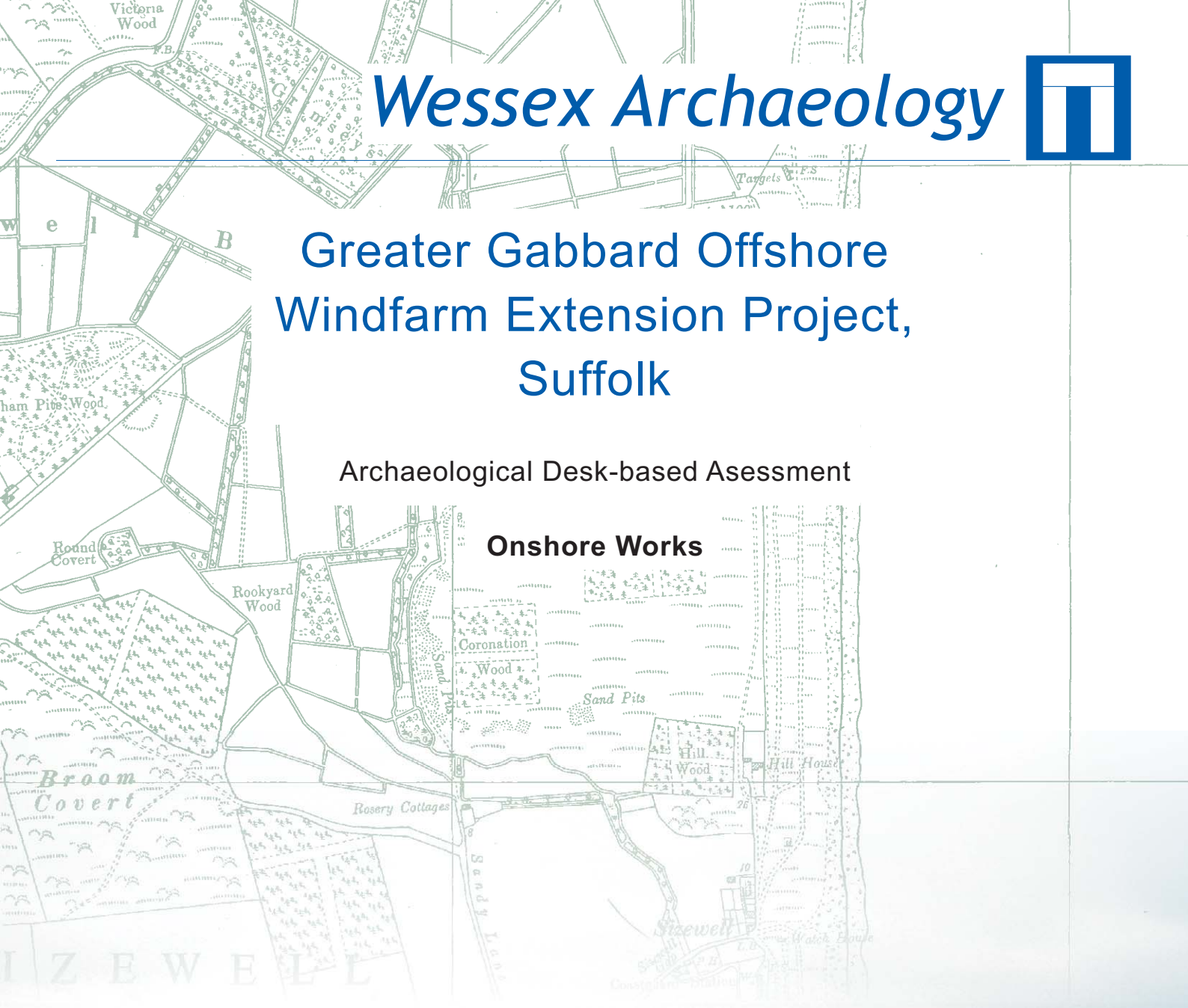




## Greater Gabbard Offshore Windfarm Extension Project, Suffolk

Archaeological Desk-based Assessment

### Onshore Works





**GREATER GABBARD OFFSHORE WIND FARM  
EXTENSION PROJECT  
SUFFOLK**

**Archaeological Desk-based Assessment**

**ONSHORE WORKS**

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**GREATER GABBARD OFFSHORE WINDFARM  
EXTENSION PROJECT  
SUFFOLK**

**Archaeological Desk-based Assessment  
Onshore Works**

**Summary**

Wessex Archaeology was commissioned by Airtricity to undertake an archaeological desk-based assessment of an area of onshore works associated with proposed extension to, and cable route for, the Greater Gabbard Offshore Windfarm.

The Site comprises an area of foreshore, beach and coastal mainland immediately to the south and south-west of the Sizewell B Power Station, Suffolk where it is anticipated that the cable route from the Greater Gabbard wind farm will come ashore and connect to the National Grid. There are two proposed substation sites: one option lies immediately to the west of the current substation serving the Greater Gabbard Offshore Windfarm at NGR 646617, 262838; the second lies to the south at NGR 646704, 262212.

The recorded cultural heritage resource within a 1.5km Study Area around the Site was considered in order to provide a context for the discussion and interpretation of the known and potential resource within the Study Area. Archaeological investigations within and around the Study Area have recorded archaeological sites, deposits and find spots dating from the prehistoric to the modern period, with much of the known and potential archaeological resource reflecting the situation of the Site on the coast, comprising a number of WWII defence elements. Within the boundary of the Site there are a number of recorded sites and monuments, dating from the prehistoric period to the modern day. It is considered that the potential for recovering archaeological remains from the Site is high. Overall the potential archaeological resource within the Site may be considered to be of local to regional importance.

There are no statutorily designated sites or monuments within the Study Area. It is considered that development would have a negligible impact on the settings of any Scheduled Monuments and Listed Buildings in the wider area, as these are already compromised by the existing Sizewell Power Station. The historic landscape of the Site and Study Area is of generally degraded character but includes some strong elements such as the Sizewell Belts and geometric fields of Estate Sandlands and lies within the Heritage Coast and an Area of Outstanding Natural Beauty.

It is considered that, in order to comply with the criteria set out in National and Local Planning Legislation further archaeological investigation may be required. The precise nature and scope of further investigations within the Site should be agreed through consultation with the Development Control Archaeologist for Suffolk County Council, and undertaken in line with an agreed Written Scheme of Investigation, produced in advance of any Site works.

**GREATER GABBARD OFFSHORE WINDFARM  
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**Acknowledgements**

This project was commissioned by Airtricity, and Wessex Archaeology is grateful to Rick Campbell in this regard. Wessex Archaeology would also like to thank Dr Colin Pendelton of the Suffolk Sites and Monuments Record for his assistance, as well as the staff at the Suffolk Record Office in Ipswich. Wessex Archaeology would also like to thank Dave Gill of Suffolk Archaeological Service for providing information on unpublished excavations in the Study Area.

The report was researched and compiled by Nikki Cook. Caroline Russell undertook the site visit and obtained the historic mapping from the Suffolk Record Office. The project was managed for Wessex Archaeology by Nikki Cook.

## GREATER GABBARD OFFSHORE WINDFARM EXTENSION PROJECT SUFFOLK

### Archaeological Desk-based Assessment Onshore Works

## 1 INTRODUCTION

### 1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Airtricity to undertake an archaeological desk-based assessment of an area of onshore works associated with proposed extension to, and cable route for, the Greater Gabbard Offshore Windfarm, Suffolk, hereafter 'The Site' (see **Figure 1**).

1.1.2 The Site covers an area of c.94 ha, although within this area there are two preferred locations for substations to connect the Greater Gabbard Offshore Windfarm Extension to the National Grid. The first substation option (Option 1) lies immediately to the west of the current substation being built to serve the Greater Gabbard Offshore Windfarm at NGR 646617, 262838, whilst the second (Option 2) lies to the south at NGR 646704, 262212 (see **Figure 1**).

1.1.3 At the time of writing, the exact route of the onshore cable run to the new proposed substation is unknown, but it is thought that it will run alongside the existing cable run for the current Greater Gabbard windfarm, outlined in purple on **Figure 1**. Similarly the cable run linking the proposed substation to Sizewell Power Station is also unknown, but is also likely to follow the cable run from the existing substation, with the route outlined in orange on **Figure 1**.

1.1.4 This assessment has been commissioned to inform the Client regarding any relevant archaeological and/or historic environment issues and constraints relating to the onshore works associated with the Greater Gabbard Offshore Windfarm Extension, and will also support a Planning Application for the Site.

### 1.2 The Site, location and geology

1.2.1 The Site is situated within a lowland coastal strip on the East Anglian coast, immediately to the south and south-west of the Sizewell B Power Station, Sizewell, Suffolk (see **Figure 1**).

1.2.2 The Site comprises an area of foreshore, beach and coastal mainland where it is anticipated that the cable route from the Greater Gabbard Windfarm Extension will come ashore and connect to the National Grid via a new substation.

1.2.3 The underlying geology of the Site comprises thick chalk formations at depth overlain by thin layers of Ormesby Clay Formation and Lambeth Group mudstones, above which lie Harwich Formation layers comprising sandy mudstone and siltstone with volcanic ash deposits. The immediate underlying geology, to a depth of c.50m below OD, consists mostly of Crag

Group shelly micaceous sands with local rounded flint gravels (“Westleton Beds”), although in the western portion of the Site the immediate underlying geology comprises sands and gravels of the Lowestoft Till Formation (Geological Survey of Great Britain 1:50,000 map sheet 191).

## **2 METHODOLOGY**

### **2.1 Aims and scope**

2.1.1 The aim of this assessment is to establish the known and potential cultural heritage resource within the Site and its environs, which may be affected by the proposed development.

2.1.2 For the purposes of this assessment, the cultural heritage resource is taken to encompass archaeological remains (both above and below ground), palaeoenvironmental evidence, historic structures, and elements of the historic landscape within the intertidal and terrestrial zones potentially affected by the proposed development.

2.1.3 This report assesses the likely impact of proposed development on archaeology, the built heritage resource and the historic landscape, and provides recommendations on appropriate mitigation strategies.

### **2.2 Study Area**

2.2.1 The recorded cultural heritage resource within a Study Area defined by a 1.5km radius from the centre of the Site at NGR 647013, 262554 was considered in order to provide a context for the discussion and interpretation of the known and potential resource within the Site (**Figure 1**).

### **2.3 Sources**

2.3.1 A number of publicly accessible sources of primary and synthesised information were consulted. A brief summary of the sources consulted is given below.

#### ***Sites and Monuments Record***

2.3.2 The Suffolk Sites and Monuments Record (SSMR) was consulted for information held pertaining to the cultural heritage resource within the Study Area. The SSMR is a database of all recorded archaeological sites, findspots, and archaeological events within the county, and was consulted for this study in November 2009.

2.3.3 Information from the SSMR along with that from the additional sources, has been reviewed and synthesised for the purposes of this report. The SSMR data is provided in gazetteer format in **Appendix 1** and **2**.

2.3.4 Information relating to any Scheduled Monuments and Listed Buildings within the Study Area was obtained by consulting English Heritage online resources. For full website details see **References**.

#### ***Legislative and planning documents***

2.3.5 The *East of England Plan 2008*, the *Suffolk Structure Plan 2001*, the *Suffolk Coastal Local Plan 2006* and the *Suffolk Coast and Heaths Management Plan 1994* were consulted. These local planning documents provide



information relating to any existing development controls and additional planning guidance relating to the archaeological resource and cultural heritage. The relevant chapters in these documents have been prepared in accordance with national guidelines including *Planning Policy Guidance Note 16 Archaeology and Planning* (PPG16) and *Planning Policy Guidance Note 15 (PPG15) Planning and the Historic Environment*.

- 2.3.6 The results of a review of this guidance and, where relevant, details of any statutory and non-statutory designations are included below.

**Documentary sources**

- 2.3.7 A search of other relevant primary and secondary sources was carried out digitally, and in Wessex Archaeology's own library. Recent volumes of local journals were consulted, and both published and unpublished archaeological reports relating to excavations and observations in the area around the Site were studied. The sources consulted are listed in the **References** section below.

**Cartographic sources**

- 2.3.8 A search of historic manuscript and Ordnance Survey maps was undertaken at the Suffolk Record Office in Ipswich. The study of maps and associated historical sources helps to clarify the archaeological potential of the Site in two ways. First, it suggests aspects of historic land use prior to any modern development. Secondly, it pinpoints areas within the Site that, because of that development, are likely to have become archaeologically sterile. All maps consulted in the preparation of this document are listed in **References**.

**Previous studies**

- 2.3.9 As part of the English Heritage (EH) National Mapping Programme (NMP), recent work within the area undertaken for the Suffolk Coastal NMP comprises *The Archaeology of the Suffolk Coast and Inter-tidal Zone* (Hegarty & Newsome 2004). This survey involved the interpretation, mapping and recording of all archaeological features visible on aerial photographs in the coastal and estuarine areas of Suffolk and was carried out between April 2001 and March 2004.
- 2.3.10 A further project undertaken as part of the EH NMP resulted in *Suffolk's Defended Shore: Coastal Fortifications from the Air* (Hegarty & Newsome 2007). This project used information gathered from the Suffolk Coastal NMP to focus on military and coastal defence sites visible on aerial photographs taken largely from the early 1940s to the present day.
- 2.3.11 Wessex Archaeology recently completed an archaeological and cultural heritage assessment for the construction of a proposed nuclear power station, Sizewell C, immediately to the north of the existing Sizewell B power station at Sizewell, Suffolk (Wessex Archaeology 2009). The Study Area for this assessment overlaps with the Greater Gabbard Study Area considered here, and draws on the research and conclusions of this recent report.
- 2.3.12 On a regional scale, the resource assessment for *Research and Archaeology: a Framework for the Eastern Counties* (Glazebrook 1997) includes the study area. The report adopts a highly condensed and

chronological approach whereby period reviews are presented as brief assessments of the archaeological resource of the region.

## 2.4 Site visit

2.4.1 The Site was visited on 26<sup>th</sup> November 2009, when full access to the Site was gained. The aim of the visit was to assess the general aspect, character, condition and setting of the Site and to identify any potential impacts not evident from secondary sources. Weather was dry but cloudy. A digital photographic record of the visit is held in the project archive.

## 2.5 Chronology

2.5.1 Where mentioned in the text, the main archaeological periods are broadly defined by the following date ranges:

- World War II 1939-1945
- Modern 1900-present
- 19<sup>th</sup> century 1800-1899
- Post-medieval 1500-1799
- Medieval AD1066-1499
- Saxon AD410-1066
- Romano-British AD 43-410
- Iron Age 700 BC- AD 43
- Bronze Age 2400-700 BC
- Neolithic 4000-2400 BC
- Mesolithic 8500-4000BC
- Palaeolithic 500000-10000BP

## 2.6 Best practice

2.6.1 This assessment has been carried out in accordance with the Institute for Archaeologists' *Standard and Guidance for Desk-based Assessment* (IfA 1994, revised September 2001 and October 2008).

## 2.7 Assumptions and limitations

2.7.1 Data used to compile this report consists of secondary information derived from a variety of sources, only some of which have been directly examined for the purposes of this Study. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.

2.7.2 The SSMR is not a record of all surviving elements of the cultural heritage resource, but is a record of the discovery of a wide range of archaeological and historical components of the cultural heritage. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

## 2.8 Copyright

2.8.1 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the Copyright, Designs

and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

### 3 PLANNING BACKGROUND

#### 3.1 Introduction

3.1.1 There is national legislation and guidance relating to the protection of, and proposed development on or near, important archaeological sites or historical buildings within planning regulations as defined under the provisions of the Town and Country Planning Act 1990. In addition, local authorities are responsible for the protection of the historic environment within the planning system.

3.1.2 The following section summarises the national, regional and local planning and legislative framework governing the treatment of archaeological remains, the historic built environment and the historic landscape within the planning process.

