an uncertain, possibly moderate potential to contain prehistoric remains. The Site would have been a suitable location for settlement, being located on a natural promontory with close access to the wetland intertidal resources of Langstone Harbour and the coast. Mesolithic and early Neolithic flints has been recovered just beyond the Site Boundary.
- 20.6.10.7 This Section has an uncertain, but probably low potential to contain Roman remains. There are no features and only limited finds in the study area dated to the Roman period. Whilst this may be a result of limited investigations in the area, the distance from the main road network and suggests the Section was not a focus of activity during this period.
- 20.6.10.8 This Section has an uncertain, but probably low potential to contain early medieval remains. There are no finds relating to this period in the vicinity. Whilst this may be due in part to the lack of investigations in the area it is considered unlikely Portsea Island was densely inhabited at this time; in all likelihood the Site likely lay within open land, which may have been cleared and possibly used for pasture during this period.
- 20.6.10.9 This Section has a low potential to contain later medieval remains. Option 9a passes through what is previously the historic core of Milton Village. There have been two former investigations within this area, neither of which revealed medieval remains. Modern development in the area is likely to have removed much of the earlier medieval settlement evidence. The Site Boundary is also confined to the

former/existing Milton road (A238). As such, the potential for structural remains is considered low.

- 20.6.10.10 This Section has a moderate potential to contain post-medieval remains. There is a moderate potential for remains associated with the Portsmouth and Arundel Canal (A1c), which runs laterally through the Site Boundary at the junction of Milton Road and Goldsmith Avenue. If present within the Site Boundary, buried remains relating to the former canal would be of medium or high heritage significance, based on the nature and extent of the remains. Archaeological investigations in the area have also recorded post-medieval agricultural remains (cultivation or dumping layers) within Milton, of low/negligible heritage significance.

20.6.11 SECTION 10 - EASTNEY (LANDFALL): ASSETS, POTENTIAL AND SIGNIFICANCE

Designated heritage assets

- 20.6.11.1 This Section contains one designated heritage asset; The eastern part of the Site Boundary contains the southern extent of the 17th–18th century Fort Cumberland (A1a).
- 20.6.11.2 In the vicinity, to the south-western part of the Landfall, there are the remains of WWII tank traps, which are Grade II listed (A1g). There are two further scheduled monuments in the vicinity: the Eastney Sewage pumping station (A108) directly to the north-east; and, Eastney Forts and perimeter defences (A99), 780 m to the west.

Known undesignated heritage assets

- 20.6.11.3 The current baseline assessment has not identified any known undesignated heritage assets within this Section of the Onshore Cable Corridor.

Archaeological potential/significance

- 20.6.11.4 This Section has a moderate potential to contain paleoenvironmental remains. Such remains might be present in the Storm Beach Deposits at the proposed Transition Joint Bays' ('TJBs') location.
- 20.6.11.5 This Section has a low to moderate potential to contain prehistoric remains. This Section is located to the west of Langstone Harbour which would have been a suitable location for prehistoric settlement, being located on a natural promontory with close access to wetland intertidal resources of Langstone Harbour and the coast. There are however, limited known finds in the vicinity. Like the previous Sections of the Onshore Cable Corridor, remains would likely be limited to isolated finds of low or negligible heritage significance.

- 20.6.11.6 This Section has an uncertain, low to moderate potential to contain Roman remains. There are no features and only limited finds in the study area dated to the Roman period. Whilst this may be a result of limited investigations in the area, the distance from the main road network and suggests this Section was not a focus of activity during this period.
- 20.6.11.7 This Section has uncertain but probably low potential for early medieval remains. Whilst the nature of settlement during the early medieval period is not well understood, there are no known finds or features recording within the assessment study area, and the survival of such is rare as the pottery is friable and the features often ephemeral.
- 20.6.11.8 This Section has a moderate potential to contain later medieval agricultural remains. The potential remains from the later medieval are likely to be limited to landscape features such as field boundaries and drainage ditches or buried evidence of medieval ridge and furrow cultivation. If present, such remains would be of low significance, derived from archaeological and historical interest.
- 20.6.11.9 This Section has a high potential to contain post-medieval remains. The western edge of the 18th century Fort Cumberland (A1a) lies within the Site Boundary. Previous investigations have recorded evidence for the below-ground survival of the artificial slope surrounding the fort; further remains associated with this slope might be expected within the scheduled monument consent area. Any below-ground remains within the Site Boundary associated with the fort are likely to be of high or very high significance, depending on their survival and extent and based on the heritage interest of the finds.

