

Assessment of Settings

Thurrock Scheduled Ancient Monuments

July 2019

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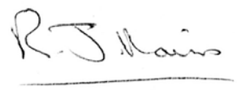
Approver	Richard Havis		11/07/2019

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1. Introduction

The assessment has been undertaken in accordance with the guidelines set out in the National Planning Policy Framework (2019) and the Historic England guidance on The Setting of Heritage Assets Historic Environment Good Practice Advice Note in Planning: 3.

The report makes use of a number of sources, including the Essex Historic Environment Record (EHER) and Historic England's data on designated historic environment assets. For the purposes of this study the following table defines the periods as defined by the EHER:

Prehistoric	
Palaeolithic	900,000 - 12,000 BC
Mesolithic	12,000 - 4,000 BC
Neolithic	4,000 - 1,800 BC
Bronze Age	1,800 - 700 BC
Iron Age	700 - AD 43
Historic	
Roman	AD 43 - 410
Anglo Saxon/ Early Medieval	AD 410 - 1066
Medieval	AD 1066 - 1536
Post Medieval	AD 1536 - 1900
Modern	AD 1900 – Present

1.1 USE OF THE REPORT

This report was undertaken in order to provide a detailed assessment of the significance of the setting of the Scheduled Monuments of Thurrock in response to the developing Thurrock Local Plan, which includes both housing as well as commercial development along the Thames. The report provides a description of the monuments and their setting thus providing a report on all of the Scheduled nationally important sites across Thurrock to be identified in order to support the Local Plan and decision-making within the Planning Process. The monument types range from the large and imposing, as is the case with Tilbury and Coalhouse Fort, to below-ground archaeological remains which have a less visual presence in the landscape. They all however have a setting that is integral to their significance and for understanding the monument.

Site visits were undertaken to all of the monuments with photographs taken of each from accessible viewpoints (numbered view symbols on the figures). However not all of the site areas or their environs were publically accessible, further view-point symbols (not numbered) have therefore been added to the plans where important views are identified based on the desk based assessment only.

The report is designed to be used by planners to understand the nature of the scheduled monument and their importance. The viewpoints are designed to show the potential setting of the monument and where it can be appreciated from. This information can be used, along with the advice from the Historic Environment advisors to guide where development can be achieved without causing significant harm to the monument. However any development proposal that impacts the setting of a Scheduled Monument should be accompanied by an impact assessment appropriate to the scale and nature of that development, including visualisations of the potential impact.

Similarly developers in close proximity to Scheduled Monuments should consider the potential for enhancement of both the monument themselves or their setting. Historic England provides a pre-application service where the impact on Scheduled Monuments, or the potential for the enhancement of monuments can be discussed.

Where applicants are proposing developments which impact the scheduled monuments it is advisable to consult both Historic England and the Local Authority historic environment advisors at the earliest opportunity.

2. Assessing signifance & setting

An assessment of significance explains what matters, why and to whom. It includes a description of those features that matter and an appraisal of why they are important. This provides the essential information needed to determine the type of management a site requires in order to sustain and enhance its significance.
The NPPF defines significance (for heritage policy) 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 (NPPF 2019 glossary).
Understanding the significance of the Scheduled Monument and the heritage interests that contribute to them, is fundamental to the planning process, and is vital when considering approaches to management interventions, since it may not be possible to sustain all the values equally. The NPPF identifies four types of heritage interest:-

- Historic interest
- Architectural interest
- Archaeological interest
- Artistic interest

The National Planning Policy Framework (NPPF 2019) defines that the setting of a heritage asset is the surroundings in which it is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. 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 (NPPF glossary).
Historic England has provided advice on The Setting of Heritage Assets, Historic Environment Good Practice Advice in Planning: 3. The advice note includes a '(non-exhaustive) check-list of potential attributes of a setting that may help to elucidate its contribution to significance'. As the advice note states, 'only a limited selection of the attributes listed is likely to be particularly important in terms of any single asset.'
The contribution of setting to the significance of a heritage asset is often expressed by reference to views, a purely visual impression of an asset or place which can be static or dynamic, including a variety of views of, across, or including that asset, and views of the surroundings from or through the asset, and may intersect with, and incorporate the settings of numerous heritage assets.
In order to reduce repetition, the assessment of the settings of the identified heritage assets will be considered together where appropriate. Those attributes listed by Historic England's advice note on setting that are pertinent to the significance of the heritage assets have been considered as part of this study. However, the assessments are quite broad brush in nature; in the event of a specific planning application further assessment would be required from the applicant in order to establish the potential impacts of any specific development on the setting of the heritage asset.
Significant views have been identified by this study. There are however numerous other views that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so these should not be considered as a definitive list and the impact of individual planning proposals on the setting of the Scheduled Monument will need to be considered on a case by case basis.

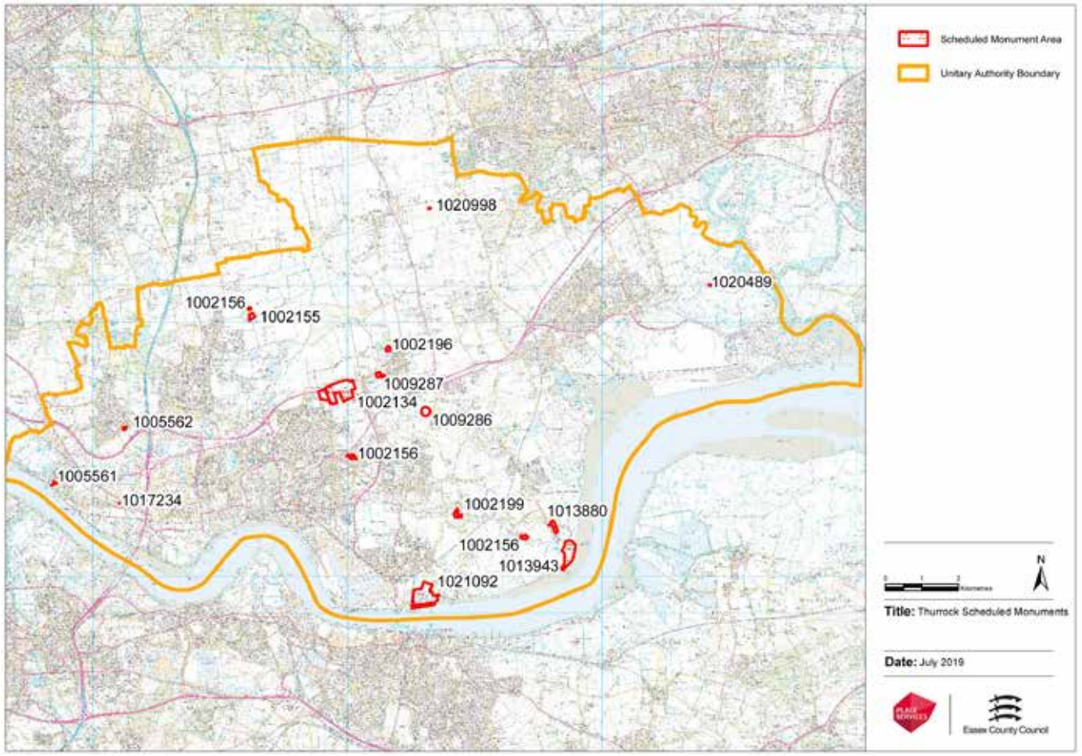
2. Assessing signifance & setting

There are 17 Scheduled Monuments in Thurrock, ranging in date from the Neolithic Causewayed Enclosure at Orsett to the World War II Bombing Decoys. They are distributed across the Thurrock landscape, from the higher ground to the north down to the coastal marshes. Some have been subsumed within more recent development, whilst others remain isolated within their original setting. All are of national importance, either because they are particularly intact examples of their type of monument or because they are a rare survival of that monument form. All significantly contribute to the understanding and enjoyment of the archaeology and history of Thurrock and provide an important and tangible link with the past. This report assesses how the role of the setting of the individual monuments contributes to its significance.

The Essex Historic Environment Record, which contains information on all known archaeological sites (whether designated or undesignated) within the Thurrock Unitary Authority can be accessed via the Heritage Gateway website

(https://www.heritagegateway.org.uk/gateway/).

Figure 1: Distribution of Scheduled Monuments in Thurrock



3. Scheduled Monuments

3.1	(SM1002196)	BISHOP BONNER'S PALACE
3.2	(SM1002196)	BULPHAN WORLD WAR II BOMBING DECOY
3.3	(SM1009286)	CAUSEWAYED ENCLOSURE AND ANGLO-SAXON CEMETERY 500M EAST-NORTHEAST OF HEATH PLACE
3.4	(SM1013943)	COALHOUSE FORT BATTERY AND ARTILLERY DEFENCES
3.5	(SM1002134)	CROPMARK COMPLEX, ORSETT
3.6	(SM1002156)	DENE HOLES IN HANGMAN'S WOOD
3.7	(SM1017234)	DOVECOTE AT HIGH HOUSE, PURFLEET
3.8	(SM1002199)	EARTHWORKS NEAR CHURCH, WEST TILBURY
3.9	(SM1013880)	EAST TILBURY BATTERY
3.10	(SM1002155)	GATEHOUSE AND MOAT OF SOUTH OCKENDEN OLD HALL
3.11	(SM1005561)	PURFLEET MAGAZINE
3.12	(SM1002156)	ROMAN BARROW 260M NE OF SOUTH OCKENDEN HALL
3.13	(SM 1002156)	SECOND WORLD WAR ANTI-AIRCRAFT BATTERY AT BOWATERS FARM
3.14	(SM1005562)	SITE OF MOATED MANOR HOUSE EAST OF ST MICHAEL'S CHURCH, AVELEY
3.15	(SM1009287)	SPRINGFIELD STYLE ENCLOSURE AND IRON AGE ENCLOSURES SOUTH OF HILL HOUSE, BAKER STREET
3.16	(SM1021092)	TILBURY FORT
3.17	(SM1020489)	WORLD WAR II BOMBING DECOY ON FOBBING MARSHES, 1.11KM AND 1.15KM NORTH WEST OF OOZEBARN

3.1 BISHOP BONNER'S PLACE (SM1002196)

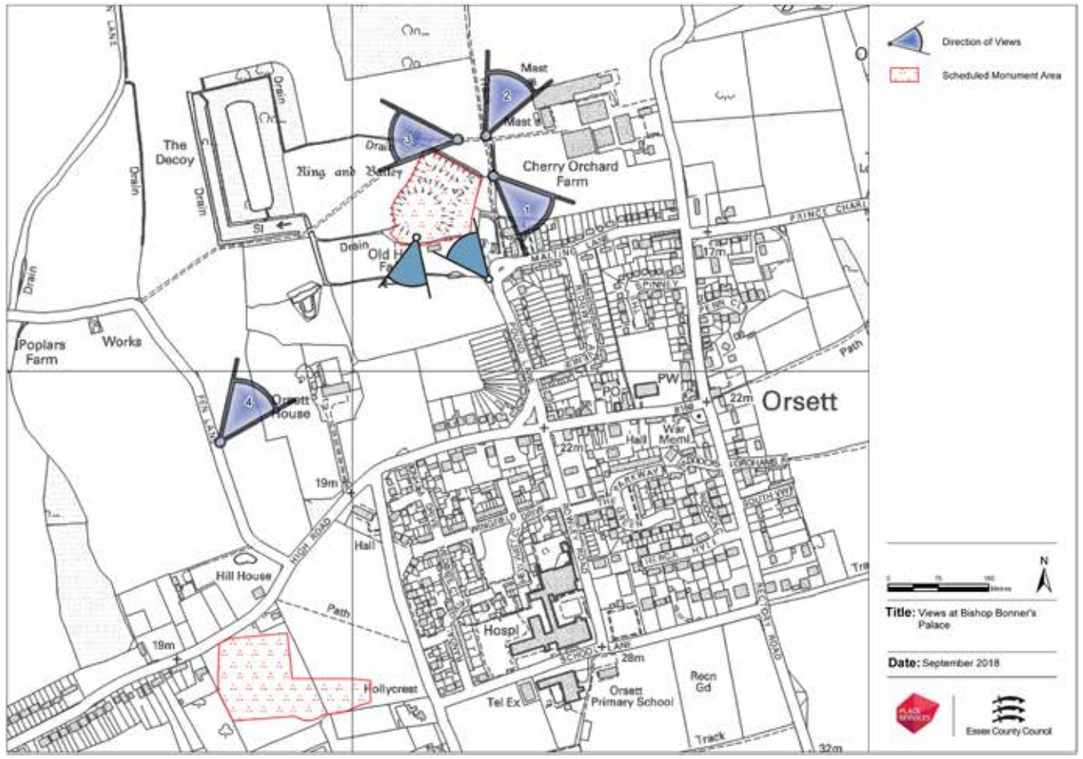


Figure 2: Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)



(Left) Figure 3 Aerial view of Bishop Bonner's Palace looking southwards, the ringwork is clearly visible, with the bailey located under the trees beside it. In the top-left of the photo is Orsett Church, Old Hall Farm is located immediately above the earthwork and The Decoy in the bottom-right of the photo.

3.1.1 Location and topography

Bishop Bonner's Palace (centred TQ 641822) comprises a ring and bailey earthwork located some 400m to the north-west of the centre of the historic settlement of Orsett. It is sited on a gentle slope, between the 10-15m contours. To the south the ground rises gently to Orsett village (OD 22m). The site is located on head deposits, overlaying London Clay.

3.1.2 Description

Bishop Bonner's Palace Scheduled Monument is a medieval ring and bailey earthwork (EHER 1855). It comprises a circular enclosure (200ft internal diameter), surrounded by a ditch c. 50ft wide. To the north is an oblong bailey enclosed by a well-defined ditch, on the northern side of which defences are strengthened by a second ditch. The work is said to be the site of a palace of the Bishops of London, who held the vill of Orsett from the late Saxon period onwards. The only building remains consist of a fragment of rubble foundation on the north-west side of the ringwork. In a wood, 200yds to the west, is a large oblong fish pond, known as The Decoy, which is linked to the ringwork by a network of drainage channels. It is not Scheduled, but appears to have formed part of the overall complex.

3.1.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.1.3.1 Archaeological interest

The monument comprises a medieval ring and bailey earthwork. The site has surviving earthworks, and it can be presumed that below-ground survival of archaeological features is correspondingly good. The built structures that would have been present only survive as a fragment of rubble foundation, the superstructure is thought to have been built of timber and no trace of this survives. Waterlogged deposits can be expected to be localised in nature, being confined to deeper features such as wells and very deep pits. The soil-type of head deposits and the underlying geology of London Clay are conducive to the preservation of bone and shell and man-made artefacts. There has been little archaeological study of the Scheduled site.

The significance of the site is, however, not confined to the Scheduled area; there are further earthworks in the form of a rectangular fish-pond located to the west, which is linked by a complex of drainage ditches to the Scheduled Monument. There are numerous cropmarks to the south of the Scheduled Monument, demonstrating a densely and continuously settled landscape from the Neolithic period onwards. It is probable that this activity extended into the immediate area of the monument.

3.1.3.2 Historic interest

Bishop Bonner's Palace, Orsett is of national importance archaeologically and historically as evidenced by its Scheduled Monument designation. The site is one of only eleven ring-works recorded in Essex and one of eight Bishop's Palaces recorded for the county. Ringworks are medieval fortifications built and occupied from the late Anglo-Saxon period to the later 12th century. They comprised a small defended area containing buildings which was surrounded or partly surrounded by a substantial ditch and a bank surmounted by a timber palisade or, rarely, a stone wall. Occasionally a more lightly defended embanked enclosure, the bailey, adjoined the ringwork. Ringworks acted as strongholds for military operations and in some cases as defended aristocratic or manorial settlements, as appears to have been the case at Orsett. They are rare nationally with only 200 recorded examples and less than 60 with baileys. As such, and as one of a limited number and very restricted range of Anglo-Saxon and Norman fortifications, ringworks are of particular significance to our understanding of the period.

The historical links between Essex and the



View 1: Looking from north-east corner of Bishop Bonner's Palace looking south-east along footpath to historic Orsett, the church tower is visible above the roofs of the houses



View 2: Looking from north-east corner of Bishop Bonner's Palace looking northwards across open countryside, this view can be seen in reverse from Conway's Road looking back towards the Palace

Bishopric of London date to the original conversion of Essex to Christianity in the seventh century, with St Paul's being the original Cathedral for the region. The place-name link to Bishop Bonner refers to Edmund Bonner, Bishop of London during the reign of Queen Mary I.

3.1.4 Contribution of the setting to the heritage assets significance

3.1.4.1 Topography

Bishop Bonner's Palace is sited on a gentle slope, between the 10-15m contours. There are wide views in all directions. To the north it overlooks the former Orsett Fen, now drained and farmed. To the south the ground rises gently to Orsett village (OD 22m). The site is located on head deposits, overlaying London Clay. To the east the land rises gently to a high point at Horndon-on-the-Hill. The topography makes a major positive contribution to the setting of the heritage asset.

3.1.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

There are numerous heritage assets within the immediate area of the Scheduled Monument. Old Hall Farm appears to be the successor to The Palace, it comprises a Grade II Listed 15th or early 16th century jettied farmhouse The Decoy to the immediate west of the site comprises further earthworks in the form of a rectangular fish-pond which is linked by a complex of drainage ditches to the Scheduled Monument. Also contemporaneous with the site and associated with it, either economically or socially, is the 12th century Church of St Giles and All Saints, and the historic settlement of Orsett, which contains a significant group of Listed Buildings ranging in date from the 15th to the 19th centuries. These make a major positive contribution to the setting of the heritage asset.

There is considerable evidence in the form of extensive cropmark complexes, including three groups which have been Scheduled, to the south of the site on the gravel ridge. These demonstrate that the immediate area had been a densely and continuously settled landscape from the Neolithic period onwards. These make a minor-moderate positive contribution to the setting of the heritage asset.

Later monuments include a Cold War Nuclear Listening Post and the Orsett Union Workhouse. These make a minor positive contribution to the setting of the heritage asset.

3.1.4.3 Land use, greenspace, trees and vegetation

The site is partially down to lawn and partially under rather scrubby woodland. There has been recent planting of standard willows to the north-west, beside the avenue to Cherry Orchard Farm and the grass is mown to form a park-like aspect. To the north and east there is open farmland and the barns, etc. associated with Cherry Orchard Farm. To the south is the house and gardens of Old Hall Farm and beyond them the settlement of Orsett. These together make a major positive contribution to the setting of the monument

3.1.3.4 Functional relationships and communications

The primary functional relationship is with Old Hall Farm and the complex of water management features associated with that site and the adjoining Decoy. There is also a clear functional relationship with the historic settlement of Orsett and its 12th century Church. There is also a link to the wider agricultural landscape of fields, footpaths and farms. These together make a major positive contribution to the setting of the monument

3.1.4.5 Integrity

The immediate setting of the site is largely unchanged, with the Grade II 15/16th century Old Hall Farm located to the immediate south and the surviving links both to the historic settlement of Orsett and the agricultural landscape. The earthworks that comprise the Scheduled site survive well, as do a complex of associated earthworks and water features. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.



View 3: Looking from north-east corner of Bishop Bonner's Palace looking westwards along the entrance road to Cherry Orchard Farm and the new tree-plantation, views are curtailed by the hedge and the trees around The Decoy



View 4: Looking from Fen Lane looking northeastwards to the trees around the Palace and The Decoy, the house in the middle distance is the II Orsett House*

3.1.4.6 Associative relationships between heritage assets

As discussed above there is a wealth of other heritage assets in the vicinity of the Scheduled site, the contemporaneous features, which includes the historic settlement and church at Orsett makes a major positive contribution to the setting and significance of the heritage assets. The earlier features make a minor to moderate contribution to the setting and significance of the heritage assets.

3.1.4.7 History and degree of change over time

The original setting of Bishop Bonner's Palace is still discernible in the modern landscape. The relationship with Old Hall Farm is still intact. The inter-relationship with the historic settlement and church at Orsett is still present, albeit with the addition of modern housing development between the historic core and the Palace. The wider landscape to the north, east and west are still extensively rural. To the north there are wide views, which are largely uninterrupted by modern intrusions, although there has been some boundary loss.

3.1.5 Experience of the asset

As set out in Historic England's guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.1.5.1 Views from, towards, through, across and including the assets

3.1.6 The rarity of comparable survivals of setting

Ringworks are an early and rare form of medieval fortification. Bishop Bonner's Palace is unusual in that much of its original rural setting remains relatively intact. There has been modern encroachment between it and historic Orsett, but the original links in the form of tracks and roads are still present, as are some of the views.

3.1.7 Future developments and other impacts within the setting of the heritage asset

Lower Thames Crossing: The closest point of the proposed route of the Lower Thames Crossing is located approximately 500m to the north-west of Bishop Bonners Palace. This will have a detrimental impact both visually and aurally on the rural setting to the west and north-west of the heritage asset.

Housing: Known impacts at present comprise potential house allocations to the immediate south of the heritage asset, as well as other planning applications. These could have a detrimental effect on the immediate setting of the monument and how it is understood within the rural landscape.

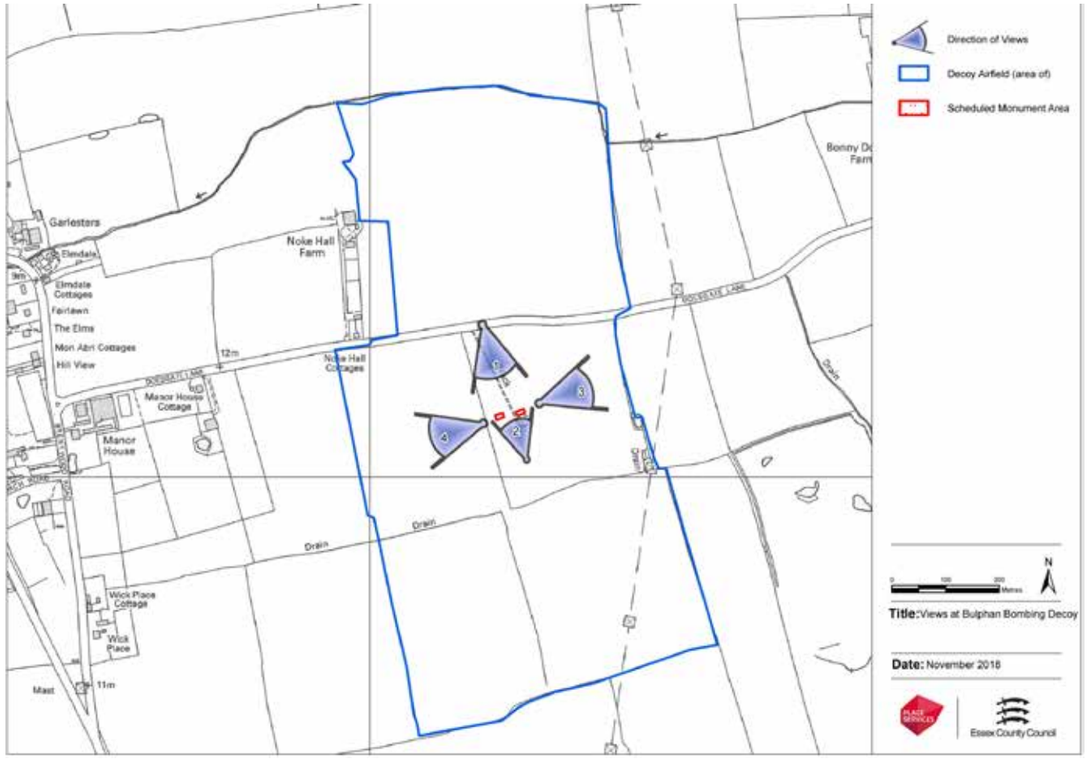
3.1.8 Recommendations

There is a need to consider the impacts of the Lower Thames Crossing, liaison is required between Historic England Highways Agency consultants and the Local Authority to minimize the impact of the road corridor on the setting of the monument.

For any future development including large scale residential schemes the setting of the monument needs to be taken into account, and where the setting cannot be preserved or the impacts appropriately mitigated the allocation should not be approved.

Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site and its immediate vicinity would benefit from a programme of scrub management.

3.2 BULPHAN WORLD WAR II BOMBING DECOY (SM1002196)



(Left) Figure 4: Location plan showing the principal views to and from the monument



(Right) View 1: View looking south across the night-shelters (above-ground in the centre and the top of the below-ground on the right), also showing the modern pylon and the wind sock to the left.

3.2.1 Location and topography

The monument lies on the edge of a west facing hill 1 km east of Bulphan, at about 20m above sea level. The geology is Head deposits over London Clay. The northern edge of the dummy airfield is formed by a tributary of the Mar Dyke. The site is gently undulating.

3.2.2 Description

The monument includes two shelters, in separate areas of protection, designed to control a wartime decoy or `dummy' aerodrome located on the lower slopes of a hillside, 850m and 890m south west of Doesgate Farm. This site is documented in contemporary records from World War II, `Bulphan' was constructed to replicate and thus draw bombing raids away from RAF Hornchurch located about 11km to the west. The decoy was both a `K' site, designed for daytime use, and a night-time `Q' site. During the day the decoy displayed grassed runways, sandbagged defence positions, ammunition dumps and plywood dummy aircraft among their simulations. At night the decoy had electric lighting illuminating two traversing `runways', obstruction/recognition lights and moving `headlamps'. Most of these structures were ephemeral and are no longer present on the site. However, the decoy airfield was controlled from two bunkers, known as night shelters which have both survived and are included in the scheduling.

The first night shelter to be built was constructed below ground level. Of concrete construction it had two entrances, one with steps halfway along the southern face and one taking the form of an escape hatch with vertical steel ladder (the former is now infilled). These gave access to at least two underground rooms. The only part of this shelter visible above-ground is the escape hatch and a steel chimney pipe. This structure was found to be prone to flooding and was replaced by an above-ground night shelter, located to the east, during the course of the war.