#### 3.2 National legislation and planning guidance

POLICY NO.	TITLE	POLICY TEXT
n/a	<b>Ancient Monuments and Archaeological Areas Act 1979 (as amended)</b>	Scheduled Monuments and designated Archaeological Areas are afforded statutory protection and the consent of Secretary of State (Department of Culture, Media and Sport), as advised by English Heritage (EH), is required for any works affecting designated monuments or areas.
PPG15	<b>Planning and the Historic Environment</b>	Guidance on protection and enhancement of the historic environment including built heritage and historic landscape through the Local Development Plans (LDPs). Local Planning Authorities (LPAs) administer special consents, in addition to regular planning controls, for planning applications involving Listed Buildings, Conservation Areas, Historic Parks and Gardens and Registered Battlefields.
PPG 16	<b>Archaeology and Planning</b>	Archaeology is a material consideration in the planning process and LDPs should include policies for the protection, enhancement and preservation of sites and their settings. There is a presumption in favour of the preservation <i>in situ</i> of nationally important remains and their settings, whether Scheduled or not.  Planning applications should include an assessment of likely impacts on archaeology. It is reasonable for an LPA to require archaeological evaluation in order to make an informed and reasonable decision.  The case for the preservation of archaeological remains must be assessed on the individual merits of each case, taking into account relevant policies and material considerations, including the intrinsic

		importance of the remains, and weighing these against the need for the proposed development.
n/a	<b>England's Coastal Heritage: A statement on the management of coastal archaeology 1996</b>	Outlines a number of principles for managing coastal archaeology. These include the promotion of preservation <i>in situ</i> , that finds should be managed in accordance with the principles which apply to terrestrial archaeological remains, that marine and terrestrial remains must be considered seamlessly, that a precautionary approach should be adopted and that PPG16 should be applied to the treatment of sub-tidal archaeological remains in order to secure best practice.

### 3.3 Local planning guidance and policy

POLICY NO.	TITLE	POLICY TEXT
<b><i>East of England Plan (adopted May 2008)</i></b>		
ENV6	<b>Historic Environment</b>	To identify, protect, conserve and where appropriate, enhance the historic environment of the region; its archaeology, historic buildings, places and landscapes including historic parks and gardens and those features and sites (and their settings) which are especially significant in the East of England.

POLICY NO.	TITLE	POLICY TEXT
<b><i>Suffolk Structure Plan (adopted 2001)</i></b>		
ENV4	<b>The Countryside and Coast</b>	The landscape quality and character of the countryside and coast will be protected for their own sake and their non-renewable and natural resources will be conserved. Proposal for prominent structures will only be acceptable if the local planning authority is satisfied that they are essential in the countryside, and that the location, siting and design minimises adverse impact on the environment
ENV22	<b>Archaeology</b>	Development will not be acceptable if it would have a material adverse effect on Scheduled Ancient Monuments or other sites of national archaeological importance, or their settings. On other sites of archaeological importance or potential, provided there is no overriding case against development, planning permission will be subject to satisfactory prior arrangements.

POLICY NO.	TITLE	POLICY TEXT
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**Suffolk Coastal Local Plan (adopted 2006)**

Note: The Suffolk Coastal Local planning authority is in the process of replacing the Suffolk Coastal Local Plan with the Suffolk Coastal Local Development Framework. Until its replacement, the current Suffolk Coastal Local Plan will contain 'saved policies' that will be used for the purposes of development control. The policies listed below comprise the 'saved policies' relating to the heritage resource.

<p><b>AP7</b></p>	<p><b>Development of Archaeological Sites</b></p>	<p>In considering planning applications, outline or detailed, for development that might affect sites that are known or are likely to contain archaeological remains, the Council will require the following: a field evaluation where important archaeological remains may exist but their nature and extent is not fully understood; the preservation of archaeological remains <i>in situ</i> where the assessment or field evaluation indicate that the remains are important; a recording of the archaeological remains that would be lost in the course of works for which permission is being sought; a brief setting out the arrangements for recording remains. Development that would adversely affect a Scheduled Ancient Monument, its setting or remains would not be permitted.</p>
<p><b>AP10</b></p>	<p><b>Management Plans</b></p>	<p>The District Council will actively encourage the implementation of the Suffolk Coast and Heaths Management Plan.</p>

3.3.1 The *Suffolk Coast and Heaths Management Plan (adopted June 2008)* (SCHMP) replaced the earlier 2002 Management Plan, which itself replaced the Heritage Coast Plan and River Orwell North Shore Management Plan.

3.3.2 Requirement A: Aim 5 of the SCHMP seeks to conserve the historic resources of the area including landscapes, archaeology and the built environment. This document is non-statutory, but Policy AP10 of the *Suffolk Coastal Local Plan* states that the District Council will actively encourage the implementation of the SCHMP. However, Section 3, para 3.4.5 of the SCHMP also notes that the current nuclear power station at Sizewell and its associated infrastructure has already had a considerable adverse impact on the natural beauty of the area.

**4 BASELINE RESOURCE**

**4.1 Introduction**

4.1.1 A consideration of the context of the Site is an important element of establishing the nature of potential elements of the cultural heritage resource within the Site. The following section provides a brief synthesis of the archaeological and historical development of the Site and the Study Area, compiled from the sources detailed above. The aim of the synopsis is to establish the known resource within the Site and to provide a context for the identification and understanding of any potential cultural heritage resource which may survive.

4.1.2 A gazetteer of the sites referred to in the text is provided in **Appendix 1** and **2**. Sites are numbered from **1-73** with a **WA** prefix for the ease of reference.

An overall illustration of the sites in the gazetteer are provided on **Figures 2 to 5**.

## **4.2 Statutory and local heritage designations**

- 4.2.1 The Site does not contain any remains with statutory or local heritage designations. There are also no sites with statutory or local heritage designations (e.g. registered battlefields, parks and gardens, Scheduled Monuments or Listed Buildings) within the Study Area.
- 4.2.2 The nearest Scheduled Monuments are a Bronze Age bowl barrow on Aldringham Common, 1.2km to the south-west of the Site boundary; two Bronze Age bowl barrows in Square Plantation 2.1km to the south-west of the Site boundary; another two bowl barrows on Aldringham Green 2.3km to the south-west of the Site boundary; and the second site of Leiston Abbey c.2km to the north-west of the Site boundary. The second site of Leiston Abbey is also a Grade I Listed Building. None of these sites will be impacted by proposed development.
- 4.2.3 There are a number of Listed Buildings in Leiston, 1.5km to the west of the Site, beyond the Study Area, but none of these will be impacted by the proposed development.
- 4.2.4 The nearest Conservation Area comprises the historic core of Leiston, but this lies beyond the Study Area, 1.75km to the west of the Site boundary, and will not be impacted by the proposed development.
- 4.2.5 The Suffolk Coast between Kessingland and Felixstowe has been defined by the Countryside Agency as Heritage Coast. This definition of a narrow coastal strip recognises the national importance of its high scenic quality and its largely unspoilt nature and the need for these assets to be safeguarded.
- 4.2.6 The eastern half of the Site lies within the Heritage Coast as defined within the Local Plan, and also within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). The Site lies within the Sand Dunes and Shingle Ridges Landscape Character Area (LCA) of the AONB, in an area of low-lying coast which is actively eroding.

## **4.3 Previous archaeological investigations**

- 4.3.1 Several previous archaeological studies have been undertaken in the area within and around the Site, notably in connection with proposals for the onshore works associated with the Greater Gabbard Offshore Windfarm, currently in progress.
- 4.3.2 Within the area of Rosary Field adjacent to Sandy Lane, archaeological excavations revealed the remains of timber buildings based around earth-fast posts and clay floor, small ditches (indicative of corrals or animal enclosure) and three large external ovens, or corn driers. All appear to date to the medieval period, dating to the 12<sup>th</sup> to 14<sup>th</sup> century. There was also a barn building, c.16m long and 5m wide, with an aisled ground plan.
- 4.3.3 A second phase of excavations at the Site found the remains of an early medieval boat, which had been subsequently broken up and parts of the hull used to create a timber lining for a well (Atfield, *et al* 2009). More details

about these excavations can also be found at <http://www.suffolk.gov.uk/Environment/Archaeology/FieldProjects/GreaterGabbardWindfarmSizewell.htm> .

#### **4.4 Archaeological and historical context**

##### ***Palaeolithic***

- 4.4.1 There are currently no known sites or find spots confidently assigned to the Palaeolithic period within the Study Area, although within the Site, and in particular within the area of the Option 2 substation, there are sands and gravels and chalky, pebbly, sandy clay of the Lowestoft Till Formation, dating to the Anglian period. This may indicate a limited potential for the recovery of palaeoliths, attesting to hominid or early modern human activity within the Site, although none have yet been recorded.

##### ***Mesolithic***

- 4.4.2 The early Mesolithic period, which marked the onset of the Holocene in Britain, saw a warming of the climate accompanied by the development of a forest environment within the Study Area region. The onset of the Holocene is further characterised by the continual rise in sea level, resulting in the deposition of alluvial mud within the coastal plain of the Study Area.
- 4.4.3 At c.9,000 BP sea-level is thought to have been some 30m lower than the present day (Coles and Funnell 1981; Shennan and Horton 2002), suggesting that the Study Area was not submerged during this period. Following a rapid rise in sea-level between 8500 and 7000 BP, high water rose from -25.5m OD to -8.9m OD and the marine extent of the Study Area is likely to have become progressively submerged.
- 4.4.4 The occurrence of temporary, minor reductions in sea level during the early Holocene enabled plants to colonise the exposed mudflats, resulting in the development of peat beds interspersed within the marine alluvium. A significant sea level regression, associated with peat formation, is thought to have occurred in the Late Mesolithic period between 6750 and 6500 BP in the Study Area (Pye & Blott 2006:458).
- 4.4.5 East Anglia is quite rich in Mesolithic sites, the distribution of which suggests that areas fringed by the coastal zone were particularly favoured by these early communities. The Study Area would have comprised a landscape attractive for human activity during the Mesolithic period, not only providing access to both terrestrial and marine resources but also enabling Mesolithic communities to exploit the herds of red deer and other such mammals which migrated into Britain from the Continent as the climate ameliorated (Sumbler *et al.* 1996:136). The discovery of two Mesolithic maceheads just beyond the Study Area, in an area adjacent to the Sizewell Belts, could suggest Mesolithic activity relating to the wetland resource within the Study Area.
- 4.4.6 The rising sea level is likely to have progressively forced Mesolithic settlement sites further inland on higher ground, attested by the discovery of a Mesolithic hill-top settlement at Little Bealings, Woodbridge (Martin 1993:41) some 20km south west of the Study Area. Despite this, Mesolithic communities are likely to have continued to exploit the marine resources within the coastal and marine extent of the Study Area. The earliest evidence for watercraft dates to the Mesolithic period with the discovery of a

logboat dating to 7,920-6,470 BC found in Pesse in the Netherlands (McGrail 2004). It is likely that logboats and other such simple craft were utilised within the marine extent of the Study Area for coastal voyages or fishing activities.

### **Neolithic and Bronze Age Figure 2**

- 4.4.7 Towards the end of the Mesolithic continual sea-level rise meant that by the early Neolithic the coastline within the Study Area would have attained a form approaching that of today. Despite the continual transgression of the Holocene epoch, temporary periods of regression continued to occur within the Study Area. As in the Mesolithic period, a significant regressive period associated with peat formation is thought to have occurred between 4500 and 4300 BP within the coastal region of the Study Area (Pye and Blott 2006:458).
- 4.4.8 Although the wider region would have provided a landscape rich in resources for hunting, fishing and shellfish collecting during this period, existing evidence for Neolithic sites within the wider region is relatively sparse and of those which are present, few have been examined in any detail. An exception to this is the early Neolithic site at Hurst Fen, Mildenhall (c.72km west of the Study Area) which was discovered by the tributary of the Little Ouse (West 1990:106), suggesting a preference for early Neolithic communities to occupy areas adjacent to a wetland resource. This is further supported by the discovery of Neolithic artefacts within alluvial deposits at the mouths of the Rivers Deben and Orwell to the south of the Study Area (Bradley *et al.* 1997:156).
- 4.4.9 Late Neolithic settlement sites are regarded as nationally rare and elusive (Brown & Murphy 1997:14) although this dearth of evidence could be due to the poor survival of Neolithic sites rather than representative of a low level of activity within these areas during this period.
- 4.4.10 Of the sites and find spots that are present within the county, a concentration of Neolithic settlements has been noted on the lighter soils within a mile of a watercourse in areas such as the Sandlings (Martin 1999a:36). Specialised activities are likely to have continued near to the coast with fishing activities and the transportation of goods across water. Thus although there are few known Neolithic sites within the region, it is likely that the Study Area provided a favourable environment for these early communities. A large ceremonial enclosure at Freston, Ipswich, implies that reasonably sized Neolithic populations were certainly present within the Suffolk coastal zone (Hegarty & Newsome 2004:25).
- 4.4.11 Within the Study Area there are a number of finds which can be attributed to the Neolithic or early Bronze Age, although these have yet to be recorded in secure contexts, or in direct association with other archaeological sites or features. A Neolithic chipped flint axe was found on Sizewell Beach (**WA01**), whilst several scatters of worked flint, including flakes and scrapers and pot-boiling flints, have also been recorded within the Site and wider Study Area (**WA02-WA07**). Evidence for Bronze Age activity in Suffolk predominantly comprises of funerary monuments, find scatters and palaeoenvironmental deposits. Direct evidence relating to Bronze Age settlements is relatively rare within the region (Hegarty and Newsome 2004:27), although the recovery of the several artefact scatters in the Study Area comprising pot-



boiler flints (**WA02-WA07**), may suggest a background level of settlement activity of Bronze Age date within both the Site and Study Area.

- 4.4.12 Within both the Site and Study Area there are a significant number of recorded cropmark ring ditches (**WA08-WA21**), some of which are causewayed, although so far none of these sites have been confirmed by excavation. Such sites may date to the late Neolithic or early Bronze Age, and potentially represent a fairly dense concentration of later prehistoric funerary and ritual monuments. Immediately to the south-west of the Study Area there are the Scheduled bowl barrows on Aldringham Common, and at Square Plantation and Aldringham Green, whilst the discovery of two Bronze Age cinerary urns to the north of Leiston certainly suggests activity of this nature within the wider area during this period.
- 4.4.13 The resources along the coast would have been important to Bronze Age communities, providing an environment suitable for grazing, hunting, fishing and shellfish collecting.
- 4.4.14 There would have been seafaring activities within the marine extent of the Study Area throughout the Bronze Age, including the transportation of goods along the coast and further afield. The discovery of what has been interpreted as a shipwreck, comprising 363 Middle Bronze Age objects of Continental origin, offshore at Langdon Bay, Dover, may suggest the occurrence of trade across the North Sea during this period (Fenwick and Gale 1998:26). There is evidence of significant advances in technology and vessel size from the Bronze Age onwards.

### **Iron Age**

- 4.4.15 At a regional level, it is not until the Late Bronze Age and Early Iron Age period that we begin to see settlements surrounded by substantial ditches and banks within East Anglia (Hegarty & Newsome 2007:11). In the Early Iron Age, the distribution of settlement across the region is sporadic with locally distinct clusters of farmsteads occurring on lighter soils, often within close proximity to a water source (Blagg *et al.* 2004:196; Bryant 1997:23). There was also a wider penetration into the boulder clay areas during this period, although this too was largely confined to areas with reasonable access to water (Martin 1988:68).
- 4.4.16 The Late Iron Age saw the expansion and intensification of settlement sites within the Study Area region, whereby evidence suggests a movement towards larger, nucleated settlements from the 4<sup>th</sup> to the 2<sup>nd</sup> centuries BC (Bryant 1997:28). At this time the Suffolk region was occupied by at least two tribes; the Iceni in Northern Suffolk and Norfolk and the Trinovantes in Southern Suffolk and Essex. Evidence indicates no definable linear frontier between the tribes, although a boundary has been suggested in the vicinity of Hacheston in the Sandlings, approximately 13km west of the Study Area (Moore 1988:14), thus proposing that Sizewell was adjacent to the border line of the two tribes. The presence of the largest Iron Age fortification in Suffolk located at Burgh (c.22km south west of the Study Area) suggests significant Iron Age activity within the wider region. The fortification is thought to be within the Trinovantian area and may represent a central point from which the east coast Sandlings could be controlled (Moore 1988:15-16).