20.7 FUTURE BASELINE

- 20.7.1.1 For heritage assets within the Site Boundary (below and above ground) and the historic landscape character of the Site, the future baseline is expected to be the same as the present. Such remains are a static resource, which have reached equilibrium with their environment and do not change (i.e., decay or grow) unless their environment changes as a result of human or natural intervention.
- 20.7.1.2 In terms of the setting of designated heritage assets within the surrounding area of the indicative Converter Station location, this may change due to the presence of future developments, although such proposals (other than the Proposed Development and the committed developments identified) are not currently known. These could potentially have a detrimental or positive effect on setting, and could result in the intervening presence of buildings and/or mature vegetation.

20.8 PREDICTED IMPACTS

20.8.1 CONSTRUCTION STAGE EFFECTS

20.8.1.1 The text below sets out the preliminary effects on the historic environment in connection with the construction of the Proposed Development. The environmental effect on each identified receptor (heritage asset) is presented in detail in Appendix 20.2, by route Section.

Preliminary works/enabling works: topsoil strip

20.8.1.2 It is assumed for the purposes of this assessment that topsoil would be removed in the following areas:

- Across the entire Converter Station Area as part of the preliminary site works;
- Within the 6.0 m-wide Onshore Cable Route ‘working width’ where it crosses greenfield land;
- Within the footprint of each Joint Bay (‘JB’); and
- Within the footprint of temporary access roads, temporary construction compounds, and temporary topsoil storage areas.

20.8.1.3 The removal of topsoil would expose any archaeological remains that may be present immediately beneath the topsoil. These may then be affected by movement of vehicles and plant involved in demolition and construction activities, for example through rutting and compaction. In addition, it is possible that topsoil removal without archaeological supervision may result in overstripping, which would have an effect upon archaeological remains located beneath the topsoil, or understripping, where archaeological features are concealed beneath a thin layer of topsoil but are then exposed and unprotected from subsequent demolition and construction activities. The magnitude of change for topsoil removal has been assessed as large.

Proposed Converter Station

20.8.1.4 The indicative Converter Station location is proposed adjacent to the existing Lovedean substation and will be connected by two underground AC cables. The indicative Converter Station footprint would cover an area of approximately 4 ha.

20.8.1.5 Given the topography of the area, earthworks would be required to create a level platform and construction Laydown Area to build the Converter Station. There may be additional archaeological impacts following the preliminary topsoil strip, resulting from major earthworks and landscaping, most notably the ‘cut and fill’ required to create a level building platform for the new Converter Station, potentially a major impact following topsoil removal. ‘Cut’ activities, involving reducing ground level locally, where they extend below modern made ground/top soil, would truncate or entirely remove any archaeological remains to the footprint of the works, the degree of impact depending on the depth of the cut. ‘Fill’ activities, which comprise raising the ground level locally, result in any archaeological remains being buried (and this

preserved) below the ground raising deposits. Soft landscaping (tree removal and planting) can entail ground disturbance up to 1.0–1.5 mbgl. The magnitude of change for these impacts have been assessed as large.

Proposed Converter Station foundations

20.8.1.6 The foundations are likely to be a shallow slab design (conventional ground bearing) where cut is required to achieve a level platform and shallow piles where fill is required (Chapter 3 Description of the Proposed Development).

20.8.1.7 There would be additional impact deriving from the insertion of a shallow slab or piles for the Converter Station foundations. The level of impact would depend on the method used but would likely remove entirely any archaeological remains present to the depth of the works (depth not currently known). The magnitude of change for these impacts have been assessed as large.

Proposed AC Cable trenches

20.8.1.8 The AC cables would be positioned within a 1.0 m wide trench and the typical burial depth across agricultural land and open country side is 1.3 mbgl (Aquind Ltd 62100616-UK-AC_Trench-0001, AC Cable Trench Assumptions, rev 1, dated 25-10-18). This would truncate or entirely remove any archaeological remains within the trench footprint. The magnitude of change for these impacts have been assessed as large.

Proposed Converter Station permanent Access Road

20.8.1.9 A new permanent Access Road will be established from Broadway Lane to the proposed Converter Station, which will be utilised accordingly throughout the construction period. It will also continue to be required for maintenance staff to access site (Chapter 3 Description of the Proposed Development). The construction of this road would entail a preliminary topsoil strip, the archaeological impact of which is discussed above, and possibly additional landscaping earthworks.

Proposed Onshore Cable Route

20.8.1.10 The environmental effects arising from each Section of the Onshore Cable Corridor are presented in detail in Appendix 20.2, and a summary is given below.

20.8.1.11 The majority of the Onshore Cable Route would consist of DC underground cables which will run from the Converter Station south to the Landfall at Eastney. There will be four DC cables, laid in pairs in two separate trenches. Included with each pair would be a smaller diameter Fibre Optic Cable. The archaeological impact assessment is based on assumed depths of construction.