The above-ground shelter is constructed of brick rendered with cement and measures 13m long by 6m wide. The design is to a known wartime standard (Type 3395/40) comprising an Engine (or Generator) Room and an Operations Room, but with the addition of a small toilet cubicle just inside the entrance in the southern wall. The easternmost room, the Engine Room, has survived in its original form complete with engine plinth set into the floor. The Operations Room retains the original escape hatch in the roof at its westernmost end. Local residents recall that the decoy airfield at Bulphan was manned by six airmen. The decoy was in use throughout much of the war, being successful on at least one occasion when it drew upon itself the incendiaries and high explosives of a heavy night-time bombing raid intended for nearby RAF Hornchurch.

The monument is largely in good repair, with the above ground shelter currently being used as the club house for a model aeroplane club. The below ground shelter is difficult to access and there was some standing-water on the floor. It is known that there has been some dumping of waste materials into this part of the structure.

3.2.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.2.3.1 Archaeological interest

Apart from the scheduled concrete structures nothing further survives from the bomb decoy itself, largely due to these being ephemeral surface-laid structures, such as grass runways, lines of electrical wires, and movable lighting.

3.2.3.2 Historic interest

'K' sites (also known as Dummy Landing Grounds [Day] or DLG[D]) were intended to replicate RAF satellite airfields, rudimentary landing grounds used as an adjunct to permanent stations for the dispersed operation of aircraft. As such, the decoy consisted of simulated grass runways, simple technical and defensive structures including trenches, dummy aircraft, a windsock, petrol and bomb dumps represented by conspicuous dug-up areas, and a limited range of facilities for the crew manning the decoy. There were ten dummy aircraft allocated to each site, the type reflecting the function of the `parent' station. Forty-two decoys in England are recorded as having a `K' component, located mostly in eastern counties.

The `Q' sites were intended to simulate the



View 2: View looking northwards past the night-shelter to right, showing the long view over the former decoy airfield and beyond to open countryside.



View 3: Looking eastwards across the dummy airfield to the Langdon Hills, which are to the south-west of Basildon.

flare-path lighting of permanent RAF stations as a lure to attack by night bombers and intruder aircraft. The programme lasted until August 1944 during which time the lighting configurations changed periodically to shadow developments on real airfields. Common features of Q sites included the lighting arrangements and a night shelter. The night shelter is generally all that survives. In all, 236 sites with a `Q' component are recorded in England. These are distributed mostly in the east, and in central and southern England. Very little now survives of any of these decoys, most having been cleared after the war. The survival of the two successive Bulphan World War II bombing decoy night shelters provides a lasting reminder to the ingenuity of the home defences employed.

Bulphan is of great significance to the study of the evolution of bombing decoy design. The underground design of the earlier shelter, although affording better protection from bombing raids than the later above-ground design, proved unsuitable for the surrounding geological conditions and was prone to flooding. This was therefore superceded by a replacement night shelter of above-ground earth-covered design which proved more successful, whilst still providing camouflage and protection against bombing raids. The Bulphan shelters provide a graphic illustration of the wartime process of trial and error design, the success of which was a vital component in providing a quick and effective defence against the German airborne offensive.

3.2.4 Contribution of the setting to the heritage assets significance

3.2.4.1 Topography

The immediate setting of the monument is open grassland, on a gently undulating side of a west facing hill. There are long, wide views all around, appropriate for the function of a dummy airfield. This makes a major positive contribution to the setting of the heritage asset.

3.2.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

The site of a medieval moat immediately to the north of Noke Hall Farm is adjacent to the north-west edge of the dummy airfield. Doesgate Farm house to the east is a 17th-century Grade II listed building. North of Doesgate is Lower Dunton Hall, an 18th-century Grade II Listed building. To the west is The Old Plough House, which is a 15th-century, Grade II* hall house, and Garlesters, a 16th-century Grade II house. These features make a minor positive contribution to the setting of the heritage asset.

Contemporary to the historic assets are three rectangular features discovered as cropmarks to the south but still on the dummy airfield. It is unclear what these represent. There is the site of a road block to the west on Doesgate Lane, and to the south-east the site of a bomb crater, and the site of a Heavy Anti-Aircraft gun site. These make a moderate positive contribution to the setting of the heritage asset.

3.2.4.3 Land use, greenspace, trees and vegetation

The immediate area around the heritage asset is grassland. Around this are hedgerows and trees with a rural agricultural landscape beyond. Currently the site is used by a model airplane club, who has a wind sock on the site in the same way as a functioning airfield. These together make a major positive contribution to the setting of the monument. The line of electric pylons running along the west side of the site, makes a minor negative impact on to the setting of the monument

3.2.4.4 Functional relationships and communications

There is an integral relationship with the surrounding landscape and the road which crosses the site. The need to draw enemy fire away from Hornchurch dictated the location of this site in open rural countryside and this is integral to the understanding of the monument. This relationship makes a major positive contribution to the monument.

3.2.4.5 Integrity

The immediate setting of the bombing decoy site remains largely unchanged, with the original extent of the dummy airfield still



View 4: Looking south-west across the dummy airfield.

intact. The site itself comprises two surviving structures, two night-shelters, one above ground and one below ground. The remainder of the elements which made up a decoy site of this nature were largely ephemeral and surface-based. There a line of electric pylons and cables which run along the west side of the site, but this does not impinge on the essentially rural nature of the site. The wider landscape still remains largely rural in nature. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.

3.2.4.6 **Associative relationships between heritage assets**
As discussed above there is a relationship between the Scheduled bombing decoy and the contemporary WWII features. These however no longer survive and therefore these relationships make a reciprocal minor to moderate positive contribution to each other.

3.2.4.7 **History and degree of change over time**
The setting of the Bulphan bombing decoy site has remained relatively unchanged in the 70 years since the end of WWII. The airfield and surrounding agricultural land remain much as they were when the bombing decoy was built to draw bombs away from Hornchurch, although there has been the introduction of electricity pylons crossing the edge of the airfield. The wider backdrop has also changed little, with only a very distant view of the cranes at Mucking Creek indicating modern development.

3.2.5 **Experience of the asset**
As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.2.5.1 **Views from, towards, through, across and including the assets**

3.2.6 **The rarity of comparable survivals of setting**
Very little now survives of any of the decoys which were constructed around London, most having been cleared after the war. The survival of the two successive Bulphan World War II bombing decoy night shelters in their virtually intact setting is very rare indeed.

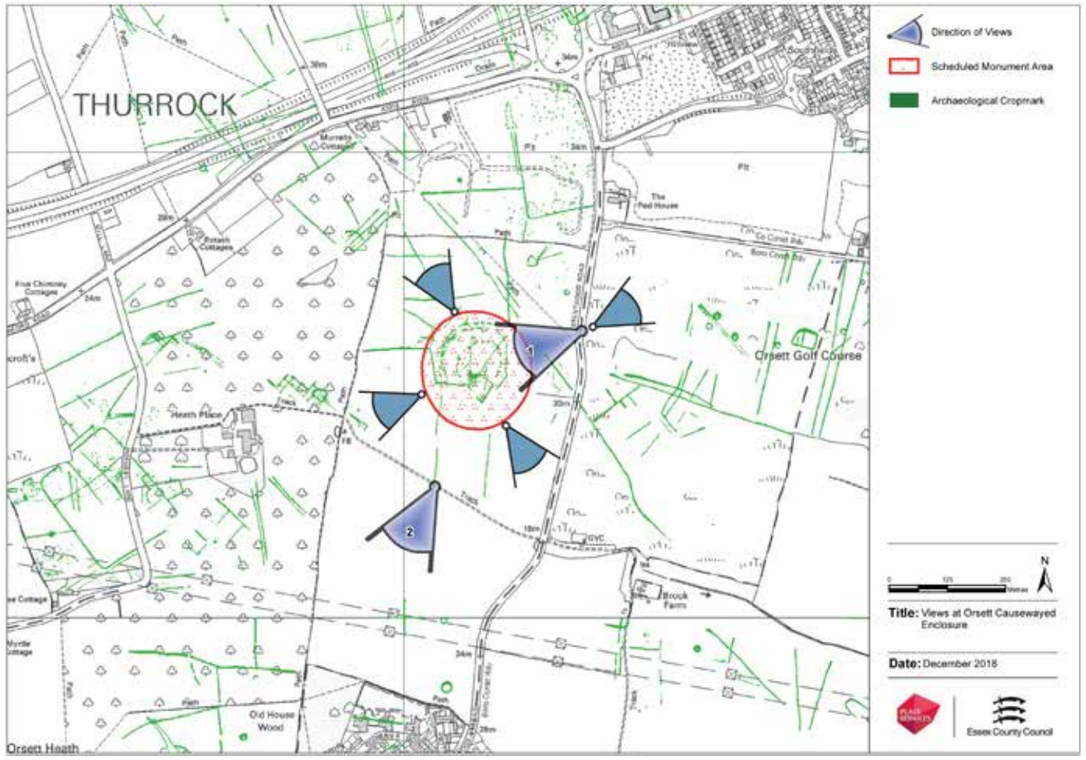
3.2.7 **Future developments and other impacts within the setting of the heritage asset**
Housing: Known impacts at present comprise potential house allocations on the outskirts of Bulphan, which will have a minor detrimental effect on the wider setting of the monument. Other planning applications also have the potential to have a detrimental impact on the setting of the heritage asset.

Parts of the site are deteriorating with water ingress into the asset. These structures were not expected to survive for a long period and as such are deteriorating over time.

3.2.8 **Recommendations**
For any development schemes the setting of the monument needs to be taken into account, and where the setting cannot be preserved or the impacts appropriately mitigated the allocation should not be approved.

Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from a programme of consolidation and restoration.

3.3 CAUSEWAYED ENCLOSURE AND ANGLO-SAXON CEMETERY 500M EAST-NORTHEAST OF HEATH PLACE (SM1009286)



(Left) Figure 5 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)



(Right) View 1: View looking north-west across the heritage asset, showing the arable field and distant hedge line.

3.3.1 Location and topography

The Causeway Enclosure is located 500 metres to the east of Heath Place lying to the south of the A13. The land slopes gently away from the monument towards the south into the valley of a small tributary of the Thames. To the east and west it slopes into smaller dry valleys. The field which contains the site has a hedge along the north edge.

3.3.2 Description

The monument comprises a Neolithic causewayed enclosure, Iron Age settlement and an Anglo-Saxon round barrow cemetery situated on a natural platform on the Thames terraces. Although there are no visible earthworks at ground level the monument survives as buried features which have been identified as cropmarks from aerial photographs. These include three roughly circular concentric interrupted ditches (i.e. they are not continuous but are crossed by causeways at irregular intervals), enclosing an area at least 160m in diameter.

The outer two ditches are 10m apart. A palisade trench lies between the inner and middle ditches. This palisade trench has three breaks in it, coinciding with those in the outer ditches. The inner ditch is between 30m and 40m from the middle ditch and encloses an area measuring between 80m and 95m across.

Other internal features such as postholes and pits can be seen within the enclosed area on aerial photographs. Also visible on aerial photographs, within the southern half of the inner circuit, are at least 5 round barrows represented by ring ditch cropmarks. These are between 8m and 13m in diameter with a circular ditch from 1m-2m wide and up to 0.35m deep.

In 1975 trial trenching and small scale excavation took place in order to verify the interpretation of the monument. Parts of the ditches and palisade slot were excavated which confirmed their Neolithic date. A continuous bank was found to have been originally constructed on the berm between the two outer ditches, the material for which was quarried from the interrupted ditches. The palisade was an additional, contemporary, defensive feature inside the middle ditch. Within the enclosed area various pits and post holes were investigated. A number of the features identified during excavation were shown to be Iron Age in date. A period of Early Iron Age settlement was followed in the Middle Iron Age by an enclosed settlement within a rectilinear ditched enclosure, which lies within the southern part of the monument. In addition, two of the five ring ditches were fully excavated and were found to represent round barrows containing Saxon inhumation burials in wooden coffins.

3.3.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.3.3.1 Archaeological interest

Between 50 and 70 causewayed enclosures are recorded nationally, mainly in southern and eastern England of which only 5 are located in Essex. They were constructed over a period of some 500 years during the middle part of the Neolithic period (c.3000-2400 BC) but also continued in use into later periods. They vary considerably in size (from 2 to 70 acres) and were apparently used for a variety of functions, including settlement, defence, and ceremonial and funerary purposes. However, all comprise a roughly circular to ovoid area bounded by one or more concentric rings of banks and ditches. The ditches, from which the monument class derives its name, were formed of a series of elongated pits punctuated by unexcavated causeways. Causewayed enclosures are amongst the earliest field monuments to survive as recognizable features in the modern landscape and are one of the few known Neolithic monument types. Due to their rarity, their wide diversity of plan, and their considerable age, all causewayed enclosures are considered to be nationally important.

Trial trenching has shown that the causewayed enclosure survives well beneath the plough soil. This investigation has left 90% of the monument undisturbed. These excavations produced significant information concerning the original form and construction of the monument as well as discovering quantities of Neolithic flint tools and pottery sherds. There are only five causewayed enclosures known in Essex and so the information contained within this monument



View 2: View looking south towards Chadwell St Mary, showing the tower block and electric pylons in the distance beyond which lies the Thames.

can give rare insights into the economy of the locality as well as the social and religious life of the people who occupied it. The establishment of an Iron Age settlement site here is also of great interest and indicates that the site had been adapted for a variety of uses throughout its long life.

The construction of an Anglo-Saxon barrow cemetery within the inner circuit of the causewayed enclosure indicates that it was still a significant site for the local population 3,000 years after it was first constructed, potentially still being visible as an earthwork. This group of burials is one of only a small number of known Saxon barrow groups in East Anglia. This cemetery is particularly representative of the middle Anglo-Saxon period (7th - 8th century) and is likely to contain rare evidence for social and burial practices at this date.

3.3.3.2 **Historic interest**

The historic cartographic evidence shows the site of Seaborough Hall located immediately to the south-east of the monument, the Hall was still in existence until the mid-20th century. The place-name derives from the Old English for Seven Barrows, undoubtedly a reference to the adjoining Anglo-Saxon barrow cemetery indicating that the mounds survived into the medieval period at least.

3.3.4 Contribution of the setting to the heritage assets significance

3.3.4.1 **Topography**

The immediate setting of the monument is relatively open agricultural land. It is likely that the original setting of the causewayed enclosure would have been open, without the current field boundaries and roads, which may have originated in the medieval period or perhaps earlier. Its position is just below the summit of the hill with long views towards the River Thames. Most causewayed enclosures on higher ground are centred just off summits so that they have a distinct orientation, perhaps signifying a link with a particular area of lower-lying land. Although some modern development is visible in the distance, the topography makes a major positive contribution to the setting of the heritage asset.

3.3.4.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

The causewayed enclosure lies within an extensive historic landscape identified from cropmark evidence, ranging from prehistoric enclosures/settlements and ring ditches to a Roman enclosure and medieval field systems. Some of these features will be contemporary with the causewayed enclosure, including a possible Neolithic settlement enclosure, and a possible mortuary enclosure. It has been shown in Essex that Bronze Age and Iron Age activity often occurred in close proximity to causewayed enclosures, so the group of potentially Bronze Age round barrows situated to the east of the site may have been placed there because of the Causewayed Enclosure location. Overall the cropmarks indicate that the area of the scheduled monument and a much larger area surrounding it has extensive occupation of multi-period date. Seaborough Hall was situated just to the south-east of the site and it was first mentioned in 1293. The name originated as Seueberghe, meaning seven barrows. These make a major positive contribution to the setting of the heritage asset.

Other heritage assets comprise Heath Place to the south-west, a Listed Grade II house dating from the 18th century, Murrells Cottages to the north, Listed Grade II and dating from the 18th century, and a barn at Barehams Boarding Kennels, Listed Grade II and dating from the 17th century. These make a neutral contribution to the setting of the heritage asset.

3.3.4.3 **Land use, greenspace, trees and vegetation**

The immediate area around the heritage asset is open land. To the north sand is being extracted, to the west and south the land is under arable production, and to the east is a golf course. Hedges bound the field to west, north and east. The view south is over Chadwell St Mary leading towards the River Thames. These make a moderate positive contribution to the setting of the heritage asset.

3.3.4.4 **Functional relationships and communications**

As described above, the heritage asset sits within an extensive historic landscape that has been continuously occupied since prehistoric times. Some of the cropmarks are contemporary with the Causewayed Enclosure, including a possible Neolithic settlement enclosure, and a possible mortuary enclosure. It has been shown in Essex that Bronze Age and Iron Age activity often occurred in close proximity to causewayed enclosures, so the group of potentially Bronze Age round barrows situated to the east of the site and the Iron Age enclosure within the causewayed enclosure may have been placed there because the Causewayed enclosure was there. Similarly the Saxon burial mounds within the scheduled area may have been located in this location due to its historic or religious importance. These make a major positive contribution to the setting of the heritage asset.

On the basis of what has been found at other sites with Saxon burials, it is likely that there would also have been settlement nearby. This has not been identified as yet.

3.3.4.5 **Integrity**

This heritage asset is part of an extensive landscape of cropmarks around Orsett and Mucking. The implication from the density of cropmarks is that the original landscape would have had a dispersed settlement pattern with agricultural fields in between. It would have been a very open landscape with views to



Figure 6 Aerial view of the cropmarks, looking north, the causewayed enclosure is visible in the centre of the photographs as the lighter dashed lines forming two concentric circles. (EX11_04_048 ©ECC)

the Thames. This is still largely the case. The topography immediately round the heritage asset has not changed, although to the north the A13 now crosses the landscape, and the spread of Chadwell St Mary to the south is visible from the site. The position of the site with views to the River Thames still remains. The roads and footpaths in the area probably originated in the medieval period, as they cross cropmarks of earlier periods.
The openness makes a moderate positive contribution to the setting.

3.3.4.6 **Associative relationships between heritage assets**

The heritage asset lies in an area of extensive multi-period cropmarks (see general overview of cropmarks). Within this, other potentially Neolithic heritage assets can be identified, including a settlement enclosure and a mortuary enclosure. The close association of causewayed enclosures with Bronze Age and Iron Age heritage assets is seen here with an Iron Age enclosure within the Neolithic enclosure, which may have already silted up and been less visible in the landscape, along with possible Bronze Age ring ditches sited to the east. There are also other cropmark enclosures in the vicinity that may date to these periods, but are currently undated beyond the identification of probably prehistoric. Overall this scheduled complex is an integrated part of a much larger group of both scheduled and undesignated assets within this area.

These make a major positive contribution to the setting of the heritage asset.

3.3.4.7 **History & degree of change over time**

Although the heritage asset still lies within an agricultural environment, there have been modern developments nearby. The upgraded A13 runs to the north of the heritage asset. Sand and gravel extraction has taken place to the north-east and further east of the heritage asset. Chadwell St Mary is situated to the south and is spreading northwards. This makes a moderate negative contribution to the setting.

3.3.5 **Experience of the asset**

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.3.5.1 **Views from, towards, through, across and including the assets**

3.3.6 **The rarity of comparable survivals of setting**

There are only five causewayed enclosures known in Essex and so the information contained within this monument can give rare insights into the economy of the locality as well as the social and religious life of the people who occupied it. The establishment of an Iron Age settlement site here is also of great interest and indicates that the site had been adapted for a variety of uses throughout its long life. Its surviving setting with the arable land use is thus rare.

The Saxon burials at Orsett were the first in Essex to have the enclosing ring ditches confirmed by excavation. They are smaller than other round barrows but it is extremely difficult to identify a Saxon barrow just from the cropmarks of the ring ditch. Other Saxon burial groups have now been discovered and excavated in the course of development, so the survival of this group within the arable setting is very important.

3.3.7 **Future developments and other impacts within the setting of the heritage asset**

Lower Thames Crossing: The proposed route of the Lower Thames Crossing will run to the south of the heritage asset cutting a development corridor through extensive cropmark complexes known to exist in this area. This will have a major impact both visually and aurally on the setting of the heritage asset.

Housing: Known impacts at present comprise potential house allocations to the south of the heritage asset, as well as other planning applications. These could have a detrimental effect on the immediate setting of the monument and how it is understood within the rural landscape.

Minerals and Waste: The sand quarry to the north of the site has been largely extracted removing any surviving archaeological deposits. Any subsequent development of this area will need to have a mitigation policy in place in order to manage the impact on the setting of the heritage asset.

3.3.8 **Recommendations**

There is a need to mitigate the impacts of the Lower Thames Crossing, liaison is required between Historic England and the Highways Agency consultants to develop an appropriate integrated mitigation strategy to minimize the impact to both the Scheduled Monument and the non-designated assets within the development corridor.

For any development schemes the setting of the monument needs to be taken into account in the allocation or master planning stage, to ensure that the impact on the setting is minimized or if this cannot be achieved development should not proceed. Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from Historic England assessing the overall cropmark complex in the context of the relationship between the scheduled site and the adjacent non designated assets. Consideration should be given to encouraging the land owner to use the Countryside management schemes to take the field out of production to protect the site from ploughing.

3.4 COALHOUSE FORT BATTERY AND ARTILLERY DEFENCES (SM1013943)





(Left) Figure 7 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)

(Right) Figure 8 Aerial view of Coalhouse Fort showing its marshland setting. The East Tilbury battery is located in the small area of woodland beside East Tilbury to the rear of the Fort, whilst the Bowaters farm anti-aircraft battery is in the woodland on the left-hand edge of the photo.

3.4.1 Location and topography

The monument lies in an area of former marshland known as East Tilbury Marshes, at Coalhouse point on the north bank of the River Thames where the Gravesend Reach of the river meets The Lower Hope part of the river. It is a flat, low-lying landscape, averaging only 3m OD. To the immediate north of the SM is a spur of higher ground on which the historic settlement of East Tilbury is sited, this averages 11m OD. The site of Coalhouse Fort is located on tidal-flat deposits. The site forms a defensive triangle across the Thames, with Cliffe Fort and Shornemead Fort in Kent, as well as originally being intervisible with Tilbury Fort to the west.

3.4.2 Description

The monument comprises the Victorian Coalhouse Fort at East Tilbury, with its associated railway link and jetty and its rifle range, as well as the foundations of a Henrician `blockhouse' coastal battery, a late 19th century `Quick-Firer' battery and a low-level radar tower dating from World War II.

The earliest element of this remarkable sequence of Thameside defences is the blockhouse, the construction of which was ordered by Henry VIII in 1539/40. It was built of stone and timber robbed from St Margaret's Chantry nearby. Nothing is visible of the structure itself but the landward ditch survives as a creek, and timber palisading running along the shore in the area may belong to this phase. Beside the blockhouse a jetty was built, perhaps initially to support the blockhouse but later to land coal. After several phases of rebuilding, the jetty served Coalhouse Fort, to which it was joined by a full-gauge railway line which survives almost intact but for the tracks themselves.

The first phase of the fort, begun in 1799, was replaced in 1847-55 by a more complex structure which was in turn superseded by the present buildings between 1861-74. This latest fort was added to in the First and Second World Wars and only went out of military use in 1949. Near the waterfront, a little distance from the fort, are a 19th century battery for Quick-Firer guns and searchlights, a rifle range and a World War II low-level radar tower. The structures form a notable group of defensive sites at the strategically important Coalhouse Point.

Whilst some progress has been made in repairing and consolidating original structures associated with the fort, other elements are undergoing a slow decline. In recognition of this Historic England, in partnership with Thurrock Unitary Authority, are funding a Conservation Management Plan.

3.4.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.4.3.1 Archaeological interest

In addition to the standing architectural remains there is also a high archaeological potential due to waterlogging, particularly relating to the Henrician blockhouse.

There is considerable archaeological evidence for earlier periods in the immediate vicinity of the fort. This includes a Neolithic and Iron Age settlement sites on the higher ground to the north-west, and Late Iron Age/Roman or medieval salterns on the marshes to the north of the fort. The road through East Tilbury is thought to be Roman in origin, and led to a crossing-point of the river in the approximate location of the present fort. The later periods are also well-represented, particularly with defensive structures, which range from spigot mortar emplacements to anti-glider ditches.

3.4.3.2 Historic interest

Coalhouse Fort is a remarkably well preserved late 19th century fort built on the recommendation of the Royal Commission on the Defence of the UK in 1860. It is one of the finest examples of an armoured casemate fort in England and is well documented historically. The jetty and railway line are an integral part of the fort.

The Henrician blockhouse is well documented historically and has high archaeological potential due to waterlogging. Such a site adds to the knowledge of the coastal fortifications made by Henry VIII. The Quick-Firer battery, built in 1893, is the sole surviving purpose-built battery of its type in the Thames basin. The rifle range is an unusual survival which adds to the known range of earthwork monuments and is closely associated with the fort. Virtually intact World War II radar installations of the type at East



View 1: View looking across the Thames from Coalhouse Fort to Cliffe Fort on the Kentish side of the river

Tilbury are known at only two other places in England, making this an extremely rare survivor of a once widespread system. The group of structures demonstrates the former strategic importance of Coalhouse Point and demonstrates the changing approaches to defence over 400 years. Furthermore the sites formed elements of wider defence systems designed to protect the Thames Estuary and especially London.

3.4.4 Contribution of the setting to the heritage assets significance

3.4.4.1 Topography

The primary setting of the monument is the River Thames and the bordering historic grazing marshes. The fort is located on the apex of the bend of the river with views down the Lower Hope stretch of the river to the east and the Gravesend Reach to the west. The former coastal marsh forms a wide, open and flat landscape with extensive views on a clear day. To the north-west is the escarpment on which the historic settlement and church of East Tilbury is sited, as well as the defensive Scheduled Monuments of the East Tilbury battery and the anti-aircraft battery at Bowaters Farm.