- 4.4.17 Specialist activities along the coast are likely to have continued throughout the Iron Age. It was during this period that specialised activities such as salt production first appear in the archaeological record. Evidence for Iron Age salt-making has been discovered around the River Alde (Bradley *et al.* 1997:159) approximately 5km south of the Study Area.
- 4.4.18 It is clear that from at least the Iron Age onwards sea-going ships passed through the southern North Sea. Of the vessels which ventured within and around the marine extent of the Study Area, it can be assumed that many are likely to have foundered, as a result of collision, war or natural causes. The seabed topography within the Study Area is characterised by the Sizewell sandbank which runs parallel along the coastline of the Study Area. The crest of the sand bank is very shallow, posing a navigational hazard to vessels which passed through the area.
- 4.4.19 There currently are no known sites or find spots recorded within the Suffolk SMR dating to the Iron Age within the Site and Study Area. However, a field walking project by Suffolk County Council Archaeological Service (SCCAS) in 1994 to the east of Crown Farm, 250m to the west of the Site boundary, recorded a small amount of Iron Age pottery (SCCAS 1995).

### **Romano-British Figure 3**

- 4.4.20 After Claudius conquered Britain in AD43, the Trinovantian territory came under Roman rule, while the Icenii tribe who did not oppose the Romans were left as a self-governing kingdom until the death of King Prasutagus in AD60 (Moore 1988:19).
- 4.4.21 No dramatic changes took place with the introduction of Roman administration within the Suffolk coastal region. The distribution of small towns and the pattern of field systems within the county suggest a continual preference for communities to occupy and exploit areas adjacent to a water resource, although the Romano-British expansion into the central clay plateaux of Suffolk marked the first real exploitation of the heavier soil regions (West 1998:261). The light soils of the region adjacent to a water supply such as the Study Area continued to facilitate for agricultural practices during this period, enabling a mixture of arable farming and stock rearing to take place (Moore 1988:53).
- 4.4.22 With the introduction of a centralised system of government, the Romans saw the need to defend the province resulting in the construction of inland forts such as Pakenham (c. 50km west of the Study Area) and Coddanham (c. 35km south west of the Study Area) (Hegarty & Newsome 2007:11). There is limited military evidence within the Study Area region, perhaps because the Icenian territories required only a minimal military presence during the early post-conquest period (Hegarty and Newsome 2004:44).
- 4.4.23 The Boudican rebellion AD60-61 prompted a change in emphasis of Roman policy, whereby 'civilisation' was sought through urbanisation and road building schemes rather than concentrating solely on the military needs of the frontier zones (Moore 1988:21). There is no evidence for large urban centres or towns with a planned layout of municipal buildings in Suffolk during the Romano-British period, although a large number of settlements were scattered across the county (*ibid.*:38). Hacheston, approximately 13km west of Sizewell situated on the north-side of the river Deben, provides

evidence of one such settlement attesting for Roman activity within the wider region of the Study Area. The evidence for Roman roads towards the coast becomes increasingly fragmentary in Suffolk (Hegarty & Newsome 2004:45).

- 4.4.24 Specialist activities continued to occur along the coastline and estuaries throughout this period. The practice of marine salt production comprised a marginal element of Romano-British industry which, due to a limited area of reclaimed saltmarsh along the Suffolk coast, occurred to a much lesser extent than in the neighbouring county of Essex. The majority of the earthwork sites known as the 'Red Hills', the remains of salt production, occur within the 5m contour line along the coastal and estuarine zone and have been observed in the area approximately 1.5km north of the Sizewell Power Station. Further salt working sites have been discovered at Snape and Iken approximately 4km to the west of the Study Area (Moore 1988:65).
- 4.4.25 There would have been extensive seafaring activity within the Study Area during the Roman period. Felixstowe (c.30km south of the Study Area) comprises the only known Roman port on the Suffolk coast, although the Dunwich promontory some 6km to the north of the Study Area comprises a possible location for a second coastal Romano-British port which may have been destroyed by coastal erosion (Hegarty & Newsome 2004:49). The Minsmere Haven may thus have been subject to the transportation of goods through coastal voyages from the large port of Felixstowe to Dunwich, with vessels passing through the Study Area.
- 4.4.26 The known heritage resource suggests fairly limited Romano-British activity within the Study Area. Where present, evidence comprises artefact scatters of pottery and tile fragments found during evaluation in 1994 (**WA22** and **WA23**), with other finds of pottery and coins concentrated within the Leiston village area, to the west of the Site and Study Area. However, excavations within the Site to the east of Sandy Lane recorded a system of field and enclosure ditches which preceded the medieval occupation of the Site and have been provisionally dated as Romano-British, although post-excavation work is still ongoing (Atfield, *et al* 2009).

### **Saxon and medieval settlement and land use Figure 3**

- 4.4.27 After the withdrawal of Roman administration in the early 5<sup>th</sup> century AD, town life is thought to have disappeared and the Study Area region returned to a more fragmented society, comprising of settlements of small groups of relatively small timber buildings based on local agriculture (Moore 1988:84).
- 4.4.28 The Saxon migration into Britain from overseas demonstrates continued seafaring within the region during this period. With the collapse of centralised rule and organised defences, the Suffolk region underwent a number of incursions by Germanic/Saxon invaders which resulted in settlement in the 5<sup>th</sup> and 6<sup>th</sup> centuries AD. The Sutton Hoo ship, an early Anglo-Saxon ship burial found on a promontory overlooking the River Deben in Suffolk (c.18km south west of the Study Area), not only represents the type of Northern European shipbuilding practices adopted during this period, but further provides evidence of the perceived importance of ships and seafaring within the wider Study Area region at this time (Bruce-Mitford 1972; Evans 1994).

- 4.4.29 The distribution of sites within the early Anglo-Saxon period suggests a restored preference for the lighter soil regions such as the Sandlings, with little evidence of activity on the central boulder clay belt (West 1998:266). The early Anglo-Saxon cemetery at Snape attests for the presence of communities within the wider region during this period. The village of Leiston, to the west of the Study Area, is also mentioned in the Domesday Book, attesting to a likely Saxon foundation. Despite this, the known heritage resource revealed no sites relating to the Anglo-Saxon period within the Study Area. However, recent excavations at a Heathland Creation Trials Site to the east of Crown Farm, c.250m to the west of the Site boundary, records that Saxon pottery was found within 200m of the site (Heard 2009, 5), although this is not mentioned within the SSMR data. There is also some evidence to indicate that there was a settlement at Sizewell in the late Saxon period (*ibid.*).
- 4.4.30 The economic and social development of the 7<sup>th</sup> century saw the founding of the first towns and urban centres since the Romano-British period and the rural and urban landscape of the Study Area and the Suffolk coastal region began to take on a more familiar aspect of medieval Suffolk (Moore 1988:84; West 1998:317). Ipswich, which was occupied in the 7<sup>th</sup> century, became a major settlement arising from continental trade with the Rhine mouth (West 1998:317). Imported artefacts within the region suggest an expansion of these trade links by the 8<sup>th</sup> and 9<sup>th</sup> centuries AD to incorporate Germany, Belgium and Northern France (Wade 1993:148).
- 4.4.31 Documentary sources record Suffolk as a region of great wealth and importance by the Late Anglo-Saxon period, a status that is not reflected in the quantity and quality of archaeological evidence (West 1998:320). Viking raids on the British coast started in the 8<sup>th</sup> century AD. As a result of overseas trade and the Danish raids and invasions, the North Sea would have been important during the Late Saxon period in providing a communication, trade and migration route from the Scandinavian home countries to Britain.
- 4.4.32 Coastal routes would also have continued to be important throughout this period, and with the establishment of Anglo-Saxon towns and anchorages such as Dunwich in the early 11<sup>th</sup> century, the Study Area is likely to have been subject to such voyages which facilitated for the export of foreign goods from Ipswich to other such distribution centres along the East coast. Log-boats were used for transport along the inland waterways within the region. Evidence of such vessels within the wider region is provided by a dug-out canoe radiocarbon dated to 775 to 892AD (Wessex Archaeology 2003:33). The canoe, which was trawled up by a fisherman 1-2 miles off Covehithe, some 16km to the north of the Study Area, is thought to have either washed out of a river valley or to have sank while travelling along to coast close to the shore (Wessex Archaeology 2003:33). Similarly, an early medieval boat was recovered during a second phase of archaeological excavations in advance of the onshore works for the Greater Gabbard windfarm within the Site. The boat, which was probably a small inshore fishing vessel, had been broken up during the 14<sup>th</sup> century, and parts of its hull re-used as a timber well lining. The boat was constructed using the same techniques as the great Sutton Hoo ships, although on a much more modest scale (Suffolk Archaeological Service). The same excavations also recorded a wide range of pottery from the 12<sup>th</sup> to 14<sup>th</sup> centuries, including

high-status wares, as well as personal items such as brooches and buckles. Fishing hooks, weights and fish bones were also found (Atfield, *et al* 2009).

- 4.4.33 Fisheries were an important component of maritime activity along the region's coastline throughout this period. Fishing activity within the wider region of the Study Area is attested by the discovery of a timber fishtrap discovered within the mudflats of the intertidal zone of the Stour in Holbrook Bay dating to the middle Anglo-Saxon period (Everett 2007:4-7). A further middle Anglo-Saxon timber structure discovered at Barber's Point on the foreshore of the River Alde comprises a series of upright posts, wattle fragments and large horizontally laid pieces of roundwood (*ibid.*:11-12). The structure is thought to represent a possible fish trap, but may also have formed a trackway or a simple quay or wharf (*ibid.*:16).
- 4.4.34 The Anglo-Saxon settlements which were established from the 7<sup>th</sup> century onwards eventually became the centres of medieval villages in the Study Area region although they have since been largely obscured by post-medieval development (West 1998:320). Leiston, situated to the west of the Study Area, is recorded as being a medieval town with a grant of market during the 13<sup>th</sup> century and Sizewell too is likely to be of late Saxon foundation, although only Leiston is mentioned in Domesday.
- 4.4.35 The medieval period is largely characterised by the reclamation of land in the Study Area region. During this period, the lowland to the north of the Study Area, presently occupied by the Minsmere Nature Reserve, was a small estuary open to the sea (Pye and Blott 2006:459). The Monks from Leiston Abbey, which was founded on the shore of the estuary in 1182, constructed clay embankments to reclaim areas of marshland in the area. These monastic reclamation attempts were ultimately successful, and in response to severe flooding in 1347 and 1366, the Abbey was relocated further inland to Leiston (*ibid.*:461). Earthworks such as these comprised one of the most extensive single class of feature recorded along the Suffolk coast (Hegarty and Newsome 2004:78).
- 4.4.36 During the medieval period, the area of the Site would have been part of the property of Leiston Abbey until the dissolution of the monasteries in c.1538, and is located outside Sizewell, which was an urban centre in the medieval period. Sizewell was granted a market in 1237, 15 years earlier than Leiston, and there were 40 taxpayers recorded for Sizewell in 1524, compared to 33 within Leiston parish. Indeed, Sizewell had a greater population than Leiston during the medieval period, but rising water level and coastal erosion in the early post-medieval period meant that it was gradually being lost to sea, and by 1674 only six inhabited houses were recorded (Atfield 2008).
- 4.4.37 Excavations in Rosary Field adjacent to Sandy Lane, within the Site, revealed timber buildings, animal corrals and three large external ovens or possible corn-driers. A broad natural channel which runs across the middle of the Site is an extension of the fenland grazing wet common known as Sizewell Belts, and during the medieval period the channel would have formed a fresh water lagoon, and thus a focus for industrial activities, such as hemp retting for the manufacture of linen and rope (Atfield, *et al* 2009).
- 4.4.38 Throughout the medieval period there is increasing evidence for coastal trade along the east coast. Suffolk was an important region for maritime

activity and East Anglian ports enjoyed a degree of eminence throughout the medieval period (Malster 1969:3).

- 4.4.39 Fishing continued to comprise an important element of the economy during the medieval period. Fishing hooks, weights and fish bones were found during excavations at the Site in 2008 (Atfield, *et al* 2009). In Suffolk, fish bones are exceedingly common in medieval urban deposits (Murphy 1997:64) and many coastal settlements such as Southwold (c.10km north of the Study Area) and Aldeburgh established fishing industries in the late medieval period, particularly with the development of the Icelandic fisheries (Oxford Archaeology 2007:12). Further finds within the wider region comprise a number of fishtraps known as ‘kiddles’ which may date to the medieval period have been discovered off Stonner Point in the intertidal zone of the River Deben (Hegarty & Newsome 2004:105). These kiddles would have operated on a more extensive scale than the Anglo-Saxon fishtrap at Holbrook Bay (*ibid.*:105) suggesting an increase in fishing industries during this period.

#### ***Post-medieval and modern landscape Figures 3 and 4***

- 4.4.40 The exploitation of the wetland and marine resource continued to comprise an important element in post-medieval economy within the Study Area. A number of horizontal timbers discovered within the salt marsh at Snape Warren Causeway, thought to represent a late 19<sup>th</sup> century crossing point (Everett 2007:3) highlights the need for post medieval communities to access the wetland resource within the region.
- 4.4.41 Fishing activities played a significant role in this economy. A series of timbers dated to the 16<sup>th</sup> and 17<sup>th</sup> century discovered at Holbrook Bay have been identified as possible posts for fish nets (*ibid.*:7, 16) and attests the occurrence of fishing activity within the wider region of the Study Area. The intertidal zone also facilitated for the shellfish industry in Suffolk, whereby a number of oyster pits have been discovered along the coast reflecting the peak of oyster consumption in the mid 19<sup>th</sup> century when oysters formed the common food for the urban poor (Hegarty & Newsome 2004:98). In an area north-east of Crane’s Creek in Suffolk the remains of a probable post-medieval oyster dredger have also been discovered adjacent to oyster beds and a late 19<sup>th</sup> century boat hard (*ibid.*:112).
- 4.4.42 Maritime activity expanded dramatically during the post-medieval period. With the opening up of the New World and the founding of the East India Company in 1599, goods were traded further afield from Britain. In the 16<sup>th</sup> century, the Sandlings region prospered with the increase in demand for wool with the ability to utilise the wetland for sheep grazing.
- 4.4.43 Coastal and inland shipping continued to be a significant component of the trading and exportation of goods to and from the Study Area region throughout the post medieval period. East Anglia was at the forefront of the ‘Agricultural Revolution’ in the 18<sup>th</sup> century, whereby communications were developed to serve the farming economy which lead to improvements to inland navigations (Gilman, *et al* 1997:67). Prior to the construction of the Eastern Counties Railway to Leiston in 1859 and Aldeburgh in 1860, the district had been largely dependent upon transport by sea, with the transport of vital commodities such as coal from the north east by schooners and brigs (Whitehead 1991:109). This dependence is reflected by the Aldeburgh quay

records, which reveal that a total of 40 vessels were registered in Aldeburgh in 1844, a number which had reduced to only 29 in 1861 after the introduction of the railway (Whitehead 1991:115).

