

RSFE20



## FOBBING SOLAR FARM RAYLEIGH, ESSEX

*Archaeological Desk-based Assessment  
for Aardvark EM on behalf of Rayleigh Green Limited*

*14<sup>th</sup> August 2020*

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Project Manager:	Mike Kimber
Author:	Andrew Brown
Fieldwork:	Jen Richards
Graphics:	Jen Richards and Andrew Brown
Approved by:	Andy Towle

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# FOBBING SOLAR FARM

## ARCHAEOLOGICAL DESK-BASED ASSESSMENT

*In March 2020 Headland Archaeology was commissioned to produce a desk-based assessment to assess the potential impact that a proposed solar farm development site on land near Fobbing, Essex would have on the historic environment.*

*The site contains no designated heritage assets, although there is one Scheduled Monument, one Grade I Listed Building, two Grade II\* and seventeen Grade II Listed Buildings within the Outer Study Area. No harm is predicted to the significance of any of the designated heritage assets in the wider 1 km study area through change within their settings. This includes the Bombing Decoy scheduled monument and the Grade I Listed Church of St Michael.*

*This assessment has found evidence for Mesolithic activity and for Iron Age, Roman and medieval settlements within the Outer Study Area.*

*The site contains two known non-designated heritage assets: a low mound of salt-making debris dating to the Late Iron Age or Romano-British period of medium archaeological significance within Field 5 and a medieval or post-medieval hollow way of low archaeological significance marking the route of an old road. There is a potential for the survival of additional, previously unknown archaeological remains at the site, in particular further remains associated with the salt-making mound.*

*Groundworks for the construction of the new solar farm and battery storage facility, access roads, utility trenches, compounds and landscaping works are likely to physically impact any archaeological remains at the site.*

*The impacts on known and potential archaeological remains are not considered to be sufficiently significant to prevent development of the site, but further investigations and/or mitigation work may be required by the local planning authority.*



## 1 INTRODUCTION

### 1.1 Planning Background

Rayleigh Green Limited is proposing to construct a 49.9 MW solar farm project with a battery storage facility on land to the east of Fobbing Essex (henceforth 'the Site' or the Proposed Development Area (PDA)). The site is spread across ten fields between the A13 to the north and the A1014 to the south. In March 2020 Headland Archaeology was commissioned to produce a desk-based assessment to assess the potential impact that this proposed development would have on the historic environment resource.

This desk-based assessment will be used to support determination of a planning application to be submitted by the Client.

### 1.2 Site Description

The proposed development is located on arable agricultural land to the east of Fobbing and is spread across ten fields between the A13 to the north and the A1014 to the south (Approximate NGR: TQ 72700 85071 centred, Figure 1). The proposed development measures approximately 157 hectares (ha) in total. The proposed development is located within the Parish of Fobbing, Essex (Photos 1-11).

The Site is approximately 1m above Ordnance Datum (AOD).

### 1.3 Consultation

Consultation with the Local Authority Archaeologist for Essex was carried out via email in April 2020 regarding the scope of the assessment. A 1km study area for gathering baseline information from the Historic Environment Record and other sources was agreed.

## 2 AIMS AND OBJECTIVES

The assessment has been carried out according to the *Standard and guidance for historic environment desk-based assessment* published by the Chartered Institute for Archaeologists (CIfA 2017), and aims to:

- Collate available written, graphic, photographic and electronic information relevant to the development site;
- Describe the nature, extent and significance of the historic environment within the area potentially affected by the development, identifying any uncertainties in existing knowledge;
- Determine the potential impact of the proposed development; and
- Identify any requirements for further investigation that may be necessary to understand the effects of the proposed development on the historic environment.

## 3 METHODOLOGY

### 3.1 Study areas

An Inner Study Area corresponding with the Proposed Development Area (PDA) has been used to identify heritage assets with potential for direct impacts as a result of the proposed solar farm. An Outer Study Area of 1km around the proposed development has been agreed with the Local Authority Archaeologist (email dated 13th March 2020). All designated and non-designated Heritage Assets within this Study Area will be assessed. The scope of the assessment was also informed by desk-based (in the form of a ZTV) analysis of the sightlines and topography around the proposed development.

A site visit was carried out on 19<sup>th</sup> June to analyse the topography around the proposed development and analyse potentially prominent views from the southern sea wall towards the Grade I Listed Fobbing Church.

### 3.2 Data sources

The assessment has been based on a study of all readily available documentary sources, following the CIfA Standards and Guidance (CIfA 2017). The following sources of information were referred to:

- Designation data from the National Heritage List for England, downloaded from the Historic England website on 15/05/2020;

- Descriptions of designated heritage assets in the National Heritage List for England, viewed on the Historic England website;
- Archaeological and architectural records from the National Record of the Historic Environment, viewed through the Heritage Gateway website ([www.heritagegateway.org.uk](http://www.heritagegateway.org.uk));
- Aerial photographs available from online sources e.g. National Collection of Aerial Photographs (NCAP), Google Earth and Getmapping.com;
- Archaeological records and aerial photographs held by the Essex Historic Environment Record (HER) Office obtained as a digital data extract on 23<sup>rd</sup> April 2020;
- Historic maps and plans available from online sources and supplied by the client;
- Environment Agency Lidar data;
- Geological data available online from the British Geological Survey;
- Portable Antiquities Scheme data; and
- Readily available published sources and unpublished archaeological reports.

The Historic England archives in Swindon are closed due to the Coronavirus pandemic and searches of their aerial photographs are not possible until they reopen (which may be several months). As an alternative available online searches of aerial photo images have been consulted for this assessment.

### 3.3 Identification of heritage assets

The assessment aims to identify all known heritage assets potentially affected by the proposed development, and to estimate the potential for currently unknown heritage assets to be present within the development area. A heritage asset is defined in the National Planning Policy Framework (NPPF 2019) (Annex 2) as ‘a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest’. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another. Some heritage assets are designated as Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Registered Parks and Gardens, Registered Battlefields, or locally designated through policies in the Local Plan. Undesignated assets may be recorded in Historic Environment Records, while many other assets are currently unrecorded.

Heritage assets within the 1km Study Area are shown in Figures 2 and 3, with detailed descriptions compiled in a gazetteer (Appendix 1, Table 1). Designated heritage assets (Figure 3) are labelled with the list entry number which refers to them in the National Heritage List for England; undesignated assets (Figure 2) with the reference number in the Essex HER. Heritage assets identified during the assessment have been assigned a number (prefixed HA for Heritage Asset).

### 3.4 Assessment of heritage significance and importance

Heritage assets are assessed in terms of their significance and importance, following the requirement in NPPF paragraph 189, and taking account of Historic England’s guidance in *Managing Significance in Decision-Taking in the Historic Environment* (GPA2). Significance, in relation to heritage policy, is defined by the NPPF (Glossary, Annex 2) as

*“the value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”*

Setting is defined in Annex 2 of the NPPF as:

*“the surroundings in which an asset is experienced. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral.”*

Where potential impacts on the settings of a heritage assets are identified, the assessment of significance includes ‘assessing whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s)’, following Step 2 of the staged approach to setting recommended in Historic England’s guidance in *The Setting of Heritage Assets* (GPA3). Attributes of an asset’s setting which can contribute to its significance are listed on page 9 of GPA3.

The *importance* of a heritage asset is the overall value assigned to it based on its heritage significance, reflecting its statutory designation or, in the case of undesignated assets, the professional judgement of the assessor (Table 1). Historic England guidance also refers to an asset's 'level of significance' (GPA2, paragraph 10), which in this usage has the same meaning as importance. Nationally and internationally designated assets are assigned to the highest two levels of importance. Grade II Listed Buildings and Grade II Registered Parks & Gardens are considered of medium importance, reflecting the lower level of policy protection provided by the NPPF (paragraph 194). Conservation Areas are not assigned to either level of importance by the NPPF but their status as local designations and their omission from the National Heritage List justifies their classification here as assets of medium importance, except where their particular characteristics merit a higher level – this is a matter of professional judgement. Other non-designated assets which are considered of local importance only are assigned to a low level of importance; however, it is recognised that some non-designated assets will be of more than local importance and professional judgement will be used to identify them and assign an appropriate level of importance.

Table 1: Criteria for Assessing the Importance of Heritage Assets

Importance of the asset	Criteria
Very high	World Heritage Sites and other assets of equal international importance
High	Grade I and II* Registered Parks and Gardens, Scheduled Monuments, Protected Wreck Sites, Registered Battlefields, Grade I and II* Listed Buildings, and undesignated heritage assets of equal importance
Medium	Conservation Areas, Grade II Registered Parks and Gardens, Grade II Listed Buildings, heritage assets on local lists and undesignated assets of equal importance
Low	Undesignated heritage assets of lesser importance

### 3.5 Potential for unknown heritage assets

Archaeological features are often impossible to identify through desk-based assessment. The likelihood that significant undiscovered heritage assets may be present within the Proposed Development Area / Inner Study Area is referred to as *archaeological potential*. Overall levels of potential can be assigned to different landscape zones, following the criteria in Table 2, while recognising that the archaeological potential of any zone will relate to particular historical periods and types of evidence. The following factors are considered in assessing archaeological potential:

- The distribution and character of known archaeological remains in the vicinity, based principally on an appraisal of data in the Essex HER;
- The history of archaeological fieldwork and research in the surrounding area, which may give an indication of the reliability and completeness of existing records;
- Environmental factors such as geology, topography and soil quality, which would have influenced land-use in the past and can therefore be used to predict the distribution of archaeological remains;
- Land-use factors affecting the survival of archaeological remains, such as ploughing or commercial forestry planting; and
- Factors affecting the visibility of archaeological remains, which may relate to both environment and land-use, such as soils and geology (which may be more or less conducive to formation of cropmarks), arable cultivation (which has potential to show cropmarks and create surface artefact scatters), vegetation, which can conceal upstanding features, and superficial deposits such as peat and alluvium which can mask archaeological features.

Table 2: Archaeological potential

Potential	Definition
High	Undiscovered heritage assets of high or medium importance are likely to be present.
Medium	Undiscovered heritage assets of low importance are likely to be present; and it is possible, though unlikely, that assets of high or medium importance may also be present.
Low	The study area may contain undiscovered heritage assets, but these are unlikely to be numerous and are highly unlikely to include assets of high or medium importance.