20.8.1.12 The DC Cables would be placed within a trench approximately 0.7–1.0 m wide at a approximate depth of 1.3 mbgl. Any archaeological remains within the footprint of the trench would be removed to this depth. This has been assessed as a small magnitude of change.

- 20.8.1.13 Along the majority of the Onshore Cable Corridor the proposed cable trench would be dug within brownfield land within the area of an existing road or pavement or in hardstanding. It is assumed that much of the ground beneath, including the upper levels of any archaeological remains, has already been disturbed or truncated by modern road construction and by existing services.
- 20.8.1.14 If the proposed cable installation is undertaken partly or wholly outside the existing service trenches, they would potentially have an impact on any archaeological remains located beneath the road surfaces/modern made ground.
- 20.8.1.15 In some cases, the proposed cable installation might be carried out entirely within existing service trenches. If this is the case, it would have no archaeological impact as remains will already have been removed.
- 20.8.1.16 In rural areas, the total construction corridor would be approximately 23 m including a 5 m haul road and safety clearance distance of 1 m either side, within which topsoil would be stripped.

Joint Bays

- 20.8.1.17 JBs will be positioned at 0.6–2.0 km intervals along the Onshore Cable Route. The preferred position for these is off of the existing carriageway. The excavation required for each JB would be approximately 15.0 m x 3.0 m, to a depth of 1.7 m in roads, foot paths/verges and 1.85 m in open fields. There would be additional land take requirements for compound areas, to be further defined in the ES. This has been assessed as a large magnitude of change.
- 20.8.1.18 As with the Onshore Cable Route, where the Joint Bays are located within brownfield land, a layer of modern made ground might be expected. Previous disturbance may have compromised the survival of any archaeological remains to some extent.

Transition Joint Bays ('TJBs')

- 20.8.1.19 At the proposed Landfall, anticipated to be located within the car park south of Fort Cumberland Road, 2 TJBs will be required, one per pair of HVDC cables each entailing the excavation of approximately 15 m x 5 m, to a depth of up to 1.75 mbgl. Potential remains affected include possible palaeoenvironmental or prehistoric remains. The impact on prehistoric remains has been assessed as insignificant (see 20.2.3), as likely remains would be limited to isolated flint tools. It is understood that there would be no construction impacts within the scheduled monument consent area adjacent to the Landfall, therefore there would be no effects on post-medieval remains.

Horizontal Direction Drilling

- 20.8.1.20 There are 4 locations along the Onshore Cable Corridor where the Cable Route ducts are proposed to be installed using an HDD installation technique. These are:
- the Eastney Landfall;

- the allotments north-east of Bransbury Park;
- the Portsea Island crossing under Langstone Harbour and the A27; and
- King's Pond near Anmore, which may consist of multiple HDDs.

20.8.1.21 Whilst the construction depth is not currently known, it is likely to be positioned beneath archaeological horizons within natural geology. It is understood the maximum depth would be between 5 m and 15 m, depending on the length of the crossing and the local ground conditions (Chapter 3 - Description of the Proposed Development). As such, impact would only occur in the working areas for the JB's where the HDD would emerge from the excavation of localised trenches and establishment of working areas (see 20.8.1.18).

Landscaping and Drainage

20.8.1.22 Further additional works include new planting and attenuation ponds. An attenuation pond is proposed within the Converter Station Area, to the south of the indicative Converter Station location.

20.8.1.23 Ground disturbance from new planting is assumed for the purposes of this assessment to extend to a depth of 1.0–1.5 m, to take into account space for the tree bowl and root action. Any archaeological remains within this area will be disturbed.

20.8.1.24 The excavation of attenuation pond is assumed for the purposes of this assessment to extend to a depth of approximately 1.5–2.0 m. Any remains within the footprint of the proposed pond would be removed to the depth of the pond.

Other relevant impacts identified at this stage

20.8.1.25 There may be further localised impacts from:

- Erection of lightning masts;
- Installation of site fencing;
- Construction of welfare facilities; and
- Ecological Mitigation works.
- Construction of Optical Regeneration Station ('ORS') building(s); within the vicinity of the Landfall at Eastney; it is not anticipated to have deep foundations as such the likelihood for impact is low).

20.8.1.26 It is assumed for the purposes of this assessment that these constructions would cause localised ground disturbance to a maximum depth of 0.5–1.0 mbgl. Impact on any buried heritage assets present is likely to occur where the modern made ground/topsoil is less than 0.5 m thick. This is assessed as a small magnitude of change.