- 4.4.44 The transportation of goods was not always confined to legal conducts within the Study Area. In the post-medieval period, Sizewell was a hub for smuggling and Sizewell Gap to the south of the power station was the haunt of a highly organised band of Smugglers known as the Hadleigh Gang (Bacon & Bacon 1984:38). In 1745, as many as 300 horses and 100 carts were seen on Sizewell beach loading contraband goods (*ibid.*). Within the Site just to the south of Sizewell, there is an old ship's mast with metal footholds to aid climbing sited near some fishermen's old huts and boat winches, which acted as a lookout (**WA32**).
- 4.4.45 The Sizewell Bank posed a significant threat to the vessels which passed through the Minsmere Haven during this period. In response to this threat, permission was granted for the construction of two lighthouses at Orford Ness to the south of the Study Area in 1634 (Bacon & Bacon 1984:38). The remains of a number of vessels dating to this period are thought to be present within the vicinity of the Sizewell Bank. The timbers of a barge thought to be post medieval in date were discovered approximately 350m east from the Sizewell shore while dredging the channel for the inlet pipe for the Sizewell B power station nuclear generator. In addition to this, a total of 39 vessels of post medieval date are recorded to have wrecked within the area surrounding the Sizewell Bank. Although these vessels are listed as shipping casualties and thus of imprecise location, they highlight the volume of shipping activity which passed through the marine extent of the Study Area during this period.
- 4.4.46 The post-medieval period also saw the development of fortifications along the coastline within the wider region of the Study Area. During the 16<sup>th</sup> century, in response to the threat imposed by Europe, Henry VIII concentrated on protecting key anchorages such as the Thames and the Humber, leaving the Suffolk coast largely unprotected (Hegarty & Newsome 2007:15). By the 18<sup>th</sup> century, Napoleonic France posed an increasing threat to the low-lying shore of Suffolk resulting in the construction of a number of Martello Towers between 1808-1812 on the East coast between Clacton in Essex and Aldeburgh to the south of the Study Area (*ibid.*:18).

#### **Cartographic Evidence**

- 4.4.47 The onset of the post-medieval period saw little change in land use and organisation in the Study Area. The field boundaries that exist within the area are likely to date back to the Anglo-Saxon period and a review of maps from the Leiston Tithe map (not reproduced) and Aldringham Estate Map (c.1841) (**Figure 6**) to subsequent Ordnance Survey maps from 1881 to 1976 (**Figures 7, 8 and 9**) reveals that the medieval and earlier field boundaries within the proposed Site remained largely unaltered throughout the post-medieval and modern periods. Although the Leiston Tithe Map is fragmentary and does not cover the full extent of the proposed Site, the use of land recorded with the map certainly indicates a continued preference for post medieval communities to utilise the lowland soils with high moisture content for pasture and the higher ground drier soils for arable farming.

- 4.4.48 Historic map regression shows the area of the Site to the west of Sandy Lane to have been unenclosed Crown Land on the Tithe and Aldringham Estate Maps (see **Figure 6**), and is likely to have belonged to the Crown since the dissolution of the monasteries in c.1538, having been previously part of the monastic grange of Leiston Abbey. A historic routeway crosses the Site, linking the medieval village of Sizewell with the second site of Leiston Abbey.
- 4.4.49 By the time of the 1<sup>st</sup> Edition Ordnance Survey map of the area, surveyed in 1881, the land within the Site had been enclosed, creating Broom Covert (561), the area of rough pasture and furze (185), and fields 184, 186, 202, and 201 (see **Figure 7**), in addition to the already enclosed fields surrounding Sizewell Farm, Crown Cottages and Halfway House, just to the west of the Site boundary, had also been built in this intervening period.
- 4.4.50 There is little change recorded within the Site on the OS mapping until 1947 when the northern part of field 202, to the east of Broom Covert and west of Rosery Cottages, is planted with a formal arrangement of deciduous woodland, which remains present today (see **Figure 8**). There are no further changes depicted on the 1958 OS map (**Figure 9**), but by 1976 the area of The Warren to the north of the Site, comprising Four Forms Wood, Coronation Wood and Hill Wood had been developed as the Sizewell Power Station.

#### **Second World War Figure 5**

- 4.4.51 Of the 32 sites attributed to the modern period within the Study Area, 31 are recorded as representing coastal and anti-invasion defences dating to World War Two (WWII) (**WA33, WA34, WA36** and **WA46-WA73**) (see **Figures 4** and **5**). The threat of German invasion in the early 20<sup>th</sup> century thrust Suffolk into a new position of strategic importance, and due to its location on one of Suffolk's most vulnerable stretches of shoreline, some of the earliest British pillboxes were constructed at Sizewell (Hegarty & Newsome 2007:18).
- 4.4.52 Towards the beginning of WWII, the anti-invasion defences in Suffolk largely comprised of barbed wire and pillboxes (*ibid.*:60). Following an incentive in 1941 to consolidate and expand anti-invasion defences, Sizewell was subject to an increasing complexity of defences. By the end of 1941, beach scaffolding connected anti-tank cubes along the shore at Sizewell, and the spaces between camouflaged pillboxes were filled with complex interlinking barbed wire entanglements (*ibid.*) (**WA49-WA53**). Most of these defences have been removed, but some remain extant, including some anti-tank cubes (**WA52**) (**Plate 1**) and pillboxes (**WA36, WA57**). Both these pillboxes are within the Site boundary, with one (**WA36**) immediately adjacent to the planned cable route from the windfarm to the substation (**Plate 2**).
- 4.4.53 There were also a number of strongpoints established along the coast within the Site and Study Area (**WA62-WA69**) which comprised various structures and earthworks, including pillboxes, barbed wire entanglements, practice trenches, beach scaffolding, weapons pits and slit trenches.
- 4.4.54 Towards the end of WWII the need to counter an airborne attack surpassed that of a coastal invasion, and Light Anti-aircraft Artillery (LAA) and Heavy Anti-aircraft Artillery (HAA) positions became an integral part of the coastal defence scheme. A number of HAA sites recorded along the Suffolk coast



are thought to relate to the DIVER strip, a defensive line of HAA batteries that was constructed in 1944 to combat the V1 flying bomb (Lowry 1996:62). In Sizewell a Diver Battery and its camp had been established in 1944 in response to the growing threat imposed by hostile aircraft (**WA46, WA47**) (Hegarty & Newsome 2007:60). Other sites included an extensive area of anti-glider ditches on Aldringham Common (**WA48**).

- 4.4.55 The Study Area would have been a significant hub of aircraft activity during WWII. The presence of an airfield founded in 1934 known as Theberton, Leiston or Saxmundham airfield was used during WWII as a fighter base for both the United States of American Air Force (USAAF) and the Royal Air Force (RAF).
- 4.4.56 In times when Britain was not at war, the Study Area region became a focus for recreation during the modern period. In the 1920s, Sizewell beach is thought to have been wider than the present day, enabling organized motorcycle races to be held on the beach (Whitehead 1991:157). In its most recent past, Sizewell remains a very small fishing hamlet on the dunes. Its modern landscape is dominated by the construction of the Sizewell Power Stations. Sizewell A was built in 1961 and de-commissioned in 2006. Sizewell B was built between 1988 and began generating in 1995.

*Historic landscape character*

- 4.4.57 Based on the historic mapping consulted for this report (see above), the Suffolk Landscape Character Assessment (2008) and a site visit, the historic landscape within the Site may be characterised as *Estate Sandlands*, comprising 18<sup>th</sup> and 19<sup>th</sup> century enclosed fields with a strong geometric structure. This *Estate Sandlands* character is also apparent within the wider Study Area, with an area of coastal levels (the Sizewell Belts) in the northernmost part of the Study Area.
- 4.4.58 The Suffolk Coast between Kessingland and Felixstowe has been defined by the Countryside Agency as Heritage Coast. This definition of a narrow coastal strip recognises the national importance of its high scenic quality and its largely unspoilt nature and the need for these assets to be safeguarded.
- 4.4.59 The eastern half of the Site lies within the Heritage Coast as defined within the Local Plan, and also within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). The Site lies within the Sand Dunes and Shingle Ridges Landscape Character Area (LCA) of the AONB, in an area of low-lying coast which is actively eroding.

## 5 DISCUSSION

### 5.1 Summary of presence and survival within the Site

- 5.1.1 The recorded terrestrial resource within the Site is dominated by records of largely prehistoric and medieval date, with WWII sites prevalent in the eastern, coastal portion of the Site. The relevance and significance of these records is summarised below. The heritage resource recorded within the Site is shown on **Figures 2 to 5**.
- 5.1.2 Of the prehistoric sites recorded within the Site boundary (**WA02-05, WA09-WA10, WA16-19**), four sites (**WA02-WA05**) comprise artefact scatters

recorded during an earlier archaeological evaluation in 1994. These artefact scatters comprise pieces of worked flint, scrapers, pottery sherds and pot-boiler flints (flints heated in fire until extremely hot and then dropped into a vessel of liquid to heat it; used for cooking in pots which could not take the heat of a direct flame). None of these artefact scatters were attributed to secure contexts, although evidence from aerial photographs for numerous causewayed, concentric and other cropmark ring ditches (**WA09-10**, **WA16-19**) suggest there may be evidence for Neolithic and Bronze Age settlement at the Site, or for ritual/funerary monuments and associated activity. Such remains are likely to be of local or regional importance.

- 5.1.3 Within the Site footprint there are known peats and alluvial deposits likely to have formed, in part, in the prehistoric period. It is known from analogy that freshwater wetlands and coastal zones were important resource procurement zones during the prehistoric period. Therefore, it is feasible that these wetland derived deposits could contain anthropogenic evidence or palaeoenvironmental evidence relating to their use and the general environment during this period. The waterlogged conditions of peats and alluvium provide very good conditions for an aerobic preservation of organic remains.
- 5.1.4 The favourable survival conditions offered by the waterlogged deposits can also preserve later archaeological remains relating to the use of the wetlands. For example, within the Site, archaeological investigations recorded medieval settlement evidence of 12<sup>th</sup> to 14<sup>th</sup> century date, including high status pottery (**WA24-27**) and personal goods, as well as earlier ditches and provisionally dated to the Romano-British period (Atfield, *et al* 2009). Some Romano-British pottery and tile fragments were also found at the Site (**WA22-23**). A broad channel which ran across the middle of the Site represented a former extent of the wetland area of the Sizewell Belts and would have formed a fresh water lagoon, which was the focus of industrial activities such as the manufacture of linen and rope (*ibid.*). The remains of a medieval wooden boat were found re-used in the lining of a well contemporary with the settlement. The remains were very well preserved in waterlogged conditions and were the remnants of a small inshore vessel, presumably suitable for navigating through the marshland creeks of the medieval Sizewell Belts.
- 5.1.5 The potential, therefore, for the presence of remains relating to the prehistoric, Romano-British and medieval use of the wetland area of the Site, is recognised, with such remains of likely local or regional importance.
- 5.1.6 The recorded resource within the eastern portion of the Site is dominated by large areas of World War II activity including anti aircraft batteries, beach defences, anti tank defences and military buildings (**WA36**, **WA50**, **WA52**, **WA53**, **WA57**, **WA63-66**, **WA70**). Many of these sites are recorded from the 1940s RAF aerial photographs, digitised as part of the county mapping programme (Hegarty & Newsome 2004; Hegarty & Newsome 2007). Most of these wartime defence structures would have been removed in the years immediately after the war to make the coastline safe for civilian use. Where components of the World War II resource do survive they tend to be the more solid constructions like concrete pillboxes and anti-tank blocks.

5.1.7 Only two concrete pillboxes (**WA36, WA57**) are visible above-ground within the Site, with one (**WA36**) lying immediately adjacent to the proposed onshore cable route connecting the Greater Gabbard Windfarm to the substation (**Plate 2**).

## 5.2 Potential development impacts

5.2.1 The Site is proposed for the location of a new substation in one of two preferred locations (**Plates 3 and 4**) and associated installation of underground cables to connect the Greater Gabbard Windfarm Extension to the new substation, and from the new substation to the National Grid via Sizewell Power Station (see **Figure 1**).

5.2.2 Activities associated with the proposed development which could result in an adverse impact on buried archaeological remains within the Site may include:

- groundworks associated with construction of new foundations (for the substation);
- groundworks associated with construction of services (the cable runs, from the windfarm to the substation, and from the substation to the power station); and
- groundworks associated with the construction of new access points and work compounds.

5.2.3 The extent of these impacts will depend on the presence, nature and depth of any archaeological remains, in association with the extent and depth of proposed groundworks. However, there is a **high** potential for buried archaeological remains to be present across the Site, especially relating to the prehistoric and medieval periods, including palaeoenvironmental and waterlogged deposits.

5.2.4 There are some historic boundaries within the Site which are likely to be deemed important under the Hedgerow Regulations Act. One such boundary lies to the east of the preferred location of Substation 2 (**Plate 5**), but will not be affected by the proposed development. The other boundary lies immediately to the east of Sandy Lane, and will be slightly impacted during groundworks for the cabling linking the substation to Sizewell Power Station, if this follows the cable run as indicated on **Figure 1**.

## 6 CONCLUSIONS

6.1.1 There are no statutory or non-statutory designated sites and monuments within the boundary of the Site or Study Area, and no recorded sites within the footprints of the preferred substation locations.

6.1.2 It is considered that development would have a negligible impact on the settings of any Scheduled Monuments and Listed Buildings in the wider area, as these are already compromised by the existing Sizewell Power Station. The historic landscape of the Site and Study Area is of generally degraded character but includes some strong elements such as the Sizewell Belts and geometric fields of Estate Sandlands and lies within the Heritage Coast and an AONB (**Plate 6**).

6.1.3 Given the nature of the archaeological resource within the Site, it is considered that there is a **high** potential for buried archaeological remains across the Site, especially relating to the prehistoric and medieval periods, including palaeoenvironmental and waterlogged deposits.

6.1.4 Therefore, it is considered that the groundworks associated with the foundations of the substation and laying of underground cabling may present a direct physical impact to the heritage resource within the construction footprint. This would be in conflict with national and local planning policy.

## **6.2 Recommendations**

6.2.1 It is considered that, in order to comply with the criteria set out in National and Local Planning Legislation (see **3.2** above), further archaeological investigation will be required. This is likely to take the form initially of non-intrusive geophysical survey followed by targeted archaeological evaluation excavation. The precise nature and scope of further investigations within the Site should be agreed through consultation with the Development Control Archaeologist for Suffolk County Council, and undertaken in line with an agreed Written Scheme of Investigation, produced in advance of any Site works.