Negligible	The study area is highly unlikely to contain undiscovered heritage assets of any level of importance.
Nil	There is no possibility of undiscovered heritage assets existing within the study area.

## 4 RESULTS

### 4.1 Overview of the historic environment

#### *Previous investigations*

The Essex HER records seven previous archaeological investigations within the Outer Study Area. All of these previous archaeological events are field surveys carried out between 1970 to 2002 (Essex HER 2020).

No other details have been provided by the Essex HER with regards to the results of these surveys.

#### *Geology and geomorphology*

The underlying geology of the site is recorded as clay, silt and sand of the London Clay Formation (NERC 2020). These formations were laid down between 48 to 56 million years ago during the Palaeogene period. Superficial tidal flat deposits of clay and silt are recorded overlying this and were likely laid down approximately 2 million years ago during the Quaternary period.

The marshes of the Thames foreshore of Essex and north Kent contain a Holocene stratigraphy of five peats, alternating with clays and sand, which records a sequence of sea-level change and human occupation during the last 10,000 years. The Pleistocene deposits of the lower reaches of the River Thames and its tributaries are of international significance. They form a framework for the geological record in Britain and have important links with the glacial stratigraphy of East Anglia, the fluvial stratigraphy of the Rhine and Seine, and global climatic stratigraphy (Essex County Council 2004).

Borehole data from the southern part of the Site (TQ78SW7- Fobbing Canvey Foulness Project Canvey) recorded 0.15m of clayey silt topsoil overlying 6.88m of medium orange-brown sandy, clay silt which became more bluish grey beyond 1.25m depth. The borehole recorded a peat layer 0.90m thick at a depth of 6.88m below ground level which became more clay to a depth of 9.89m below ground level and overlay 3.60m of medium purple blue sandy silt alluvium. Below this was 0.90m of fine sandy silty clay and gravel river terrace deposits overlying the London Clay bedrock at a depth of 14.78m below ground level.

#### *Prehistoric (650,000 BC- AD43)*

About 472,000 years ago, the Anglian ice sheet covered most of Essex. When this ice sheet reached Essex, the Thames was flowing through the Vale of St Albans towards Colchester. A lobe of ice blocked the river and it was diverted towards its present course. As the ice eventually receded at the beginning of the next interglacial stage (the Hoxnian Stage c.423000 – 380000 bp), the landscape of Essex bore some resemblance to that of the present day. The Stour, Colne, Chelmer, Blackwater and Crouch rivers followed roughly their present courses, but the Medway joined the Thames at Southend and the combined river continued north-east across what is now the coast of east Essex to join the Rhine (Bennet, Gilman & Medleycott 2011).

The majority of Palaeolithic sites across Essex comprise of single findspots or assemblages of artefacts of flint tools in the form of hand axes, flakes and flint cores and come from the Clactonian, Acheulian and Levallois industries. There is however the potential for pre-Anglian glaciation sites given recent discoveries at Pakefield in Norfolk and High Lodge in Suffolk. Palaeolithic sites have a marked distribution along the river valleys of Essex and reflect the occurrence of Pleistocene river gravel deposits. Numerous finds have been made from aggregate extraction pits at Ockendon, the Dolphin Quarry, Chadwell Heath, Avely and Purfleet around Thurrock over 15km to the west of the development. These sites illustrate the potential for Palaeolithic material from the aggregate resource in Essex (Bennet, Gilman & Medleycott 2011).

#### *Mesolithic*

With the warming up of Britain during the Mesolithic period, from about 10,000 years ago, most of lowland Britain was covered by a succession of forest types with breaks in the canopy around rivers and lakes. In Essex, there was one estuary east of Foulness with the Crouch and Blackwater rivers flowed into the Thames. Sea levels rose during this period, flooding the original estuary and the land bridge to continental Europe (Bennet, Gilman & Medleycott 2011).

The majority of Mesolithic sites across Essex like those of the Palaeolithic period comprise primarily lithic finds of microliths, core axes or adzes. Other archaeological evidence for the period includes pits, flint working sites,

and submerged or buried land surfaces. A number of these sites survive submerged in the Crouch and Blackwater river estuaries in the north of the county and at Stone Point near Walton on the Naze over 60km to the north-east on the Essex coast. The impact of aggregate extraction on the Mesolithic archaeological resource is not clear. This may be a reflection that evaluation strategies used on quarry sites are not as successful in identifying the more ephemeral archaeological evidence that is characteristic of the Mesolithic period. However, the known Mesolithic sites tend to follow aggregate bearing areas which follow river routes and the edges of marshland (Bennet, Gilman & Medleycott 2011).

The earliest evidence for human activity within the Study Area comes from Corringham approximately 1km to the west of the Site boundary where Mesolithic struck flint scatters were found in 1970 near the old light railway terminus (MEX23450; MEX23469; MEX23680) on a light orange clay in a terrace stream valley. The flint assemblage included parallel-sided blades and pyramidal cores and many finely worked flakes and blades, but no microliths were found. Notched flakes and blades illustrate the technique used to make microliths. Small areas to the north-east were scraped in 1973 when a new pumping station was constructed alongside a stream. Flint blades were found in the bulldozed patches. The finds are significant for their quantity and their fresh condition and are assumed to be plough-lifted from relatively undisturbed features. This, with narrow-blade cores and the blades themselves (used for burins, saws, end scrapers and various hollow or convex cutting implements) is clear proof of Mesolithic occupation. Another Mesolithic flint microlith with retouch was found in a roadside bank in Fobbing (MEX23636) approximately 1km to the west of the Site (Essex HER 2020).

### *Neolithic*

By the early Neolithic the sea level had risen and the Essex coastline took upon something approaching its present day appearance. As a result, large areas of former Mesolithic land surface are now within the intertidal zone. Settlement sites on these land surfaces have produced evidence indicating there was a mixed hunter-gatherer and agricultural based economy within a still largely wooded landscape. Long barrow burial mounds and other monuments were constructed around this time. Neolithic sites tend to be found on the gravel terraces of the river valleys, this may be a result of clearer cropmarks leading to a bias in identification and investigation or may be that lighter well-drained gravel-rich soils were favoured by early farmers (Bennet, Gilman & Medleycott 2011). The Essex HER records that Neolithic flint flakes were also discovered along with the Mesolithic flint scatters during investigations at Corringham Station in 1970 (MEX23458).

The Essex HER records a cropmark for a small prehistoric sub-circular enclosure (MEX23631) 470m to the west of the Site boundary. The HER describes this cropmark as a possible henge monument of unknown date. No description of the size for this feature has been recorded.

### *Bronze Age*

It was during the Bronze Age that a fully agricultural economy was developed with extensive evidence for Bronze Age settlement focussed on the sand and gravel terraces of the south and east of the county. The majority of early Bronze Age sites have a riverine or coastal distribution and cluster on the Stour valley, along the Chelmer, Blackwater and Colne rivers and areas where the Thames has cut through London clay to expose glacial sands and gravels, or on brickearth or river gravels. The extensive coastal marshes, including Fobbing Marsh, were likely used for pasture and ditched rectangular fields have been identified within the wider landscape at the quarry site of Mucking (Bennet, Gilman & Medleycott 2011).

The middle Bronze Age is represented by numerous cremation cemeteries and casual finds of bronze axes, but settlement evidence is more difficult to identify. There are a number of ring ditch cropmarks and several standing barrows; a small number of which have been excavated and found to date from either the early or middle Bronze Age. The earliest evidence for salt manufacture dates to the Middle Bronze Age, and the numerous creeks and estuaries of the Essex coast formed routeways for trade and transport linking Essex to other parts of Britain and to continental Europe (Bennet, Gilman & Medleycott 2011).

Within the Study Area the Essex HER records two findspots for Bronze Age artefacts to the north of the Site boundary at Vange. One of these was a Bronze Age axe found at Merrick's Marsh, Vange (MEX23186) approximately 560m to the north-east of the Site. The other record is for a Bronze Age hoard (MEX23190) found 890m to the north of the Site.

### *Iron Age*

The middle Iron Age has a large diversity of settlement types from small farmsteads, villages through to enclosed defended sites. There is also evidence for pre-Roman field systems at Little Waltham and at Braintree. There is substantial evidence of trade with continental Europe with large quantities of amphorae found at Heybridge and Stansted.

Many Bronze Age sites in Essex appear to have continued largely unchanged into the Iron Age with some of the major political, social, economic and technological developments seen in the Iron Age having their origins in

the late Bronze Age. Domestic buildings at that time were overwhelmingly roundhouses and most settlements throughout Essex were demarcated by an enclosure ditch. However, it appears these ditches were unlikely to be defensive as there is evidence at Stanway where the ditches were allowed to silt up with no re-cutting (Bennet, Gilman & Medleycott 2011).

The Essex HER records a cropmark of a possible Late Iron Age redhill (salt-making site) or enclosure (MEX1042332) within Field 5 of the Proposed Development Area.

It is considered likely that this mound is the industrial remains of a sea salt manufacturing site; either a redhill of Late Iron Age or Romano-British date, or a medieval saltern. Redhills are low irregular mounds or spreads of red earth containing fragments of vegetable-tempered briquetage, charcoal flecks and occasional sherds of pottery. Briquetage is the coarse ceramic vessels used to boil salt water to produce salt. The redhills rarely contain other types of finds and can vary from 0.25ha to several hectares in area and although, earlier this century, some remained as mounds from 0.4 to 2m high, ploughing of those sites now inside the sea wall has reduced their height (Murphy P L, Wilkinson T J 1995, p166).

Excavations carried out at Stanford Wharf Nature Reserve in 2011-2012, approximately 4 km to the south-west of the Site, revealed an intense period of occupation during the middle Iron Age which was concentrated around several redhills consisting of debris from long term salt production. Associated features included ditch, gullies, pits and hearths as elements of this industrial process. Pottery and scientific dating techniques revealed that these redhills were amongst the earliest examples in Essex. The production site appears to have gone out of use during the late Iron Age however the excavations revealed that salt production re-started there following the Roman occupation (Biddulph et al 2012).

Iron Age pottery sherds (MEX23193) are also recorded near Vange approximately 880m to the north of the Site.

The late Iron Age saw an increase in trade with Rome, most notably imported wine. Archaeological evidence from Elms Farm, over 25km to the north at Heybridge where late Iron Age shrines were replaced with structured temple complexes, typically Iron Age roundhouses were gradually replaced by rectangular structures, gravelled roads and an open market place suggest that the transition from the late Iron Age to the Roman period may not have been the sudden event previously thought (Bennet, Gilman & Medleycott 2011).