20.8.2 PREDICTED CONSTRUCTION STAGE EFFECTS, PRIOR TO MITIGATION

20.8.2.1 Detailed predicted Construction Stage and Operational Stage environmental effects are contained within Appendix 20.2 (Heritage and Archaeology Impact Tables); these

are assessed for each Section and by specific receptor (Heritage Asset). A top-level summary of the predicted effects is outlined below along with predicted insignificant effects.

Insignificant effects

- 20.8.2.2 Construction Stage effects on potential *agricultural* medieval or post-medieval buried remains of **low, very low or negligible** significance (e.g. field boundary ditches) has been assessed as insignificant. The baseline assessment suggests there is background potential for such activity across the Site Boundary, where not removed by subsequent modern ploughing and development. Where there is evidence to suggest more significant remains, e.g. earthwork remnants of ridge and furrow cultivation, or cropmarks, this will be considered.
- 20.8.2.3 Construction Stage effects on *isolated* prehistoric flint tools has also been assessed as insignificant. There is the potential for isolated finds (of **low** significance) throughout the length of the Site Boundary and their location/presence is not possible to predict across such a large area. The presence of know chance finds has however been used in the assessment of archaeological potential within each Section.
- 20.8.2.4 Construction Stage effects on designated heritage assets at the Converter Station Area has been assessed as insignificant. This is on the basis that all assets are at a sufficient distance from the indicative Converter Station location that the potential for noise/dust/visual impacts are considered **negligible**. It is considered that the temporary construction activities would be of significantly lower magnitude and significance than the resulting permanent (Operational Stage) effects and on this basis are not considered further in this assessment.

Converter Station Area

- 20.8.2.5 Potential assets affected by construction activities include possible prehistoric, Roman, later-medieval and post medieval remains, of predicted low, medium or high significance. The likely environmental effect would be of **Minor, Moderate or Major negative** significance depending on the nature and extent of the remains (see Appendix 20.2 for detailed impact assessment by route Section).

Onshore Cable Route

- 20.8.2.6 Potential assets affected by construction activities along the Onshore Cable Corridor include remains from all periods (including paleoenvironmental remains), of low to high significance. The predicted environmental effects would be of **Minor, Moderate, or Major negative** significance depending on the nature and extent of the remains (see Appendix 20.2 for detailed impact assessment by route Section).

Landfall

- 20.8.2.7 Potential assets affected by construction activities at Eastney Landfall include Palaeoenvironmental, prehistoric and possibly Roman remains, of low, medium or high significance. The predicted environmental effects would be of **Minor, Moderate or Major negative** significance depending on the nature and extent of the remains (see Appendix 20.2 for detailed impact assessment by each route Section). No below ground disturbance is proposed within the Eastney Fort (A1a) Scheduled Monument Consent Area.

20.8.3 OPERATIONAL STAGE EFFECTS

- 20.8.3.1 Operational Stage effects arise from permanent changes to the setting of above ground designated heritage assets due to the presence of the Converter Station, where the Proposed Development would entail the introduction of new built form in the landscape.
- 20.8.3.2 Since it is currently assumed that the Onshore Cable Corridor is otherwise entirely below-ground, only those designated assets within the vicinity of the Converter Station Area have been assessed for the PEIR. Additional assessment may be required for the ES depending on the characteristics and location of FOC infrastructure.
- 20.8.3.3 The text below sets out the preliminary effects on the historic environment in connection with the operation of the Proposed Development. The environmental effect on each identified receptor (heritage asset) is presented in detail in Appendix 20.2.

Rookwood

- 20.8.3.4 This group of assets includes Rookwood (A87) and Granary 5 Metres West of Rookwood (A125).
- 20.8.3.5 The significance of these assets as a group is very high. Their setting is considered to make a moderate contribution to their significance. As a group, Rookwood exists within a property significantly sheltered by mature vegetation, as identified during the site visit. Views of the agricultural landscape are mainly to the south away from the proposed Options. Due in part to distance but also to the vegetation screening there will be no views of the Proposed Development. Consequently, the magnitude of change has been assessed as negligible.
- 20.8.3.6 The heritage significance of Rookwood is very high and the significance of the Granary is high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term effect of **negligible** significance on the assets within the Rookwood Group prior to the implementation of mitigation measures.

Ludmore Cottages

- 20.8.3.7 The significance of Ludmore Cottage (A1i) is high and its setting makes a moderate contribution to its significance. Ludmore Cottages enjoys some views of the surrounding agricultural landscape which contribute to its significance. However, these views are limited by a modern barn located to the south and also dense vegetation screening along the western side of the asset. These prevent any views of the indicative Converter Station location.
- 20.8.3.8 The heritage significance of Ludmore Cottage is high and the magnitude of change is negligible. Therefore, there is likely to be a direct, permanent, long-term effect on Ludmore Cottage of **negligible** significance prior to the implementation of mitigation measures.