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Wessex Archaeology and English Heritage

## 7.2 Historic Environment Records

Suffolk Sites and Monuments Record

## 7.3 Cartographic Sources

Ordnance Survey Landplan 1:10,000  
Geological Survey of Great Britain (England & Wales) 1:63,360 sheet 191

- 1840** Estate Map of Aldringham  
**1841** Leiston Tithe Map and Apportionment ref: FDA 164/A1/Ib and 1a  
**1841** Aldringham with Thorpe Tithe Map and Apportionment ref: FDA4/A1/A  
**1881** Ordnance Survey 1<sup>st</sup> Edition 25" map  
**1890** Ordnance Survey 1<sup>st</sup> Edition 6" Map  
**1905** Ordnance Survey 2<sup>nd</sup> Edition 6" Map  
**1928** Ordnance Survey 3<sup>rd</sup> Edition 6" Map  
**1938** Ordnance Survey Revised edition 6" Map  
**1947** Ordnance Survey 6" Map  
**1958** Ordnance Survey 6" Map  
**1976** Ordnance Survey 1:10,000 Map

## 7.4 Online resources

<http://www.magic.gov.uk>  
<http://lbonline.english-heritage.org.uk/>  
<http://www.british-history.ac.uk/>  
<http://www.suffolk.gov.uk/Environment/Archaeology/>



## APPENDIX 1: GAZETTEER OF INFORMATION PROVIDED BY SSMR FOR THE STUDY AREA

WA No	MONU ID	SMR No	Period	Monument Type	Description	Easting	Northing
01	MSF2342	LCS 003	Prehistoric	Findspot	Chipped flint axe, slightly rolled, length four and three quarter inches, found on Sizewell beach (about quarter of a mile from 1966 car park) about April 1966 by Master Kevin Hobbs, Alma Cottage, Ashbocking, who presented it to Ipswich Museum.	647650	263250
02	MSF21571	LCS 049	Prehistoric	Artefact scatter	Several pieces of worked flint plus flint gritted sherd found. Of likely Neolithic or Bronze Age date.	647206	262855
03	MSF21575/ MSF21607	LCS 051 LCS 073	Prehistoric	Artefact scatter	Several pieces of worked flint including pot boiler flints and scrapers plus a Prehistoric sherd found during an evaluation by Suffolk Archaeological Service in 1994. A further 251 burnt flints were recovered in the adjacent field, c.100m to the north. Of likely Neolithic or Bronze Age date.	646975	262792
04	MSF21581	LCS 054	Prehistoric	Artefact scatter	Several flint flakes and others were found during an evaluation in 1994, including some pot boiler flints and scrapers. Of likely Neolithic or Bronze Age date.	646825	262643
05	MSF21587	LCS 058	Prehistoric	Artefact scatter	Several pot boiler flints and other worked flints found during an evaluation by Suffolk Archaeological Service in 1994. Of likely Neolithic or Bronze Age date.	646517	262576
06	MSF21589	LCS 060	Prehistoric	Artefact scatter	Prehistoric worked flint including pot boiler flints and scrapers found during an evaluation by Suffolk Archaeological Service in 1994. Of likely Neolithic or Bronze Age date.	646171	262571
07	MSF21595	LCS 064	Prehistoric	Artefact scatter	A number of worked flints including two pot boiler flints and scrapers found during an evaluation by Suffolk Archaeological Service in 1994. Of likely Neolithic or Bronze Age date.	646093	262981
08	MSF21569	LCS 048	Prehistoric	Causewayed ring ditch	A causewayed ring ditch visible on APs as a cropmark near Leiston Common. Of likely Bronze Age date.	646083	263386

WA No	MONU ID	SMR No	Period	Monument Type	Description	Easting	Northing
09	MSF21583	LCS 055	Prehistoric	Causewayed ring ditch	A causewayed ring ditch approximately 8m in diameter plus a series of other cropmarks, possibly field boundaries. Ring ditch of likely Bronze Age date.	646759	262598
10	MSF21585	LCS 057	Prehistoric	Causewayed ring ditch	Large causewayed ring ditch approximately 50m diameter, incomplete. Visible as a cropmark on APs. Of likely Bronze Age date.	646884	262593
11	MSF21592	LCS 061	Prehistoric	Causewayed ring ditch	Causewayed ring ditch approximately 20m diameter, incomplete, visible on APs. Of likely Bronze Age date.	646206	262610
12	MSF21593	LCS 062	Prehistoric	Causewayed ring ditch	Causewayed ring ditch, incomplete, approximately 20m in diameter, visible from APs as a cropmark. Of likely Bronze Age date. Other possible field boundaries also visible.	646156	262604
13	MSF21600	LCS 067	Prehistoric	Causewayed ring ditch	Causewayed ring ditch, approximately 30m in diameter and other cropmarks, possibly tracks, visible on APs. Ring ditch of likely Bronze Age date.	645896	263192
14	MSF21605	LCS 072	Prehistoric	Causewayed ring ditch	Causewayed ring ditch visible from APs. Of likely Bronze Age date.	646077	263447
15	MSF21612	LCS 078	Prehistoric	Causewayed ring ditch	Causewayed ring ditch approximately 10m in diameter, visible from APs. Of likely Bronze Age date.	646230	263447
16	MSF21601	LCS 068	Prehistoric	Concentric ring ditch	Concentric semi-circular cropmark possible ring ditch, approximately 20m diameter, visible from APs. A possible second smaller ring is visible inside. Of likely Bronze Age date.	646530	262745
17	MSF21574	LCS 050	Prehistoric	Ring ditch	Possible track in south end of field, plus possible part of ring ditch and other cropmarks, visible from APs. Ring ditch of likely Bronze Age date.	647267	262789
18	MSF21578	LCS 052	Prehistoric	Ring ditch	Ring ditch approximately 10m diameter, plus other cropmarks, possibly field boundaries & tracks. Ring ditch of likely Bronze Age date.	646951	262825
19	MSF21579	LCS 053	Prehistoric	Ring ditch	Ring ditch approximately 20m in diameter visible from APs. Of likely Bronze Age date.	646991	262729
20	MSF21602	LCS 069	Prehistoric	Ring ditch	A semicircular ring ditch visible from APs, approximately 30m diameter if complete. Of likely Bronze Age date.	646288	262629

WA No	MONU ID	SMR No	Period	Monument Type	Description	Easting	Northing
21	MSF21603	LCS 070	Prehistoric	Ring ditch	Two small (10m diameter) ring ditches together, visible from APs. Of likely Bronze Age date.	646358	263428
22	MSF21572	LCS 049	Romano-British	Findspot	One Romano-British potsherd found during an evaluation by Suffolk Archaeological Service in 1994..	647208	262858
23	MSF21576	LCS 051	Romano-British	Artefact scatter	Roman sherds and possible Roman tile fragment found during an evaluation by Suffolk Archaeological Service in 1994..	646977	262789
24	MSF21570	LCS 049	Medieval	Artefact scatter	Three possible Thetford ware type sherds, dating to between the 9 <sup>th</sup> and 12 <sup>th</sup> centuries, with Medieval coarseware of 12 <sup>th</sup> to 14 <sup>th</sup> century date, & 5 glazed Medieval sherds.	647211	262855
25	MSF21577/ MSF21606	LCS 051 LCS 073	Medieval	Artefact scatter	Medieval pottery found during an evaluation by Suffolk Archaeological Service in 1994. Majority of sherds found were medieval coarseware of 13 <sup>th</sup> or 14 <sup>th</sup> century date with a possible 12 <sup>th</sup> century presence. A further 27 sherds of medieval coarseware were collected in the next field, c.100m to the north.	646980	262789
26	MSF21580	LCS 054	Medieval	Artefact scatter	13 <sup>th</sup> and 14 <sup>th</sup> century coarseware pottery sherds found during an evaluation by Suffolk Archaeological Service in 1994.	646826	262643
27	MSF21586	LCS 058	Medieval	Artefact scatter	Medieval coarseware pottery found during an evaluation by Suffolk Archaeological Service in 1994.	646520	262579
28	MSF21590	LCS 060	Medieval	Artefact scatter	One Thetford-type ware sherd and medieval coarseware found during an evaluation by Suffolk Archaeological Service in 1994.	646174	262571
29	MSF21596	LCS 064	Medieval	Artefact scatter	Pottery found during an evaluation by Suffolk Archaeological Service in 1994. Majority of sherds were Medieval coarseware, although there was one stray find of a Romano-British sherd.	646093	262981
30	MSF21598	LCS 066	Medieval	Artefact scatter	Fifteen Medieval coarseware sherds found during an evaluation by Suffolk Archaeological Service in 1994.	645759	263108
31	MSF21599	LCS 066	Post Medieval	Artefact scatter	Thirteen Post Medieval sherds found during an evaluation by Suffolk Archaeological Service in 1994.	645759	263108

WA No	MONU ID	SMR No	Period	Monument Type	Description	Easting	Northing
32	MSF23192	LCS 132	Post Medieval	Lookout	Old ship's mast mounted in metal sheath. Metal footholds set into mast to aid climbing. Sited near old huts and boat winches of fisherman. Possible lookout?	647596	262646
33	MSF21591	LCS 060	Modern	Artefact scatter	Large amount of modern building debris noted on this field during an evaluation by Suffolk Archaeological Service in 1994, and probably of World War II date.	646174	262574
34	MSF21594	LCS 063	Modern	Military feature	Military, probably WW2, rectangular and linear cropmarks, possibly enclosures.	646153	262734
35	MSF21391	ARG 054	Modern	Garden Terrace	Balcony and garden terraces of large house from first quarter of C20th. Now a Christian retreat. Terraces built from brick and cast concrete as in style of Ogilvie's Thorpeness. Balustrading from re-inforced concrete.	647573	262018
36	MXS19701	LCS 116	Modern	Military feature	Pillbox, forming part of WWII strongpoint ( <b>WA 65</b> ), visible on APs and still extant. Square pillbox, of concrete construction, two firing points each side, entrance to rear with blast shield.	647510	262554
37	MSF16197	LCS 023	Undated	Subrectangular enclosure site	Subrectangular enclosure earthwork/cropmark, c.70m by 50(+)m, on open heath(?) land. West side not visible due to field boundary.	646255	263155
38	MSF21573	LCS 049	Undated	Findspot	One jet bead found during an evaluation by Suffolk Archaeological Service in 1994..	647219	262863
39	MSF21582	LCS 054	Undated	Findspot	One glass bead found during an evaluation by Suffolk Archaeological Service in 1994, date unknown.	646822	262640
40	MSF21584	LCS 056	Undated	Enclosure	An enclosure approximately 50m x 30m, visible from APs.	646967	262884
41	MSF21597	LCS 065	Undated	Enclosure; Field boundary	A series of linear markings on APs show possible enclosure, also possible ring ditches in south east of field and possible tracks. Some of the features may be of prehistoric date.	646190	263076
42	MSF16195	ARG 018	Undated	Enclosure	Rectangular enclosure earthwork visible on an AP, open-ended to the west, c.80m x 100(+)m.	647155	262105

WA No	MONU ID	SMR No	Period	Monument Type	Description	Easting	Northing
43	MXF19702	LCS 117	Undated	Extractive pit	A quarry pit of unknown date, visible on APs. The pit is c.150m west of Home Farm, and is marked on the 1 <sup>st</sup> and 2 <sup>nd</sup> edition OS maps of 1884 and 1904. On the Aldringham Estate Map (c.1840) it is next to an area marked as a Kiln and Yard, so is likely to have been an extractive pit associated with the kiln.	646927	262393
44	MXF19703	LCS 118	Undated	Extractive pit	Two quarry pits of unknown date in Leiston parish, visible on APs. Both pits are marked on the 1 <sup>st</sup> and 2 <sup>nd</sup> edition OS maps of 1884 and 1904, and on current OS maps.	647081	261733
45	MXF19704	ARG 022	Undated	Extractive pit	A quarry pit of unknown date in Aldringham cum Thorpe parish, visible on APs. The pit straddles the boundary between two fields which hasn't changed since the 1 <sup>st</sup> edition OS map. The pit is also marked on the 1 <sup>st</sup> edition map, and suggests that it may be considerably older than the field boundary and current field system.	647305	261266

## APPENDIX 2: GAZETTEER OF WWII DEFENCE SITES PROVIDED BY SSMR FOR THE STUDY AREA (POLYGON DATA)

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
46	MXS19691	LCS 106	Anti-aircraft battery	Early World War II strongpoints and a late World War II Light and Heavy Anti-aircraft Artillery site at Sizewell in Leiston parish, visible on 1940 APs. All the strongpoints, which comprised pillboxes, slit trenches and barbed wire obstructions, were superseded by a heavy anti-aircraft artillery site and its camp by 1945. The site appears to have been part of the DIVER strip, installed between June and November 1944 to combat the V1 flying bomb. Destroyed by the construction of the Sizewell Power Station.	647270	263655	647270	263655	647270	263655
47	MXS19713	ARG 031	Anti-aircraft battery	A World War II strongpoint and heavy anti-aircraft battery, visible as structures and earthworks on APs at Aldringham cum Thorpe. The strongpoint (which comprised a pillbox and slit trench surrounded by barbed wire) was replaced in 1942 by a heavy anti-aircraft battery and associated camp, with Nissan Huts, removed by 1952.	647210	260954	647210	260954	647210	260954

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
48	MSF16194	ARG 017	Anti-glider ditches	An extensive area of World War 2 anti-glider ditches are visible as earthworks on APs, on Aldringham Common, Aldringham cum Thorpe. The ditches are c.3m to 5m in width and c.100m to 130m long. The ditches are laid out in an irregular chessboard pattern and cover an area of c.96ha. Although many of the ditches have been ploughed away, some sections are still visible on photographs of 1976 and 1982.	646474	261585	646424	261535	646524	261635
49	MXS19850	LCS 125	Anti-invasion defences	World War II anti-invasion coastal defences at Sizewell, Leiston, visible as structures and earthworks on APs from 1940 onwards. The first defences here were barbed wire and a pillbox. Later additions include various structures and two slit trenches.	647551	263771	647551	263771	647551	263771
50	MXS19858	LCS 129	Anti-invasion defences	World War II anti-invasion coastal defences from Sizewell village to Sizewell Hall, Leiston. Multiple barbed wire obstructions are visible on APs from 1941 on the high ground and sand dunes overlooking the beach, stretching for 1km. There was also a pillbox and tank blocks. A jumble of 11 tank blocks were seen during the Rapid Field Survey of the Suffolk Coast in 2003, some upturned.	647594	262192	647594	262192	647594	262192

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
51	MXS19855	LCS 127	Barbed wire obstruction	World War II anti-invasion defence barbed wire on the sea-front at Sizewell, Leiston. The barbed wire is first visible on APs of 1940, with the defences elaborated in 1941 with the addition of further entanglements. All barbed wire appears to have been removed by October 1945.	647541	263182	647541	263182	647541	263182
52	MXS19856	LCS 128	Barbed wire obstruction	World War II anti-invasion beach defences near Sizewell village, Leiston, comprising barbed wire obstructions and anti-tank cubes, visible on APs from 1940. Five tank blocks were seen as part of the Rapid Field Survey of the Suffolk Coast in 2003.	647587	262847	647587	262847	647587	262847
53	MXS19837	LCS 119	Beach defences	Extensive World War II beach scaffolding, running southwards for circa 7km from Leiston parish, visible on APs from 1941. Anti-invasion beach scaffolding was one component in a wider system of anti-invasion measures in place along much of the Suffolk coast. A rapid field survey of the coast in 2003 identified remains of these defences eroding from the sandbank, consisting of concrete squares with remains of scaffolding poles cemented in.	647521	262718	647521	262718	647521	262718



WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
54	MXS19689	LCS 104	Bomb crater	A group of c.14 bomb craters of WWII date visible as earthworks on APs dated to 1940/1941.	647376	263851	647376	263851	647376	263851
55	MXS19707	ARG 025	Coastal battery	A coastal battery and associated features of World War II date, Aldringham cum Thorpe, visible as structures and earthworks on APs..	647489	261556	647489	261556	647489	261556
56	MXS19696	LCS 111	Pillbox	A World War II pillbox at Sizewell, Leiston parish, visible on APs in 1941 and 1946, but has been removed by 1952. It was located on high ground overlooking the beach, and protected on its seaward side by the coastal anti-invasion defences ( <b>WA 53</b> ).	647508	263246	647115	262794	647115	262794
57	MXS19697	LCS 112	Pillbox	World War II command post trench and pillbox in Leiston parish, visible on APs from 1940. The pillbox is visible on a AP in 1940, but the trenches do not appear until 1941, by which time the pillbox has been camouflaged. The largest trench is shaped like three arms of a swastika, and has been interpreted as a command post, from which military activities were coordinated. The trenches were infilled and ploughed by 1955. The pillbox remains extant.	647115	262794	647508	263246	647508	263246
58	MXS19694	LCS 109	Radar station	Masts and mast footings of probable World War II radar stations in Leiston parish, visible on APs in 1945.	647432	263375	647432	263375	647432	263375