### ***Romano-British (AD43- 410AD)***

The Roman Invasion of 43AD marked the formal beginning of the Roman period in Britain. As previously noted, the archaeological evidence would suggest that the rural landscape saw a gradual transition from the Iron Age into the Roman period. The landscape was dominated by open grassland (pasture) with wheat and barley being staple arable crops. Aerial photography and targeted archaeological excavations have revealed a landscape of Roman field systems identified as being well laid out with right angles and regular fixed measurements such as those found at Great Holts near Boreham. Other sites across the county have been identified through cropmarks where there is evidence of systematic organisation in their layout, both in the consistent use of right-angles and of multiples of fixed measurements (Bennet, Gilman & Medleycott 2011).

As well as various sizes of towns, there are over sixty possible villa sites recorded on the Essex HER and studies of the Chelmer valley and its tributaries have calculated that villas were spaced at 2-3km intervals along the valley slopes at the junction of the boulder clay and the river gravels where the natural spring line occurs. Analyses of other river systems, such as the Brain, also suggest similar distances of 2-3km between the villas/larger settlement sites. As well as the villa complexes there is evidence for farmsteads which ranged in size from 4 to 46 hectares, single enclosures and unenclosed settlements (Bennet, Gilman & Medleycott 2011).

An artificial mound (MEX1039731) is recorded just 33m to the north of the boundary of Field 2 at the northern part of the Site. The Essex HER describes this feature as approximately 3m high and 35m long on its western side where it has a well-defined edge which continues down as the side of a silted-up creek. Along its northern and southern edges the mound is delimited by smaller fossil creeks. Its eastern side is less well defined and has been partially covered by what appears to have been a storage area or dump of modern building rubble, presumably used for surfacing the trackway.

The Essex HER records findspots of two Roman coins; one dated to the reign of Tiberius was found at Vange (MEX23190) approximately 880m to the north of the Site and the other (MEX23250) dated to the reign of Gratian found at Merrick's Farm approximately 765m to the north-east of the Site. Romano British tile and pottery was also discovered during excavations at Corringham Station in 1970 (MEX23626), suggesting a possible multiperiod farmstead or settlement may be located near there.

### **Early Medieval (AD 410- 1066)**

Following the Roman withdrawal in the 5<sup>th</sup> century East Anglia, and Essex in particular, became a focus for the first phase of Saxon conquest. Essex emerged from the period of flux as an independent kingdom until the mid-9<sup>th</sup> century.

The majority of archaeological evidence for the post-Roman and Anglo-Saxon period comes from cemetery sites across the county. The settlement of Mucking, located to the south-west beyond the Study Area, was one of the most extensively excavated settlement sites in England with 53 posthole buildings and 203 sunken feature buildings (SFBs) (Jones 1980). Fieldwork across Essex suggests a complex settlement pattern with woodland being allowed to regenerate on boulder clay soils whilst arable cultivation continued in the river valleys and gravel terraces (Bennet, Gilman & Medleycott 2011).

Recent investigations on Saxon sites around the Thames estuary have identified a number of cemetery sites, the most dramatic being the Prittlewell Princely burial, which is important for understanding the Saxon elite, conversion to Christianity and contacts with the continent. Archaeological work at Rayleigh to the north-east of the Study Area identified an early Saxon cremation cemetery, although no known Saxon settlement sites are known in the immediate vicinity. Finds analysis suggest the individuals were probably of low status, in contrast with Prittlewell. The incidences of Saxon cemeteries close to eastern coastal estuaries suggests that access along rivers and waterways offered fertile soils and an easy water supply of previously cleared land provided ideal conditions for incoming farming communities (Heppell 2010; Bennet, Gilman & Medleycott 2011).

The Essex HER records that late Saxon pottery was discovered during excavations at Corringham Station in 1970 (MEX23463) whilst two records refer to the Church of St Michael which is recorded as being founded in the years before the Conquest in 1066 (MEX1010627 and MEX28902).

The late Saxon period was marked by Viking raids and invasions, but in 894 Alfred's army destroyed the Viking fleet at Benfleet approximately 5km to the north of the Site. Edward the Elder later reclaimed Essex from the Danelaw, and founded *burhs* at Colchester, Maldon and Witham. In 991 the battle of Maldon took place between the Saxons of Essex and an invading Viking force. It was during this period that the great estates were sub-divided into manorial holdings. Sub-division also took place in ecclesiastical organisation with the building of proprietary chapels close to the manorial holding. The manors of the Domesday Book, many with their own parish churches have their origins in this period. The landscape of Essex and distribution of roads and settlement by the 10<sup>th</sup> century was substantially similar to that of the 18<sup>th</sup> century (Bennet, Gilman & Medleycott 2011).

The Domesday Book records that in 1086 the site was located within Fobbing, a large wealthy manor under the lordship of Count Eustace of Boulogne. At that time it comprised 76 households worth £36. The previous Overlord in 1066 had been King Edward the Confessor with a man named Brictrmer (son of Queneva) acting as the local lord (Powell-Smith 2020).

### **Medieval (AD 1066 - 1539)**

The typical settlement type of the manorial hall and accompanying church were already features within the Essex landscape with the pattern continuing into the medieval period. By the medieval period the main elements of the Essex landscape were in place, including most of the settlements, main routes, and manors. The Normans then added castles as the focus of large territorial lands and seats of power for the new overlords. Throughout the 11<sup>th</sup> and 12<sup>th</sup> centuries new towns were established either as additions to existing castles or as wholly commercial ventures. Towns such as Chelmsford and Braintree were founded during the late 12<sup>th</sup> century by the Bishop of London to exploit his manor's locations at important communications cross-roads (Bennet, Gilman & Medleycott 2011).

Trading and seaborne transport flourished both within the Greater Thames estuary and the wider county. Medieval settlements, manorial sites and church/hall complexes throughout the region were sited to give access to the intricate network of creeks and estuaries of the Greater Thames. These developments are often linked to the estates of religious establishments; both Christchurch, Canterbury and St. Pauls, London, held extensive lands around the Greater Thames, but secular lords also played a significant role (Williams & Brown 1999).

Within the Study Area the Essex HER contains twenty-five records attributed to the medieval period. Five of these records refer to both the Church of St Michael in Fobbing (MEX10310007) and All Saints Church at Vange (MEX1033086; MEX1002144; MEX1033093; MEX1033088); both of which are over 800m to the west and north of the Site boundary respectively.

There are seven records for upstanding 14<sup>th</sup> and 15<sup>th</sup> century buildings within the Study Area (MEX1010780; MEX1010681; 1010637; MEX1010633; MEX1010632; and MEX28904 and MEX1010779). The closest of these buildings to the proposed development are Fobbing Hall (MEX101077), Fishers Cottage (MEX1010633) and The Old Rectory or Pell House (MEX28904). All of which are over 600m to the west of the Site. Excavations



have been undertaken on a number of medieval farmstead sites. These usually originated in the 12th century, a period of population growth and expansion, and were abandoned in the 14th century. This may reflect a series of economic and social disasters, including the Black Death, poor weather with resulting widespread crop failure and famine. The excavated farms are those that failed, the ones that survived this period are largely still occupied and continue to populate the contemporary landscape of fields and farms (Bennet, Gilman & Medleycott 2011).

The HER contains two records for medieval pottery found during excavations at Corringham Station in 1970 (MEX23467 and MEX23470) whilst a pit containing medieval pottery and detritus was found during archaeological monitoring of housing development plots at Hurst Builders Merchants in Fobbing in 2004 (MEX1040100). Marsh Lane to the west of the Site is recorded by the HER as a medieval sunken lane (MEX1032378) and a coin hoard (MEX1044131) was recovered in 2003 just 56m to the south of Marsh Lane.

To the east of the proposed development the Essex HER records two D-shaped ditched enclosures at Vange (MEX1039740 and MEX1039741) and a raised platform (MEX1039742) over 160m from the Site. The HER also records the site of Nazewick (MEX27230) and associated ridge and furrow (MEX1032232). The HER suggests this placename may first have been recorded in 1419 as 'Nass(e)wik' or marsh. A site visit carried out in 1995 identified earthworks possibly for a house platform. This platform is located approximately 524m to the east of the Site boundary. The site of Fobbing House (MEX23471) is located approximately 210m to the south of the Site boundary.

The remaining two medieval records are for historic marsh grazing areas to the east (MEX1042109) and south (MEX1042108) of the Site boundary. The better and lighter soils were largely used for crop cultivation, with the greens and commons serving as pasturage. The valley bottoms of rivers and streams were often managed as meadow pasture, for hay cultivation, with stock being placed on them once the hay crop had been cut. They were often drained by a system of closely-spaced parallel ditches set at right-angles to the river. The meadows are largely a feature of northern and western Essex, with the notable exception of those along the Mar Dyke in Thurrock. The coastal marshes supported extensive flocks of sheep as well as shell-fisheries (Bennet, Gilman & Medleycott 2011).

### **Post-medieval (AD 1540- 1799)**

During the post-medieval period the Reformation saw major changes to society and its built environment with the closure of the monastic sites and the building of large mansions in their places by the newly rich owners.

Throughout the 17<sup>th</sup> and 18<sup>th</sup> century landscape changes included the extensive drainage and embankment of the marshes around Canvey Island to the east of the Study Area. The island was created by Dutch engineering expertise and a second phase of land reclamation took place in the 19<sup>th</sup> century which was characterised using straight reclamation ditches. Although by the late 18<sup>th</sup> century the cloth industry was in decline in Essex, the agricultural industry began to boom particularly in wheat and barley. This was primarily fuelled by ever increasing demand from London (Bennet, Gilman & Medleycott 2011).

Historic England records twenty Grade I, II\* and Grade II Listed Buildings within the Study Area. These listed buildings are also recorded by the Essex HER and all are upstanding buildings. The majority are located within the village of Fobbing over 600m to the west of the Site boundary. Two exceptions are the Grade II Listed Church of All Saints (List Entry: 1122235) over 800m to the north of the development and the Grade II Listed Five Bells public house (List Entry: 1338411) which is over 900m to the north of the Site.