Barn Cottage

- 20.8.3.9 The significance of Barn Cottage (A102) is high and its setting makes a moderate contribution to its significance. Barn Cottage has extensive views of the rural agricultural landscape. In the surrounding area, the hedgerows lining the roads and marking field boundaries are very dense and high which prevent many long-distance views over the landscape. It is not believed that Barn Cottage will have any views of the indicative Converter Station location.
- 20.8.3.10 The heritage significance of Barn Cottage is high and the magnitude of change is negligible. Therefore, there is likely to be a direct, permanent, long-term effect on Barn Cottage of **negligible** significance prior to the implementation of mitigation measures.

Denmead Farm

- 20.8.3.11 This group of assets includes Denmead Farmhouse (A109), Granary 20 Metres West of Denmead Farmhouse (A109) and Cottage at Denmead Farm.
- 20.8.3.12 The significance of the group of assets at Denmead Farm is high and setting makes a moderate contribution to their significance. Denmead Farm is based to the south west of the two Options. Dense vegetation screening along the roads and field boundaries in the surrounding landscape prevent any views of the indicative Converter Station location. This will change some of the views out from the assets towards the surrounding landscape but this will have a minor impact on the overall setting which will be largely retained.
- 20.8.3.13 The heritage significance of the assets at Denmead Farm is high and the magnitude of change will be negligible. Therefore, there is likely to be a direct, permanent, long-term effect on the assets at Denmead Farm of **negligible** significance prior to the implementation of mitigation measures.

Little Denmead Farm & Bleak Cottage

- 20.8.3.14 This group of assets includes Farmhouse at Little Denmead (A101), the Barn at Little Denmead (A101) and Bleak Cottage (A93).
- 20.8.3.15 The significance of the group of assets at Little Denmead Farm & Bleak Cottage are of high significance and their setting makes a moderate contribution to their significance. The distance from the indicative Converter Station location and dense vegetation screening in the form of road and field boundaries prevents any views.
- 20.8.3.16 The heritage significance of the assets at Little Denmead Farm & Bleak Cottage is high and the magnitude of change is negligible. Therefore, there is likely to be a direct, permanent, long-term effect on the assets of Little Denmead Farm & Bleak Cottage of **negligible** significance prior to the implementation of mitigation measures.

Stoneacre

- 20.8.3.17 Stoneacre (A120) is an asset of high significance and its setting makes a moderate contribution to its significance. Stoneacre is a very well sheltered property, with vegetation enclosing the asset on all sides. This prevents any extensive views of the surrounding landscape and will also therefore prevent any views of the indicative Converter Station location.
- 20.8.3.18 The heritage significance of Stoneacre is high and the magnitude of change is negligible. Therefore, there is likely to be a direct, permanent, long-term effect on the assets significance of Stoneacre of **negligible** significance prior to the implementation of mitigation measures.

Scotland (Cottage)

- 20.8.3.19 Scotland (A117) is an asset of high significance and its setting makes a moderate contribution to its significance. Access directly up to Scotland Cottage was not possible on the day of the site visit as the road leading to the house is private and therefore assessment had to be made from further west down Dogkennel Lane. From here, views over the landscape were extensive due to the asset being based on an area of higher land. It is possible that the asset will have views of the indicative Converter Station location. Despite this, the distance between the asset will mean that impacts would be minimal and most rural views from Scotland will be retained. Furthermore, as part of the Proposed Development, mitigation to the north of the indicative Converter Station location is proposed, in the form of earth bunds, these will also reduce the likeliness of impact.
- 20.8.3.20 The heritage significance of Scotland is high and the magnitude of change is small. Therefore, there is likely to be a direct, permanent, long-term effect on the significance of Scotland (Cottage) of **minor negative** significance prior to the implementation of mitigation measures.

Hinton Manor House

- 20.8.3.21 Hinton Manor House (A141) is an asset of high significance and its setting makes a moderate contribution to its significance. Hinton Manor House is an enclosed asset, existing within its own boundary wall which has high vegetation screening. This prevents many views out towards the surrounding landscape. Additionally, screening on the west side of Hinton Manor Lane also prevents any views.
- 20.8.3.22 The heritage significance of Hinton Manor House is high and the magnitude of change is negligible. Therefore, there is likely to be a direct, permanent, long-term effect on the significance of Hinton Manor House of **negligible** significance prior to the implementation of mitigation measures.