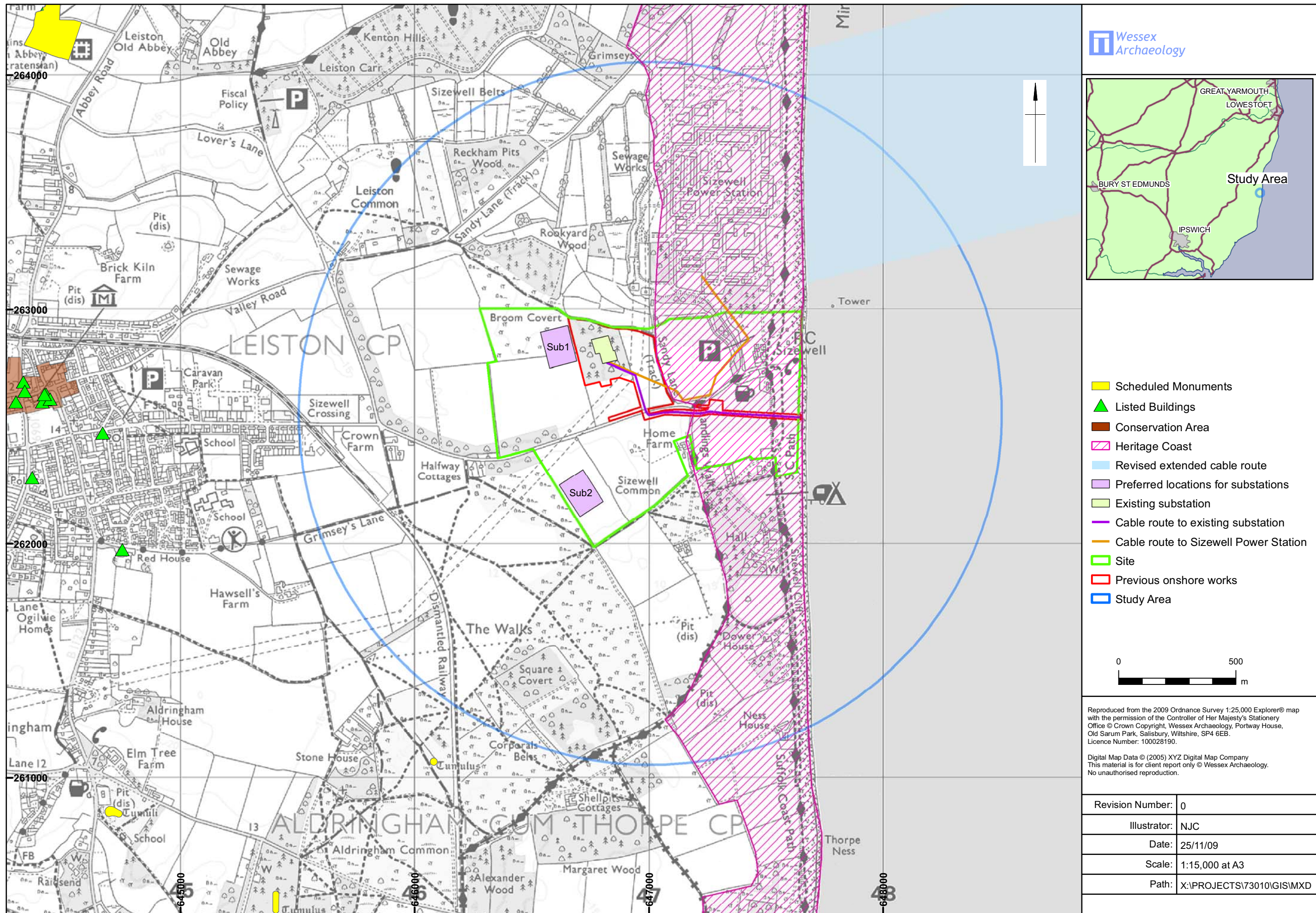
WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
59	MXS19690	LCS 105	Rifle butts	World War II shooting butts in Leiston parish. A shooting range of probable WWII date is visible on APs from 1940 onwards. The range composed a rifle butt and five firing platforms. The butt faces inland towards the SW. The butt and platforms are still visible on OS photographs of 1969, but had been removed by 1973.	647327	263905	647327	263905	647327	263905
60	MXS19706	ARG 024	Slit trench	World War II slit trenches, visible as earthworks on APs in the grounds of Sizewell Hall, Aldringham cum Thorpe.	647470	262200	647470	262200	647470	262200
61	MXS19710	ARG 028	Slit trench	A slit trench of World War II date in Aldringham cum Thorpe parish, visible on APs in 1941. It appears to have been filled in and under cultivation by 1952.	647404	261328	647404	261328	647404	261328
62	MXS19693	LCS 108	Strongpoint	Two World War II coastal strongpoints and practice trenches in Leiston parish, visible as structures and earthworks on APs from 1941. The strongpoints consist of pillboxes located on the higher ground overlooking the beach, surrounded on the landward side by barbed wire entanglements. Destroyed by the construction of the Sizewell Power Station.	647467	263443	646945	261297	646945	261297

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
63	MXS19695	LCS 110	Strongpoint	World War II strongpoints and barbed wire obstructions in Leiston parish, visible on 1940 APs. The first strongpoint consists of two pillboxes connected by a length of trench c.55m long, and surrounded by a circle of barbed wire enclosing an area of c.1ha. The pillboxes are set into a post-medieval boundary bank. The second strongpoint formed part of the coastal defences, and comprised a pillbox overlooking the beach, protected on its seaward side by the barbed wire and beach scaffolding coastal defences.	647334	263115	647553	262322	647553	262322
64	MXS19700	LCS 115	Strongpoint	A World War II strongpoint or depot at Sizewell village, Leiston parish. WWII beach scaffolding is visible as a structure on APs from 1941, surrounding the village of Sizewell. A large number of square or rectangular structures are also visible on APs, of unknown function. A possible pillbox and coastguard lookout are also apparent. The beach scaffolding also appears to form a small enclave on the beach, leading the site to be interpreted as a military depot or secure access point to and from the sea.	647507	262809	647596	261806	647596	261806

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
65	MXS19701	LCS 116	Strongpoint	An extensive World War II strongpoint and a later WWII probable experimental radar station in Leiston parish, visible on APs. A number of pillboxes, weapons pits and slit trenches are visible on APs from 1941 and 1942. The area is bounded on the west by an anti-tank ditch ( <b>WA 70</b> ) and on the east by anti-invasion coastal defences ( <b>WA 50</b> ). The radar station is established some time after 1943, and was the focus of intense activity. Pillbox still extant ( <b>WA 36</b> ).	647456	262512	647334	263115	647334	263115
66	MXS19705	ARG 023	Strongpoint	A World War II seafront strongpoint in Aldringham cum Thorpe parish, visible on APs as structures and earthworks on Sizewell Cliffs. The strongpoint is bounded on the east by a stretch of barbed wire, part of the anti-invasion coastal defences ( <b>WA 50</b> ). The strongpoint consists of a pillbox, slit trench, concrete anti-tank cubes and barbed wire.	647553	262322	647467	263443	647467	263443
67	MXS19708	ARG 026	Strongpoint	A World War II strongpoint in Aldringham cum Thorpe, visible as structures and earthworks on APs, comprising a pillbox, slit trenches and barbed wire.	647596	261806	647456	262512	647456	262512

WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
68	MXS19709	ARG 027	Strongpoint	A World War II strongpoint and possible command centre, Aldringham cum Thorpe, comprising two pillboxes, a series of slit trenches and weapons pits, with a number of paths leading to Ness House, possibly requisitioned as a command centre.	647571	261235	647571	261235	647571	261235
69	MXS19712	ARG 030	Strongpoint	A World War II strongpoint in Aldringham cum Thorpe parish, visible on APs from 1945 onwards. The strongpoint is located within a loop of an anti-tank ditch and is focussed on an old rifle butt. The butt is marked on both the 1 <sup>st</sup> and 2 <sup>nd</sup> edition maps of 1884 and 1904 as 'Old Rifle Butt'. The strongpoint consists of two pillboxes and a number of weapons pits and slit trenches, as well as possible anti-aircraft ditches, placed to complement the extensive anti-aircraft ditch site immediately to the north-west ( <b>WA 48</b> ). The Old Rifle Butt and pillboxes are visible on APs of 1969, but their current condition is unknown.	646945	261297	647507	262809	647507	262809

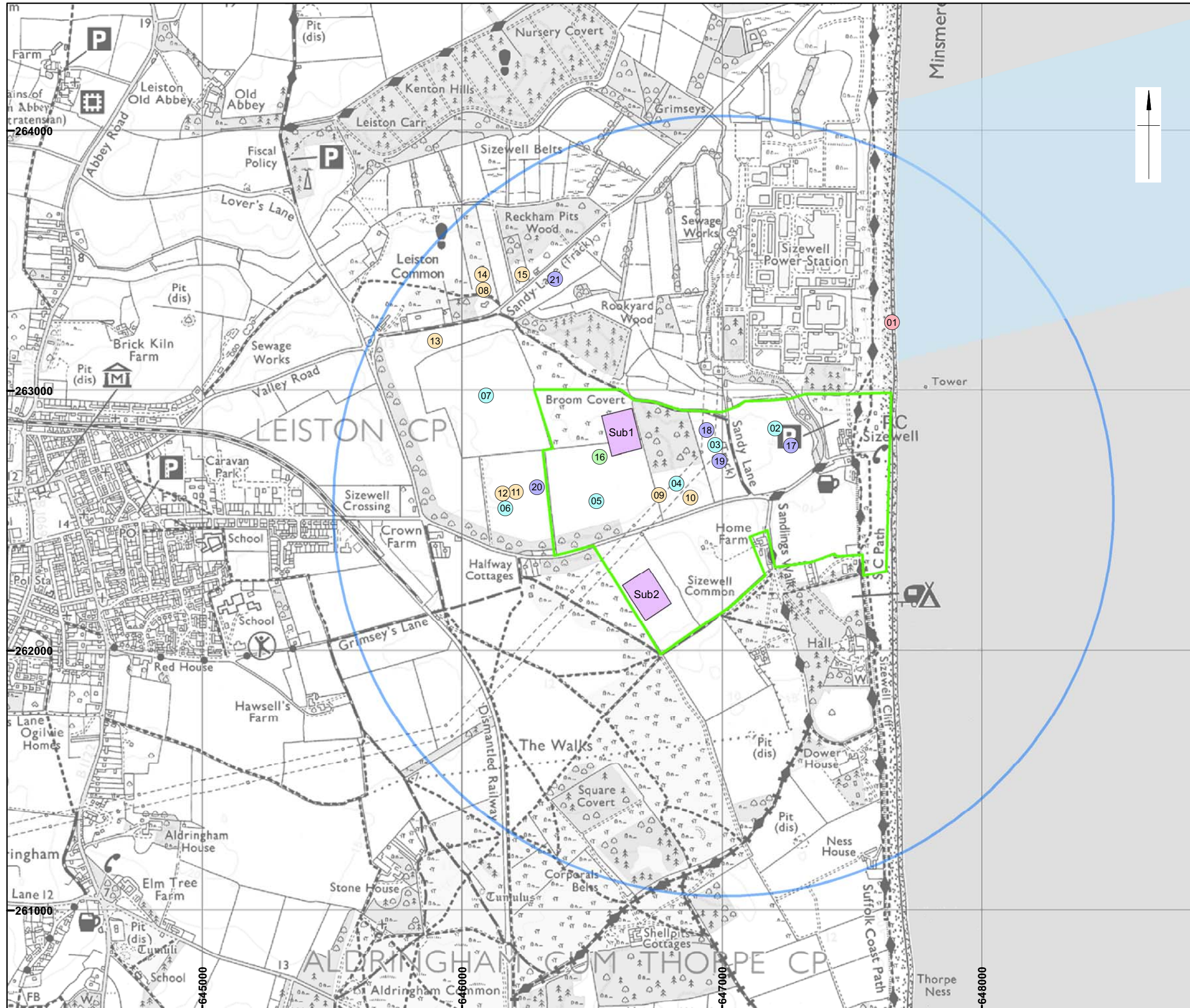
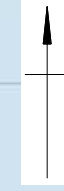
WA No	MONU ID	SMR No	Monument Type	Description	Easting	Northing	MinX	MinY	MaxX	MaxY
70	MXS19698	LCS 113	Tank trap	A World War II anti-tank ditch in Leiston and Aldringham cum Thorpe parish, visible as a earthwork on APs, having been newly cut in 1941. The ditch had been infilled and ploughed by 1952, although sections of the ditch which cut across cultivated fields are visible as a cropmark on APs from 1968.	647301	261915	647442	264038	647452	264048
71	MXS19842	LCS 122	Tank trap	World War II anti-tank cubes near Sizewell, Leiston, visible on APs from 1941. A line of cubes at the northern extent of the group, running W-E, are still extant, although most of the row running N-S were removed during the construction of Sizewell Power Station.	647447	264043	647574	263355	647574	263355
72	MXS19853	LCS 126	Tank trap	A row of World War II anti-tank cubes near Sizewell, Leiston, visible on APs from 1941. They run in a W-E direction from the sand dunes to the beach for c.110m. Still seen on APs from 1982.	647574	263355	647301	261915	647301	261915
73	MXS19711	ARG 029	Weapons pit	A World War II weapons pit and probable slit trench in Aldringham cum Thorpe, visible on APs of 1941.	647137	261131	647137	261131	647137	261131



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The Site, Study Area, preferred substation locations and proposed/existing cable routes in relation to sites with statutory designations and areas of non-statutory designation

Figure 1



- Prehistoric sites**
- Findspot
  - Artefact scatter
  - Causewayed ring ditch
  - Concentric ring ditch
  - Ring ditch
  - Revised extended cable route
  - Preferred locations for substations
  - Site
  - Study Area



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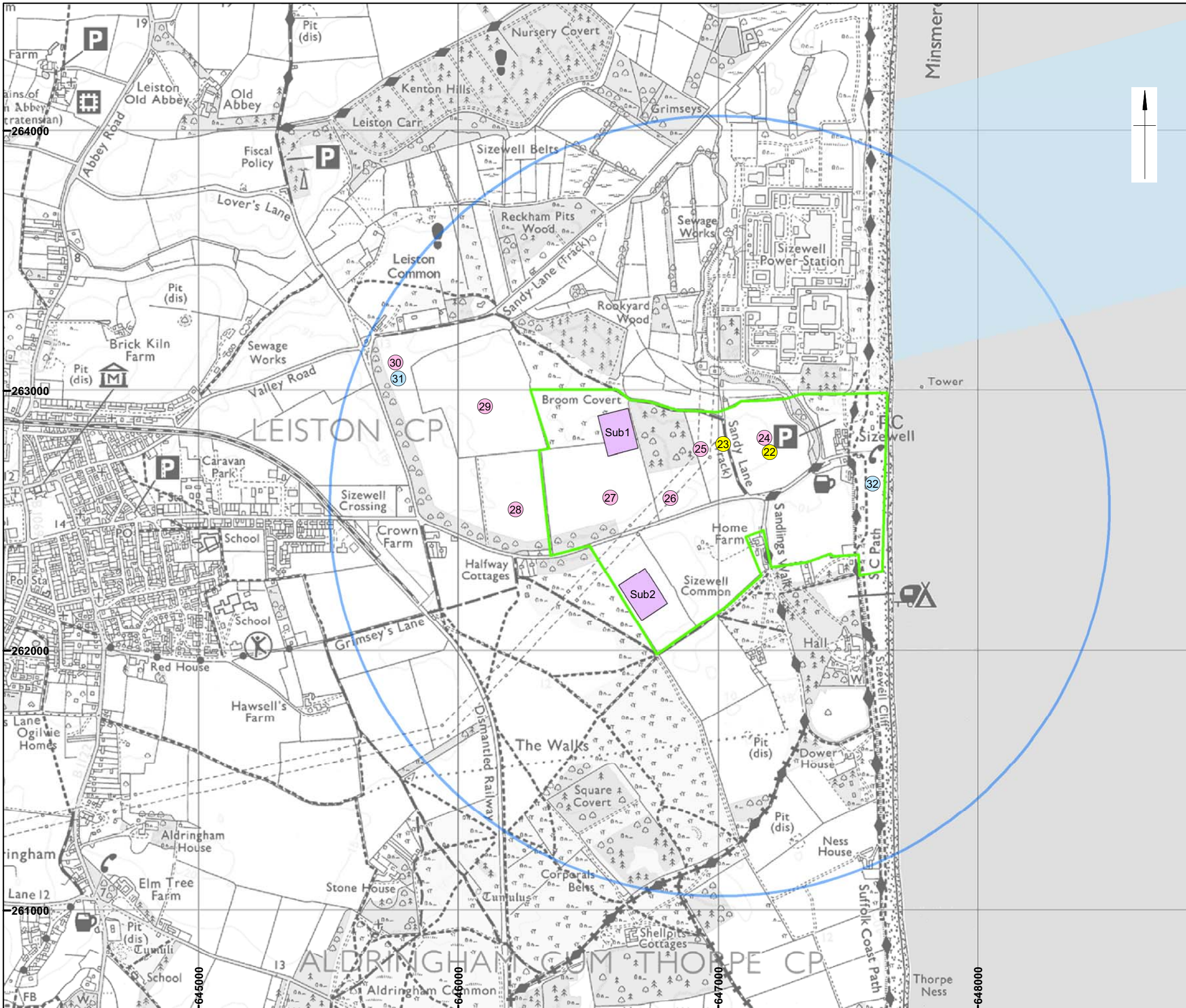
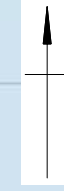
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The Site and Study Area in relation to known prehistoric sites (data from SSMR) WA nos. 01-21