The site forms a defensive triangle across the Thames, with Cliffe Fort and Shornemead Fort in Kent, which are intervisible, forming the other corners of the triangle. There was a requirement when the fort was in use that the area between it and Tilbury Fort was kept clear of vegetation in order to preserve a line of sight between the two fortifications. Conversely the creation of the glacis (earth bank) on the riverside of the fortification was accompanied by selected planting for the purposes of screening whilst still allowing a clear-field of view from the fort.

The local topography makes a major positive contribution to the setting of the heritage assets, whose siting is entirely determined by the topography and the links across the river to Kent.

Currently the immediate area around the fort has been landscaped to give a parkland appearance with mown grass and trees. The car-park is partially screened behind the trees. The tree-planting, although attractive in its own right, does have a screening effect on the views westwards from Coalhouse Fort to Tilbury Fort and can be considered as having a minor negative impact on the understanding of the relationship between the two sites. Tilbury Power Station to the west forms a significant local landmark, and currently blocks the views towards Tilbury Fort, which is sited immediately to its rear. The power station is intended to be demolished in 2017. Currently it makes a moderate negative impact on the understanding of the relationship between the two sites.

3.4.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

Coalhouse Fort is associated with a significant number of historic monuments, some in the immediate vicinity and others set at a distance. Firstly there is the defensive triangle across the Thames to Cliffe Fort and Shornemead Fort in Kent. Secondly there is the inter-relationship with Tilbury Fort to the west. To the north-west are the associated defensive Scheduled Monuments of the East Tilbury battery and the anti-aircraft battery at Bowaters Farm, both of which are located on the crest of the escarpment with wide views over the river valley. In addition to the principal military monuments there are also several smaller structures which form part of the overall scheme; these include a searchlight/gun battery in the graveyard, pill-boxes on the sea-wall and anti-glider ditches across the marshes. Individually and as a group the military monuments both in the immediate vicinity and on the Kentish shore make a major positive contribution to the setting of the heritage assets.

The historic settlement and church of East Tilbury is sited on the crest of the escarpment to the north-west of the Fort. The church is Grade I listed. The marshland landscape is historic in origin, having been reclaimed in the early post-medieval period. These assets make a moderate to major positive contribution to the setting of the heritage asset.



View 2: View looking across the Thames to Shornemead Fort on the Kentish side of the river

There is extensive prehistoric and Roman settlement evidence in the vicinity of the Fort, both on the higher ground and on the marsh; this makes a minor positive contribution to the settling of the heritage asset.

3.4.4.3 **Land use, greenspace, trees and vegetation**

Currently the immediate area around the fort has been landscaped to give a parkland appearance with mown grass and trees. The car-park is partially screened behind the trees. The tree-planting, although attractive in its own right, does have a screening effect on the views westwards from Coalhouse Fort to Tilbury Fort and can be considered as having a minor negative impact on the understanding of the relationship between the two sites. The wider landscape setting is the sea-wall and the Thames to the seaward side and the drained marsh to either side. Land-fill of old quarries has changed the levels in the middle distance to both the north and west of the site.

3.4.4.4 **Functional relationships and communications**

The primary functional relationship of the setting of the monument is the River Thames and the forts at Cliffe Fort and Shornemead Fort in Kent, which form the other corners of the defensive triangle across the river. Secondly there is the relationship with Tilbury Fort, both had their origins as Henrician blockhouses, and were subsequently updated, before Coalhouse took over the primary defensive role on the Essex side of the Thames in the 19th century. The relationship between the Fort, and the historic road and crossing-point of the Thames is also key to the understanding of the heritage asset. These relationships make a major positive contribution to the setting of the heritage asset.

3.4.4.5 **Integrity**

The immediate setting of Coalhouse Fort has seen some late 20th century planting to create a parkland setting, rather than the original grazing marsh. However the riverside location remains essentially unchanged and the wider marsh area is still evident, albeit with a degree of quarrying and land-fill.

Tilbury power station, together with some of the tree-planting, blocks the Intervisibility of Coalhouse Fort with Tilbury Fort. More recent development to the north is largely obscured by the escarpment and does not impinge on the setting of the heritage asset. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.

3.4.4.6 **Associative relationships between heritage assets**

As discussed above there are significant relationships between Coalhouse Fort and the other historic military installations in the area, both on the Essex side of the Thames and on the north Kent shore. These relationships make a reciprocal major positive contribution to each other.

There is also the relationship between the Scheduled site and the historic settlement of East Tilbury, including the Grade I parish church which forms a local landmark. These relationships make a moderate to major positive contribution to each other.

3.4.4.7 **History and degree of change over time**

The riverside location and open marshland setting remain much as they were throughout the life of the Fort, albeit with the addition of landfill sites raising ground levels in the middle distance. To the west Tilbury Power Station currently blocks the views to Tilbury Fort (it is due to be demolished in 2017). The presence of electricity pylons, and to a lesser extent the wind turbines, also provide new accents in an otherwise largely open landscape. There are a number of modern additions to the immediate setting of the asset, including tree-planting and the car-park.

3.4.5 **Experience of the asset**

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.



View 3: Looking west towards Tilbury Fort, here the original view is blocked by Tilbury Power Station and the trees

3.4.6 **The rarity of comparable survivals of setting**

The groups of structures that make up Coalhouse Fort make up part of a wider defence systems designed to protect the Thames Estuary and especially London. The survival of such a wide range of structure, spanning several hundred years of defensive architecture within an open marshland setting on both sides of the Thames is rare and makes a major positive contribution to the setting and significance of the heritage assets.

3.4.7 **Future developments and other impacts within the setting of the heritage asset**

Lower Thames Crossing: The proposed route of the Lower Thames Crossing will run to the west of the heritage asset although the actual road will lie within a tunnel at this point. The extraction of material from the tunnel is due to be stored on the Essex side of the Thames and will potentially impact the setting of the asset. The possibility of land raising has the potential of impacting the visual link with the Thames to the east and south.

Housing: Known impacts at present comprise potential house allocations to the north of the heritage asset, as well as other planning applications, these would have a detrimental effect on the rural setting of the monument and its original sight lines as a defence on the shore of the Thames.

Minerals and Waste: The sand quarry to the north of the site has been largely extracted. Any subsequent development of this area will need to design a mitigation and enhancement strategy in order to manage the impact on the setting of the heritage asset.

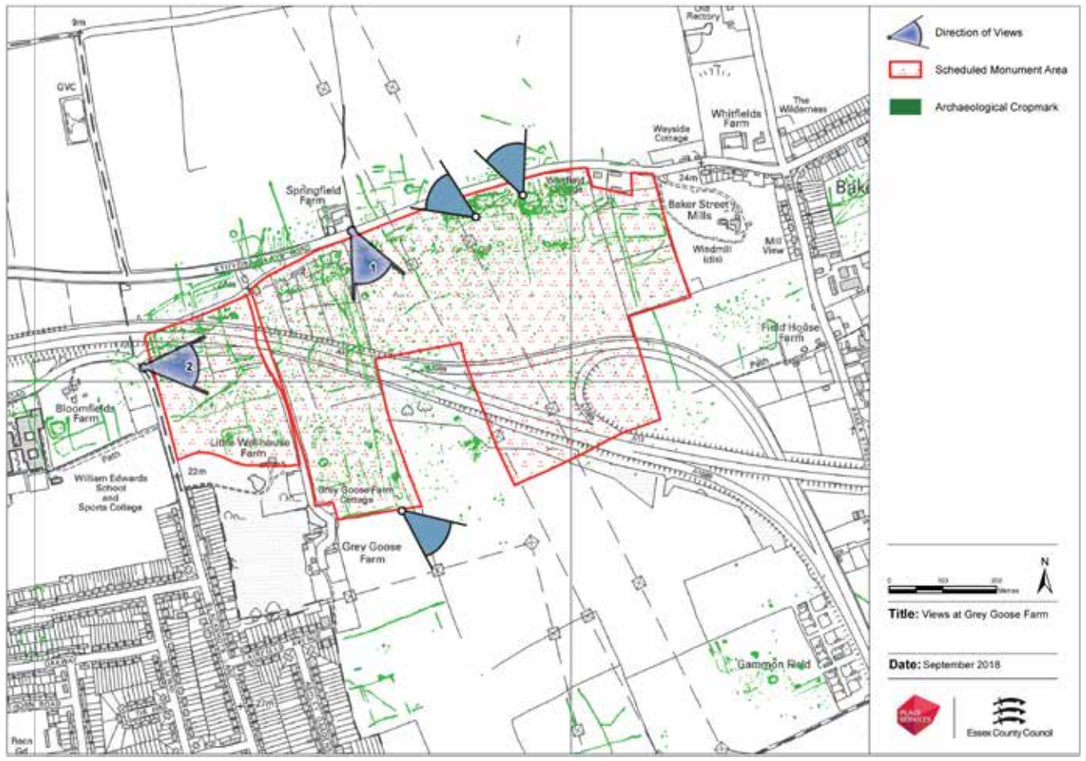
3.4.8 **Recommendations**

There is a need to mitigate the impacts of the Lower Thames Crossing, liaison is required between Historic England and the Highways Agency consultants to develop an appropriate mitigate strategy which protects the setting of the heritage asset.

For any development schemes the setting of the monument needs to be taken into account, and where the setting cannot be preserved or the impacts appropriately mitigated the allocation should not be approved.

Opportunities should be sought to preserve and enhance the setting of the heritage asset, particularly in restoring the former intervisibility between Tilbury Fort and Coalhouse Fort.

3.5 CROPMARK COMPLEX, ORSETT (SM1002134)





(Left) Figure 9 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)

(Right) View 1: View looking south across the heritage asset, showing the arable field with the electric pylons and the A13 in the distance.

3.5.1 **Location and topography**

The monument lies across several fields between Orsett and North Stifford with the west and southern area bisected by the A13. The land is largely agricultural apart from the area of the A13 and its associated slip roads and embankments. The land is fairly level with a slight fall away to the south with views across the River Thames to Kent.

3.5.2 **Description**

An extremely complex cropmark picture showing, against a background of extinct field systems and river systems, rectilinear enclosures of possibly Roman date, ring ditches which probably represent ploughed out barrows and a mass of very substantial pits. In many cases these pits may be the sites of Early Saxon sunken-floored buildings. Recent research would seem to indicate that this may often be the case. Finds in excavations already conducted at Thurrock, may be seen as confirmation of this. The monument is in five separate parts, divided by the major duel carriageway of the A13. It also has the slip-roads of the A1089 which have substantial embankments. Part of the complex has been quarried as part of the borrow pit for the A13.

The present scheduling covers many of the cropmarks; however, this dense complex does extend to the north beyond the scheduled boundary.

3.5.3 **Assessment of the heritage asset's significance**

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.5.4 **Archaeological interest**

The heritage asset consists of cropmarks of overlapping rectilinear and curvilinear enclosures; several ring ditches; and a field system with double ditched trackways between the fields. Elsewhere over the area there are linear features, and a heavy concentration of large pits. The cropmarks continue north of the road with similar linear features and rectilinear enclosures and a ring ditch. These are likely to represent settlement and land use ranging from the prehistoric to post medieval periods.

Excavation in advance of the construction of the A13 across the heritage asset revealed a Late Bronze Age settlement. The field system appears to be late or post Roman and may have flanked a trackway. They were aligned roughly parallel with modern field boundaries and appear to form an early phase. The excavation indicates that this complex represents a multi-period complex of settlement and agricultural production exploiting the gravel terraces above the Thames.

3.5.5 **Historic interest**

There are historic family names associated with Baker Street (first mentioned in 1402) and Grey Goose Farm (1624).

3.5.6 **Contribution of the setting to the heritage assets significance**

3.5.6.1 **Topography**

The immediate setting of the monument is relatively open agricultural land. The surviving field boundaries follow the same alignment as those showing as cropmarks. Two lines of electric pylons cross the site so the topography makes a moderate positive contribution to the setting of the heritage asset. The topography of the southern half of the scheduled monument has been extensively altered by the construction of the A 13 and its associated embankments and cutting which has had a major negative contribution to the setting.

3.5.6.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

There are many cropmarks in the area around this site (see cropmark summary document), ranging from prehistoric enclosures and ring ditches to a Roman enclosure and medieval field boundaries. Many of these features will be contemporary with the cropmarks on this site. This asset forms part of an extensive multi-period cropmark landscape extending from Mucking in the east to Grays in the west. These make a major positive contribution to the setting of the heritage asset.

Other heritage assets comprise Baker Street Windmill, a Listed Grade II smock mill dating to the 17th century, Greygoose Farmhouse, a listed Grade II house dating to the 17th century, and Little Wellhouse, a Listed Grade II house dating to the 16th/17th century. These



View 2: View looking south-east across the heritage asset towards Little Thurrock, showing tower blocks and electric pylons in the distance.

form the most recent element of the historic landscape comprising the built heritage from the 16th century onwards.
These make a neutral contribution to the setting of the heritage asset.

3.5.6.3 **Land use, greenspace, trees and vegetation**
The immediate area to the south and north of the heritage asset is arable. To the north is Stifford Clays Road. To the west lies the urban area of Little Thurrock and Grays which is gradually expanding closer to the asset. The A13 duel carriageway crosses the west and south of the site from its north-west corner to south-east corner with a major junction into Grays within the scheduled area. Two lines of electric pylons cross the site. The view south is over Little Thurrock some arable land, largely laid to pasture and further major roads leading to Chadwell St Mary.
These make a major negative contribution to the setting of the heritage asset.

3.5.7 **Functional relationships and communications**
These cropmarks are part of a wider landscape covering the area from Grays to Mucking.
Parts of this historic landscape are designated heritage assets (Orsett Causewayed enclosure and Baker Street), but the vast majority are undesignated assets. Some of the cropmarks have been evaluated, especially during the construction of the A13, which gives a window into the land use at different periods. A number of the roads across and in the vicinity follow the same alignment as the late or post Roman field system indicating their potential early origins.
These make a major positive contribution to the setting of the heritage asset.

3.5.7.1 **Integrity**
The heritage asset lies in a number of fields on either side of the A13 and parts of the site have been destroyed by the construction of the A13 and its associated junction. The traffic on the A13 can be seen from Sifford Clays Road, and together with the electricity pylons, this impact on the visual integrity.
Overall, this makes a major negative contribution to the setting.

Against this, the archaeological features which show as cropmarks are believed to survive well beneath the plough soil, and the older roads on either side of and through the site are on the same alignment as the late or post Roman field system.
These make a moderate positive contribution to the setting.

3.5.7.2 **Associative relationships between heritage assets**
As described above, the heritage asset lies in an area of extensive multi-period cropmarks. The evidence from the cropmarks indicates that this site is an element of a much larger historic landscape extending from Mucking in the East through to this area immediately adjacent Grays. The complex contains evidence of multi-period deposits, as evidenced from the A13 excavations, indicating either the continuous occupation probably from the Neolithic period through to the modern day. Although the majority of the elements of this complex are undesignated, as a whole they form a highly important and sensitive historic landscape.

These make a major positive contribution to the setting of the heritage asset.

3.5.7.3 **History & degree of change over time**
Although the heritage asset still lies within an agricultural environment, there have been modern developments which affect this site. The A13 crosses the heritage asset. Electric pylons cross the heritage asset. Little Thurrock is situated to the south and is spreading northwards.
This makes a major negative contribution to the setting.

3.5.8 **Experience of the asset**
As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.5.9 **Views from, towards, through, across and including the assets**



Figure 10 Aerial photograph of the cropmark complex, looking to the east. The cropmarks are visible as darker stripes in the ripening wheat; the A13 is located on the right-hand side of the photo (EX18/03/003, ©ECC)

3.5.10 The rarity of comparable survivals of setting

The significance of this site lies both in the richness of the archaeology preserved and its siting within a landscape of cropmarks which indicate how the landscape was used over millennia. This particular site has had its significance seriously impacted by modern development on the southern half of the scheduled area. However it is an integral part of a much larger cropmark landscape within Thurrock which contains evidence of millennia of occupation. This overall landscape is unusual in its extent.

3.5.11 Future developments and other impacts within the setting of the heritage asset

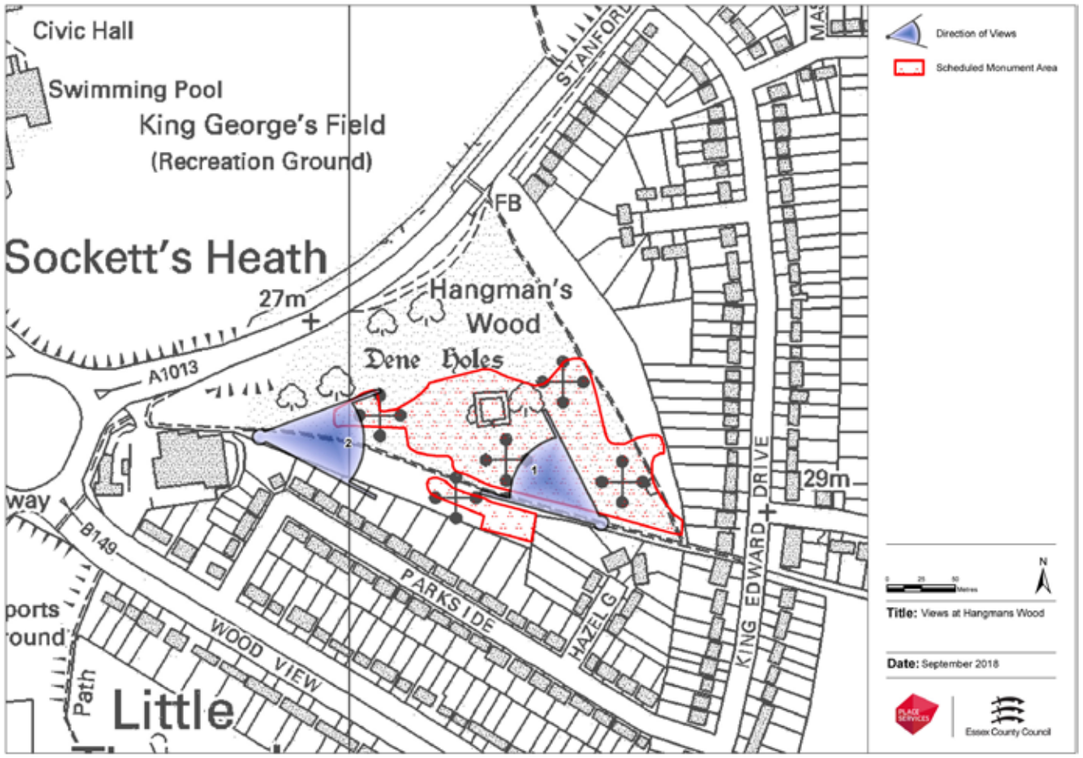
Lower Thames Crossing: The proposed route of the Lower Thames Crossing will destroy a significant part of the monument and its setting.

3.5.12 Recommendations

Large-scale mitigation of the impacts of the Lower Thames Crossing will be required. Definition of the significance and extent will need to be followed by extensive detailed archaeological investigation of both the scheduled area and the remainder of the cropmark complex outside of the scheduled area.

If the proposed Lower Thames Crossing does not proceed on this route, opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from Historic England reassessing the scheduling to cover the full extent of this element of the overall cropmark complex which lie to the north of Stifford Clays Road and the area between Stifford Clay Road and the A13. At the same time those areas already destroyed or badly damaged could be removed from the scheduled area. Similarly the removal of the area from agricultural production would be beneficial to the archaeological deposits.

3.6 DENE HOLES IN HANGMAN'S WOOD (SM1002156)





(Left) Figure 11 Location plan showing the principal views to and from the monument

(Right) Figure 12 View into the northernmost fenced dene hole showing the top of the shaft.

3.6.1 Location and topography

Hangman's Wood is a remnant of semi-natural ancient woodland, now managed for amenity use. It is situated on top of a ridge of higher ground at Little Thurrock. Housing lies to the south and east of the wood, and a busy road runs along its north-west boundary. The geology comprises Thanet Sands over Chalk. It is within an area of former heathland, reflected in the names of Socket's Heath to the west and Orsett Heath to the north-east. The dene holes are situated within the wood.

3.6.2 Description

Hangman's Wood contains an extensive and well preserved set of dene holes. Dene holes are thought to be medieval chalk mines and consist of vertical shafts through the Thanet Sand and end in branching chambers cut into the underlying chalk. The Hangman's Wood dene holes are particularly deep, the shafts being over 20 metres deep before the Chalk is reached.

The first extensive investigation into the nature and origin of these dene holes was carried out by the Essex Field Club in 1887. At that time 51 shafts were known at Hangman's Wood but all except 5 were blocked and could only be identified by depressions on the surface. The club entered and examined 15 shafts and associated chambers, mainly by cutting tunnels through from one set of chambers to the next. The Field Club carried out further investigation of the site in the 1950s and early 1960s. It is thought that there may be as many as 72 shafts, or dene holes, on this site. At the present time it is thought that only two shafts are open but these are securely gated and underground access is prohibited. The shafts are of geological interest as they show the section from the Thames terrace gravels, through the Thanet Sands and into the Chalk with its bands of flints visible in the chamber walls. The site is also designated a SSSI, as the dene holes are important for hibernating and roosting bats, and the woodland is important as habitat.

3.6.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.6.3.1 Archaeological interest

Investigation of the dene holes by the Essex Field Club showed that each shaft had a series of chambers at the bottom, usually six. The scheduled area contains the remains of many more dene holes than the three which are visible now. The practise of excavating a new shaft and putting the rubbish into the previous shaft has meant that some of the other shafts were discovered by observing depressions in the ground, or when the ground gave way. Most have been back-filled so they pose no danger to the public.

3.6.3.2 Historic interest

Dene holes are found in Essex and Kent and are first mentioned in 1570 in a description of Dartford. It is thought that they are therefore medieval. In Kent, they are often found in woodland and in association with earthworks. Many other dene hole sites were discovered in Essex but have been destroyed by chalk extraction across the south of Thurrock. The dene holes illustrate how chalk was excavated. The chalk platforms seen in some chambers are those left by the original excavators. The slope employed in forming the roof is one which gives a good factor of mechanical safety in chalk. Rough footholds or toe-grips are diametrically cut at approximately 1 foot 6 inches (0.457m) apart to facilitate descent and these continue down the shaft to the floor level. The total depth of the shaft varies between 30 to 80 feet (9.1 – 24.38m). It has been suggested that some dene holes may have originated in the Roman period, but there is no evidence from Hangman's Wood to suggest that this is the case here.

3.6.4 Contribution of the setting to the heritage assets significance

3.6.4.1 Topography

Hangman's Wood lies on top of a ridge where the more extensive former heath was situated. Although this is not apparent within the wood, it has contributed to the survival of the dene holes, the wood and the surrounding open areas to the north and south, which are now playing fields. The local topography makes a major positive contribution to the setting of the heritage asset.

3.6.4.2 Other heritage assets (including buildings, structures, landscapes, areas or



View 1: View looking west to two of the open dene holes (behind grey security fencing), located on either side of the main foot-path. The rear boundary of the properties fronting Parkside is on the left and shrubby growth and trees are to the right.



View 2: View looking east to the open dene holes (behind grey security fencing), partially hidden behind the mature trees in the foreground. The rear boundary of the properties fronting Parkside is on the right and The wooded areas of Hangman's Wood to the left.

archaeological remains)
Palaeolithic hand-axes were found at Deneholes Roundabout and at Sockett's Heath Pit to the west of Hangman's Wood, and at Thurrock Technical College, Orsett Heath and Terrels Heath, all to the east of Hangman's Wood. A Neolithic hand-axe was found to the north of the wood. These may well be indicative of the use of the flint seams within the chalk in the immediate vicinity. To the south-east, in the grounds of Palmer's College, there were early Roman features including a pottery kiln. Also another dene hole was found here. A Roman coin was found in Hangman's Wood. These make a moderate-major positive contribution to the setting of the heritage asset.

3.6.4.3 **Land use, greenspace, trees and vegetation**
The dene holes sit within a semi-natural ancient woodland, set within an area of former heathland. This has been its historic setting and is part of their setting. The housing to the east and south, and the road to the north-west, are shielded by the trees and do not detract from the setting.
The surrounding woodland and the open playing fields beyond reflects the original setting of the dene holes and makes a major positive contribution to the setting of the monument.

3.6.4.4 **Functional relationships and communications**
The primary functional relationship is with the former heath and the ancient woodland. The Chapman and André map of 1777 show Hangman's Wood, Orsett Heath, Socketts Heath and Heath Farm. The early edition OS maps show Terrels Heath too and the landscape between has already been enclosed, but the fields are large and open, perhaps reflecting that there was heathland here. Roads connect the relict heaths and Hangman's Wood. Although Orsett Heath and Terrels Heath are both reduced in size, and Socketts Heath only survives in name, this relationship makes a major positive contribution to the monument.

3.6.4.5 **Integrity**
The immediate setting of the dene holes has been woodland since before 1777. Houses now lie to the east and south of the woodland, but are shielded by the trees. The roads shown on the early edition OS maps to the north-west and to the south (now a bridleway) both survive, preserving the integrity of the site as a whole. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.

3.6.4.5 **Associative relationships between heritage assets**
As discussed above there is a relationship between the dene holes and the former heathland setting. The find of Palaeolithic hand-axes have also come from the former heathland. These relationships make a reciprocal major positive contribution to each other.

3.6.4.6 **History & degree of change over time**
The dene holes were probably dug when there were fewer trees around, given the density of former dene hole shafts in Hangman's Wood, as shown on the early edition OS maps. Apart from more trees around the dene holes, the changes have been around the fringe of Hangman's Wood. Housing was constructed immediately to the east and south before or in the 1920s, and a ring of schools and colleges, built in the succeeding years until now, with their playing fields now surrounding the wood.

3.6.5 **Experience of the asset**
The three visible dene holes are situated to either side of the bridleway that runs along the southern side of Hangman's Wood. They are protected by a double security fence each and it is impossible to see down the shafts. Further sites of dene holes are visible by slight depressions in the ground and different vegetation growing over the shaft entrances.