20.8.4 DECOMMISSIONING

- 20.8.4.1 As the majority of effects on the historic environment would occur during construction, excavation for the removal of the cable or dismantling the Converter Station is not anticipated to give rise to any additional effects on the historic environment.

20.8.5 CUMULATIVE EFFECTS

- 20.8.5.1 An assessment of cumulative effects in relation to below-ground archaeological remains across the Site has been scoped out (see 20.2). For intangible and deeply buried heritage assets it is not feasible to quantify accurately the nature of the resource across the assessment Study Area, which would enable the identification of a cumulative impact and potential elevated effect. There is a likely shared potential between the Proposed Development and the other nominated schemes for archaeological remains. As such, the overall significance of cumulative effects is beyond the forecasting ability).
- 20.8.5.2 An assessment of Operational Stage effects in relation to the setting of designated heritage assets will be carried out in the forthcoming ES chapter. This will be restricted to the Converter Station site only (as per scope of the assessment).
- 20.8.5.3 The zone of influence will comprise committed developments within 1km of the Site Boundary within East Hampshire and Winchester District authorities, totalling 7 committed developments. This includes those that have been granted planning permission or are reasonably foreseeable (i.e. resolution to grant) and are similar in terms of use, scale and nature. Any additional committed developments requiring assessment will also established in the ES.

20.8.6 PREDICTED OPERATIONAL STAGE EFFECTS, PRIOR TO MITIGATION

20.8.6.1 In conclusion, prior to mitigation, it is predicted that one asset out of those assessed has the potential to experience material changes in its setting through views of the indicative Converter Station location. Scotland (Cottage) is an asset of **high** significance and the magnitude of change is small. There is likely to be a direct, permanent, long-term effect on the significance of Scotland (Cottage) of **minor negative** significance prior to the implementation of additional mitigation measures. It was concluded that all other assets assessed would experience direct, permanent, long-term effects on their significance of negligible significance prior to the implementation of additional mitigation.

20.9 PROPOSED MITIGATION

20.9.1 CONSTRUCTION STAGE BASELINE SURVEY AND MITIGATION

20.9.1.1 The mitigation strategy proposed to mitigate predicted construction related impacts identified in 20.6 is set out below. Three strategies are presented:

- Strategy 1: Greenfield area (i.e. open rural or undeveloped land) evaluation and mitigation;
- Strategy 2: Brownfield area (i.e. along existing roads, pavements and hardstanding) evaluation and mitigation: Joint Bays and TJBs; and
- Strategy 3: Brownfield area (i.e. along existing roads, pavements and hardstanding) mitigation: proposed cable trench excavation.

Strategy 1: Greenfield area evaluation and mitigation

20.9.1.2 Within the greenfield section of the Site Boundary (Sections 1-3), proposed ground disturbance would be extensive due to the preliminary topsoil strip. This is assumed to be site-wide for the Converter Station Area and also within the 6 m wide Onshore Cable Route working width, along with temporary access routes and for temporary compounds.

20.9.1.3 Within these areas, the presence, nature, date, extent and significance of any archaeological remains present would need to be clarified by site-based investigations as the potential for such remains, as assessed by the desk-based approach to date, is largely uncertain.

20.9.1.4 Preliminary site-based investigations (baseline assessment) would comprise two stages:

- Stage 1: geophysical survey. Non-intrusive survey which can be effective for large rural areas. The method and its effectiveness can vary. The aim of the survey would be to identify anomalies that might be subsurface archaeological remains, along with areas of modern disturbance, where survival of remains may have been compromised; and

- Stage 2: archaeological trial evaluating trenches. These will be targeted to geophysical anomalies of potential archaeological interest, along with any remains identified by the desk-based research, but will also include sampling of 'blank areas'.

20.9.1.5 The results of the surveys will be used to inform the further assessment to be carried out.

20.9.1.6 The results of the evaluation will enable the Applicant to formulate with the relevant statutory consultees an appropriate mitigation strategy for any significant archaeological remains that could be affected.

20.9.1.7 Mitigation could take the form of a targeted archaeological excavation (preservation by record) well in advance of the commencement of ground works and/or an archaeological watching brief (a programme of 'strip, map and sample) carried out alongside the preliminary topsoil removal. This would ensure that archaeological remains were not removed without record. This would need to be programmed with adequate time for the recording of archaeological remains.

20.9.1.8 Although rare, where archaeological remains of very high (national) significance are identified, there may be a requirement, where feasible, for their preservation *in situ*, i.e. through modifications to the design, e.g. modification in design of foundations and formation levels for the Converter Station, or avoidance in the adjustment of the position of the Converter Station and/or the line of the Onshore Cable Route.