Figure 2





- Romano-British
- Medieval
- Post Medieval
- Revised extended cable route
- ▭ Preferred locations for substations
- ▭ Site
- Study Area



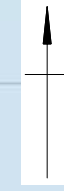
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The Site and Study Area in relation to known Romano-British, medieval and post-medieval sites (data from SSMR) WA nos.22-32

Figure 3



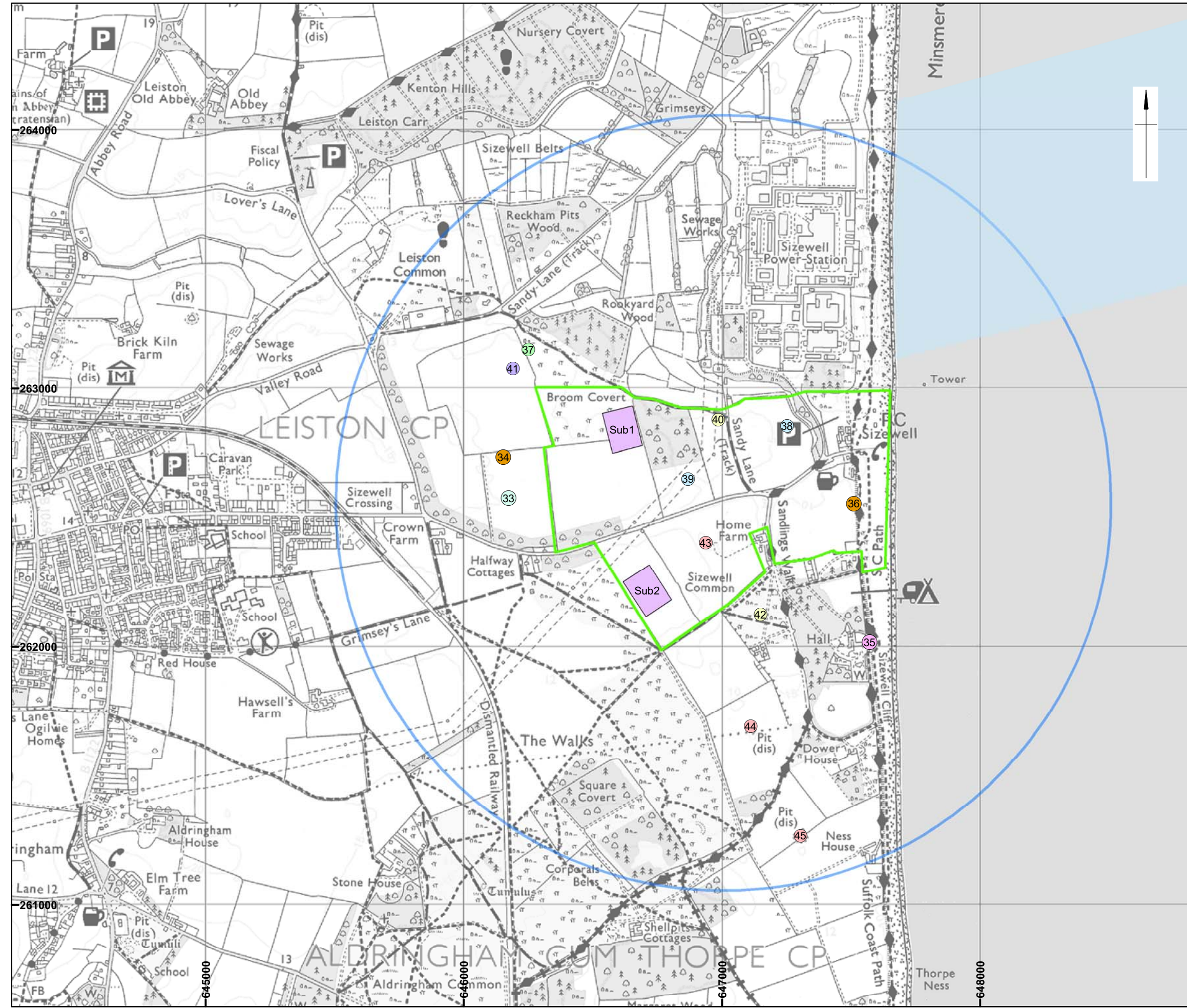
- Modern**
- Artefact scatter
  - Garden terrace
  - Military feature
- Undated**
- Enclosure
  - Enclosure; Field boundary
  - Extractive pit
  - Findspot
  - Subrectangular enclosure
  - Revised extended cable route
  - Preferred locations for substations
  - Site
  - Study Area



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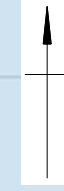
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The Site and Study Area in relation to known modern and undated sites (data from SSMR) (excluding WWII sites) WA nos. 33-45

Figure 4



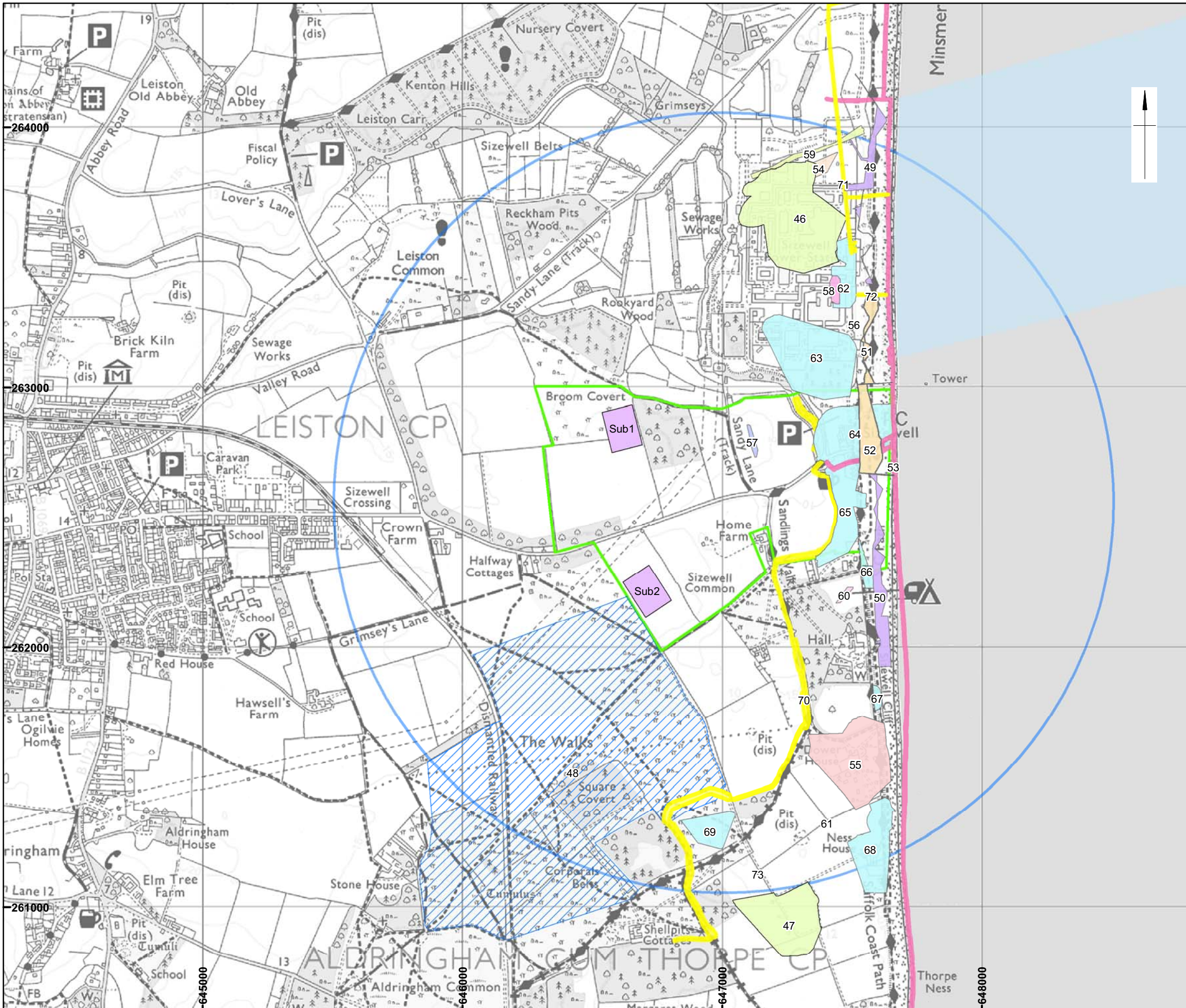
- Anti-aircraft battery
- Anti-glider ditches
- Anti-invasion defence
- Barbed wire obstruction
- Beach defence
- Bomb crater
- Coastal battery
- Pillbox
- Radar station
- Rifle butts
- Slit trench
- Strongpoint
- Tank trap
- Weapons pit
- Revised extended cable route
- Preferred locations for substations
- Site
- Study Area



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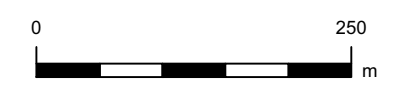


The Site and Study Area in relation to known WWII features (data from SSMR) WA nos.46-73

Figure 5



- Site
- Preferred locations for substations

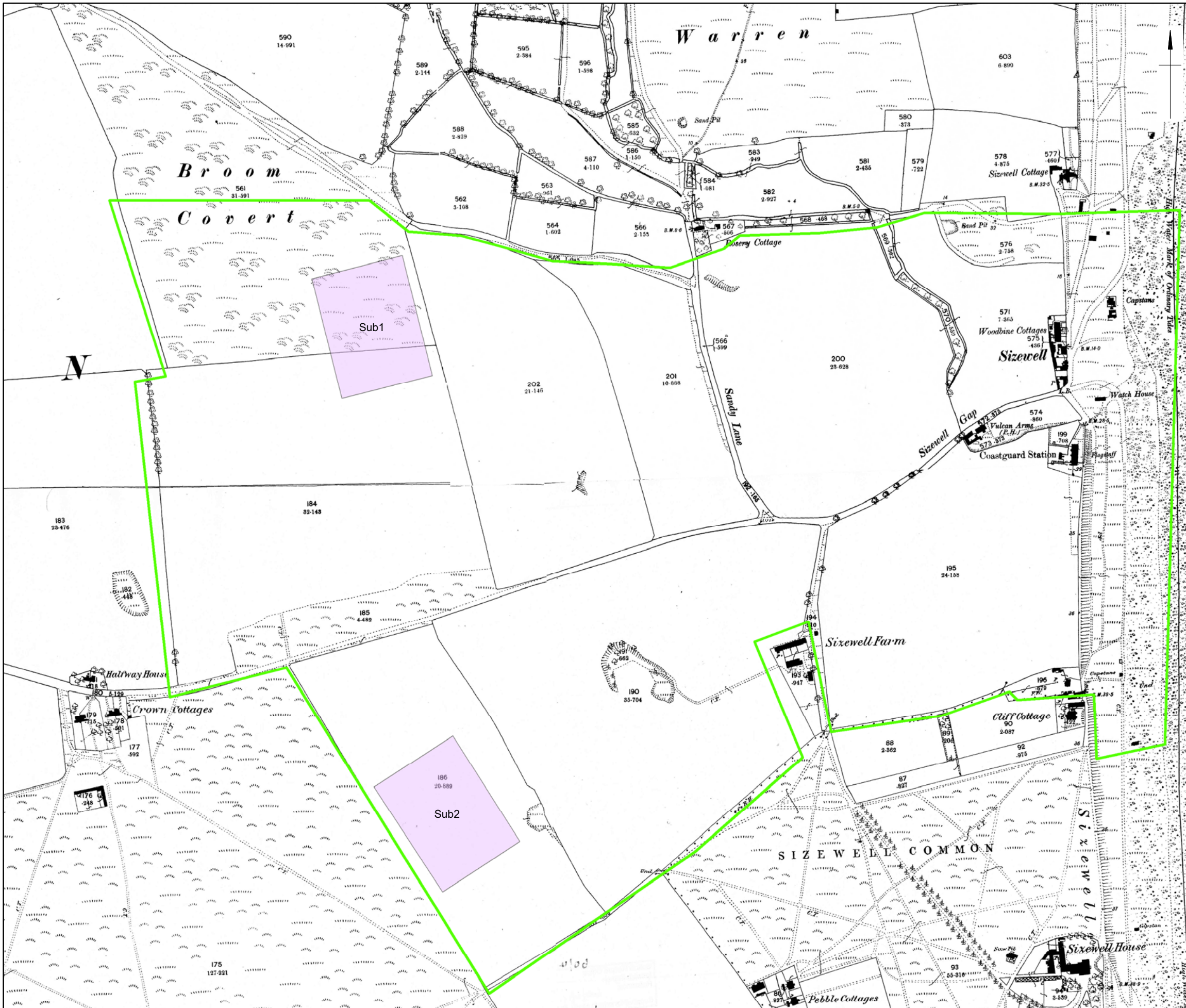


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The Site and preferred substation locations in relation to the Adringham Estate Map, c.1840