3.6.5.1 **Views from, towards, through, across and including the assets**

3.6.6 **The rarity of comparable survivals of setting**
As discussed above, the dene holes in Hangman's Wood are the only surviving group of dene holes in Essex. The woodland setting has helped to preserve and protect them. Other examples of dene holes have been lost



Figure 13 Hangman's Wood in its immediate setting. Some of the darker vegetation in the mown grass may indicate other dene hole sites.



Figure 14 Hangman's Wood in its wider setting, with Tyrells Heath behind and Orsett Heath beyond. The former heathland character of the area is visible in places

to the extensive chalk extraction in Thurrock.

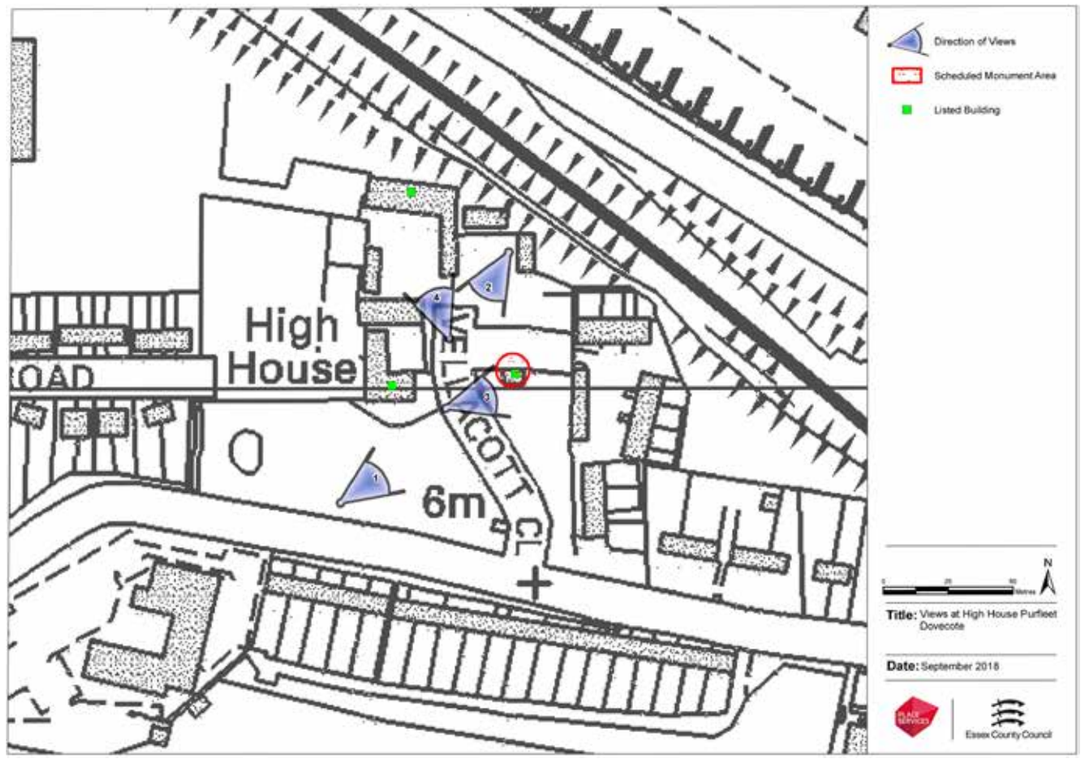
3.6.7 Future developments and other impacts within the setting of the heritage asset

This site is located within a SSSI woodland. The primary threat to it is either collapse due to changes in groundwater levels, trees falls or vandalism in the form of dumping or other anti-social behaviour.

3.6.8 Recommendations

Opportunities should be sought to preserve and enhance the setting of the heritage asset. This could include the addition of interpretative panels explaining the history and significance of both the dene holes and the SSSI woodland.

3.7 DOVECOTE AT HIGH HOUSE, PURFLEET (SM1017234)



(Left) Figure 15 Location plan showing the principal views to and from the monument



(Right) View 1: High House farmhouse and the dovecote looking north-west, with the farm buildings behind and the modern development to the east of the dovecote.

3.7.1 Location and topography

The monument comprises a brick-built dovecote situated within the historic farm complex of High House, some 900m north of the River Thames. The farm complex is situated on a slightly elevated position on the 10m contour, overlooking the West Thurrock Marshes (OD 5m). The geology is Seaford Chalk formation, overlain by alluvium to the south. There has been large scale chalk extraction immediately to the north of the Scheduled Monument, leading to alterations to the topography in that area.

3.7.2 Description

The dovecote, which is Listed Grade II, is octagonal with brick walls rising 3m above the exterior cemented plinth towards a smooth cemented eaves cornice (originally carved plaster). The roof is tiled with a wooden louver surmounted by a weather vane and has a dormer window of two lights facing north.
The entrance faces west towards the house and has a unusual double door. The massive inner door is constructed entirely of iron and originally had an elaborate lock activating three bolts (parts of which survive), while the outer wooden door is reinforced and secured by iron straps padlocked over staples. The interior of the dovecote is largely unaltered and contains 517 brick nest boxes set into the walls with a continuous alighting ledge to each tier. The first tier of nests is 0.36m from the ground, and between this tier and the floor are two brick string courses projecting about 0.5m, possibly a precaution against vermin entering the nests. The nests have entrance holes which are 0.13m by 0.16m leading into `L'-shaped compartments measuring some 0.28m deep. The nests were thus designed in order to accommodate two broods.

The dovecote also retains its two armed wooden potence complete with ladder, (a rotating structure designed to provide access to the nest boxes), which is supported upon a circular brick table (cemented over) some 1.25m in diameter.

The main beam of the potence is housed in the intersection of two alighting beams which also carry the framework of the louver. The internal roof timbers are to some extent restored but retain a fair number of the original timbers.

The security entrance is unique and was probably fitted to keep out pigeon thieves who often stole birds for London pigeon shoots in the 18th century.
Documentary sources refer to the dovecote having been used as a temporary village lock up.

3.7.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.7.3.1 Archaeological interest

Dovecotes are specialised structures designed for the breeding and keeping of doves as a source of food and as a symbol of high social status. Most surviving examples were built in the period between the 14th and the 17th centuries, although both earlier and later examples are documented. They were generally freestanding structures, square or circular in plan and normally of brick or stone, with nesting boxes built into the internal wall. They were frequently sited at manor houses or monasteries. Whilst a relatively common monument class (1500 examples are estimated to survive out of an original population of c.25,000), a large number will be considered to be of national interest, although the majority will be listed rather than scheduled. They are also generally regarded as an important component of local distinctiveness and character.
Although a few aspects of the structure have been replaced or strengthened in recent years, as a whole the dovecote at High House survives extremely well, particularly so in a region which has seen many such buildings lost to disrepair and demolition or radically altered.

3.7.3.2 Historic interest

Following a national review of this class of monument in 1998, the High House dovecote is now thought to be one of only a small number of exceptional survivals in Essex, and it is especially notable for the survival of the potence and nest box array. The dovecote thus retains substantial evidence for the manner of its use and serves to illustrate part of the economy and lifestyle of the inhabitants of the associated manor since the 17th century.
The very unusual development of the entrance is also of particular interest, reflecting the



View 2: View south-eastwards showing the dovecote and farmhouse with the backdrop of industry along the Thames.



View 3: View of the dovecote from the west, with the modern housing development behind.

economic value of the dovecote and perhaps other events from the social history of the area.
Of note is the association of the High House estate with the Grantham and Whitbread families. The Grantham family have an important naval and ocean going legacy, and Samuel Whitbread was one of Britain's most prolific brewers with a business legacy which is still active today. It appears that the brew house was maintained throughout the period of Whitbread ownership.

3.7.4 Contribution of the setting to the heritage assets significance

3.7.4.1 Topography

The dovecote was associated with the manor of West Thurrock, the original name of High House. The house and most of the associated manorial and farm building survive as a group on an elevated position which drops to the south. The site formerly was sited in agricultural land, but is now surrounded by modern developments, including housing to the east, south and west, a railway line and road to the north-east, and commercial buildings to the north-west. The elevated position separates the manorial group of buildings from the surrounding housing and this means that there are long views to the south towards the Thames and its associated industry. The modern developments in the topography make a moderate negative contribution to the setting of the heritage asset.

3.7.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

The buildings which form a group with the heritage asset have been recorded before conversion to their current uses. High House itself is 17th century, and the threshing barn on the northern edge of the group is early 19th century. Both are Listed Grade II. The buildings are arranged around two courtyards and comprise a north service range (mid-19th century), a bake/brew house (16th century and a survival from the original manorial complex), a coach house (early 19th century), stables (late 18th century), a workshop (late 18th/early 19th century), the granary and cowsheds (late 19th century), and a possibly 17th century well. The survival of this whole group of buildings including the dovecote is rare and makes a major positive contribution to the setting of the heritage asset.
Archaeological evaluation to the north-west of High House revealed prehistoric pits and post-holes, Bronze Age/Iron Age ditches, an early Roman ditch and a possible early Roman grave. There were also post medieval features and yard surfaces associated with the 18th century and later occupation of High House Farm.

Test pits in advance of the Channel Tunnel Rail Link recovered Palaeolithic artefacts as well as environmental evidence in the form of pollen and fossils. Fieldwalking identified a prehistoric flint scatter with flint flakes and burnt flint. Excavations at High House Farm revealed ditches, gullies and pits of mainly late prehistoric and early Roman date on the higher ground in the western half of the site. The late prehistoric period is represented by two phases of settlement-related activity within an overall middle Bronze Age/early Iron Age time span. The Late Iron Age and early Roman features were probably also settlement related and include a small enclosure, a possible trackway and an unusual group of at least 14 inhumation burials and two cremation burials inserted along the entire exposed length of an earlier, Bronze Age ditch. On the south side of the road is a terrace of industrial cottages, built in1904 by the Purfleet Wharf and Saw Mills.

3.7.4.3 Land use, greenspace, trees and vegetation

In the immediate vicinity, the heritage asset is surrounded by amenity grassland, car parking and the converted farm buildings. 20th-century housing developments surround the farm complex on the east, south and west, but at a distance. The railway line forms the north-east boundary of the farm complex. The more modern developments to the north-west, being on higher ground appear dominant in the landscape. Although part of the original curtilage of the farm has survived, the dominance of the commercial developments makes a moderate negative contribution to the setting of the heritage



View 4: View of the farm buildings from the dovecote, with modern commercial development behind.

asset.

3.7.4.4 **Functional relationships and communications**
The major functional relationship of the heritage asset is to the surrounding farm house outbuildings and barns. Although converted to non-farming uses, these survive as a group and make a major positive contribution to the monument.
A new access road runs past the dovecote to a modern housing development immediately to the east, which sits mostly within the original curtilage on the eastern side of the farm complex. This development has been carefully constructed to fit in with the farm character and therefore these make a neutral contribution to the setting of the heritage asset.

3.7.4.5 **Integrity**
The immediate setting of the dovecote has only changed on the eastern side, with the railway line and the new housing development. The farm complex including the dovecote has survived with most of the farm's curtilage, though the farm has lost its relationship with its agricultural land which is now lost under modern developments, particularly to the north-west, and in its outlook towards the Thames to the south. The integrity of the setting makes a positive contribution to the monument.

3.7.4.5 **Associative relationships between heritage assets**
As discussed above there is a relationship between the scheduled dovecot and the farm complex within which it sits. This relationship makes a reciprocal major positive contribution to each other.

3.7.4.6 **History & degree of change over time**
The dovecote is associated with the manor of West Thurrock, the original name of High House. This had its origins in the medieval period and remained an agricultural farm right up to the early 20th century when the first houses and commercial developments were built. Other housing and commercial developments continued during the 20th century and into the 21st century. A new road was also constructed immediately to the north-east, reflecting the increasing development in the area. This was followed by a new high-speed railway line between the road and the farm complex.

3.7.5 **Experience of the asset**
As set out in Historic England's guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

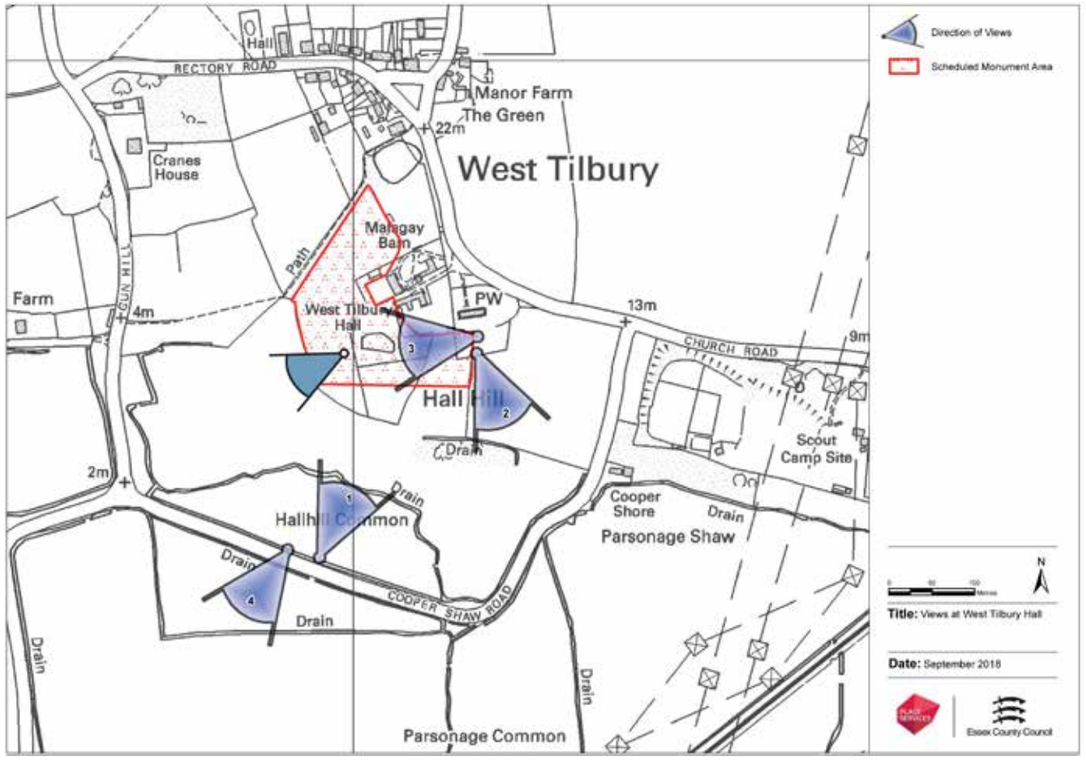
3.7.5.1 **Views from, towards, through, across and including the assets**

3.7.6 **The rarity of comparable survivals of setting**
Approximately 80 dovecotes survive in Essex, in varying states of survival. They are mostly found associated with farms and manor houses and the better preserved ones are designated as Listed Buildings. Most are still within the setting of agricultural land, so the setting of this dovecote within the original farm complex but an urban environment is unusual.

3.7.7 **Future developments and other impacts within the setting of the heritage asset**
Employment area: The area to the south of High House has been identified as an area for employment activity. This has the potential to negatively impact on the setting of the heritage asset, in particular impeding the longer views towards the Thames.
Other planning applications within the immediate setting could have a detrimental effect on the monument and how it is understood.

3.7.8 **Recommendations**
If development occurs to the south of the site the setting of the heritage asset should be considered in the design of the development. Opportunities should be sought to enhance the experience of the heritage asset, through opening for educational and general visits, information boards and other appropriate promotion and interpretation.

3.8 EARTHWORKS NEAR CHURCH, WEST TILBURY (SM1002199)



(Left) Figure 16 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)



(Right) View 1: View looking northwards from Cooper Shaw Road up the escarpment to the monument with the Church and Hall complex behind

3.8.1

Location and topography

The monument lies on the slope and crest of a steep natural escarpment overlooking the West Tilbury Marshes. The ground rises steeply from 2m OD to 20m OD with West Tilbury Church and Hall located on the highest ground to the north-east of the Scheduled area. There are wide views to the south, east and west, views to the north are constrained by the Church and Hall.

3.8.1.1 **Description**

The Scheduled Monument comprises earthworks immediately adjacent to the West Tilbury Church and Hall complex. The church yard stands upon a slight mound suggesting the site of an early camp, a bastion-like projection to the west gives the work a medieval appearance. South-west of the church is a length of rampart with an internal ditch which turns at right angles towards the north. These have been obscured by gravel diggings and farm buildings. The earthworks have not been dated nor a function ascribed, although given its prominent location on the crest of the escarpment a defensive role is probably the most likely interpretation.

The site is largely used as rough grazing, with scrub growth in the south-west corner.

3.8.2 **Assessment of the heritage asset's significance**

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.8.2.1 **Archaeological interest**

The rampart and ditch have potential for the preservation of dating evidence, and possibly for waterlogged evidence in the ditch. There may also be surviving below-ground archaeology within those areas of the Scheduled Monument that have not been disturbed by earlier gravel-digging. Certainly the cropmark evidence for the field to the north of the Hall demonstrates the presence of a multi-period archaeological landscape, which includes a ring-ditch, enclosures, field boundaries and a trackway. Monitoring of the foundations of an extension to the adjacent Hall recorded a late Roman pit or ditch, and three flint and chalk footings of probable medieval date

3.8.2.2 **Historic interest**

The place-name Tilbury means the 'burh (fortification) of Till' and it is possible that this site is the burh, certainly the location is both very prominent and defensible. In AD 623 Saint Cedd built a monastery at Tilbury, it is not clear where this was located, but this site is one possible candidate. The oldest surviving portions of the Grade II* Listed Church of St James are late 11th or early 12th century in date, with later additions and modifications, it is now a house. West Tilbury Hall is Grade II Listed, and 17th century in date, its barn is 16th century in origin. The grouping of Church and Hall is typical of the medieval and post-medieval Essex landscape. The defensive nature of the site was evident during World War II when two spigot mortar pits were constructed at the corner of the churchyard, overlooking Church Road and a wide sweep of marsh to the south-east.

3.8.3 **Contribution of the setting to the heritage assets significance**

3.8.3.1 **Topography**

The monument is prominently sited on the slope and crest of a steep natural escarpment overlooking the West Tilbury Marshes. It is a highly defensible position, as demonstrated by the siting of the WWII spigot-mortar pits next to the churchyard. The ground rises steeply from 2m OD to 20m OD with West Tilbury Church and Hall located on the highest ground to the immediate north-east of the Scheduled area. There are wide views to the south, east and west, views to the north are constrained by the Church and Hall. The topography makes a major positive impact on the understanding of the setting of the heritage asset.

3.8.3.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

The monument has not been dated, however a Saxon or medieval origin would appear most likely given what is currently known about the history and archaeology of the site. The adjacent Church and Hall complex (Listed Grade II* and Grade II respectively) is therefore probably integral to the understanding of the role of the earthworks in delimiting and enhancing the top of Hall Hill. The present Church has its origins in late 11th – early 12th century, but a possible association with the 7th century monastery founded by St Cedd at Tilbury has been suggested for the site.



View 2: View looking from the north-east corner of the churchyard looking southwards across the marshes, the higher ground in the background is Kent



View 3: Looking west into the monument from the new graveyard

Equally the place-name evidence suggests the presence of a burh or fortification at Tilbury in the 7th or early 8th century, and again this site is a likely candidate for such a structure. The presence of both the Hall and the Church adjacent to the monument indicates that this area was the hub of local power in the medieval period. The presence of WWII spigot-mortar pits next to the churchyard again demonstrates the defensive and strategic nature of the site with its panoramic views to the south. The marshland landscape is historic in origin, having been reclaimed in the early post-medieval period. These assets make a major positive contribution to the setting of the monument.

There is cropmark evidence of a multi-period archaeological landscape, which includes a ring-ditch, enclosures, field boundaries and a trackway in the immediate vicinity of the site, demonstrating the attractiveness of the location to settlers over many millennia. These assets make a minor positive contribution to the setting of the monument.

3.8.3.3 Land use, greenspace, trees and vegetation

Currently the scheduled area appears to be used for rough grazing, and a portion has been colonised by scrub (largely blackthorn). This partially obscures the monument and maybe causing root damage and therefore can be considered as having a minor negative impact on the heritage asset.

The wider setting of marsh and escarpment is also grazed, and although there are issues with fly-tipping and over-grazing, the overall effect is of a rural open landscape in which the monument and the historic Church and Hall complex, complete with mature, ornamental trees form a notable local landmark. The setting can there be considered as making a major positive contribution to the understanding of the heritage asset.

3.8.3.4 Functional relationships and communications

The most significant functional relationships of the setting of the monument is relationship with the West Tilbury Church and Hall complex, which it may well be contemporaneous and with the natural escarpment along the marsh edge with its far-reaching views to the south and east and west along the Thames. Church Road is a historic routeway along the crest of the escarpment, linking the higher ground with the two historic routes down to the crossing-points of the Thames at Tilbury and East Tilbury. The inter-relationship between the dryland site and the economic resource that was the historic marshland is also key to the understanding of the heritage asset. These relationships make a major positive contribution to the setting of the heritage asset.

3.8.3.5 Integrity

The rural landscape of escarpment and marshland remains largely intact, as does the important grouping of the West Tilbury Hall and Church adjacent to the monument. To the south Tilbury Power Station and its associated pylons forms the most modern intrusion, but this is sited 2km away. To the north the setting is still largely rural as it would have been in the past.. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.

3.8.3.6 Associative relationships between heritage assets

As discussed above there are significant relationships between the earthworks and the historic church and hall complex, as well as with the historic rural landscape (both marshland and dryland). These relationships make a reciprocal major positive contribution to each other. The presence of prehistoric cropmarks and of the WWII defensive structures close to the site emphasises that the area was a favoured location for settlement in the past as well as playing a strategic role in the defence of the lower Thames valley. These relationships make a reciprocal minor to moderate positive contribution to each other.

3.8.3.7 History & degree of change over time

Given the uncertainty over the dating and function of the monument it is not possible to make definitive statements regarding the degree of change over time. There has apparently been gravel-digging within the



View 4: Looking south-west from the marsh edge towards Tilbury Power Station

monument in the past, but whether this took place during the period when the monument was in use or after it was abandoned is not known. The immediate setting of the site in relation to the Church and Hall, which are thought to be contemporaneous, remains largely unchanged. The escarpment location and open marshland setting remain much as they were throughout the presumed life of the monument, albeit with the addition of landfill sites, Tilbury Power Station and electricity pylons in the far distance.

3.8.4 Experience of the asset

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive. It is not possible to access the asset itself, which is on private land. It can however be viewed from Cooper Shaw Road to the south, where it together with the Hall and Church forms a notable local land-mark, as well as from the public footpath to the west, the churchyard to the north-east.

3.8.4.1 Views from, towards, through, across and including the assets

3.8.5 The rarity of comparable survivals of setting

Although the precise nature of the earthworks is as yet uncertain, it is possible to say that the relationship between the earthworks and its escarpment setting above the historic marsh in a still largely rural landscape is largely intact, as is its relationship with the Church and Hall complex.

3.8.6 Future developments and other impacts within the setting of the heritage asset

Lower Thames Crossing: The closest point of the proposed route of the Lower Thames Crossing is located approximately 400m to the east of the site. This will have a detrimental impact both visually and aurally on the rural setting to the east and south of the heritage asset. Mitigation measures will need to be put in place following liaison between Historic England and the Highways Agency consultants to develop an appropriate strategy.

Housing: Known impacts at present comprise potential house allocations on and surrounding the heritage asset, which will have a detrimental effect on the monument and its immediate setting. Other planning applications within the setting of the Monument have the potential to have a similar detrimental impact.

Commercial: The construction of the new Tilbury Power Station and the Flexible Energy plant will both have an impact on the setting of the Monument.

3.8.7 Recommendations

With any planning applications the design of the development needs to assess and take into account the setting of the monument and design mitigation strategies which should be put in place to minimize the visual impact of the developments.

Opportunities should be sought to establish the nature and date of the earthworks by surveying and possibly evaluation in order to enhance our understanding of the significance monument and put in place appropriate mitigation measures to preserve it for future generations. Opportunities should also be sought to reduce and manage the area of scrub in order to avoid inadvertent harm through tree-root action or burrowing animals. Consideration should be given to undertaking a Conservation Management Plan for the heritage asset.