20.9.1.9 Any archaeological work would need to be undertaken in consultation with the relevant Archaeological Advisor, in accordance with an approved archaeological Written Scheme of Investigation ('WSI') outlining the scope and method of investigation, along with the post-excavation reporting and dissemination strategy.

Strategy 2: brownfield area evaluation and mitigation: Joint Bays and Transition Joint Bays

20.9.1.10 Joint Bays and TJBs in brownfield areas would entail more than the localised disturbance of the proposed cable trench, with the excavation of larger and deeper trenches, approximately 15 m x 5 m, to a depth of 3 m (JBs) and up to 1.75 mbgl. For such areas, archaeological trial evaluation would be appropriate and may be feasible, depending on the depth of modern made ground. Geophysical survey in these areas would not be appropriate or feasible, unless they are positioned within undeveloped greenfield land.

20.9.1.11 As with the greenfield evaluation, this would aim to clarify the presence, nature, date, extent and significance of any archaeological remains within the area of excavation. The results would inform the forthcoming ES and would enable the formulation of an appropriate mitigation strategy.

Strategy 3: Brownfield area mitigation of the cable trench

- 20.9.1.12 The majority of the Onshore Cable Corridor passes through urban areas along existing roads, pavement and hardstanding. For these areas, the proposed archaeological impact would be highly localised and restricted to the approximate 1.0 m wide by 1.3 m deep cable trench, with no impacts from a 'working width' (i.e. no topsoil strip). Modern made ground is anticipated to be present, possibly to a depth of 0.5m or greater. Archaeological remains in such areas are also likely to have been partially or wholly truncated by modern infrastructure development.
- 20.9.1.13 For this reason, the preliminary surveys proposed for the greenfield parts of the Site Boundary would be neither feasible nor appropriate.
- 20.9.1.14 In order to mitigate the localised impact of the cable trench on any potential archaeological remains, an archaeological watching brief is proposed, where the cable trench excavation extends beneath any modern made ground. This would ensure that any archaeological assets were not removed without record. The archaeological watching brief would be carried out during the Construction Stage during the excavation of the cable trench, with work halted to allow sufficient time to excavate, sample, and record any archaeological remains exposed.
- 20.9.1.15 The level of archaeological watching brief attendance is likely to vary depending on the predicted sensitivity along the Onshore Cable Corridor. The future WSI would present the approach, ranging from continuous attendance in sensitive areas to regular attended for areas with low to moderate potential. For areas where there would be no impact (i.e. landfill zones), no attendance would be required.
- 20.9.1.16 The archaeological watching brief would need to be undertaken in accordance with an approved archaeological WSI outlining the scope and method of investigation, along with the post-excavation reporting and dissemination strategy.

Palaeoenvironmental sampling

- 20.9.1.17 The archaeological strategies proposed above would require an element of palaeoenvironmental sampling, where the potential for such has been identified. This might include proposed disturbance in coastal alluvial/fluvial zones adjacent to Langstone Harbour and in areas of raised marine deposits, where they would be affected.
- 20.9.1.18 This would typically entail sampling during the intrusive fieldwork discussed above (and set out in the WSI), and geoarchaeological analysis in order to develop an understanding of past environmental conditions of the local area.
- 20.9.1.19 In light of the shallow nature of the proposed impact along the Onshore Cable Corridor, deep sampling through the use of purposive geoarchaeological boreholes, along with the creation of a geoarchaeological deposit model, is not considered appropriate.

20.9.2 OPERATIONAL STAGE MITIGATION

20.9.2.1 One asset, Scotland (Cottage), was identified as having potential effects from the Converter Station of **minor negative** significance.

20.9.2.2 As well as the existing mitigation measures which are included in the Proposed Development, additional mitigation, in the form of new planting, is recommended to reduce the potential views of the Converter Station from heritage assets in the surrounding area. These should be particularly focused in the direction of designated heritage assets, i.e. the northern side of the indicative Converter Station location.

20.10 RESIDUAL EFFECTS

20.10.1.1 The environmental residual effect on each identified receptor (heritage asset) by route section is presented in detail in Appendix 20.3. In summary, all environmental effects would be reduced to **negligible** significance following the implementation of mitigation measures outlined above.

20.11 SUMMARY AND CONCLUSIONS

20.11.1.1 The preliminary assessment has identified the potential impacts associated with the construction stage, in the form of partial or complete loss to known or possible archaeological remains, where ground disturbance is proposed, and the Operational Stage, in the form of permanent changes to the setting of above ground designated assets (e.g. listed buildings) within the vicinity of the indicative Converter Station location.

20.11.1.2 No above ground heritage assets would be physically affected by the Proposed Development. A number of insignificant effects have been identified, and these have been scoped out of the assessment (see paragraph 20.1).