Figure 6



□ Site  
□ Preferred locations for substations

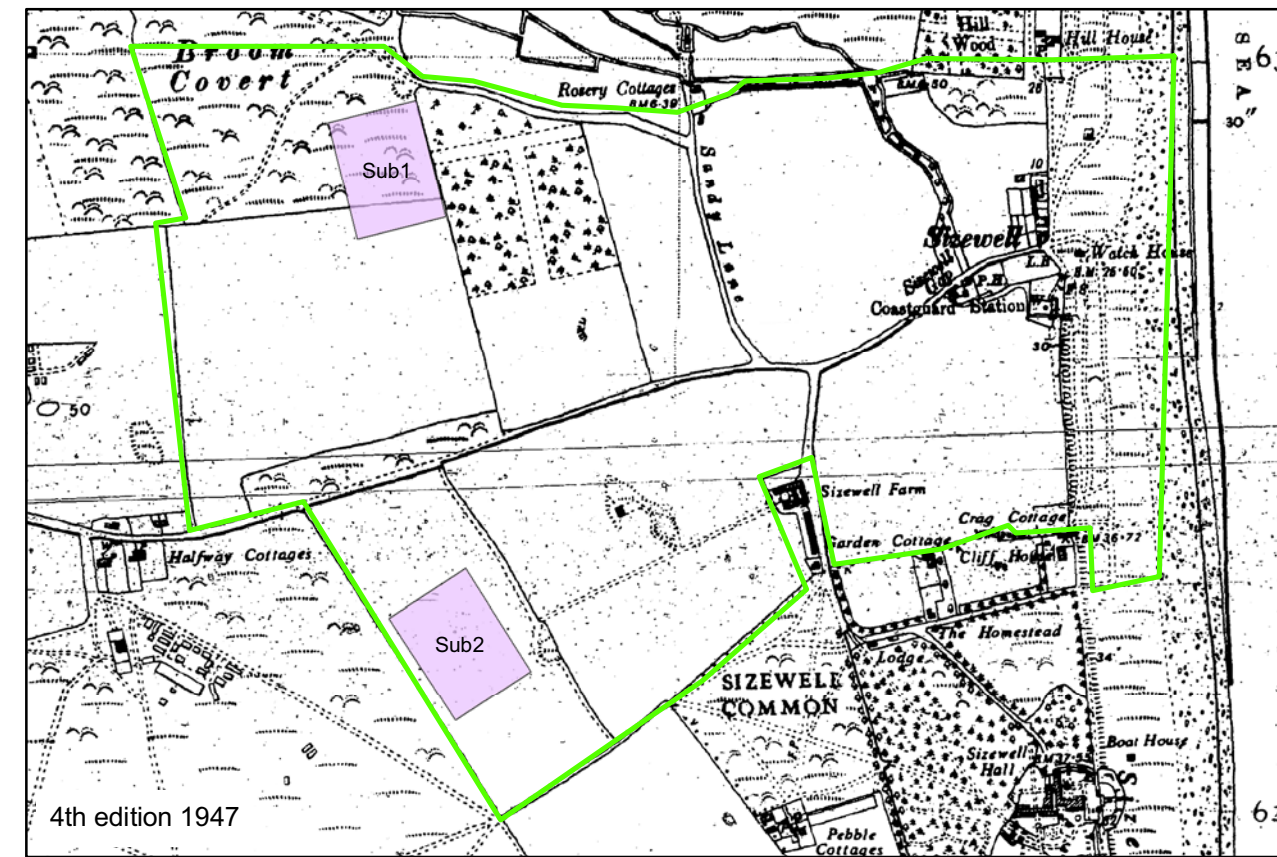
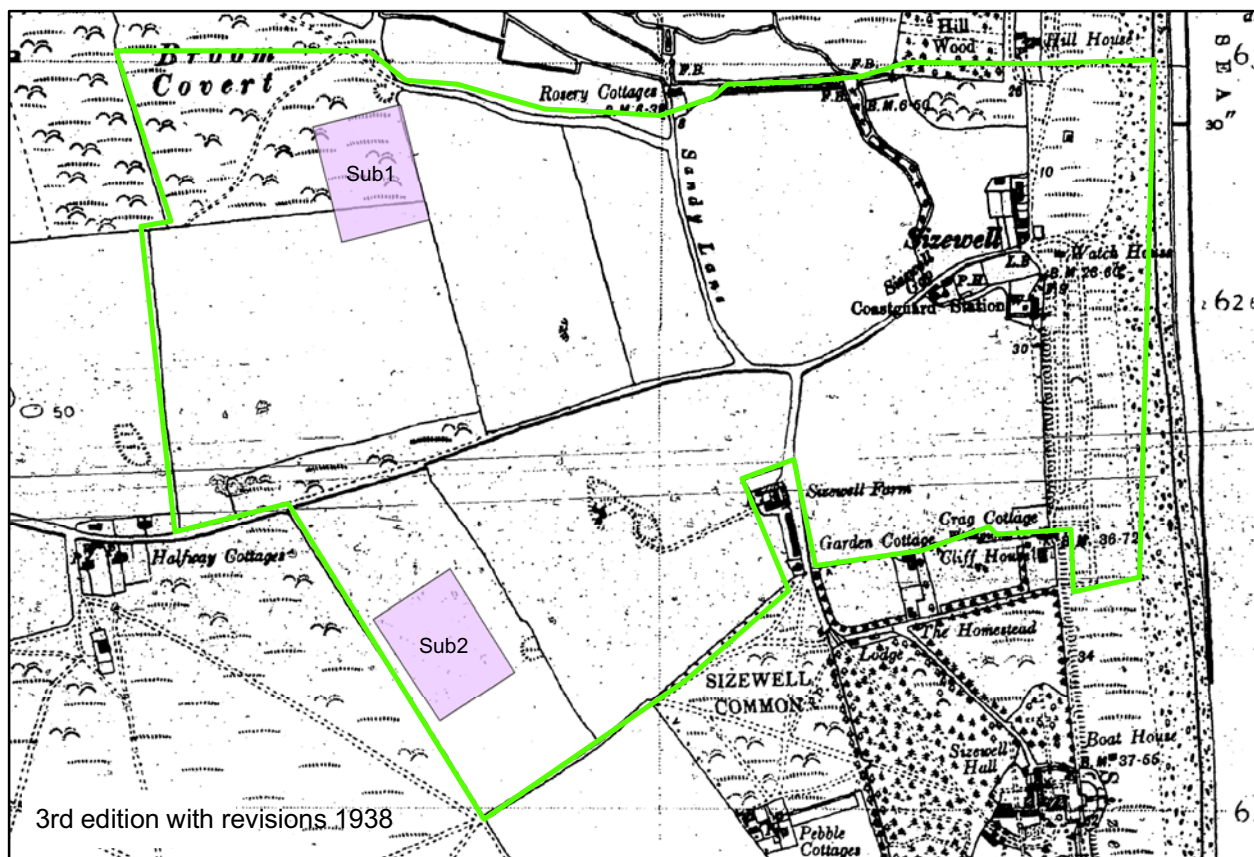
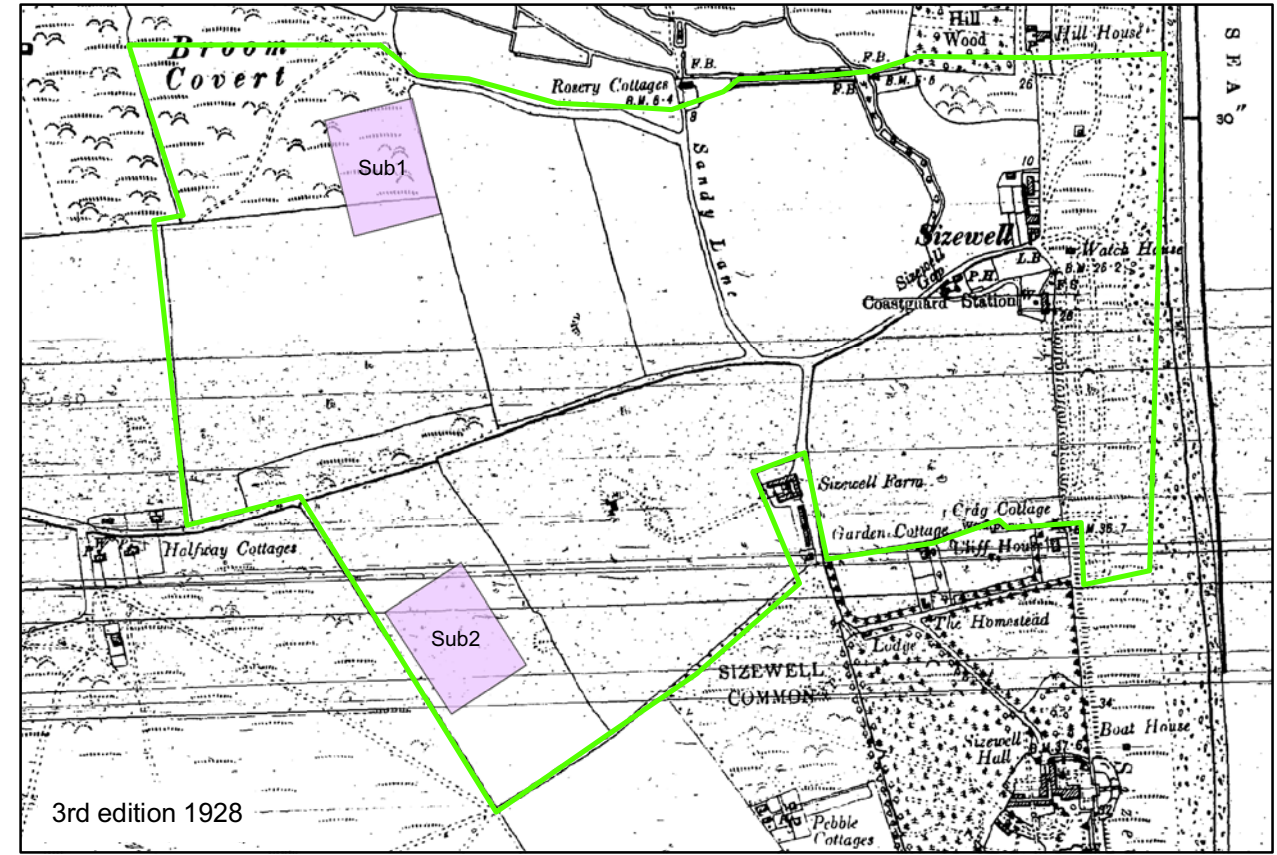
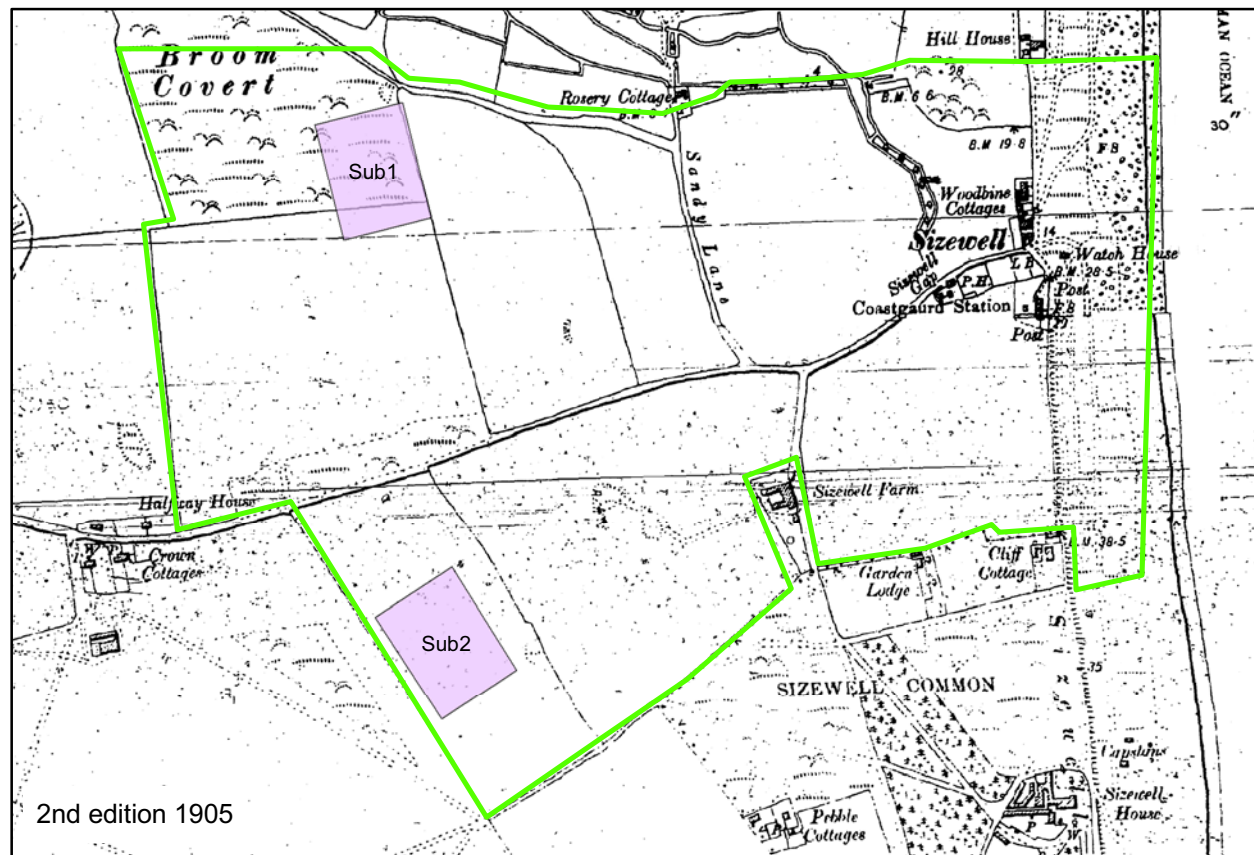


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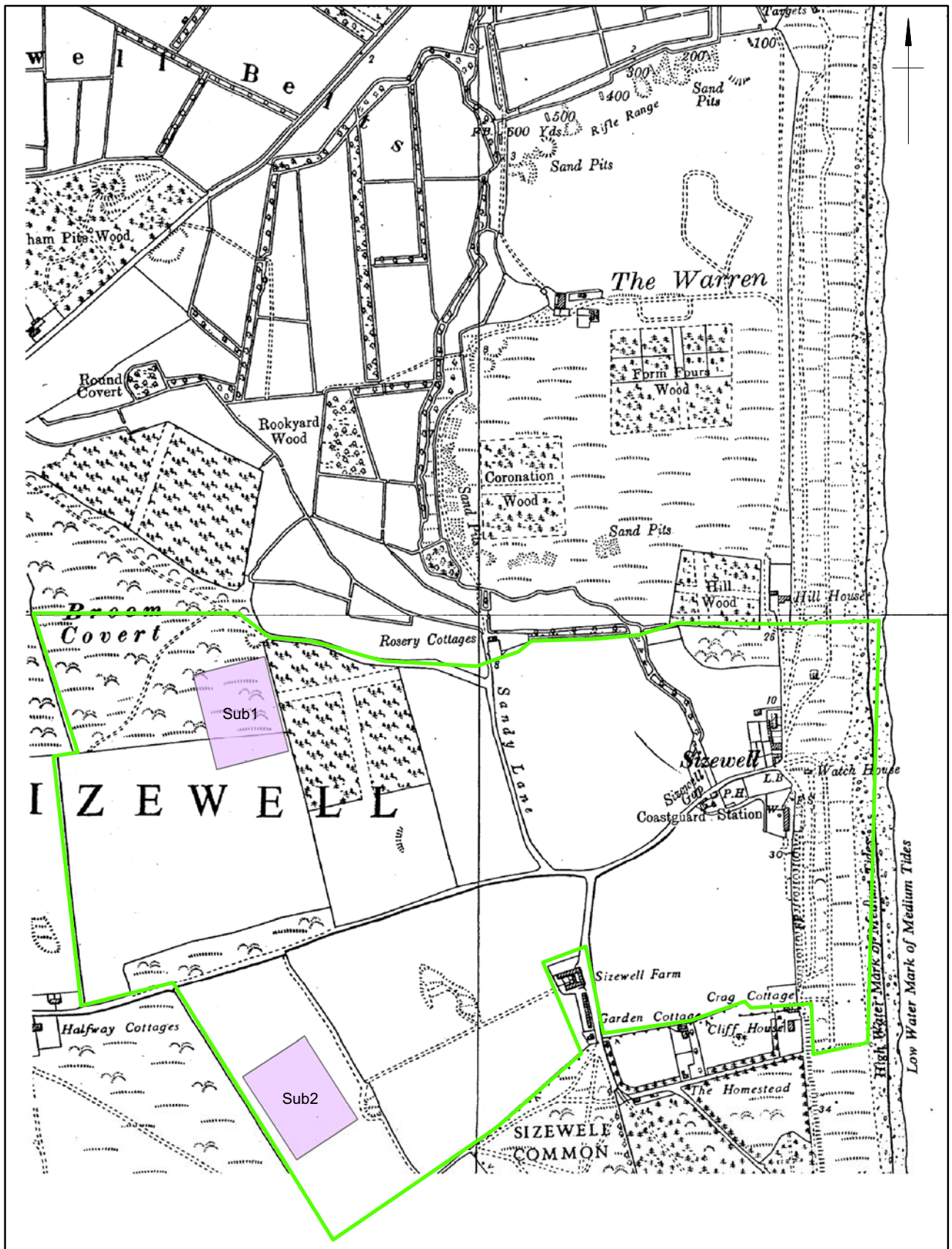
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The Site and preferred substation locations in relation to the Ordnance Survey 1st Edition map, surveyed 1881

Figure 7



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The Site and preferred substation locations in relation to the 1958 OS map

Figure 9



Plate 1 Anti-tank cubes (WA52)



Plate 2 Pillbox (WA36)

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Plate 3 Location of substation 1



Plate 4 Location of substation 2

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Plate 5 Historic boundary



Plate 6 Area of foreshore at the eastern extent of the Site, within the Heritage Coast and AONB

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