The Essex HER records forty-eight post-medieval heritage assets within the Study Area. There is one post-medieval, non-designated heritage assets within the Site boundary. This the medieval to post-medieval Marsh Lane (MEX10332378). A wide range of sites are represented in the HER data, especially buildings such as industrial sites of former brickworks, churches, manor houses and farm complexes. Other post-medieval sites include oyster beds and areas of ridge and furrow, maritime archaeology in the form of wharfs and sea walls, and a range of findspots.

The closest post-medieval heritage assets to the Site boundary are a drainage system at Vange Wick (MEX1039744); and an area of ridge and furrow (MEX1039743); a findspot of a post-medieval finger ring (MEX1045871) and a wharf which once belonged to Great Ilford Farm (MEX1037603). This wharf is located approximately 100m to the south of the Site boundary.

### **19<sup>th</sup> Century and Modern (AD 1800- Present)**

Throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries further development and urbanisation became widespread in the county. This urban expansion took place over two phases; one being the 'plotland phenomena' whereby agricultural land was sub-divided and sold off as do-it-yourself housing parcels during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. The new town of Basildon to the north of the Study Area was built to regularise these plotland settlements. The

second phase came during the 1960s as a result of overspill from London with large housing estates built on the edges of market towns (Bennet, Gilman & Medleycott 2011).

The Essex HER records a late 19<sup>th</sup> century reservoir at Vange approximately 640m to the north-west of the Site which was built by the Southend Waterworks Company (MEX1035359). Brickfields (MEX1032229) are located 500m to the north of the Site and an explosives factory built in 1894 (MEX40053) is located over 970m to the west of the Site.

The outbreak of World War II and the threat of invasion left a lasting impact on the landscape of Essex. Multiple lines of anti-tank defences, strong points around towns and villages consisting of gun emplacements, road barriers, minefields and anti-aircraft gun sites were constructed throughout the county. The National Heritage List and the Essex HER include a total of fourteen records for anti-invasion defences throughout the Study Area.

Most significant is a World War II bombing decoy which has been designated as a Scheduled Monument (National Heritage List Entry: 1020489/ MEX31870). This designated heritage asset is located approximately 170m to the south of the Site boundary. The monument lies in Fobbing Marshes on the north bank of the Thames and consists of two elements. These are the night shelter and the oil storage bay. Approximately 17m to the west of the night shelter, on heavy concrete foundations, are four parallel walls each 7m long by 1.3m high, aligned east-west. With railway sleepers formerly bridging the gaps, these walls are thought to have functioned as six storage bays for the drums of oil necessary for the operation of the site (<https://historicengland.org.uk/listing/the-list/list-entry/1020489>).

Within the Study Area the Essex HER holds records for six defensive pillboxes (MEX31875; MEX31874; MEX1034954; MEX1034956; MEX1034955; MEX31862), two anti-glider ditches (MEX40066 and MEX40093), a heavy anti-aircraft gun site at Marsh Farm (MEX40048) and the sites of a demolished turret and gun position (MEX31864) and road barrier (MEX31863). The Essex HER also records a Cold War anti-aircraft operations room (MEX1039355) within the Study Area.

These defensive heritage assets are located primarily to the east and north of the proposed development. None are located within the Site boundary. The closest are anti-glider ditches MEX40066 and MEX40093 which are both located over 50m to the east of the Site Boundary.

### **Historic Map Data**

The earliest available historic mapping data consulted was the Fobbing Parish tithe map from 1838 which showed that the landscape at that time consisted of small fields of pasture and likely water meadow, each separated by a network of small creeks or drains across the Fobbing marshes. This likely reflects a pattern of land use that has been present since at least the post medieval or medieval period. At that time the current Field 1 was made up of five smaller fields, Field 2 appears to be unchanged however Field 3 was made up of 3 smaller fields as was Field 4. All these fields at that time were owned and occupied by Mr George Spitty. Field 5 comprised six smaller fields all owned and occupied by Mr George Curtis on the eastern part of the field with the western part owned by George Spitty and Mr Henry Charles Long. Fields 6 and 7 comprised numerous smaller fields owned by both Mr George Curtis and Mrs Jane Baker and 8 was owned by Mr Henry Antony Long. Fields 9 and 10 were both owned and occupied by Mr George Spitty. The tithe map also shows the farmstead of Whitehall to the west of the Site which at that time was owned by Mr George Spitty. The farmstead of Naze Wick (MEX27230) is shown on the Vange parish tithe map and was owned by the Governors of Norwich Hospital (The Genealogist 2020). Within the Site boundary are likely to be large numbers of former field boundaries which have since vanished.

The earliest available Ordnance Survey (OS) mapping data consulted was the 1846-1899 County Series map for Essex which showed the landscape remained unchanged from the earlier tithe map. The field boundaries remained unchanged with a large number of small creeks present throughout the marshes. A series of dykes are shown on mapping from 1898 which follow the course of the creek along the eastern border of the Site.

Historic mapping data from 1903 to 1969 shows that there were no significant changes to the roads or field boundaries within the immediate landscape of the proposed development. The farmstead of Naze Wick is shown to be still present in the landscape up until the 1938 OS map where it has disappeared from the landscape.

The first significant change to the landscape can be seen with the recognition of the current field boundaries seen in historic mapping from the 1976 to 1996. This was likely a result of further draining which reduced the number of small drains and creeks seen in the earlier maps of the landscape.

### ***Aerial photographs***

Available online aerial photographs from the 1940s to the present day show that the landscape within and around the proposed development was largely open fields at that time. Aerial photographs from the 1940s onwards clearly show the bombing decoy Scheduled Monument to the south of the Site and the recorded redhill (MEX1042332) can be seen in aerial photographs from 2004 to the present day as a reddish spread within Field 5. No other archaeological anomalies are visible (Getmapping 2020; NCAP 2020; Google Earth 2020).

### ***Lidar***

Available LiDAR evidence does not show any obvious features of archaeological origin however there does appear to be a slight mound in the vicinity of a recorded redhill (MEX1042332) within Field 5. Areas of ridge and furrow are shown outside the eastern boundary of the proposed development. The World War II bombing decoy scheduled monument is also clearly shown to the south of the Site, although no other oil lines or ditches associated with this monument are visible.

## **4.2 Assessment of heritage significance**

### ***Known heritage assets within the site boundary***

Historic England, the Essex Historic Environment Record (HER) and South Essex District Council record no World Heritage Sites, Scheduled Ancient Monuments, Grade I, II\* or II Listed Buildings, Conservation Areas, Designate Wrecks, Designated Battlefields or Registered Parks and Gardens within the site boundary.

It is considered there is a high likelihood for later prehistoric archaeological remains to be discovered within Field 5. A likely Iron Age or Romano-British redhill, possibly within a larger enclosure (MEX1042332) is recorded within Field 5 which can be seen on aerial photographs. As noted above, redhills are low irregular mounds or spreads of red material made up of briquetage, charcoal flecks and occasional sherds of pottery. These features are characteristic of salt production throughout Essex, providing evidence of a locations past industrial activity. Excavations carried out at Stanford Wharf Nature Reserve revealed several redhills with associated ditches, gullies, pits and hearths. The recorded redhill in Field 5 is of medium archaeological value.

Sunken lanes or 'Holloways' are medieval or post-medieval roads or routeways used by people and animals over several centuries. Their name derives from their appearance below the general ground level of the surrounding landscape. They are of local importance. Marsh Lane (MEX1032378) is currently in use as a public right of way making up part of the Thames Estuary Path.

### ***Archaeological potential of the Study Area***

The Essex HER records evidence of prehistoric, Romano-British, medieval and post-medieval settlement within the Outer Study Area.

It is considered that there is a medium likelihood for previously unknown archaeological remains from the early prehistoric period to be present within the Site boundary. Mesolithic and Neolithic flint scatters have been found at Corringham and Fobbing to the west of the Site boundary during excavations in 1970 and a possible Henge monument (MEX23631) to the west of the Site. Bronze Age artefacts have also been recorded from Vange to the north of the Site.

The evidence from the HER and documentary sources suggest the likelihood for the site to contain buried archaeological deposits and artefacts associated with the medieval and post-medieval periods is low. However, the HER data indicates that the Site is located away from the medieval settlement foci of Fobbing, Vange and Corringham and has been used as marsh grazing since at least the medieval period. It is considered likely that any buried medieval archaeological remains will largely consist of dispersed pottery fragments, land divisions and other evidence of agricultural activity of low archaeological value.

Based on the archaeological evidence it is considered there is an overall low to medium potential for buried archaeological remains to be present within the Site boundary with localised high potential within Field 5.

### ***Designated Heritage Assets in the Study area***

Historic England, the Essex Historic Environment Record (HER) and South Essex District Council record no World Heritage Sites, Registered Parks and Gardens, Battlefields, Conservation Areas, or Designated Wrecks within the Study Area.

### *Scheduled Monuments*

There is one Scheduled Monument recorded in the Outer Study Area. This is a World War II bombing decoy in Fobbing Marshes (National Heritage List Entry: 1020489/ MEX31870). This designated heritage asset is located approximately 170m to the south of the Site boundary. The monument lies in Fobbing Marshes on the north bank of the Thames and occupies two areas of protection. These are the night shelter and the oil storage bay.

The monument primarily derives its significance from its rare survival following its decommissioning after World War II. Many bombing decoy sites were demolished and built over following the end of hostilities. The survival of major components of the World War II bombing decoy documented in wartime records as 'Shell Haven, Fobbing' is of great importance to the study of bombing decoy design. The Oil QF decoy is one of an original deployment of only two such sites in Essex (the other being 'Thames Haven, Stanford-le-Hope') whose purpose was to simulate the results of a successful night-time bombing raid on an oil refinery. Beset by development problems and expensive oil usage, only twelve Oil QFs were constructed throughout Britain. The Fobbing night shelter is a good example of this rare type of structure, and the survival of associated storage bays adds to the overall importance of the site (<https://historicengland.org.uk/listing/the-list/list-entry/1020489>).

The main impacts of the development are visual impacts on the monument looking west towards the Grade I Listed Church of St Michael. However, the monument's significance does not derive from its views to the church but rather its historic function as a bombing decoy. Views from this designated heritage asset towards the proposed development are blocked by existing vegetation and two man-made sea walls approximately 2m high separating the monument from the proposed development (Plate 5). The monument was constructed during World War II and so post-dates the construction of the sea wall. It is considered that these views do not contribute to the monument's significance as a historic bombing decoy. There are no third point views of the proposed development and the Scheduled Monument.