20.11.2 BASELINE

20.11.2.1 There are 21 Grade II listed buildings and one Grade II* listed building in the 2km study area around the indicative Converter Station location and those that would be affected in terms of understanding and appreciation of their significance because of changes to their setting have been assessed. The Onshore Cable Corridor is otherwise entirely below ground and setting effects have been scoped out based on design to date.

20.11.2.2 The Site has the potential for archaeological remains of all periods from the prehistoric to post-medieval, with potential in places for palaeoenvironmental remains. The heritage significance of such remains can vary from low to high (potentially very high) depending on the nature, extent, and date of the remains. Relatively little archaeological investigation has been carried out within the Site in the past, and current understanding of the nature and extent of past human activity, in particular for the prehistoric and Roman periods, for which there is no documentary record is limited.

20.11.2.3 The varied landscape of both greenfield (rural) land and brownfield areas has bearing on the likely survival of any archaeological remains. Survival will vary but is likely high outside of previous building development, especially in the Converter Station Area and the northern extent of the Onshore Cable Corridor, which lie in rural land. Where the Onshore Cable Corridor is located on existing roads or within brownfield land, archaeological survival is anticipated to be lower. At the Landfall Site, archaeological survival is expected to be low to moderate, due to developments on the Site Boundary from the late 19th century onwards.

20.11.3 ASSESSMENT

CONSTRUCTION STAGE

20.11.3.1 During the Construction Stage, the likely significant effect would be a partial or complete loss of buried heritage assets in areas where ground disturbance is proposed of minor negative to major negative significance. The main impact is topsoil stripping, which is assumed in the footprint of the Converter Station Area and in rural areas within the 6.0m wide Onshore Cable Route ‘working width’. The 1.0 m-wide by 1.3 m-deep cable trench excavation is a relatively localised impact, albeit over a long distance.

20.11.3.2 In rural undeveloped areas site-based investigation is proposed to clarify the nature, extent, date, and significance of any archaeological remains potentially affected. This would take the form of archaeological evaluation trenches informed by a geophysical survey. Trial trenching and Geophysical survey (where appropriate) is proposed in the footprint of the proposed Transition Joint Bays (HDD) and Joint Bays within the brownfield areas of the Site Boundary.

OPERATIONAL STAGE

20.11.3.3 During the Operational Stage, there is the potential for partial loss of significance resulting from permanent changes to the setting of designated assets. This chapter has assessed the potential impacts on the setting of heritage assets from the Converter Station Area within Section 1. The likely permanent changes to the setting of designated assets has been assessed with only one concluded as being of **minor negative** significance and the rest of **negligible** significance. Any changes to design of the Proposed Development, including FOC infrastructure at Landfall and the Converter Station will be assessed in the ES.

MITIGATION

- 20.11.3.4 The results of the evaluation would allow an informed decision to be made in respect of an appropriate mitigation strategy for any significant archaeological assets. Depending on the results of the evaluation, mitigation could take the form of targeted archaeological excavation (preservation by record) in advance of construction and/or an archaeological watching brief ('strip, map and sample) alongside preliminary topsoil removal. Any archaeological work would need to be undertaken in consultation with the local authority's archaeological advisor and Historic England, in accordance with an approved archaeological WSI.
- 20.11.3.5 For brownfield areas, the proposed impact would be highly localised to the cable trench; as such preliminary evaluation would be neither feasible or appropriate. In order to mitigate the localised impact of the cable trench on any potential archaeological remains, an archaeological watching brief is proposed, where the cable trench excavation extends beneath any modern made ground. This would ensure that any archaeological assets were not removed without record. The archaeological watching brief would be carried out during the Construction Stage during the excavation of the cable trench, with work halted to allow sufficient time to excavate, sample, and record any archaeological remains exposed.
- 20.11.3.6 All environmental effects would be reduced to **negligible** significance following the implementation of mitigation measures outlined.

20.11.4 ASSESSMENTS AND SURVEYS STILL TO BE UNDERTAKEN

- 20.11.4.1 An additional area east of Milton requires further PCC HER data collection. This is to be carried out during the ES assessment stage.
- 20.11.4.2 As outlined in section 20.9 of this Chapter, further surveys in the form of archaeological evaluation is required in Greenfield areas, comprising archaeological trial trenches informed by geophysical survey. This will be carried out at the earliest feasible time, to inform the EIA. Further consultation with LPA archaeological officers will be carried out following the publication of this PEIR, to agree the scope of works.
- 20.11.4.3 The design will be kept under review, for example, the location of the proposed ORS building in the vicinity of the Landfall site, and further assessment will be undertaken where required.

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