3.9 EAST TILBURY BATTERY (SM1013880)

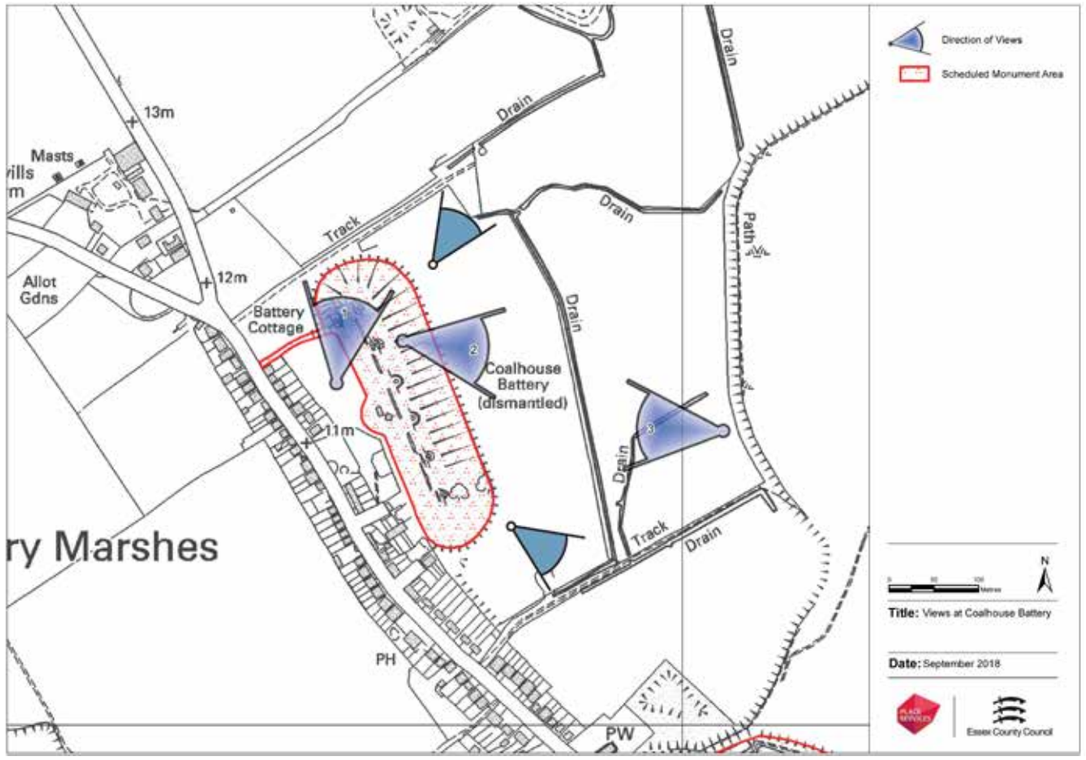


Figure 17 Plan showing the battery and the principal views in and out of the monument (other significant views are indicated by the smaller view-point symbols)



Figure 18 This aerial view shows some of the gun emplacements, but other structures are obscured by the vegetation. This also shows the former marshland (upper half of photo), now agricultural land between the battery and sea wall. East Tilbury is located to the rear of the battery.

3.9.1 Location and topography

The monument lies at just below the 10m contour, slightly above an area of marshland known as East Tilbury Marshes (from 2.7m to 5m OD), to the north-west of Coalhouse Fort. The monument occupies a site on the north bank of the River Thames, facing east across the river. The geology comprises River Terrace deposits over Thanet Sands, with Alluvium to the east under the marshes.

3.9.2 Description

East Tilbury battery, separate from the nearby Coalhouse Fort, was built in 1889/90 to support Coalhouse Fort with long-range fire. Its form rejected the stark outline of its predecessors, instead being blended into the landscape by means of a long and sloping earthen frontal area so that from a distance it was invisible (`Twydall Profile'). The guns at the battery, two 10-inch and four 6-inch, extended the tactical doctrine of invisibility, being mounted on `disappearing carriages' which lay flat in deep emplacements for reloading and aiming but which were raised above the parapet for the few seconds of firing. Below the gun mountings were magazines and accommodation blocks, and to the rear of the battery were a cookhouse and the battery office.

Although the guns were removed when the battery was decommissioned before the First World War, the remainder of the fortification is remarkably well-preserved, despite the encroachment of scrub. Many structural details are discernible and machinery used to raise shells and cartridges from the magazines to the emplacements is virtually intact.

3.9.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.9.3.1 Archaeological interest

The battery faces across historic grazing marsh which contains the remains of medieval salterns. Some of the former grazing marshes have been improved and enclosed. WW II anti-glider ditches were dug across the marshes. Behind the battery, the road leading down to Coalhouse Fort is believed to have its origins in the Roman period.

3.9.3.2 Historic interest

The East Tilbury battery is an exceptionally rare coastal example of the `Twydall Profile' form of defensive installation, of which it is the best and most complete in this country. The Twydall Profile represented a complete change in defensive tactics in the late 19th century from massive and starkly outlined fortifications (eg. Coalhouse Fort), to disguised installations. Furthermore, the unusual survival of the concrete sunken emplacements for disappearing guns, which add to the invisibility of the battery, adds greatly to its importance.

Historical documentation for the use of the battery exists in the form of written and photographic records which depict the organisation of the battery and the manner of operation of the disappearing guns. The battery at East Tilbury was built to support the guns at Coalhouse Fort and hence holds an important place in the complex evolutionary sequence of defensive installations both at East Tilbury itself and in the wider context of the turn of the century defence of London.

3.9.4 Contribution of the setting to the heritage assets significance

3.9.4.1 Topography

The battery sits within a green agricultural setting, with coastal marsh beyond that and then the Thames. This openness is key to its setting, as the purpose of the battery was to fire across the marsh at invading forces, should they come up the Thames. There is now a mature hedge line between the battery and the improved grazing marsh. Behind the battery is the road with the houses of East Tilbury down both sides of the road, and behind that is a level plateau of agricultural land. The local topography makes a major positive contribution to the setting of the heritage asset, whose siting is determined by the local topography.

3.9.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

The agricultural and marshland landscape in which the battery is located is historic in origin. The sea wall was probably constructed originally in the medieval period, and the marshland inside the seawall, shown on the Chapman and Andre map of 1777, was further



View 1: Part of the battery structure showing the undergrowth which has grown up around it.

enclosed and improved during the post-medieval period. The battery is sited c.350m north-west of Coalhouse Fort (SM 4) and is related to it in function. There is evidence of the trenches dug across the marsh during World War II from aerial photographs, as well as the anti-aircraft gun emplacement at Bowaters Farm (SM 13). The agricultural land, marsh, Coalhouse Fort and the other defensive features as a whole make a major positive contribution to the setting of the heritage asset.

The present sea wall itself is on the same line as shown on the 1777 map. The Church of St Katherine in East Tilbury is listed Grade I and dates from the 12th century. The Old Rectory is listed Grade II and dates from the 19th century. Behind the battery in the agricultural land are cropmarks of a prehistoric enclosure, a Bronze Age round barrow, and a medieval windmill mound. These make a moderate-major positive contribution to the setting of the heritage asset.

3.9.4.3 Land use, greenspace, trees and vegetation

The surrounding agricultural and marshland setting of the battery reflects the original setting of this asset and makes a major positive contribution to the setting of the monument. However, the vegetation growth over the monument and the hedge line in front of the battery has contrived to isolate and hide the monument.

3.9.4.4 Functional relationships and communications

There is a strong relationship between the battery site and the historic grazing marsh. The lower ground in front of the battery was crucial for its operation. This relationship makes a major positive contribution to the monument. The battery was positioned to support Coalhouse Fort so the survival of the fort also makes a major positive contribution to the monument.

3.9.4.5 Integrity

The immediate setting of the battery site has changed, with the establishment of hedges along boundaries between the battery and seawall. There has been some development along the main street of East Tilbury, but this does not impinge on the setting of the monument. The wider landscape still remains largely rural in nature. The integrity of the setting makes a positive contribution to the setting and significance of the heritage assets.

3.9.4.6 Associative relationships between heritage assets

As discussed above there is a relationship between the Scheduled battery and Coalhouse Fort and the historic grazing marsh. These relationships make a reciprocal major positive contribution to each other.

3.9.4.7 History & degree of change over time

The battery was constructed with a clear view across the marshes and sea wall to the Thames. The nature of the marshes has changed, with improvement around the edges of the marsh by drainage and some enclosure of individual fields. There are now mature hedge lines blocking that view across the marsh. The battery went out of use before the First World War and the guns removed. The rest of the structure survives very well with what appears to be little damage, apart from graffiti and some rubbish dumping. The battery is now covered by tree growth, which may lead to structural damage. It is also impossible to see an overall view of the battery.

3.9.5 Experience of the asset

The battery is accessible from the main street of East Tilbury.

3.9.5.1 Views from, towards, through, across and including the assets

3.9.6 The rarity of comparable survivals of setting

As described above, the battery is an exceptionally rare coastal example of the ˜Twydall Profile' form of defensive installation, of which it is the best and most complete in this country. It's setting comprises the agricultural and marsh land which it sits in. The 'Twydall Profile' was used primarily in fort construction at the end of the 19th century. In Essex, the Beacon Hill Battery at Harwich (coastal) and the North Weald Redoubt (inland) were both built using the 'Twydall



View 2: View eastwards from one of the gun positions towards the marsh and river, which are no longer visible.



View 3: View of the battery from the east on the seawall, showing the tree and shrub growth on the scheduled monument.

Profile'. These two monuments have different settings to East Tilbury battery and are not strictly comparable.

3.9.7 Future developments and impacts within the setting of the heritage asset

Lower Thames Crossing: The monument is located within the Lower Thames Crossing corridor land take and its immediate setting is likely to be directly impacted on. Mitigation measures are proposed in the area to the east of the heritage asset which will need to consider the setting of the monument.

Housing: Known impacts at present comprise potential house allocations to the north-east and west of the heritage asset, as well as other planning applications. These could have a detrimental effect on the immediate setting of the monument and how it is understood within the landscape.

3.9.8 Recommendations

Mitigation measures for the Lower Thames Crossing will need to be put in place following liaison between Historic England and the Highways Agency consultants in order to develop an appropriate strategy to ensure the preservation of the monument and its setting. The Battery would benefit from a Conservation Management Plan to inform any discussions.

As part of any master planning for housing or site allocation the setting of the monument needs to be considered and protected. Where the monument or its setting cannot be protected the allocation should not be put forward.

The Battery is now very overgrown and there has been some anti-social behavior on the site. It would benefit from a programme of shrub management. Opportunities should be sought to enhance the experience of the heritage asset, through opening for educational and general visits, information boards and other appropriate forms of promotion and interpretation. Opportunities for developer contributions to this work should be considered.

3.10 GATEHOUSE AND MOAT OF SOUTH OCKENDEN OLD HALL (SM1002155)

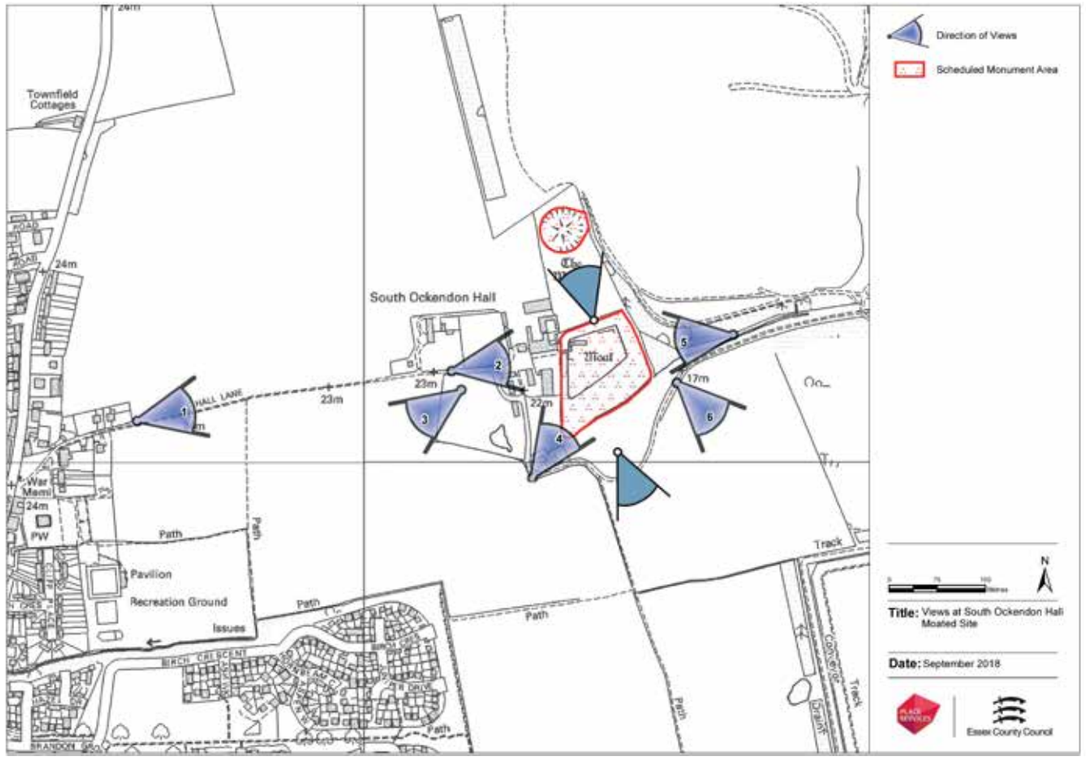




Figure 19 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)

Figure 20 Aerial photograph of both the Scheduled moat and of the Roman barrow to the north, together with the associated farm complex. The clay-pit is located on the right-hand side of the photo

3.10.1 Location and topography

The Gatehouse and Moat of South Ockenden Old Hall (centred TQ6036583162) comprises a large quadrilateral moat and associated gatehouse located some 800m to the north-east of the Historic settlement and church of South Ockenden. 117m to the north of the moat is a second Scheduled Monument, the Roman barrow 260m NE of South Ockenden Hall. Both monuments are sited on a flat plateau, on the 20m contour. To the east of the site the ground drops to the Mar Dyke valley (OD 5m). The geology of the western half of the site is a Boyn Hill Gravel Member, whilst the eastern half is on Head deposits, overlaying London Clay. There has been large-scale clay extraction to the immediate east of the Scheduled Monument leading to alterations of the topography in that area.

3.10.2 Description

The Scheduled Monument comprises a large irregular quadrilateral moat enclosing an area of about 75m by 95m. The gatehouse is located at the entrance to the moat, it comprises the lower part of outer wall of gatehouse is of finely dressed ashlar and is medieval in date, whilst the upper part is Tudor or Stuart in date. The gatehouse and the associated 18th century bridge are also Listed Grade II. The original medieval South Ockenden Hall was located on the centre of the moated area and was evidently an important house, although nothing apart from the gatehouse and part of the perimeter wall now survives. The original South Ockenden Hall stood within the moat just over the bridge in the north-west corner until at least 1866. Nothing of it remained in 1974 except the gatehouse wall. The modern Hall, to the west, was built c. 1874. The site was subsequently used as an orchard, now rather overgrown, the moat itself is still water-filled and relatively vegetation free.

The monument forms part of a wider contemporary historic landscape. To the west is located the associated farm complex, which includes a late 15th or early 16th century barn, former mill-ponds to the west which were linked to the moat by a channel and the site of a windmill to the south. The Scheduled Roman barrow to the north may have been incorporated into the manorial complex as a garden feature or viewing mount.

3.10.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.10.3.1 Archaeological interest

The Scheduled Monument comprises a large moat enclosing a house platform and accessed by a gatehouse and bridge. The original medieval South Ockenden Hall was located on the house platform, nothing apart from the gatehouse and part of the perimeter wall now survives. The site was subsequently used as an orchard, now rather overgrown, the moat itself is still water-filled and relatively vegetation free.

The monument forms part of a wider contemporary historic landscape. To the west is located the associated farm complex, which includes a late 15th or early 16th century barn, former mill-ponds to the west which were linked to the moat by a channel and the site of a windmill to the south. The Scheduled Roman barrow (see Section 3.12) to the north may have been incorporated into the manorial complex as a garden feature or viewing mount.

The site has surviving earthworks, and it can be presumed that below-ground survival of archaeological features is correspondingly good. The built structures that would have been present may well survive at foundation level given the lack of subsequent development on the site. Waterlogged deposits can be expected to be present in the moat. The soil-type of head deposits and the underlying geology of London Clay are conducive to the preservation of bone and shell and man-made artefacts. There has been little archaeological study of the Scheduled site.

The significance of the site is, however, not confined to the Scheduled area; there are further earthworks in the form of the mill-ponds to the west which is linked by a complex of drainage ditches to the Scheduled Monument. To the north the Scheduled Roman barrow forms part of a wider Roman landscape. It is probable that this activity extended into the immediate area of the monument.



View 1: Looking east along Hall Lane from South Ockenden to the Old Hall manorial complex, the 19th century South Ockenden Hall is located in the middle ground, the trees in the far distance to the right mark the site of the Scheduled moat. To the left is the Scheduled Roman barrow. The agricultural setting of the manorial complex is evident.



View 2: Looking from the farmyard access road to the gatehouse, the moated site is under the vegetation to the rear of the gatehouse.

3.10.3.2 **Historic interest**

South Ockenden was a Domesday manor. The earliest reference to the hall records a grant to support a chaplain at the free chapel at the Hall between 1190-1225. Building accounts of 1318/19 mention a hall, kitchen, well and privy. 16th century wills mention `the great dining chamber, middle chamber' and `gallery chamber'. One fragment of glazed floor tile was found in the moat and moulded and rubbed bricks found in the core of the wall may be from decorative chimneys. A survey of 1691 shows a large, probably 17th century house. The archaeological and documentary evidence suggest the Hall was a wealthy and prestigious manor house.

The manor of South Ockenden was held in overlordship by the Mandeville and Bohun, Earls of Essex, until the death of Humphrey de Bohun, in 1372. In 1421 the manor passed to the Crown, and the overlordship of the manor of South Ockenden was to be found intermittently in the 15th century in the hands of various royal ladies, including the queens, Elizabeth Woodville and Elizabeth of York. The tenancy was held by a succession of local families. In 1531 the Old Hall and most of the demesne lands in the south and south-east of the parish were separated off to form a new manor of South Ockenden Hall.

3.10.4 **Contribution of the setting to the heritage assets significance**

3.10.4.1 **Topography**

The gatehouse and moat of South Ockenden Old Hall are sited on a flat plateau, on the 20m contour. To the east of the site the ground drops to the Mar Dyke valley (OD 5m). The geology of the western half of the site is a Boyn Hill Gravel Member, whilst the eastern half is on Head deposits, overlaying London Clay. To the west is the historic settlement of South Ockenden. There has been large-scale clay extraction to the immediate east of the Scheduled Monument leading to alterations of the topography in that area. However, despite this disturbance the immediate setting is still overwhelmingly rural in nature, with a mix of large arable fields and smaller areas of paddocks. The topography makes a major positive contribution to the setting of the heritage asset.

3.10.4.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

There are numerous heritage assets within the immediate area of the Scheduled Monument. To the west is the remainder of the Old Hall complex, which includes the earthworks associated with the mill-ponds, the farmyard buildings, which includes a 15th or early 16th century barn, the site of a former windmill and the 19th century South Ockenden Hall. Also contemporaneous with the site and associated with it, either economically or socially, is the 12th century Church of St Nicholas, and the historic settlement of South Ockenden. The cropmark evidence and geophysics results from the adjacent clay-pit provide information regarding the medieval and post-medieval agricultural landscape. It is possible that the Scheduled Roman barrow to the north of the heritage asset was incorporated into the overall medieval/early post-medieval designed landscape associated with the Hall. Together these make a major positive contribution to the setting of the heritage asset.

There is considerable evidence in the form of extensive cropmark complexes, as well as from stray finds that the immediate area had been a densely and continuously settled landscape from the Bronze Age period onwards. The surviving Scheduled Roman barrow was once part of a cemetery of three barrows, the cropmark of a Roman villa/farmstead is also associated with the surviving barrow. These make a minor-moderate positive contribution to the setting of the heritage asset.

3.10.4.3 **Land use, greenspace, trees and vegetation**

The site was formerly used as an orchard with a grass-sward. It is now rather overgrown. To the immediate west is the site of the historic farmyard, comprising a mix of old and modern buildings and hardstanding, now rather dilapidated. Beyond this is the late 19th century South Ockenden Hall and its gardens. To the south are paddocks and a



View 3: Looking from westwards from the manorial complex to the historic settlement of South Ockenden, the 12th century church is prominent on the skyline.



View 4: Looking from the footpath eastwards into the moated area

pair of farm cottages. To west there is open arable farmland with the historic settlement of South Ockenden beyond. These together make a major positive contribution to the setting of the monument. The land to the east and south-east has been quarried, and in part reinstated as agricultural land, altering the contour of the land in this area, the quarry immediately adjacent to the site is still being reinstated and is screened from the site by a thick belt of trees. They represent a moderate negative impact to the setting of the heritage asset.

3.10.4.4 **Functional relationships and communications**

The primary functional relationship is with the Old Hall farmyard, the 19th century Hall, the site of the windmill, the Roman barrow and the former mill-ponds and associated water management features. There is also a clear functional relationship with the historic settlement of South Ockenden and its 12th century Church. There is also a link to the wider agricultural landscape of fields, footpaths and farms. These together make a major positive contribution to the setting of the monument

3.10.4.5 **Integrity**

Much of the immediate setting of the site still bears a relationship with the heritage asset, this includes the associated farm complex located adjacent to the site and the surviving links both to the historic settlement of South Ockenden and the wider agricultural landscape still evident. The earthworks that comprise the Scheduled site survive well, as do a complex of associated earthworks, which include the mill-pond area and the Scheduled Roman barrow. There has been disturbance to the east in the form of quarrying, this has been largely reinstated to agricultural land or is screened. The integrity of the setting makes a moderate-major positive contribution to the setting and significance of the heritage assets.

3.10.4.6 **Associative relationships between heritage assets**

As discussed above there is a wealth of other heritage assets in the vicinity of the Scheduled site, the contemporaneous features, which includes the historic settlement and church at South Ockenden makes a major positive contribution to the setting and significance of the heritage assets. The earlier features make a minor to moderate contribution to the setting and significance of the heritage assets.

3.10.4.7 **History & degree of change over time**

The original setting of South Ockenden Old Hall is still discernible in the modern landscape. The relationship with the remainder of the manorial complex is still intact. The inter-relationship with the historic settlement and church at South Ockenden is still present, albeit with the addition of modern housing development to the south-west. The wider landscape is still extensively rural. To the north there are wide views, which are largely uninterrupted by modern intrusions, although there has been some boundary loss. To the east there have been changes to land levels due to quarrying and reinstatement, and the consequent loss of any below-ground archaeology present.

3.10.5 **Experience of the asset**

As set out in Historic England's guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.10.5.1 **Views from, towards, through, across and including the assets**

3.10.6 **The rarity of comparable survivals of setting**

Moated sites are the typical monument of the Essex medieval landscape, with some 933 recorded on the Historic Environment Record, of which 109 are Scheduled, and many more are of Schedulable quality. South Ockenden Old Hall is unusual both in the size and quality of its moat and the survival of the gatehouse, evidence that it represented a higher-status monument than many of its contemporaries. Many of the Essex moated sites, including that of South Ockenden, are still located within their original rural setting. There has been extensive quarrying to the east, which has been largely reinstated, albeit not to the



View 5: Looking from the footpath north-westwards across the moated area to the farmyard, the rear of the Scheduled gate-house is visible in the centre of the photo



View 6: Looking from the footpath to the south-east, showing the raised levels relating to the reinstated quarries, the cranes of the London Gateway port are visible on the horizon

original ground levels.

3.10.7 Future developments within the setting of the heritage asset

Lower Thames Crossing: The heritage asset is located to the west of the proposed Lower Thames Crossing corridor and its setting will be potentially impacted. The scheme will potentially have a detrimental impact both visually and aurally on the rural setting to the east and north of the heritage asset.

Housing: Known impacts at present comprise potential house allocations to the west and north-west of the heritage asset, as well as other planning applications, which have the potential to have a detrimental effect on the monument and its immediate setting; appropriate mitigation strategies will be required.

3.10.8 Recommendations

As part of the Lower Thames Crossing application mitigation measures will need to be put in place to protect the setting of the monument.

This site would benefit from a Conservation Management Plan, in conjunction with the adjacent Scheduled Roman Barrow (see Section 3.12).

Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from a programme of scrub management. Opportunities should be sought to enhance the experience of the heritage asset, through information boards and other appropriate promotion and interpretation. Opportunities for developer contributions towards improving access, management and interpretation of the monument, together with the neighbouring Roman barrow should be explored.

3.11 PURFLEET MAGAZINE (SM1005561)

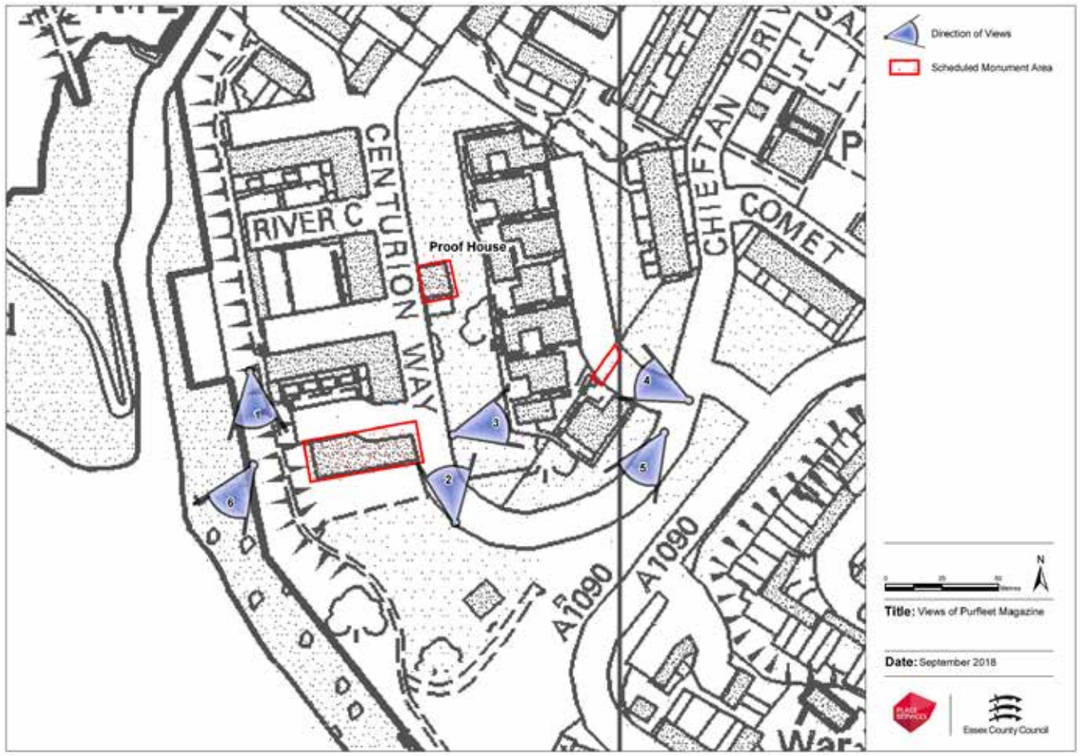


Figure 21 Location plan showing the principal views to and from the monument



Figure 22 Aerial view of Purfleet Magazine looking north, showing its Thameside setting.