There will be no physical impact to this monument and it is considered there will be no harm to the contribution that its setting makes to its significance.

### *Listed Buildings*

There are twenty Listed Buildings within the study area. One of these is the Grade I Listed Church of St Michael (1146807) located in Fobbing. There are two Grade II\* Listed Buildings; Copeland House (1337112) in Fobbing and the Church of All Saints (1122235) in Vange.

The Grade I Listed Church of St Michael (1146807) in Fobbing derives its significance from its architectural history and prominent location overlooking the Thames marshes (National Heritage List 2020). The church was built in the 11<sup>th</sup> century with extensive alterations throughout the 14<sup>th</sup> and 15<sup>th</sup> centuries (Plate 9).

The majority of the proposed solar farm is located to the east and north-east of the church building. Views from the church towards the Site are obscured by existing farm buildings associated with Curtis Farm, existing overhead electricity lines and local topography (Plates 10 and 11). It is considered that the majority of the proposed solar farm at its southern extent will not be seen from the churchyard and the northern parts of the scheme will be blocked by existing topography and existing farm buildings.

Prominent third point views from a public right of way along the sea wall bordering the southern edge of the Site were also assessed following the Site visit (Plates 7 and 8). Views from the sea wall show that the village of Fobbing and the Church of St Michael occupy a ridge along the western extent of Fobbing Marshes. The church is a prominent landmark on the skyline, however views from the sea wall are not pristine due to the intruding presence of two prominent lines of high voltage overhead electricity lines which cross the viewers sightline. Additionally, existing vegetation in the form of tree lines and extensive hedgerows effectively break up views across the marshes and obscure much of the church from the sea wall.

It is considered that the development will not result in further obstruction of views towards the church from the sea walls and will not result in any harm to the significance of the Grade I Listed Building.

The remaining seventeen are Grade II Listed Buildings. The closest of these Grade II Listed buildings to the Site is Fobbing Hall (1147899) which is located approximately 600m to the south-east of the Site boundary in Fobbing.

These buildings derive significance from the architectural and historic interest of their fabric as examples of post-medieval vernacular buildings. They are generally experienced in close proximity but the farmhouses also derive significance from their village location which formed their historic landholdings. The wider rural surroundings make a lesser contribution to the significance of the other listed dwellings.

Table 5: Listed Buildings included in the assessment

List Entry no.	Name	Grid ref.
1337092	WEATHERBOARDED GRANARY AT CURTIS'S FARM	TQ 71733 83980
1338411	THE FIVE BELL INN	TQ 70942 86533
1111594	THATCHED AND WEATHERBOARD CART LODGE AT FISHER'S COTTAGE	TQ7163284362
1337110	FISHER'S COTTAGE	TQ7163784347
1111593	THATCHED AND WEATHERBOARDED BARN AT FISHER'S COTTAGE	TQ7162684368
1337111	THATCHED AND WEATHERBOARDED GRANARY AT FISHER'S COTTAGE	TQ7161284357
1146837	WHEELERS HOUSE	TQ7169884146
1111595	1 AND 2 PAYNES COTTAGES	TQ7168083992
1111579	1 AND 2, LION HILL	TQ7162283888
1111597	1 AND 2 CHURCH VIEW COTTAGES	TQ7178083844
1146807	CHURCH OF ST MICHAEL	TQ 71801 83898
1308790	1 AND 2 CURTIS COTTAGES	TQ7172183963
1337119	1 AND 3 SHIP COTTAGES	TQ7196983799
1337112	COPELAND HOUSE	TQ7167684152
1122235	CHURCH OF ALL SAINTS	TQ7150386723
1111542	HILLCREST COTTAGES	TQ 71826 83844
1111578	WHITE LION PUBLIC HOUSE	TQ 71652 83939
1111596	PROSBUS HALL	TQ 71728 83927
1111636	PELL HOUSE	TQ 71789 83946
1147899	FOBBING HALL	TQ 71986 83830

## 5 PREDICTED EFFECTS OF THE DEVELOPMENT

The available archaeological, documentary and cartographic data suggests that the site has a generally low potential for archaeological remains from the early prehistoric, medieval and post-medieval, 19<sup>th</sup> Century and modern periods. However, it is considered there is a high potential for late Iron Age or Romano-British industrial archaeological remains within Field 5. This potential is primarily based on a recorded Iron Age redhill by the Essex HER and which is visible as a red coloured spread on aerial photographs.

The main ground impacts from the proposed development will be groundworks for the construction of the new solar farm, ground anchors, battery storage, access tracks, construction compound and grid connections. These ground works are likely to comprise ground anchors for the panels and cable runs between the rows to the battery storage and grid connections as well as topsoil stripping for the battery storage area. It is considered that these limited impacts will amount to less than 4% of the total site. Borehole recorded a peat layer 6.88m below ground level in the southern part of the proposed development. It is currently unknown what depth the solar panel mounts will be installed to; however it is considered they will unlikely be deeper than 1.6m and so unlikely to impact any significant palaeo-environmental or geo-archaeological remains.

No harm is predicted to the significance of the Bombing Decoy Scheduled Monument, the Grade I Listed Church of St Michael or any other designated heritage assets within the study area. A detailed setting assessment will be presented in the ES chapter.

## 6 CONCLUSIONS

The Essex HER records evidence of Mesolithic, Iron Age, Roman and medieval settlements within the wider 1km Study Area. There is evidence of Late Iron Age or Romano-British salt-making recorded within Field 5 of the proposed development and a Medieval/post-medieval Holloway.

The proposed development is to build a new 49.9 MW solar farm with battery storage capacity and underground grid connections. It is considered that groundworks for the construction of the new solar farm and battery storage facility, new access roads, temporary compounds, new utility trenches and landscaping will truncate or remove any previously unknown archaeological remains to be present within the footprint of these works. It is estimated that these limited impacts will amount to less than 4% of the total site.

The significance of the impacts on the known and potential archaeological remains is not considered (by Headland Archaeology consultants) to be sufficient to prevent development of the site for use as a solar farm.

It is possible that the local planning authority will request additional surveys to inform determination of the application, such as a geophysical survey or evaluation trial trenching. Such investigations would characterise the nature and extent of archaeological remains at the site and can be targeted at areas of development impact. This would be consistent with the provisions of NPPF (specifically paragraph 189). Alternatively, further investigations could be made a condition of consent, to inform mitigation works (if appropriate) in light of the results of investigations (NPPF paragraph 199).

No harm is predicted to the significance of any of the designated heritage assets in the wider 1km study area through change within their settings. This includes the Bombing Decoy scheduled monument and the Grade I Listed Church of St Michael.

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### **Historic maps**

1840 Fobbing Parish Tithe Map

### **Ordnance Survey Maps**

OS County Series: Essex 1:10,560 (1846-1899)

OS County Series: Essex 1:10,560 (1888-1914)

OS County Series: Essex 1:10,560 (1903-1950)

OS County Series: Essex 1:10,560 (1922-1969)

OS plan 1:10,560 (1958-1996)

OS Plan 1:10,000 (1969-1996)

OS Plan 1:10,000 (1973-1996)

## 8 APPENDIX 1: CULTURAL HERITAGE ASSETS WITHIN THE STUDY AREA

Table 1: Gazetteer of undesignated heritage assets within the study area

PRN No.	Description	Easting	Northing
MEX23186	Bronze Age celt found at Merrick's Marsh, Vange. NGR approximate.	572733	186592
MEX23190	Bronze Age founders hoard dated 1000-750 BC.	572000	187000
MEX1039731	D-shaped mound at Great Grass Marsh	572446	186125
MEX23463	Late Saxon pottery was found here in 1970 and is in Thurrock Museum.	571650	183750
MEX1010627	C11 and later church.	571800	183898
MEX28902	Nave built in the C11, possibly before the conquest.	571831	183903
MEX23469	Mes-Ne? flints.	571561	183755
MEX23193	Iron Age sherds from Vange - not plotted	572000	187000
MEX23205	Roman coin found near Vange.	572000	187000
MEX1042332	Soilmark of a possible redhill of probable late Iron Age - Roman date	572714	185274
MEX27230	Site of Nazewick.	573252	184902
MEX23470	Med. pottery. In Thurrock Museum.	571561	183755
MEX23467	Medieval pottery found here in 1970, in Thurrock Museum.	571561	183755
MEX1040100	Archaeological monitoring of housing development plots.	571734	183886
MEX1033093	Findings of circumstantial evidence	571485	186693
MEX1033086	Description of Church.	571485	186693
MEX1032232	Medieval ridge and furrow.	572924	184876
MEX1031007	Nave built C11 poss pre conquest.	571800	183899
MEX1010780	C15 or earlier timber framed house.	571975	183799
MEX1010681	Late C14/early C15 timber framed house.	571653	183938
MEX1010637	Late C14 timber framed house with very rare A-frame construction and later alterations.	571676	184152
MEX1010632	C15 wealden house.	571699	184143
MEX1010633	C15 timber framed hall house.	571637	184347
MEX1002144	C12 church, remodelled in C15.	571503	186723
MEX28904	Of 2 storeys with attics, partly refaced with modern brickwork.	571803	183952
MEX23471	Site of Fobbing Manor? House demolished c.WWII for decoy bombing site (see 10328).	572976	183984
MEX1042109	An area of historic grazing marsh located to the north east of Fobbing and west of Vange Creek. The marsh includes a combination of well preserved relict marsh, and agriculturally 'improved' areas. There are significant earthwork remains, including	572914	185591
MEX1042108	One of the largest areas of historic grazing marsh in Essex, located to the south and east of the village of Corringham and historic fishing port of Fobbing, with a complex and largely intact historic environment. The marsh includes a significant centra	572683	183563
MEX1039741	D-shaped ditched enclosure at Vange Wick	573029	185600
MEX1039742	Raised platform, possibly indicating a building, at Vange Wick	573059	185590
MEX1039740	D-shaped ditched enclosure at Vange Wick	573067	185795
MEX1033088	Description and findings of the church	571485	186693
MEX1032378	Sunken road	572155	184723
MEX1010779	C16 timber framed house.	571987	183829
MEX1044131	A Portable Antiquities Scheme findspot of Medieval to Unknown date.	572100	184600
MEX23680	Mesolithic flints in Thurrock Museum.	571700	183760
MEX23636	Flint microlith with retouch found in bank beside road.	571500	183800
MEX23450	Mesolithic site found here in 1970, near the old light railway terminus, approx 900 ft from the marshes, on light orange clay in a terrace-stream valley.	571561	183755
MEX1039355	Cold War AAOR	571930	186490
MEX1034955	An FW3/24 brick and concrete pillbox looks out SW across Timberman's Creek and Vange Creek.	573480	186060
MEX1034956	A brick and concrete, hexagonal Type FW3/24, thin-walled pillbox.	573480	186320
MEX1034954	A rectangular pillbox with a blast wall.	573700	185840
MEX40093	WW2 Anti aircraft ditches.	572985	184707
MEX40066	WWII anti glider ditches.	572709	186049
MEX40048	WWII HAA Gun Site.	571867	186628

MEX31874	High on a dyke overlooking Fobbing Creek on its E side, is an 11'6" square pillbox.	573690	184870
MEX31875	An aerial photograph, probably taken in 1946, shows the clear shape of a pillbox standing on the sea wall overlooking Holehaven Creek.	574030	184290
MEX31865	Contemporary records state, "Observation post.	571800	183900
MEX31870	A WWII bombing decoy.	572964	184003
MEX31863	Contemporary records state: "Concrete pimples.	571680	184150
MEX31864	Contemporary records state, "Turret and Gun position.	571650	183960
MEX31862	A brick and concrete, hexagonal Type FW3/22 (see source 1) pillbox stands on a footpath on the N edge of Fobbing.	571610	184180
MEX23458	Neolithic flints found here.	571561	183755
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MEX1040768	Boundaries of several smaller post-medieval fields.	573175	185738
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MEX1039739	Ridge-and-Furrow cultivation marks at Vange Wick	573045	185740
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MEX1037743	Post-medieval sea-wall on Vange Wharf Marsh	572808	186680
MEX1037744	Post-medieval track leading to structure on saltings, Vange Wharf Marsh	572775	186710
MEX1037611	Possible 17th century sea-wall	573299	185687
MEX1037741	Post-medieval farmstead	572500	186957
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MEX1010635	C17 timber framed granary.	571612	184357
MEX1010630	C18 timber framed granary.	571731	183980
MEX1010631	Late C18 timber framed barn.	571750	184000
MEX1010628	Late C17 house.	571788	183946
MEX1010629	C18 house in plastered brick.	571721	183964
MEX1010617	C18 pair of timber framed houses.	571470	183874
MEX1002145	Early C18 timber framed building.	570942	186532
MEX40036	Two single lines of probable oyster pits cut into the saltmarsh on the west of Pitsea County Park.	573287	186203
MEX40045	Line of probable oyster pits cut into saltmarsh on the corner of the south bank of Parting Gut.	573737	185116
MEX27232	Nazewick (site of).	573252	184902
MEX1039737	Ridge-and-Furrow cultivation marks at Vange Wick	572954	185993
MEX1039733	Ridge-and-Furrow marks at Vange Wick	572407	186297
MEX1037603	Post-medieval wharf belonging to Great Ilford Farm	572952	184082
MEX1032228	The Fobbing Brickfields were east of St. Michaels Church and north east of Fobbing Hall.	572109	183998
MEX1032229	Late C19/early C20 brick fields.	572003	186574
MEX1031008	Late in the 15th century the SW tower was destroyed and the existing West Tower built.	571799	183899

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MEX23250	Bronze coin of Gratian found c400 yds south east of the farm in 1957.	572794	186827
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MEX23473	Fobbing House Sheep bank - earthwork.	574083	184533
MEX1039749	Linear earthworks at Vange Wick	573202	185190
MEX1039734	Sub-rectangular basin at Vange Wick that may have been modified	572371	186264
MEX1039736		572702	186159
MEX1039732	Sub-rectangular mound at Vange Wick Marsh	572462	186257
MEX1037493	Landing Point	572030	183790
MEX40058	Circular extract feature at corner of modern church boundary, Vange Church..	571485	186693
MEX23186	Bronze Age celt found at Merrick's Marsh, Vange. NGR approximate.	572733	186592
MEX23190	Bronze Age founders hoard dated 1000-750 BC.	572000	187000
MEX1039731	D-shaped mound at Great Grass Marsh	572446	186125
MEX23463	Late Saxon pottery was found here in 1970 and is in Thurrock Museum.	571650	183750
MEX1010627	C11 and later church.	571800	183898
MEX28902	Nave built in the C11, possibly before the conquest.	571831	183903
MEX23469	Mes-Ne? flints.	571561	183755
MEX23193	Iron Age sherds from Vange - not plotted	572000	187000
MEX23205	Roman coin found near Vange.	572000	187000
MEX1042332	Soilmark of a possible redhill of probable late Iron Age - Roman date	572714	185274
MEX27230	Site of Nazewick.	573252	184902
MEX23470	Med. pottery. In Thurrock Museum.	571561	183755
MEX23467	Medieval pottery found here in 1970, in Thurrock Museum.	571561	183755
MEX1040100	Archaeological monitoring of housing development plots.	571734	183886
MEX1033093	Findings of circumstantial evidence	571485	186693
MEX1033086	Description of Church.	571485	186693
MEX1032232	Medieval ridge and furrow.	572924	184876
MEX1031007	Nave built C11 poss pre conquest.	571800	183899
MEX1010780	C15 or earlier timber framed house.	571975	183799
MEX1010681	Late C14/early C15 timber framed house.	571653	183938
MEX1010637	Late C14 timber framed house with very rare A-frame construction and later alterations.	571676	184152
MEX1010632	C15 wealden house.	571699	184143
MEX1010633	C15 timber framed hall house.	571637	184347
MEX1002144	C12 church, remodelled in C15.	571503	186723
MEX28904	Of 2 storeys with attics, partly refaced with modern brickwork.	571803	183952
MEX23471	Site of Fobbing Manor? House demolished c.WWII for decoy bombing site (see 10328).	572976	183984
MEX1042109	An area of historic grazing marsh located to the north east of Fobbing and west of	572914	185591
	Vange Creek. The marsh includes a combination of well preserved relict marsh, and agriculturally 'improved' areas. There are significant earthwork remains, including		
MEX1042108	One of the largest areas of historic grazing marsh in Essex, located to the south and	572683	183563
	east of the village of Corringham and historic fishing port of Fobbing, with a complex and largely intact historic environment. The marsh includes a significant centra		
MEX1039741	D-shaped ditched enclosure at Vange Wick	573029	185600
MEX1039742	Raised platform, possibly indicating a building, at Vange Wick	573059	185590
MEX1039740	D-shaped ditched enclosure at Vange Wick	573067	185795
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MEX40048	WWII HAA Gun Site.	571867	186628
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MEX28472	GHQ Line Anti-Tank Ditch	563941	212496
MEX1037611	Sea-wall, Vange Wick marsh	573299	185687
MEX1037743	Sea-wall, Vange	572808	186680
MEX1037607	Corringham Light Railway	572881	182645
MEX1037609	Sea-wall, Vange Marsh North	573132	187114
MEX1032378	Marsh Lane, Fobbing	572155	184723
MEX1034098	Coryton to Mucking, Mobil Power Cogeneration Gas Pipeline Project.	570978	182189



## 9 APPENDIX 2: PHOTOGRAPHS



Plate 1: View looking east along Marsh Lane (MEX1032378)





Plate 2: View looking north across the development area from Marsh Lane (MEX1032378).



Plate 3: View looking west across the Site towards Fobbing Village.





Plate 4: View looking west across the Site towards Fobbing Village from Fobbing Marshes.



Plate 5: View looking south towards the World War II Bombing Decoy Scheduled Monument (1020489) from the southern sea wall.





Plate 6: View looking west from the sea wall towards the Grade I Listed Church of St Michael (1146807).



Plate 7: View from the sea wall looking west towards the Grade I Listed Church of St Michael (1146807).





Plate 9: The Grade I Listed Church of St Michael (1146807).



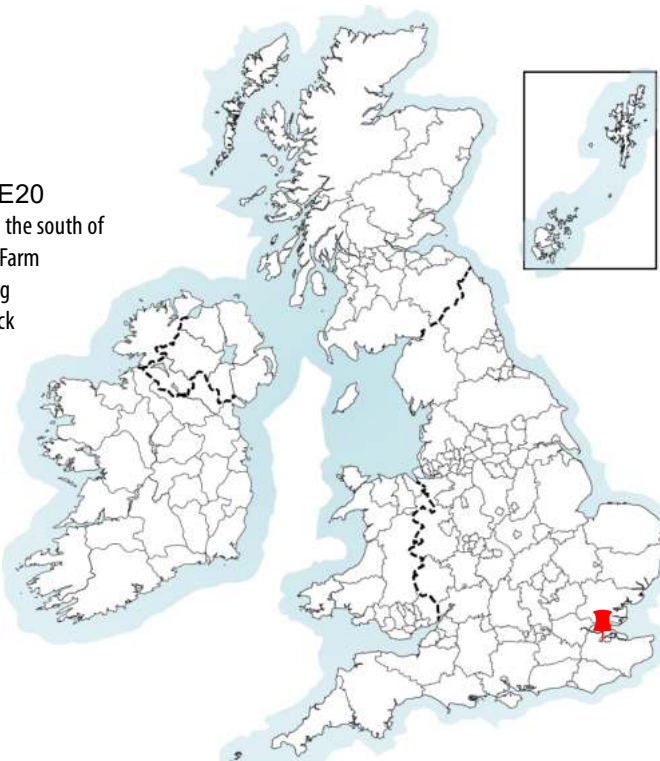
Plate 10: View from the Church of St Michael looking south-east.