3.11.1 Location and topography

The monument lies on the north bank of the River Thames where the Long Reach of the river meets the outflow of the Mar Dyke River. The site comprises a chalk spur which drops steeply down to a narrow band of former marsh behind the seawall. The contours are therefore relatively steep, rising from 0m OD behind the sea wall to approximately 15m OD at the clock tower. To the immediate east of the SM is the historic settlement and port of Purfleet, with extensive chalk quarries located to the north-east. To the north-west on the opposite side of the Mar Dyke were further military installations on Aveley Marshes The site commands wide views both up and down the Thames and across the Dartford marshes on the Kent side of the River to Dartford and Crayford.

3.11.2 Description

The Scheduled monument comprises three separate but associated elements, the magazine, the proof house and the clock tower, remnants of a much larger original government gunpowder storage complex. In the early 1760s the government gun powder magazine complex was moved from Greenwich to Purfleet. This complex included a quay, five identical storehouses and magazines, the proofing house and, some distance from the stores, shielded by an earth-bank and large garden, the Commandant's house. The magazine continued to operate through the late 18th and 19th centuries and was used as an ammunition store in the First World War. The magazine was occupied by the army until the 1960's when it was purchased by Thurrock Council. In 1973 the quay, four of the magazines and the Commandant's house were demolished. Most of the site has since been redeveloped for housing.

The scheduled structures are:
a) The central magazine of an original five built 1763-1765 as the principle ordnance depot for the Thames and Medway. This is a brick vaulted rectangular building with a slate roof. There are doors on each side and six small windows on each long side. The walls are thick and internally, the magazine would be divided into bays for storing the barrels. It is currently being used as the Purfleet Heritage Centre. It is Grade I Listed.
b) The Proofing House - A two storey brick building with slate roof. It was once part of complex of buildings used as proof houses etc., and probably dates to the original 1761-3 building programme. It is now used as the Purfleet Day Centre. It is Grade II* Listed.
c) The Clock Tower. This was part of the garden wall of the Commandant's house. It is a small square arched brick tower with clock face. One possibly original wooden door remains. It is Grade II Listed.

3.11.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.11.3.1 Archaeological interest

In addition to the standing architectural remains there is also high archaeological potential due to waterlogging in the area of the magazine.

There is considerable archaeological evidence covering a wide range of periods in the immediate vicinity of the heritage assets. This ranges from the nationally significant Pleistocene deposits and the drowned Neolithic forest on the Rainham foreshore to post-medieval quarrying and numerous military installations associated with the defence of the Thames.

3.11.3.2 Historic interest

The magazine is the only survivor of a group of 5 magazines by Montresor built 1763-5. This still remains, with the 1770s magazine at Priddy's Hard opposite Portsmouth dockyard, the most outstanding example of a typically British type of magazine, with twin barrel vaults, that relates to a critical period in Britain's growth as a naval power in the decades after the Seven Years War. The wooden overhead cranes are uniquely early examples of a type of structure that had a great impact on the development of industrial buildings, anticipating their introduction into factory and warehouse spaces in the nineteenth century. Their survival in such a complete building, one built for the British military-industrial complex, is thus of great significance in the context of the Industrial Revolution.

Proof houses were originally used for testing small quantities of gunpowder by igniting it



View 1: View looking southwards along the seawall to the Magazine building and beyond to the corner of the park and the Thames



View 2: View looking northwards from the Magazine to the Proof House, showing the natural slope of the edge of the escarpment

with a hot iron on a glass, porcelain or copper plate: the (altered) interior was originally provided with a gallery. This function of testing powder took place against the background of scientific development in eighteenth century France and Britain and Britain's attempts to standardise and improve the quality of powder available to the army and navy. It also relates to a critical period in Britain's growth as a naval power in the decades after the Seven Years War. This scientific testing was to ramify greatly and have a decisive effect on the development of explosives sites and military ordnance yards in the 19th century. The only other proof house to have survived is the early nineteenth century example at the Marsh Works in Faversham, Kent. The plan and form of this building - the gallery being repeated in Sir Frederick Abel's laboratory of the 1860s at Woolwich's Royal Arsenal (grade II) - also clearly relates to its function as an eighteenth century laboratory building, one that now represents a very rare, possibly unique, example of such a structure.

The gatehouse and clock-tower forms an integral part of the finest ensemble in any of the Ordnance Yards, consistent with the high standards practiced by the Ordnance Board in its designs for fortifications and barracks from the 17th century

3.11.4 Contribution of the setting to the heritage assets significance

3.11.4.1 Topography

The monument lies on the north bank of the River Thames where the Long Reach of the river meets the outflow of the Mar Dyke river. The site comprises a chalk spur which drops steeply down to a narrow band of former marsh behind the seawall. The contours are therefore relatively steep, rising from 0m OD behind the sea wall to approximately 15m OD at the Clock-tower. To the immediate east of the SM is the historic settlement and port of Purfleet, with extensive chalk quarries located to the north-east. To the north-west on the opposite side of the Mar Dyke were further military installations on Aveley Marshes The site commands wide views both up and down the Thames and across the Dartford marshes on the Kent side of the River to Dartford and Crayford.

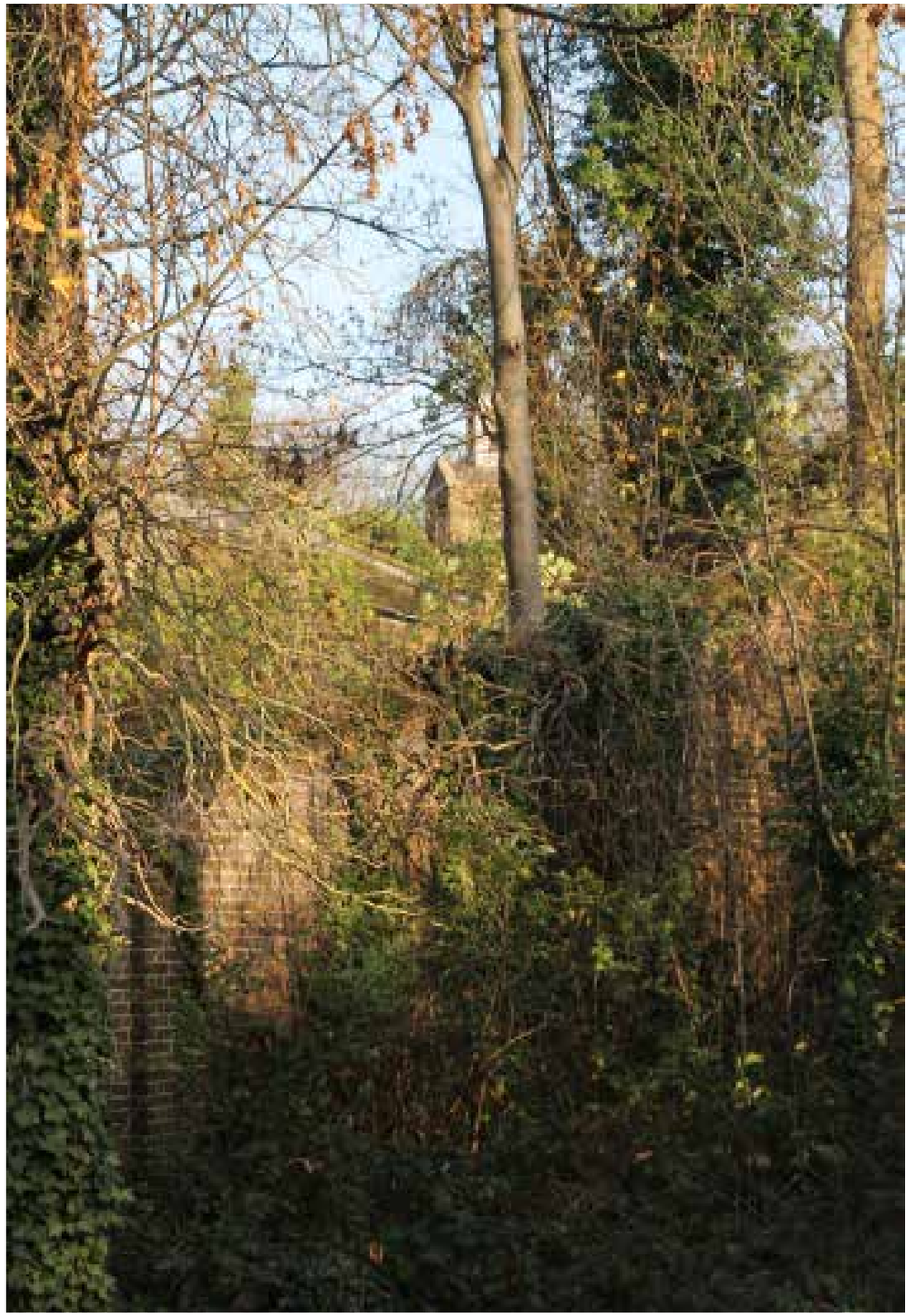
The local topography makes a major positive contribution to the setting of the heritage assets, whose siting is entirely determined by the topography and access to the Thames. However the area has largely been re-developed as housing since the 1970s, leaving the surviving monuments as islands within a modern setting, although there is still a degree of inter-visibility between the three structures. The modern development has had a moderate negative impact on the understanding of the relationship between the heritage assets.

3.11.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

Purfleet Magazine is associated with a significant number of historic monuments. Firstly there are the other defensive structures associated with this stretch of the Thames; these include the Purfleet rifle-range, a Cordite store, a D-Day assembly area to more ephemeral features such as road-blocks. Individually and as a group the military monuments make a major positive contribution to the setting of the heritage assets.

The historic settlement and church of Purfleet is sited on the slope of the escarpment to the east and north-east of the magazine. The settlement is a Conservation Area, and some of the buildings are Listed. The marshland landscape to the west is historic in origin, having been reclaimed in the early post-medieval period. There are also extensive historic industrial remains in the vicinity, including quarrying and an oil depot. These assets make a moderate to major positive contribution to the setting of the heritage asset.

There are nationally important early prehistoric deposits in the vicinity of the heritage asset, both in the gravels and on the foreshore, these makes a minor positive contribution to the settling of the heritage asset.



View 3: View looking from the Magazine upslope to the Clock-tower



View 4: View looking from Chieftain Drive/Centurion Way junction westwards to the Clock-tower and the modern housing behind.

3.11.4.3 Land use, greenspace, trees and vegetation

The heritage assets are set within a 1970s housing estate, which replaced many of the original structures on the site. The blocks of flat beside the magazine deliberately echo the layout of the now demolished magazines. To an extent the built-up nature of the immediate setting to an extent echoes the built-up nature of the original Magazine. The three surviving structures are inter-visible. The housing estate has a moderate negative impact on the setting of the heritage assets. Currently the immediate area to the east of the heritage assets is parkland with mown grass and trees. There are extensive views out from here and from the top of the sea-wall along and across the Thames. This area can be considered as having a major positive role in enhancing the understanding of the relationship between the site and the river. The wider landscape setting is the sea-wall and the Thames to the seaward side, Rainham Marsh RSPB Reserve to the west and historic Purfleet to the east. The former quarries have been infilled with housing, although the chalk quarry-face is still a local land-mark and a SSSI.

3.11.4.4 Functional relationships and communications

The primary functional relationship of the setting of the monument is access to the River Thames and the defences along it. The historic road and rail network also played a significant role. These relationships make a major positive contribution to the setting of the heritage asset.

3.11.4.5 Integrity

The immediate setting of Purfleet Magazine has been much altered by the construction of a 1970s housing estate. However the riverside location remains essentially unchanged and the historic marsh area to the west and across the river is still evident. The historic quarries have been infilled with housing, although the quarry face is still a local landmark. Historic Purfleet is a Conservation Area, containing a number of Listed Buildings. The integrity of the setting makes a moderate positive contribution to the setting and significance of the heritage assets.

3.11.4.6 Associative relationships between heritage assets

As discussed above there are significant



View 5: View looking from Chieftain Drive/Centurion Way junction southwards through the park to the Thames and beyond to Kent



View 6: View looking from the sea-wall beside the Magazine building up the Thames, the Aveley/Rainham Marshes are located on the right and Kent in the far distance on the left.

relationships between Purfleet Magazine and the other historic military installations in the area. These relationships make a reciprocal major positive contribution to each other. There is also the relationship between the Scheduled site and the historic settlement of Purfleet. These relationships make a moderate to major positive contribution to each other.

3.11.4.7 **History & degree of change over time**

Much of the original Magazine has been demolished, leaving only the three Scheduled structures as remnants of what was once a much large complex. The structures are mid-18th century in origin, and despite the changing military requirements over the centuries they have remained structurally relatively unchanged. The immediate setting has changed from military complex to 1970s hosing-estate. On a wider scale the riverside location and open marshland setting to the west remain much as they were throughout the life of the Magazine.

3.11.5 **Experience of the asset**

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.11.5.1 **Views from, towards, through, across and including the assets**

3.11.6 **The rarity of comparable survivals of setting**

The setting of the Purfleet Magazine Scheduled Monument has been compromised by the 1970s housing estate that has replaced the remainder of the original Magazine complex. However the links to the Thames and to the wider estuarine landscape, as well as to the historic settlement of Purfleet remain relatively intact. The only comparable surviving magazine at Priddy's Hard, Gosport, is also now preserved as a museum within an area of housing. The other comparable surviving Proof House at Marsh Works, Faversham became a site for mineral extraction and housing development.

3.11.7 **Future developments and impacts within the setting of the heritage asset**

Mixed-use development: Known impacts at present comprise potential mixed use development to the east of the heritage asset, as well as other planning applications, which have the potential to have a detrimental effect on the wider views of the Thames.

3.11.8 **Recommendations**

Opportunities should be sought to preserve and enhance the setting of the heritage asset, particularly in maintaining the intervisibility between the three heritage assets.

3.12 ROMAN BARROW 260M NE OF SOUTH OCKENDEN HALL (SM1002156)

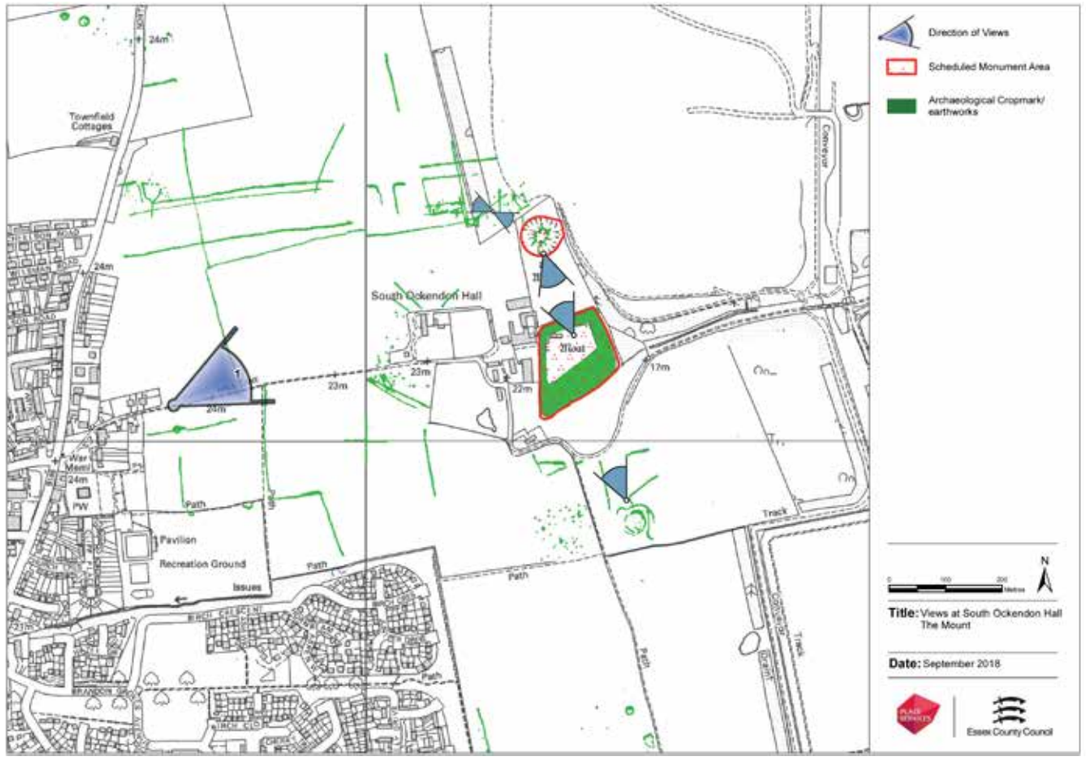




Figure 23 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)

View 1: Looking east along Hall Lane from South Ockenden. To the left is the Scheduled Roman barrow, to the right is the manorial complex. The open, agricultural setting of the site is evident.

3.12.1 Location and topography

The Roman barrow to the north-east of South Ockenden Hall (TQ 6031 8336), the medieval moat and gatehouse of South Ockenden Hall is also Scheduled (see Section 3.10). Both monuments are sited on a flat plateau, on the 20m contour. Originally the barrow was one of a line of three barrows strung out along the edge of the plateau above the Mar Dyke valley to the east (OD 5m). The geology is Head deposits, overlaying London Clay. There has been large-scale clay extraction to the immediate east of the Scheduled Monument leading to alterations of the topography in that area.

3.12.2 Description

The monument comprises a Roman burial mound, or barrow, located some 260m north east of South Ockenden Hall, on a terrace of fairly high ground on the western slope of the Mar Dyke river valley

The mound is oval in plan with a rounded profile rising to a flat summit at a height of about 5m. It has a maximum diameter of 50m at the base where it is surrounded by a largely buried ditch, visible as a slight depression measuring up to 10m in width. A single trench excavated across the ditch and into the edge of the mound in 1957 yielded 17 sherds of Roman pottery, indicating that this barrow was also constructed in the second century. The interior of the mound, including the central burial, was not disturbed.

The monument forms part of a wider contemporary historic landscape. It originally stood as one of three such barrows sited along the valley side at intervals of about 500m apart. The second barrow was excavated prior to destruction of the above-ground portions of the monument and found to date to the late second century AD, it survives as a double-ditched ring-ditch visible on aerial photos. The location of the third barrow is uncertain. Cropmark evidence shows a probable Roman villa/ farmstead located immediate north-west of the scheduled site, whilst other cropmarks and excavation evidence demonstrates that the wider landscape setting comprised a patchwork of fields and farms in the Roman period.

120m to the south is the Scheduled medieval moated site of South Ockenden Old Hall, an imposing manorial complex. Given the dominance of the barrow in the immediate landscape it is possible that it would have been incorporated into the manorial site as a garden feature or viewing mount.

3.12.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.12.3.1 Archaeological interest

The Scheduled Monument comprises a Roman barrow, surrounded by a perimeter ditch. The site has surviving earthworks, and it can be presumed that below-ground survival of archaeological features is correspondingly good. Waterlogged deposits may be present in the ditch, and there is the possibility of the original Roman ground-surface surviving under the mound. The soil-type of head deposits and the underlying geology of London Clay are conducive to the preservation of bone and shell and man-made artefacts. There has been only limited archaeological study of the Scheduled site, consisting of a single trench across the ditch and into the edge of the mound, this however confirmed the presence of Roman finds on the site.

The significance of the site is, however, not



Figure 24 Aerial photograph looking east across the Roman barrow showing the inter-relationship between it and the Scheduled moat and associated farm complex to the right of it. The cropmark of the second barrow is just visible in the top right-hand corner of the photo. The clay-pit occupies the top left-hand side of the photo.

confined to the Scheduled area; it forms one part of a much larger settled agricultural and ritual landscape, which included a further two barrows (one of which survives as a cropmark) as well as settlement sites, trackways and field boundaries. Survey and excavations in the South Ockenden area has established that there has been widespread settlement since the Neolithic period.

3.12.3.2 **Historic interest**

The proximity of the barrow to the Scheduled moated manorial complex of South Ockenden Old Hall raises the possibility that it was subsequently incorporated into that designed landscape as a garden feature or viewing mound.

3.12.4 **Contribution of the setting to the heritage assets significance**

3.12.4.1 **Topography**

Originally the Scheduled barrow was one of a line of three barrows strung out along the edge of the plateau above the Mar Dyke valley to the east (OD 5m). It would have had widespread views in all directions, across a settled agricultural landscape as far as the Thames to the south and the Langdon Hills to the east. Equally they would have been a prominent feature in the predominantly flat immediate landscape. There has been large-scale clay extraction to the immediate east of the Scheduled Monument leading to alterations of the topography in that area. However, despite this disturbance the immediate setting is still overwhelmingly rural in nature, with a mix of large arable fields and smaller areas of paddocks. The topography makes a major positive contribution to the setting of the heritage asset.

3.12.4.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

There are numerous heritage assets within the immediate area of the Scheduled Monument. The cropmark and excavation evidence demonstrates that the heritage asset formed one part of a much larger Roman settled agricultural and ritual landscape. To the south is the Old Hall manorial complex, which includes the Scheduled moat and gatehouse (see Section 3.10), which probably incorporated the barrow into the complex as a locally prominent landscape feature. Together these make a major positive contribution to the setting of the heritage asset.

There is considerable evidence in the form of cropmarks, excavation evidence and stray finds that the immediate area had been a densely and continuously settled landscape from the Neolithic period onwards. These make a minor-moderate positive contribution to the setting of the heritage asset.

3.12.4.3 **Land use, greenspace, trees and vegetation**

The barrow is tree-covered, within closely-cropped pasture. To the immediate south is the site of the historic farmyard, comprising a mix of old and modern buildings and hardstanding, now rather dilapidated. Beyond this is the Scheduled moated site, comprising standing water and an overgrown orchard. To the west and north-west there is open arable farmland with the historic settlement of South Ockenden beyond. These together make a major positive contribution to the setting of the monument. The land to the east and north-east has been quarried, and in part reinstated as agricultural land, altering the contour of the land in this area, the quarry immediately adjacent to the site is still being reinstated and is screened from the site by a belt of trees. They represent a moderate negative impact to the setting of the heritage asset.

3.12.4.4 **Functional relationships and communications**

The primary functional relationship is with the wider archaeological landscape, which includes the cropmark of the Roman barrow to the south, the Roman settlement evidence and the wider agricultural landscape of fields and trackways. There is also a clear spatial, and possibly functional, relationship with the later manorial complex of South Ockenden Old Hall. These together make a major positive contribution to the setting of the monument.

3.12.4.5 **Integrity**

Much of the immediate setting of the site

still survives, including extensive areas of contemporaneous cropmarks, including the below-ground remains of a second barrow as well as the probable villa/farmstead site and the wider landscape of fields and tracks. The relationship between the barrow and the medieval moated manorial complex is still intact. There has been disturbance to the east in the form of quarrying, this has been largely reinstated to agricultural land or is screened. The integrity of the setting makes a moderate-major positive contribution to the setting and significance of the heritage assets.

3.12.4.6 **Associative relationships between heritage assets**

As discussed above there is a wealth of other heritage assets in the vicinity of the Scheduled site, the contemporaneous features, which includes the cropmarks of a second barrow, make a major positive contribution to the setting and significance of the heritage asset. The earlier and later features make a minor to moderate contribution to the setting and significance of the heritage assets.

3.12.4.7 **History & degree of change over time**

The original setting of the barrow is still discernible in the modern landscape. The relationship with much of the original archaeological landscape is still largely intact. The inter-relationship with the historic manorial complex of South Ockenden Old Hall is still present. The wider landscape is still extensively rural as it would have been in the Roman period. To the north there are wide views, which are largely uninterrupted by modern intrusions. To the east there have been changes to land levels due to quarrying and reinstatement, and the consequent loss of any below-ground archaeology originally present.

3.12.5 **Experience of the asset**

As set out in Historic England's guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.12.5.1 **Views from, towards, through, across and including the assets**

3.12.6 **The rarity of comparable survivals of setting**

Roman barrows are rare nationally, with less than 150 recorded examples, and are generally restricted to lowland England with the majority in East Anglia. The earliest examples date to the first decades of the Roman occupation and occur mainly within this East Anglian concentration. It has been suggested that they are the graves of native British aristocrats who chose to perpetuate aspects of Iron Age burial practice. The majority of the barrows were constructed in the early second century AD but by the end of that century the fashion for barrow building appears to have ended. As a rare monument type which exhibits a wide diversity of burial tradition all Roman barrows, unless significantly damaged, are identified as nationally important. The monument is still surrounded by open countryside in a commanding position within the landscape. It is evident from the cropmarks that the heritage asset forms one part of a much wider contemporaneous landscape, much of which survives as below-ground features. There has been extensive quarrying to the east, which has been largely reinstated, albeit not to the original ground levels.

3.12.7 **Future developments and impacts within the setting of the heritage asset**

Lower Thames Crossing: The heritage asset is located to the west of the Lower Thames Crossing corridor and its setting will be potentially impacted.

Housing: Known impacts at present comprise potential house allocations to the west and north-west of the heritage asset, as well as other planning applications, which have the potential to have a detrimental effect on the monument and its immediate setting.

3.12.8 **Recommendations**

The Lower Thames Crossing will require mitigation measures to be put in place following liaison between Historic England and the Highways Agency consultants to minimize the impact.

This site would benefit from a Conservation Management Plan, in conjunction with the adjacent Scheduled Gatehouse and Moat (see Section 3.10).

Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from a programme of scrub management. Opportunities should be sought to enhance the experience of the heritage asset, through information boards and other appropriate promotion and interpretation. In addition the site can only be viewed from a distance and options allowing greater access to the site to the general public could be explored. Opportunities for developer contributions towards improving access, management and interpretation of the monument, together with the neighbouring Scheduled Gatehouse and Moat should be explored.

3.13 SECOND WORLD WAR ANTI-AIRCRAFT BATTERY AT BOWATERS FARM (SM 1002156)

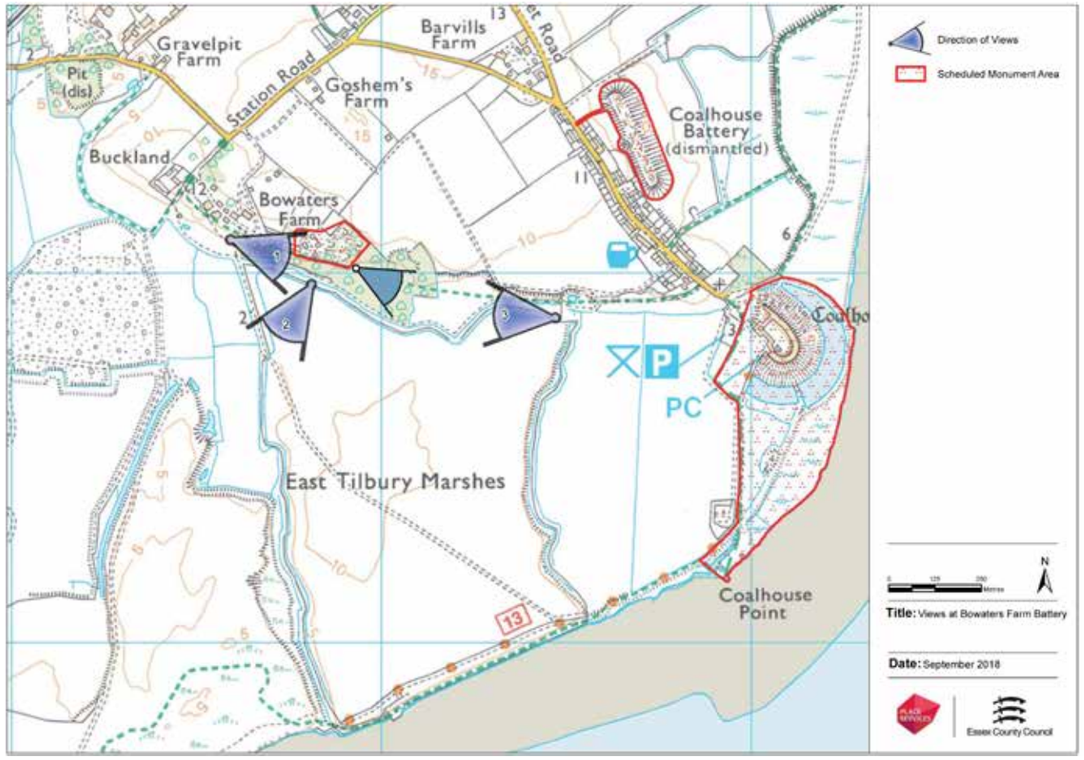


Figure 25 Plan showing the location of the battery and the principal views in and out of the monument. Also shows the other scheduled monuments in immediate vicinity (other significant views are indicated by the smaller view-point symbols)



View 1: View of the natural scarp below the site of the battery, showing the density of scrub growth

3.13.1 Location and topography

The monument lies slightly above and overlooking to the south an area marshland known as East Tilbury Marshes, to the east of Bowaters Farm. The site is positioned on the edge of a natural scarp (10m OD) where Lynch Hill gravels overlying Thanet sands meet chalk overlaid by alluvium of East Tilbury Marshes. The site is now largely inaccessible.

3.13.2 Description

The monument includes eight concrete gun emplacements with their connecting roads and vehicle parks, magazine and command post. The battery forms two groups of anti-aircraft artillery. The earlier group comprises four octagonal emplacements of concrete covered by asphalt, which measure some 16m across. Two entrances are located on opposite sides of the emplacements and earthen banks protect their outer sides. Inside the emplacements, the ten bolts which fixed the guns to the ground survive, as do the ammunition lockers against the walls. Between the middle two emplacements is a rectangular magazine building some 12m long with five compartments for shells with different fuses. At the rear of the group is a larger building which formed a command post and which included height and range-finding equipment, although this no longer survives. This group housed 4.5 inch guns from mid-1940 to 1944.

To the east is a second group of four emplacements, these examples comprising a deep circular pit lined with concrete, again measuring some 16m across, with an adjoining sunken engine room to the west or south-west. A gun turret, which no longer survives, capped the circular pit, and housed a 5.25 inch gun. This group superseded the 4.5 inch guns in 1944 and continued in use until after the war.

3.13.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.13.3.1 Archaeological interest

The physical remains of this monument itself, positioned above an area of marshland which was criss-crossed by contemporary anti-glider ditches and with wide views along the Thames from Coalhouse Fort to Tilbury Fort and across to Kent, forms the principle archaeological interest. There is evidence for earlier occupation in the prehistoric, medieval and post-medieval period along the scarp edge.

3.13.3.2 Historic interest

Anti-aircraft batteries are small clusters of artillery dedicated to firing at aerial targets. They were constructed from the First World War to the 1950s, after which time missile batteries took over from artillery as fixed weaponry while anti-aircraft artillery became increasingly mobile. They were constructed in large numbers in the immediate pre and early Second World War periods in response to the threat of air attack. Many took the form of simple sandbagged emplacements which left no substantial remains when they were abandoned. Others took the form of concrete emplacements arranged around a command post, while the latest types of battery were fully automatic and included radar-guidance equipment. Artillery of 3.7 inch and 4.5 inch and later 5.25 inch calibre was the usual armament of these batteries. Anti-aircraft batteries were widely distributed around England, with a marked concentration in the South East around London. As a result of development pressure in the South East few have survived.

The example at Bowater's Farm is the last surviving example of such batteries in this area of Essex. It forms the latest part of a series of important defensive installations at Coalhouse Point which illustrate the development of coastal defenses from the Tudor period to the mid-20th century.

3.13.4 Contribution of the setting to the heritage assets significance

3.13.4.1 Topography

The battery is still situated within a rural setting, which existed when it was constructed. Historic grazing marsh lies to the south, part of this is now a land-fill site. Woodland and scrub have grown up along the scarp and between the monument and marshland. The local topography makes a major positive contribution to the setting of the heritage asset, whose siting is in part determined by the topography.



View 2: View from the marsh edge at the base of the natural scarp looking south-west to Tilbury Power-station and Tilbury Fort (behind the power station)



View 3: View from the East Tilbury footpath coming from Coalhouse Fort looking towards the battery in the scrub in the far distance

3.13.4.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

The agricultural and marshland landscape in which the battery is located is historic in origin. The former marsh has been reclaimed for agriculture. The agricultural land and marsh as a whole make a major positive contribution to the setting of the heritage asset.

There is evidence of the anti-glider trenches dug across the marsh during World War II from aerial photographs. Coalhouse Fort and Tilbury Fort (now obscured by Tilbury Power Station), both of which originate in the Tudor period and were in continuous use until the Second World war, as well as the East Tilbury Battery, have a historic relationship with the World War Two Anti-Aircraft Battery, as part of the defence of London. These make a major positive contribution to the setting of the heritage asset.

Cropmarks of prehistoric enclosure, Bronze Age round barrow and a medieval windmill mound are situated to the north-east of the site. These make a minor positive contribution to the setting of the heritage asset.

3.13.4.3 **Land use, greenspace, trees and vegetation**

The site is on private land and the footpaths have been blocked by paddocks or by scrub growth, it was therefore not accessible for survey. There has also been considerable scrub growth around the site, and views into it have been largely blocked. Although the lack of access to the site is negative to the overall understanding of the site, the surrounding agricultural land and former open marshland reflects the original setting of the battery, and makes a major positive contribution to the setting of the monument.

3.13.4.4 **Functional relationships and communications**

There is a relationship between the ant-aircraft battery, Coalhouse Fort, Tilbury Fort and the anti-glider ditches that were in the marshland. There is also a relationship between the battery and the River Thames, as it was likely that invading aircraft would use the Thames as a navigational route for bombing raids on London. This relationship makes a major positive contribution to the setting of the monument.

3.13.4.5 **Integrity**

Most of the structures associated with the battery survive, however the immediate setting of the battery site has suffered considerable encroachment by scrub. On a wider scale the rural landscape is still relatively unchanged, particularly with the views across the marshes to the Thames. The farms have expanded with extra barns and sheds, but do not impinge on the essentially rural setting. Land fill to the south-west will raise the land surface to above its previous levels. The integrity of the setting makes a moderate-major positive contribution to the setting and significance of the heritage assets.

3.13.4.5 **Associative relationships between heritage assets**

As discussed above there is a relationship between the battery, Coalhouse Fort, Tilbury Fort and the anti-glider ditches in the former marsh and with the River Thames. These relationships make a reciprocal major positive contribution to each other.

3.13.4.6 **History & degree of change over time**

The battery was constructed as part of the defenses of London from aerial attack. Although most of these types of monuments have disappeared, the battery at Bowaters Farm has survived still surrounded by agricultural land as it would have been originally.

3.13.5 **Experience of the asset**

The battery is situated on private land and was not accessible at the time of the visit. The views described are therefore limited to the wider landscape, as indeed would have been intended when the battery was in use.

3.13.5.1 **Views from, towards, through, across and including the assets**

3.13.6 **The rarity of comparable survivals of setting**

As described above, the Anti-Aircraft Battery at Bowaters Farm is the last surviving



Figure 26 Aerial view of the anti-aircraft battery from the north. Some of the structures are showing at the bottom of the photo.

example of such batteries in this area of Essex. It also forms the latest part of a series of important defensive installations at Coalhouse Point which illustrate the development of coastal defenses from the Tudor period to the mid-20th century on this side of the Thames.

3.13.7 Future developments and impacts within the setting of the heritage asset

Lower Thames Crossing: The heritage asset is located to the west of the Lower Thames Crossing corridor and its setting will be impacted. Large scale work will be required at the entrance to the tunnels beneath the Thames which may have a direct or indirect impact to the heritage asset.

Other Development: Planning applications for housing or other forms of development have the potential to impact on the setting of the heritage asset.

3.13.8 Recommendations

Opportunities should be sought to preserve and enhance historic monument and its setting, which could include the re-opening of historic routeways and the clearance of scrub to re-establish views in and out of the heritage asset. The removal of scrub would allow an updated assessment of the extent and survival of the asset.

3.14 SITE OF MOATED MANOR HOUSE EAST OF ST MICHAEL'S CHURCH, AVELEY (SM1005562)

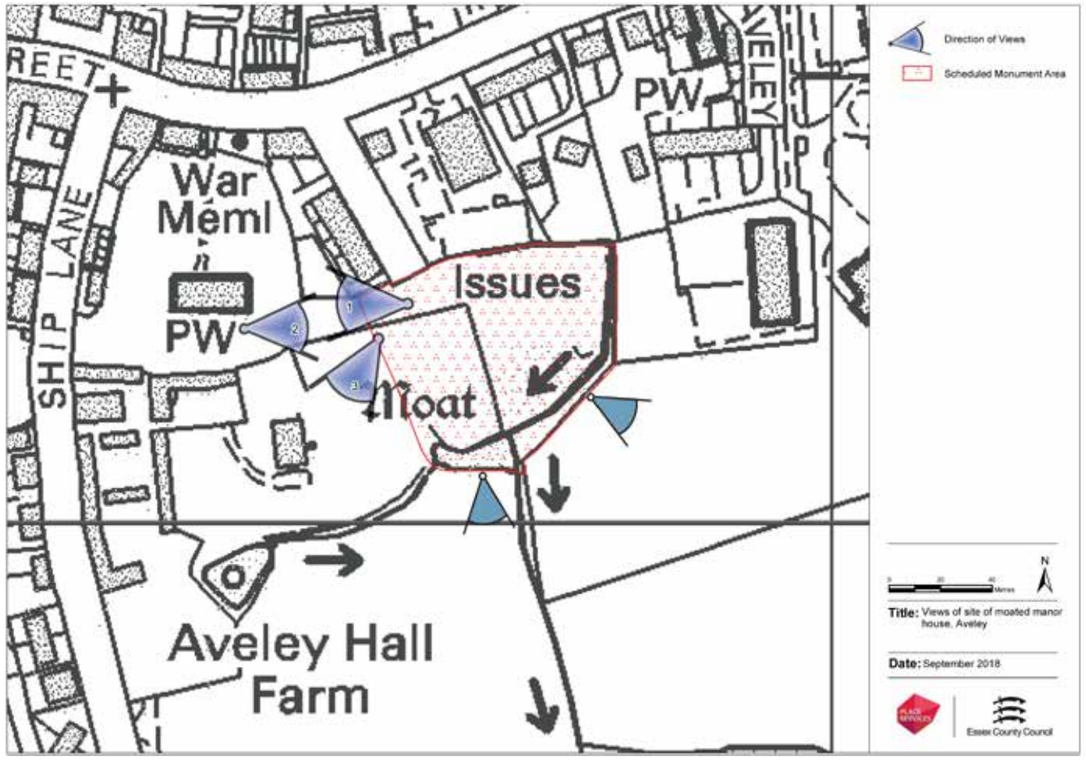


Figure 27 Location plan showing the principal views to and from the monument (other significant views are indicated by the smaller view-point symbols)



Figure 28 Aerial photograph of the Scheduled moat in the centre, with the church of St Michael and post-medieval Aveley Hall to the right and the A13 in the top left-hand corner.

3.14.1 Location and topography

Aveley Hall moat comprises a medieval manorial moated site located some 40m to the east of St Michael's Church, Aveley and the post-medieval Aveley Hall. The historic settlement of Aveley is sited to the immediate north and west, focused on the junction of the High Street and Ship Lane. Modern Aveley is located to the north and east of the historic settlement. The site is on a very gentle slope, dropping from 18m OD on the High Street to 10m OD on the southern edge of the moat, before becoming steeper as it drops down into the Mar Dyke valley to the south of the A13. The geology comprises Head deposits, overlaying sand and gravel river terraces. There has been large-scale sand and gravel extraction to the immediate east of the Scheduled Monument leading to alterations of the topography in that area.

3.14.2 Description

The Scheduled medieval manorial moated site is located immediately to the east of the church. The moat is roughly triangular in plan, and partially water-filled, the west side is indicated by surface irregularities. Other surface features link up with up with an outlying pond and existing watercourses. Badgers have thrown up pottery, dug through an area of cobbling and exposed a block of masonry. The pottery dates to 1150-1250. There is medieval documentary evidence for a house, out-buildings, a garden, and a chapel (the latter may not have been on the site itself) and a park. By 1578 the manorial centre has moved, and by 1593 the house had disappeared, however a 1782 copy of Saxton's map of 1598 marks the site where it was said to have been. The site is inaccessible to the public. The majority is now under dense scrubby woodland, with disturbance from badger setts. The western portion is now within a paddock.

The monument forms part of a wider contemporary historic landscape. To the west is the early 12th century Church of St Michael and the historic settlement of Aveley. Also to the west is the post-medieval Aveley Hall, which replaced the medieval site.

3.14.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.14.3.1 Archaeological interest

The moat is partially water-filled, and other surface features link up with up with an outlying pond and existing watercourses, waterlogged deposits can therefore be expected. The site has surviving earthworks, and it can be presumed that below-ground survival of archaeological features is correspondingly good. Badgers have thrown up medieval pottery, dug through an area of cobbling and exposed a block of masonry. The built structures that would have been present may well survive at foundation level given the lack of subsequent development on the site. Waterlogged deposits can be expected to be present in the moat. The soil-type of head deposits is conducive to the preservation of bone and shell and man-made artefacts. There has been little archaeological study of the Scheduled site. The site is typical of the many medieval moated manor and church groups in Essex.

The monument forms part of a wider contemporary historic landscape. To the west is the early 12th century Church of St Michael and the historic settlement of Aveley. Also to the west is the post-medieval Aveley Hall, which replaced the medieval site.

3.14.3.2 Historic interest

Aveley was a Domesday manor. In the late 12th century John Gilbert de Tani held the manor of Aveley from Henry II. In 1287 the manor's is described as comprising a messuage (dwelling-house with associated out-buildings and yard areas), garden and curtilage (area of land attached to a house). In 1374 a capital messuage (a house together with its yard, outbuildings, and land) and a park 'badly enclosed with a ditch and feeble palings' is recorded. A 14th century chapel (now demolished) once stood to the north of the moat. The manor changed hands several times in the 15th-16th centuries, eventually coming to the crown. By 1578 the manorial centre has moved, and by 1593 the house had disappeared, however a 1782 copy of Saxton's map of 1598 marks the site where it was said to have been.

3.14.4 Contribution of the setting to the heritage assets significance



View 1: Looking from the moated site towards the church



View 2: Looking south-east from the churchyard boundary across the Scheduled area, the western arm of the moat is just visible as a depression running across the centre of the photograph. The remainder of the site is under the scrub. The fields to the south can just be glimpsed over the hedge.

3.14.4.1 **Topography**

The immediate setting of Aveley moat comprises the Grade I Listed St Michael's church and churchyard and Aveley Hall and grounds to the west, paddocks and fields to the south, and to the north and east the rear of building plots which front on to the High Street. Beyond the fields is the embankment of the A13. Glimpses of the Queen Elizabeth II Bridge can be seen in the distance, marking the line of the Thames, although the river itself is not visible. The site is on a very gentle slope, dropping from 18m OD on the High Street to 10m OD on the southern edge of the moat, before becoming steeper as it drops down into the Mar Dyke valley to the south of the A13.

The geology comprises Head deposits, overlaying sand and gravel river terraces. There has been large-scale sand and gravel extraction to the east of the site, behind the Primary School leading to alterations of the topography in that area. Modern Aveley is sited to the north and west of the historic settlement. However, despite the large-scale modern intrusions, the immediate setting is still largely what it would have been in the past, comprising a site set behind the historic High Street, surrounded by fields and paddocks, the church and churchyard and Aveley Hall. The topography makes a moderate positive contribution to the setting of the heritage asset.

3.14.4.2 **Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)**

There are numerous heritage assets within the immediate area of the Scheduled Monument. Of primary importance is the 12th century Grade I listed parish Church of St Michael and the Listed 19th century Aveley Hall, as well as the Listed Buildings on the High Street, which include the 15th century Crown and Anchor Hotel. Together these make a major positive contribution to the setting of the heritage asset.

Other periods are also represented, there is Roman brick in the church fabric and Roman finds have been recovered from the vicinity of the village. The Second World War is also represented by a series of defensive road-block structures. These make a minor positive contribution to the setting of the heritage asset.

3.14.4.3 **Land use, greenspace, trees and vegetation**

The majority of the site is overgrown with dense scrub, except for the western third which is in a horse paddock. There has been a degree of animal damage, it is not known whether the badgers are still active on the site. To the immediate west are the grounds of the 19th century Aveley Hall and the churchyard. To the south are arable fields and the Primary School playing-fields. To the north is Aveley village. These together make a major positive contribution to the setting of the monument. The land further to the east has been quarried and reinstated as agricultural land. To the south the fields are bounded by the A13. They represent a minor negative impact to the setting of the heritage asset.

3.14.4.4 **Functional relationships and communications**

The primary functional relationship is with the parish Church, the 19th century Hall, and the historic settlement of Aveley. There is also a link to the wider agricultural landscape. These together make a major positive contribution to the setting of the monument

3.14.4.5 **Integrity**

Much of the immediate setting of the monument still bears a relationship with the heritage asset, this includes the Parish Church and the post-medieval Hall as well as the historic settlement of Aveley. The earthworks that comprise the Scheduled site survive well, as do a complex of associated water management features. The site is however overgrown and largely inaccessible. The integrity of the setting makes a moderate-major positive contribution to the setting and significance of the heritage assets.

3.14.4.6 **Associative relationships between heritage assets**

As discussed above there are other heritage assets in the vicinity of the Scheduled site, the contemporaneous features, which includes the historic settlement and church and Hall



View 3: Looking from the corner of the moated site to Aveley Hall

make a major positive contribution to the setting and significance of the heritage assets. The earlier and later features make a minor contribution to the setting and significance of the heritage assets.

3.14.4.7

History & degree of change over time

The original setting of Aveley moat is still discernible in the modern landscape. The relationship with the remainder of the manor and church complex is still intact. The inter-relationship with the historic settlement is still present, albeit with the addition of modern housing development. Some remnants of the original wider rural landscape survive, including in the immediate vicinity of the moat. To the east and south there has been quarrying and road-building, with the consequent loss of any below-ground archaeology present.

3.14.5

Experience of the asset

As set out in Historic England's guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.14.5.1 **Views from, towards, through, across and including the assets**

3.14.6 **The rarity of comparable survivals of setting**

Moated sites are the typical monument of the Essex medieval landscape, with some 933 recorded on the Historic Environment Record, of which 109 are Scheduled, and many more are of Schedulable quality. Aveley moat is characteristic of its type. The close physical relationship of the manorial centre with the Parish Church is also typical of Essex. Many of the Essex moated sites, are still located within their original rural or village setting, as is the case with Aveley. There has been extensive quarrying to the east, which has been largely reinstated and the A13 to the south also forms a modern intrusion in the landscape.

3.14.7

Future developments and impacts within the setting of the heritage asset

Housing: Known impacts at present comprise potential house allocations to the east and south of the heritage asset, as well as other planning applications, which will have a detrimental effect on the monument and its immediate setting unless appropriate mitigation is put in place.

3.14.8 **Recommendations**

This site needs updating on the Historic England Register of Sites (it is currently an Old County Number).

Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from a programme of scrub management. Opportunities should be sought to enhance the experience of the heritage asset, through information boards and other appropriate promotion and interpretation. In addition the site cannot be accessed and options allowing greater access to the site to the general public should be explored. Opportunities for developer funding to improve management and interpretation should be sought.

3.15 SPRINGFIELD STYLE ENCLOSURE AND IRON AGE ENCLOSURES SOUTH OF HILL HOUSE, BAKER STREET (SM1009287)

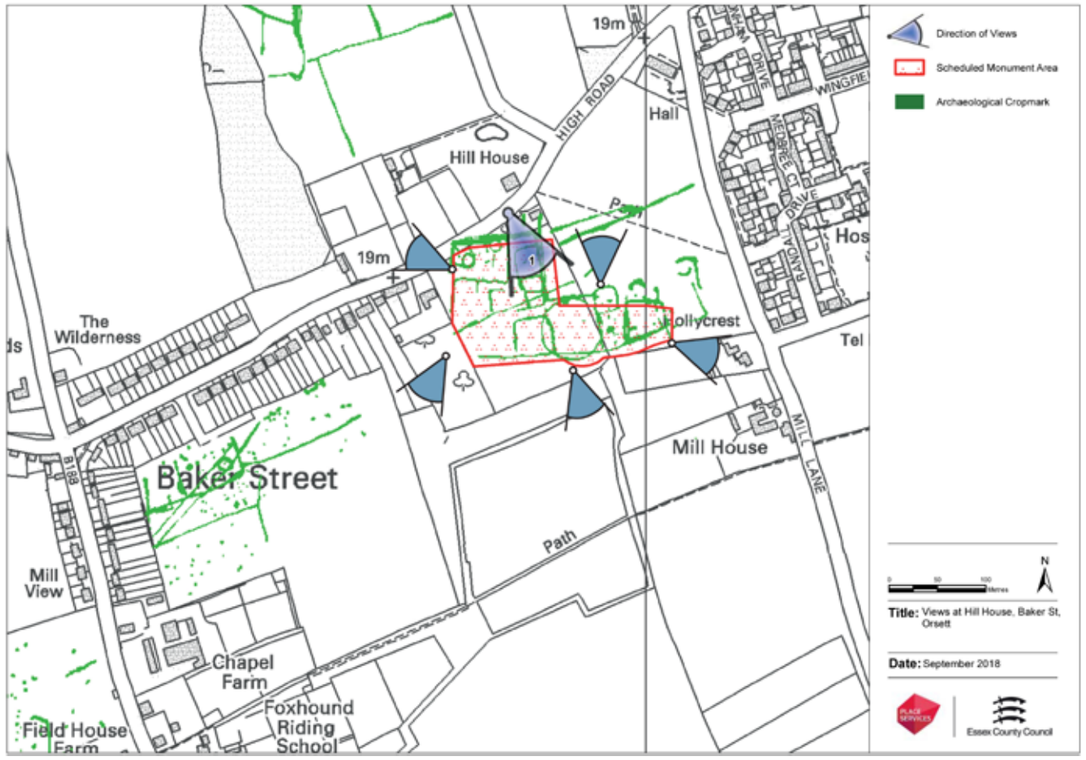


Figure 29 Location plan showing the principal views to and from the monument



View 1: View looking south across the heritage asset, showing the tarmac area, mown field and hedge lines.

3.15.1 Location and topography

The monument is located on a low flat topped ridge on a sand and gravel terrace overlooking Orsett Fen to the north, between Orsett and Baker Street. To the south there would have been long views down to the Thames across the salt marsh. The monument extends across two fields. The main field containing the monument is surrounded by hedges.

3.15.2 Description

The monument is represented by a series of buried features which have been identified as cropmarks from aerial photography.
The Springfield style enclosure includes an external ditch, enclosing an area of c.70m in diameter, with an entrance on the eastern side. The traces of a circular building and pits are visible as cropmarks on aerial photographs within the enclosure.
Overlying the Springfield style enclosure is an enclosed domestic settlement and associated field system. This settlement complex includes an L-shaped enclosed area measuring 210m by 130m, surrounded by an enclosure ditch, with at least one entrance on the eastern side. Within it are at least four roughly rectangular compounds which vary in size from 25m by 30m to 60m by 40m, most of which are believed to represent stock paddocks and pens or distinct areas for cultivation and industrial purposes. In an internal enclosure in the north-west corner of the complex are the remains of two circular buildings.