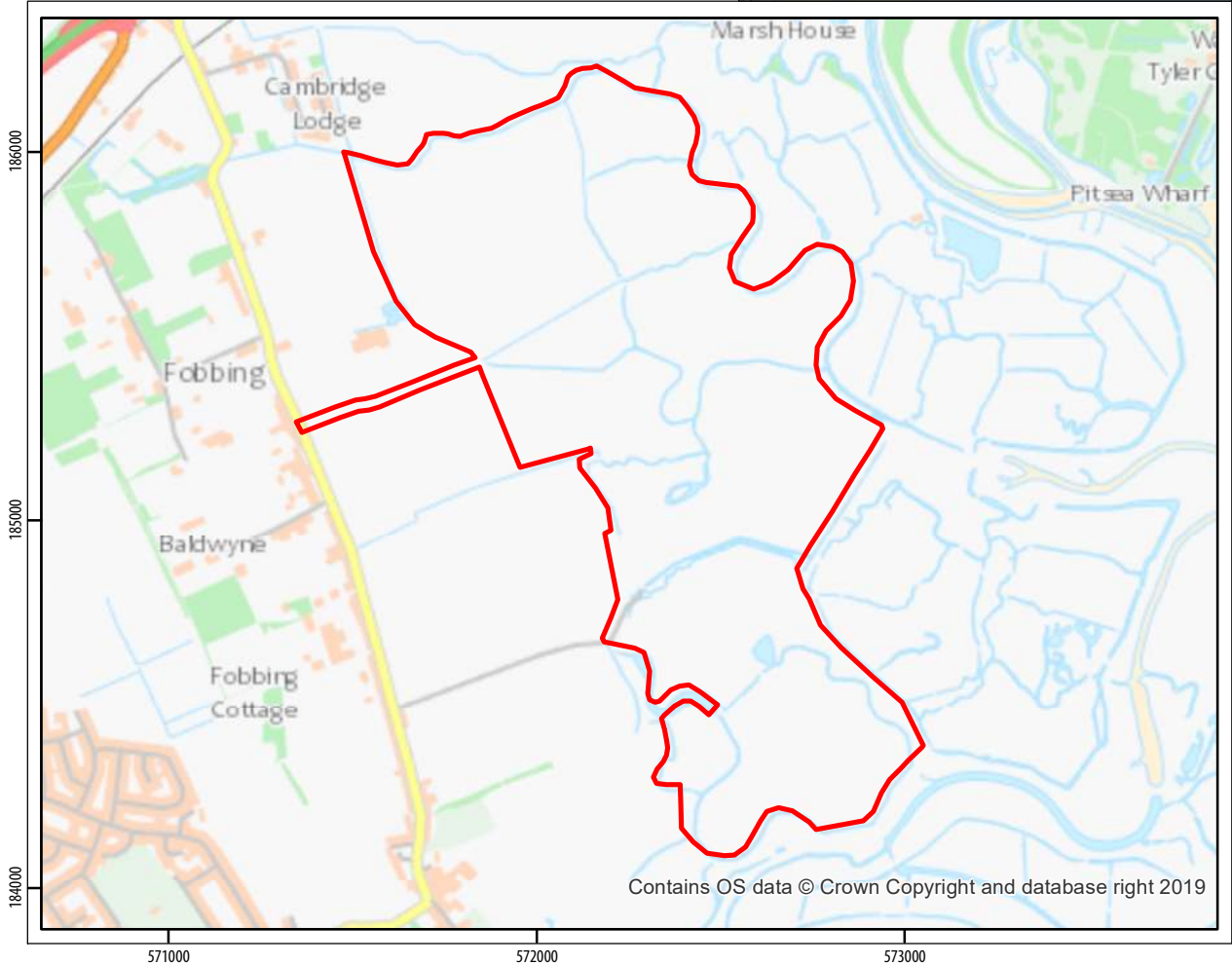
Plate 11: View looking east from the Church of St Michael looking towards the development area.

RSFE20  
land to the south of  
Marsh Farm  
Fobbing  
Thurrock

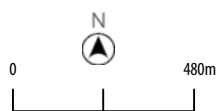


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Copyright and database right  
2019



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1:20,000 @A4

KEY  
 application site  
 Battlefield

**HEADLAND**  
**ARCHAEOLOGY**

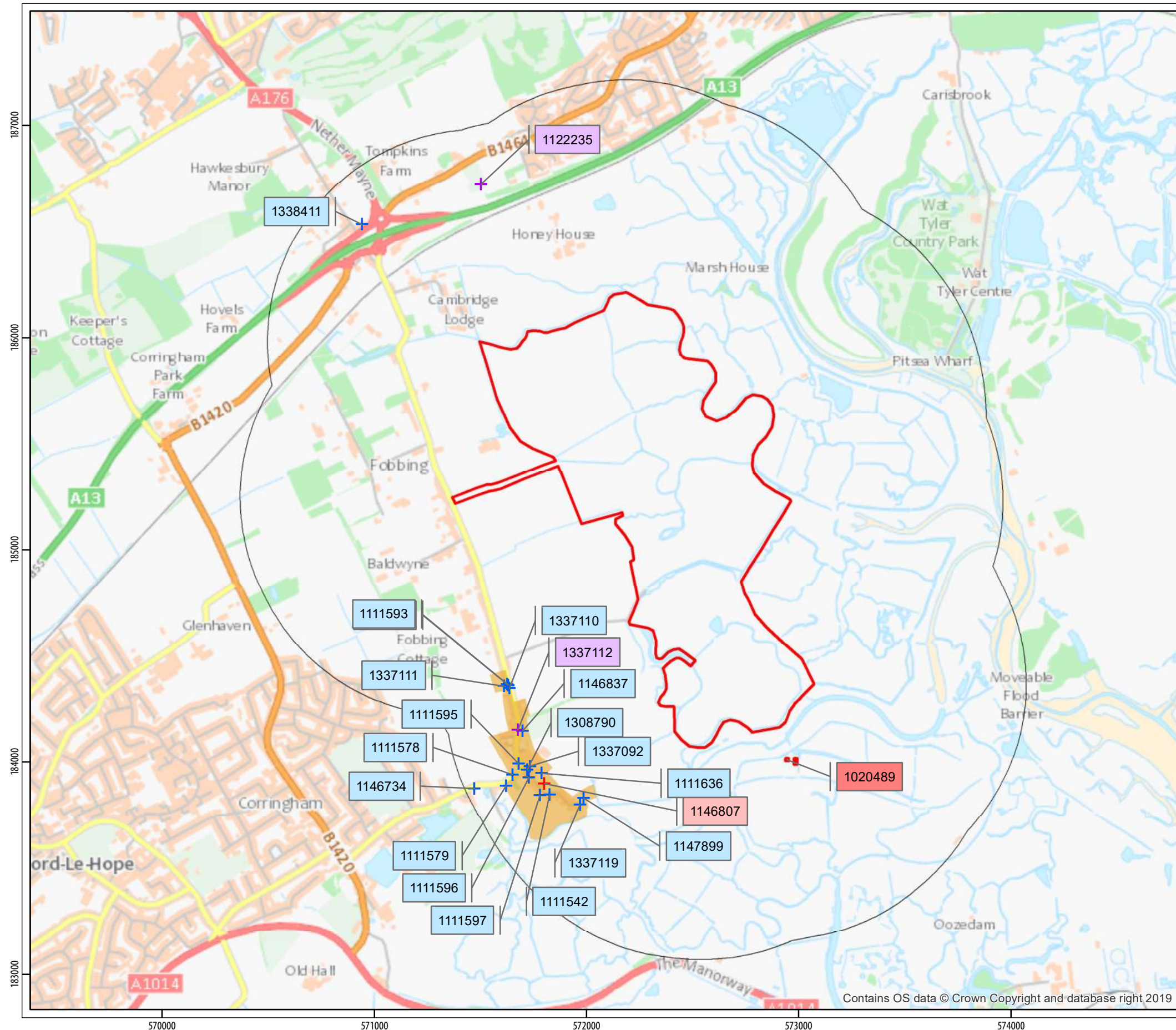
MIDLANDS & WEST

Unit 1 Clearview Court  
Twyford Road  
Hereford HR2 6JR  
01432 364901

[www.headlandarchaeology.com](http://www.headlandarchaeology.com)

Figure 1: Site Location



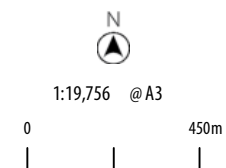


KEY

- + Grade I Listed Building
- + Grade II\* Listed Building
- + Grade II Listed Building
- Conservation Area
- 1km study area
- application site
- Scheduled Monument

Historic Environment Record information derived from Essex County Council data dated 5th May 2020  
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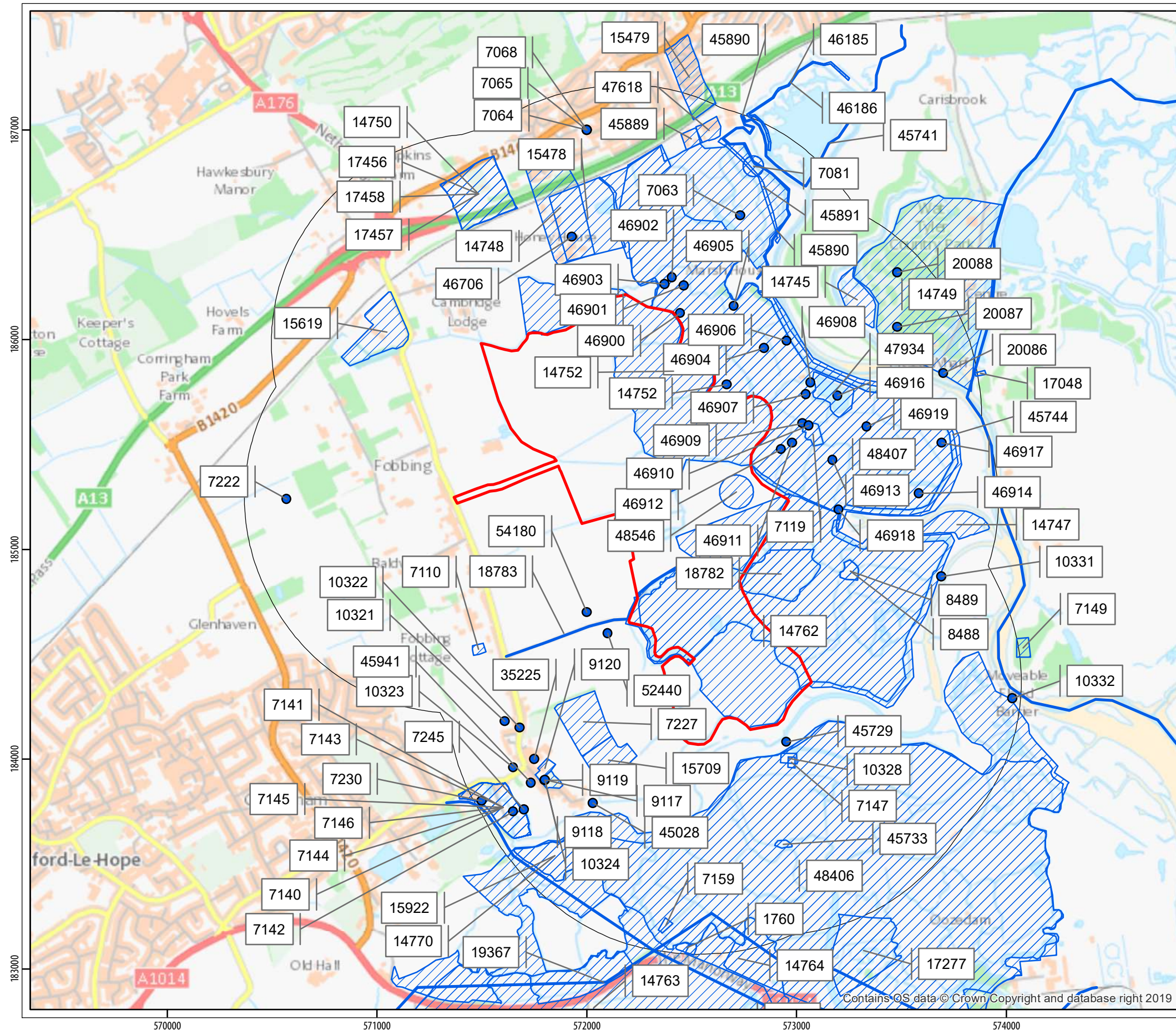
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Figure 2: Designated heritage assets within 1km of the site



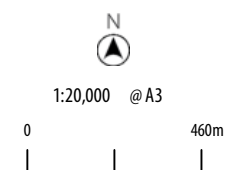


KEY

- ▭ application site
- Non-designated heritage asset
- Non-designated heritage asset
- ▨ Non-designated heritage asset
- 1km study area

Historic Environment Record information derived from Essex County Council data dated 5th May 2020  
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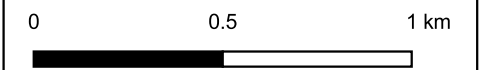
Contains OS data © Crown Copyright and database right 2019

Figure 3: Non-designated heritage assets within 1km of the site



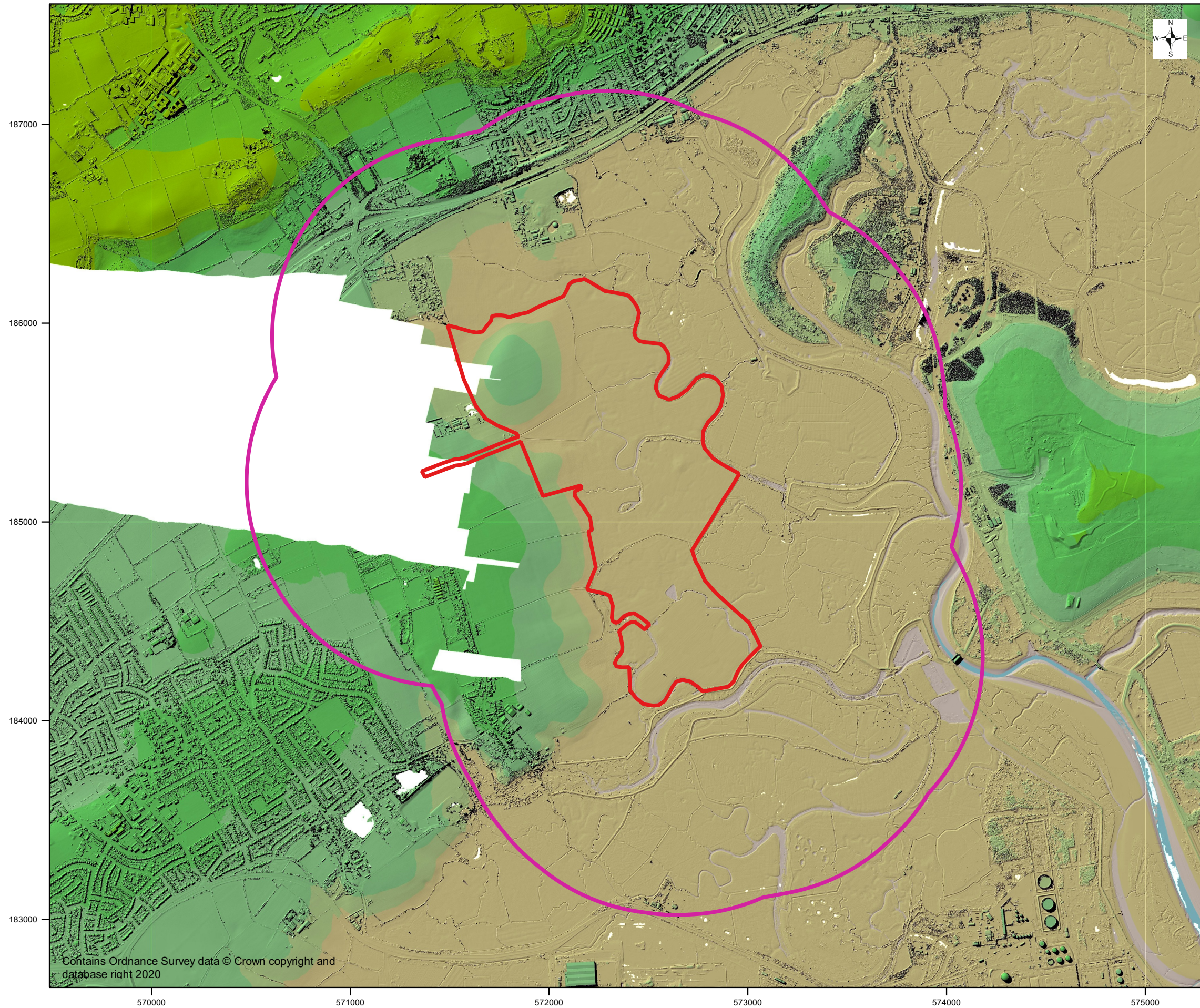
**Key**

-  Study Area
-  Site Boundary

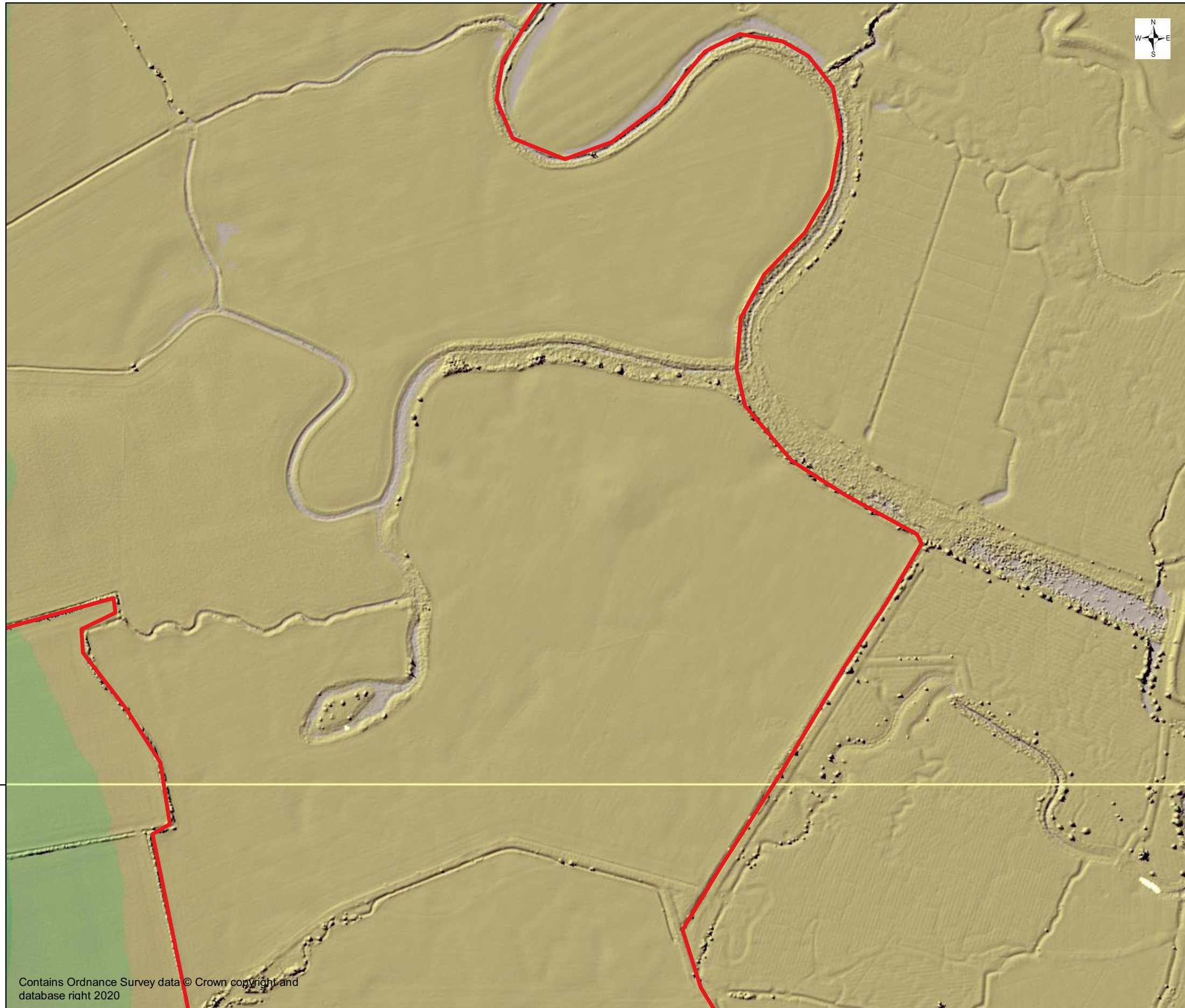


Rayleigh Solar Park



**Figure 4: Location of the Site on LiDAR image**

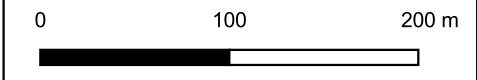






**Key**

-  Study Area
-  Site Boundary



Rayleigh Solar Park

**Figure 5: Detail of LiDAR showing redhill mound**