These are visible on aerial photographs as cropmark ring ditches 10m in diameter along with cropmarks representing pits and other features. This compound measures 60m x 40m and probably represents the main dwelling area of the enclosure complex.

3.15.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.15.3.1 Archaeological interest

Springfield style enclosures are roughly circular enclosures typically found on a hilltop or spur and dating to the Middle/ Late Bronze Age, with some occupied into the Early Iron Age. They are named after the type site at Springfield, Essex, one of the few examples in the country which has been fully excavated. They are characterized by a single enclosure ditch with a simple internal bank or box rampart. Within the enclosure, one or more circular buildings may be found with numerous pits and postholes. Their function appears to be domestic and such sites will yield archaeological and environmental information about the lifestyle of the communities living in them. They are found in eastern England, usually surviving as cropmark sites visible through aerial photography, and are thought to number no more than fifty in total. All surviving examples are considered to be of national importance and will merit protection.

The Springfield style enclosure at Baker Street is a single ditched example with one circular building and pits within it. The key components of the monument are clearly visible as cropmarks in aerial photographs indicating that, beneath the plough soil the monument survives well.

The importance of the Springfield style enclosure south of Hill House is further enhanced by its association with an Iron Age settlement enclosure complex. On this site, therefore, we can see a sequence of domestic development from the Late Bronze Age to the Late Iron Age. The association between the two types of monument will allow a study to be made of the chronological and spatial relationship between them which will provide insights into the land-use and settlement pattern in the later prehistoric period.
The site also forms part of a much larger historic landscape identified from aerial photographic evidence. This stretches from Grays in the west across to Mucking in the East comprising one of the largest complexes of cropmarks in the county. These cropmarks form a multi-period complex dating from the Neolithic through to the medieval period.

3.15.3.2 Historic interest

Orsett and Baker Street are both historic settlements containing listed buildings dating from as early as the 12th century church in Orsett, three 15th/16th century houses, through to the 17th, 18th and 19th century houses and shops. The two settlements are linked by roads and surrounded by fields which probably had their origins in the medieval period.



Figure 30 Aerial photograph Looking south over the heritage asset, showing the immediate rural setting (EX16_03_001, ©ECC)

3.15.4 Contribution of the setting to the heritage assets significance

3.15.4.1 Topography

The immediate setting of the monument is relatively open agricultural land and paddocks. It is likely that the original setting of the enclosures would have been open, without the current field boundaries and roads, which may have originated in the medieval period or perhaps earlier. There is low level modern development visible to the east and west. There are views to the south over the A13, and originally the view to the north would have been wide and open, but now blocked by a tall hedge. The topography makes a moderate positive contribution to the setting of the heritage asset.

3.15.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

The monument lies within a large historic landscape identified from aerial photographic cropmarks. These cover an area from Mucking in the East to Grays in the West, containing a multi-period complex of enclosures, settlements, religious features and field boundaries. These make a major positive contribution to the setting of the heritage asset.

Other heritage assets comprise Slades Hold Cottages to the west, a Listed Grade II group of terraced houses dating from the 17th century, Orsett House to the north, Listed grade II* and dating from the 18th century, a post-medieval former post-mill at Mill House to the south-east, and the site of the former Union Workhouse on the Orsett Hospital site to the east. These make a neutral contribution to the setting of the heritage asset.

3.15.4.3 Land use, greenspace, trees and vegetation

The bulk of the heritage asset is situated within a mown field which is hedged and a house is situated immediately to the west. Views to the north are constrained by a hedge which includes leylandii. There is a tarmacked area in the north-east corner of the field, and horse paddocks to the east. These make a

minor negative contribution to the setting of the heritage asset.

3.15.4.4 **Functional relationships and communications**
As described above, the heritage asset sits within a historic landscape that has been continuously occupied since prehistoric times. Some of the cropmarks are contemporary with the Bronze Age and Iron Age enclosures, including ring ditches from probable Bronze Age round barrows, and other enclosures which may date to the Iron Age. These make a major positive contribution to the setting of the heritage asset.

3.15.4.5 **Integrity**
This heritage asset is part of an extensive landscape of cropmarks around Orsett and Mucking. The implication from the density of cropmarks is that the original landscape may have been relatively densely occupied with settlements with the remainder being open and agricultural. This is still largely the case, though the heritage asset is now rather enclosed and cut by hedgerows along the field boundaries. These, with the roads and footpaths in the area probably originated in the medieval period, as they cross cropmarks showing the roads are later. Overall this makes a moderate positive contribution to the setting of the heritage asset.

3.15.4.6 **Associative relationships between heritage assets**
The heritage asset lies in an area of extensive multi-period cropmarks. Within this, other potentially Bronze Age and Iron Age heritage assets can be identified, including Bronze Age ring ditches and Iron Age enclosures. There are also other cropmark enclosures in the vicinity that may date to these periods, but are currently undated beyond the identification of probably prehistoric. These make a major positive contribution to the setting of the heritage asset.

3.15.4.7 **History & degree of change over time**
Although the heritage asset still lies within an agricultural environment, there have been modern developments nearby. Orsett Hospital lies to the east, Baker Street lies to the west, and the upgraded A13 runs to the south of the heritage asset. This makes a moderate negative contribution to the setting.

3.15.5 **Experience of the asset**
As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.5.1 **Views from, towards, through, across and including the assets**

3.15.6 **The rarity of comparable survivals of setting**
Springfield Style enclosures are rare nationally with no more than fifty surviving in total. They are found only in eastern England, usually surviving as cropmark sites visible through aerial photography. Their function appears to be domestic and such sites will yield archaeological and environmental information about the lifestyle of the communities living in them. All surviving examples are considered to be of national importance and will merit protection. Its importance is enhanced by its association with an Iron Age settlement enclosure complex. This will allow a study to be made of the chronological and spatial relationship between them which will provide insights into the land-use and settlement pattern in the later prehistoric period.
The heritage asset survives in a broadly rural environment and though settlement for Orsett and Baker Street has moved closer to the heritage asset, its links to the broader agricultural landscape still exist to the north and south.

3.15.7 **Future developments and impacts within the setting of the heritage asset**
Lower Thames Crossing: The heritage asset is located approximately 500m to the east and north of the proposed Lower Thames Crossing corridor and its setting will be directly impacted. The scheme will have a detrimental impact both visually and aurally on the rural setting to the north, and east of the heritage asset.

Housing: Known impacts at present comprise potential house allocations to the south-east and west of the heritage asset, as well as other planning applications which have the potential to have a detrimental effect on the monument and its immediate setting.

3.15.8 **Recommendations**

As part of the planning for the Lower Thames Crossing mitigation measures will need to be put in place following liaison between Historic England and the Highways Agency consultants in order to minimize the impact. As part of any Local Plan allocation if the heritage asset and its setting cannot be protected as part of the scheme this should not be allocated. If an application is accepted then master planning for the site should ensure the monument and its setting is protected.

The heritage asset would benefit from Historic England expanding the scheduling to cover the full extent of this element of the overall cropmark complex. Opportunities should be sought to preserve and enhance the setting of the heritage asset. The site itself would benefit from a programme of scrub management. Opportunities should be sought to enhance the experience of the heritage asset, through information boards and other appropriate promotion and interpretation.

3.16 TILBURY FORT (SM1021092)

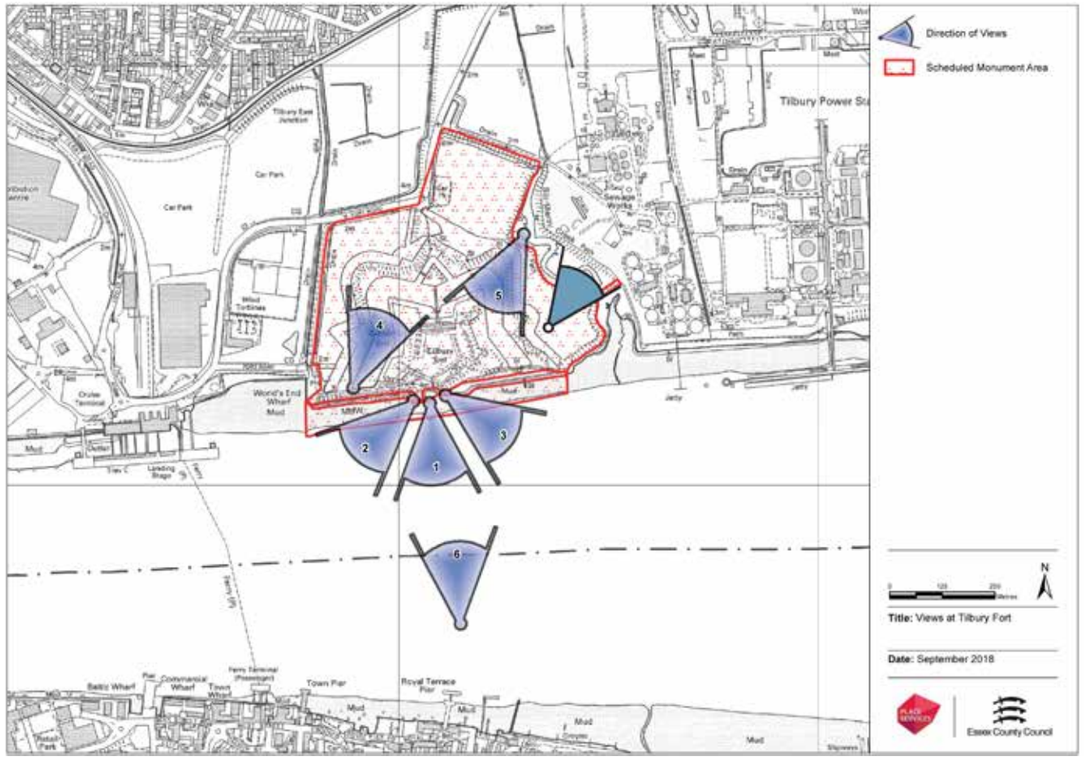


Figure 31 Plan showing the principal views in and out of Tilbury Fort (other significant views are indicated by the smaller view-point symbols)



Figure 32 Tilbury Fort gatehouse

3.16.1 Location and topography

The monument lies in an area of former marshland known as West Tilbury Marshes, on the north bank of the River Thames. Gravesend in Kent is sited immediately opposite the site, and there are wide views up and down the river as well as into Kent. It is a flat, low-lying landscape, averaging only 2m OD. About 2km to the north of the monument the former marsh meets the escarpment of higher ground. The site is located on tidal-flat deposits. The monument was originally intervisible with Tilbury Fort to the east, and with Gravesend and Shornemead Forts in Kent.

3.16.2 Description

Tilbury Fort is situated on low lying ground on the north bank of the River Thames, south east of the modern outskirts of Tilbury. The monument includes the buried remains of a Henrician blockhouse, the far larger and more complex fort and battery which succeeded the blockhouse in the late 17th century, the late 19th and early 20th century alterations to the fort and a World War II pillbox. A summary description is presented here, for a full description see the Scheduling Report (Appendix 1)

The blockhouse, the first permanent defensive structure in this location, was constructed in 1539 as part of Henry VIII's campaign to improve the coastal defences. Small fortified barracks were sited both here and at East Tilbury (about 5km distant), and on the opposite side of the river in Kent. After the Restoration in 1660, Charles II began a complete reorganisation of the national defences which, following a highly successful Dutch raid up the Thames and Medway in 1667, came to include Tilbury.

The new fort and battery, based on principles pioneered in the Low Countries, were designed by Charles' chief engineer Sir Bernard de Gomme. Work began in 1670 and the resulting fortifications remain substantially unaltered to this day. De Gomme's fort is pentagonal in plan, with arrowhead-shaped bastions projecting from four of the angles, allowing guns positioned behind the parapets to command wide areas and to be mutually supportive in close quarter defence. Pilings in the intertidal zone in front of the site of the blockhouse indicate an intention to add a fifth bastion to complete the regular appearance of the fort, but work is thought to have been abandoned at an early stage. The fighting front of the new fort was a linear battery extending along the shoreline for approximately 250m to either side of the Henrician blockhouse, which was retained as a powder magazine. On the north side of the parade are two brick built powder magazines dating from 1716, the eastern of which is used as a visitors centre and display area.

The main entrance to the fort, known as the Water Gate, is situated in the middle of the south curtain. This is a two storied brick structure with an elaborate outer facade faced with ashlar and including a frieze with a dedication to Charles II. The elaborate outworks which surround the landward sides of the fort remain substantially unaltered. The curtain wall and bastions are flanked by a broad terrace, or berm, in turn surrounded by a 50m wide moat following the outline of the fort. A narrow strip of dry land separates this channel from a more sinuous outer moat and contains a complex of defensive structures, the main element of which is a rampart, or covered way, traceable as a low earthwork running along most of its length. Access to the Landport Gate was by a wooden drawbridge (now a replica) across the inner moat. This has not survived but has been replaced by a modern replica. The northern end of this bridge stands on an arrowhead shaped island, or ravelin, within the inner moat. The ravelin would have contained gun emplacements to defend the Landport Gate from direct bombardment and provide covering fire for the northern bastions. A further wooden bridge (also a replica), links the north western side of the ravelin to the covered way between the moats.

The approach continues northward over causeways which cross a second triangular island, known as a redan, in the outer moat. The low earthworks of a redoubt (an enclosed area containing further gun emplacements) remain visible on the redan. The two moats are connected by a sluice to the east of the ravelin, and the water level is controlled by a second sluice between the south eastern corner of the outer moat and the adjacent tidal creek (Bill Meroy Creek). Water management formed a significant part of the fort's system of defences. The ability to drain



View 1: View looking across the Thames from Tilbury Fort to Gravesend and Gravesend Fort on the Kentish side of the river. The photo was taken from the modern sea-wall



View 2: View looking south-west up the Thames to Northfleet, on the north Kent shore, the photo was taken from the modern sea-wall. The boat crossing the river is the Tilbury Ferry.

the moats was vital both for periodic removal of silts and to prevent attack over the frozen surface in winter.

Beyond the moats, wider areas of the marsh were enclosed by banks and could be partly flooded to hinder an approaching force and prevent the construction of adjacent siege works.

Tilbury Fort remained at the forefront of the defence of the Thames and London through the 18th and early 19th centuries, although it never saw the action for which it was designed. By the mid-19th century it had been relegated to a secondary position behind the forts downstream at Coalhouse, Shornemead and Cliffe. Additional defences and fire-power was added in World War I and II. Bombing during World War II saw the demolition of some of the internal structures relating to the 17th century fort, including the soldier's barracks and other ancillary buildings.

3.16.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.16.3.1 Archaeological interest

In addition to the standing architectural remains there is also a high archaeological potential due to waterlogging of any buried remains. The foreshore contains waterlogged deposits, including wooden piling which will provide technical information on the construction techniques of the fort and permit detailed dendrochronological dating.

There is considerable archaeological evidence for earlier periods in the immediate vicinity of the fort. This includes find-spots of Palaeolithic and Neolithic hand-axes, a Bronze Age burial site and Roman finds. There is thought to have been a Roman road leading down from the higher ground, past the fort to a crossing-point of the river in the approximate location of the present World's End Wharf. There are a number of early post-medieval farm sites, dating to the drainage of the marshes in the 16th and 17th centuries. The later periods are also well-represented, particularly with defensive structures, which range from road blocks to anti-glider ditches.

3.16.3.2 Historic interest

Tilbury Fort is England's most spectacular surviving example of a late 17th century coastal fort, designed at a time when artillery had become the dominant feature of warfare and therefore built with massive low earthworks, resilient to the shock of bombardment, instead of stone fortifications. The layout and construction was geared to the optimum siting of cannon at the forward batteries which, in conjunction with batteries on the opposing bank of the Thames, could create a field of fire spanning the estuary providing defence for the river itself and the capital. The systems of bastions and complicated outworks defending the batteries from the rear are principally a Dutch design, extremely rare in England, and Tilbury is the best preserved and most complete example of the type.

The fort still retains many of its original internal features with most of the main buildings surviving as standing structures. The magazines are especially notable, as they are rare survivals of a very unusual building type. The buried remains of further structures associated both with the operation of the 17th century fort and the Tudor blockhouse, will also survive within the fort. The remains of the blockhouse, and of features related to its operation, are important as they represent one of the earliest types of structure built exclusively for the use of artillery in warfare. Only 27 examples are known to survive, in a variety of conditions ranging from buried foundations to incorporation in later military constructions. All such examples with substantial archaeological remains are considered nationally important. At Tilbury Fort, the remains of the blockhouse are particularly significant given that this structure was retained as a component of the 17th century defences.

The large quantity of contemporary documentation provides a detailed picture of the occupation of the fort and its development, both as a position of foremost strategic importance in the defence of the



View 3: Looking south-east down river towards Shornemead on the north Kent shore. The photo was taken from the modern sea-wall



View 4: Looking north across the defensive moats to the wider marshland landscape to the rear of Tilbury Fort. The rooftops of modern Tilbury are just visible in the distance.

approach to London, and as part of a larger system of associated forts in the Thames and Medway area. The alterations to the defences resulting from the recommendations of the 1859 Royal Commission place Tilbury within the largest maritime defence programme since the time of Henry VIII. This programme, prompted by fears of French naval expansion, ultimately involved some 70 new and upgraded coastal forts and batteries, colloquially known as `Palmerston's follies'. They formed the visible core of Britain's coastal defence systems well into the 20th century, many of which were still in use during World War II. Features at Tilbury which represent this final military phase (principally the pillbox on the western perimeter of the site), and are considered to be an integral part of the fort's history.

3.16.4 Contribution of the setting to the heritage assets significance

3.16.4.1 Topography

The primary setting of the monument is the River Thames and the bordering historic grazing marshes.

The fort is located fronting on to the river with panoramic views across the Gravesend Reach to Gravesend and the north Kent shore and to the east and west along the river. The former coastal marsh forms a wide, open and flat landscape, which was modified to form part of the overall defences of the fort through the management of water. Currently the immediate area around the fort is down to rough pasture, with numerous grazing horses. There are extensive views still surviving to the north-west and the Tilbury escarpment.

The site forms a defensive triangle across the Thames, with Gravesend Fort and Shornemead Fort in Kent, which are intervisible, forming the other corners of the triangle. There was a requirement when the fort was in use that the area between it and Coalhouse Fort, some 5km to the east, was kept clear of vegetation in order to preserve a line of sight between the two fortifications. The immediate local topography makes a major positive contribution to the setting of the heritage assets, whose siting is entirely determined by the topography and the links across the river to Kent.

Tilbury Power Station to the immediate west forms a significant visual presence in the landscape, and currently blocks the views eastwards to Coalhouse Fort. The power station is intended to be demolished in 2017. This makes a high negative impact on the understanding of the relationship between the two sites. The Sewage Works is located between the Power Station and Tilbury Fort, it is lower lying than the Power Station but is still a visual and olfactory presence, and has a minor-moderate negative impact. To the west Tilbury Docks, the International Cruise Terminal, the grade II* listed Riverside Station and modern Tilbury, with their associated road and rail links all comprise relatively recent intrusions in the historic marshland landscape and the Fort, and are both visually and aurally intrusive. However the Cruise Terminal is roughly on the site of the former riverside wharf, and represents a continuation of the historic international maritime usage of the river, it therefore has a moderate negative impact on the setting of the heritage asset.

Tilbury Docks has its origins in the later 19th century, and again demonstrates the significance of the Thames in international maritime trade throughout its history; it has a moderate negative impact on the setting of the heritage asset. The settlement of Tilbury dates the development of the docks, it comprises low-rise housing and is largely screened from the site by the railway, with only the rooflines visible amongst tree-cover, it therefore has only a minor-moderate negative impact.

3.16.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

Tilbury Fort is associated with a significant number of historic monuments, some in the immediate vicinity and others set at a distance. Firstly there is the defensive links across the Thames to Gravesend Fort and Shornemead Fort in Kent. Secondly there is the inter-relationship with Coalhouse Fort to the east. In addition to the principal military monuments there are also several smaller structures which form part of the overall



View 5. View from the landward side of Tilbury Fort to the river, the top of a cargo-ship is visible over the sea-wall, with Kent beyond it.

scheme, such as anti-glider ditches on the marshes. Individually and as a group the military monuments both in the immediate vicinity and on the Kentish shore make a major positive contribution to the setting of the heritage assets.

The historic crossing-point of the Thames at Tilbury is sited to the immediate west of Tilbury Fort. The Worlds End Inn, which is associated with the crossing-point, is Grade II listed. The marshland landscape is historic in origin, having been reclaimed in the early post-medieval period. These assets make a moderate to major positive contribution to the setting of the heritage asset.

There is prehistoric and Roman settlement evidence in the vicinity of Tilbury Fort, this makes a minor positive contribution to the settling of the heritage asset.

3.16.4.3 **Land use, greenspace, trees and vegetation**

The immediate landscape setting is the modern sea-wall and the Thames to the seaward side of Tilbury Fort and the historic marsh with its defensive water-management structures to the landward side. The marsh is down to rough pasture, with numerous grazing horses, with a degree of associated erosion and poaching of the earthworks. There is some scrub, largely thorn and brambles, but no mature trees within the marsh area. To the east is located the Tilbury Power Station and the Sewage Works and to the west and north-west are the International Cruise Terminal, Tilbury Docks, and modern Tilbury and their associated infrastructure of roads and railway. There is some modern fencing around the monument itself.

3.16.4.4 **Functional relationships and communications**

The primary functional relationship of the setting of the monument is the River Thames and the forts at Gravesend Fort and Shornemead Fort in Kent, which form the defensive link across the river. Secondly there is the relationship with Coalhouse Fort, both had their origins as Henrician blockhouses, and were subsequently updated, before Coalhouse took over the primary defensive role on the Essex side of the Thames in the 19th century. The relationship between the fort, and the historic crossing-point of the Thames is also key to the understanding of the heritage asset. These relationships make a major positive contribution to the setting of the heritage asset.

3.16.4.5 **Integrity**

The immediate riverside location and its accompanying grazing marsh remains essentially unchanged, albeit with the addition of the modern sea-defences between the fort and the sea. The views across the river to the Kentish forts from the fort walls or from the sea-wall itself is still intact. The integrity of the immediate setting makes a major positive contribution to the setting and significance of the heritage assets. However the views to the east to Coalhouse Fort are blocked by Tilbury Power Station. To the west and north-west are located the International Cruise Terminal, Tilbury Docks, and their associated infrastructure of roads and railway, have historic antecedents associated with the role of the river as a maritime highway. Modern Tilbury is less visible, being partially obscured by the railway and its attendant vegetation, and does not impinge significantly on the setting of the heritage asset. The integrity of the wider setting can therefore be considered to have a moderate negative effect on the setting of the heritage assets.

3.16.4.6 **Associative relationships between heritage assets**

As discussed above there are significant relationships between Tilbury Fort and the other historic military installations in the area, both on the Essex side of the Thames and on the north Kent shore. These relationships make a reciprocal major positive contribution to each other.

There is also the relationship between the Scheduled site and the historic landscape at Tilbury, including the historic marshland, the Listed World's End Inn and the historic crossing-point and docks. These relationships make a moderate to major positive contribution to each other.

3.16.4.7 **History & degree of change over time**



View 6: Aerial photograph of Tilbury Fort, looking northwards, showing the extent of the historic marshland, and the location of modern development in relation to the heritage asset.

The riverside location and open marshland setting remain much as they were throughout the life of the Fort, albeit with modern encroachment to either side and the addition of a modern sea-wall between the fort and the river. To the east Tilbury Power Station currently blocks the views to Coalhouse Fort (it is due to be demolished in 2017). To the west and north-west are the International Cruise Terminal, Tilbury Docks and modern Tilbury. The presence of electricity pylons, and to a lesser extent the windturbines, also provide new accents in an otherwise largely open landscape. However, some of these historic elements have historic antecedents or are linked to the historic usage of the riverine setting.

3.16.5 **Experience of the asset**

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.16.5.1 **Views from, towards, through, across and including the assets**

3.16.6 **The rarity of comparable survivals of setting**

The systems of bastions and complicated outworks defending the batteries from the rear, which include the earthworks and sluices on the wider marsh, are principally a Dutch design and are extremely rare in England. Tilbury is the best preserved and most complete example of the type, and the immediate setting makes a major positive contribution to the significance of the heritage assets. In addition Tilbury Fort is part of a wider defence system designed to protect the Thames Estuary and especially London, the corresponding forts in Essex and Kent also survive. The survival of such a wide range of structures, spanning several hundred years of defensive architecture within an open marshland setting on both sides of the Thames is rare and makes a major positive contribution to the setting and significance of the heritage assets.

3.16.7 **Future developments and impacts within the setting of the heritage asset**

Lower Thames Crossing: The heritage asset is located approximately 500m to the west of the proposed Lower Thames Crossing corridor and its wider setting will be directly impacted. The scheme will have an impact on the intervisibility with the other fortifications on the Thames.

Commercial: Known impacts at present comprise potential employment area allocations surrounding the heritage asset, including the Roll on Roll off ferry (approved), Tilbury Power Station and the Flexible energy plant which all have the potential to have a detrimental effect on the monument and its immediate setting, including the former intervisibility with Coalhouse Fort to the east; appropriate mitigation strategies will need to be put in place. Other planning applications within the setting of the heritage asset also have the potential to impact on the significance of the monument.

3.16.8 **Recommendations**

The Lower Thames Crossing promoters will need to ensure mitigation measures are put in place following liaison between Historic England and the Highways Agency consultants in order to preserve this intervisibility.

Opportunities should be sought to preserve and enhance the setting of the heritage asset, particularly in restoring the former intervisibility between Tilbury Fort and Coalhouse Fort and in managing further impacts of modern development as a consequence of the expansion of the re-development of the Tilbury Power Station site and other associated commercial developments.

3.17 WORLD WAR II BOMBING DECOY ON FOBBING MARSHES, 1.11KM AND 1.15KM NORTH WEST OF OOZEBARN (SM1020489) 134

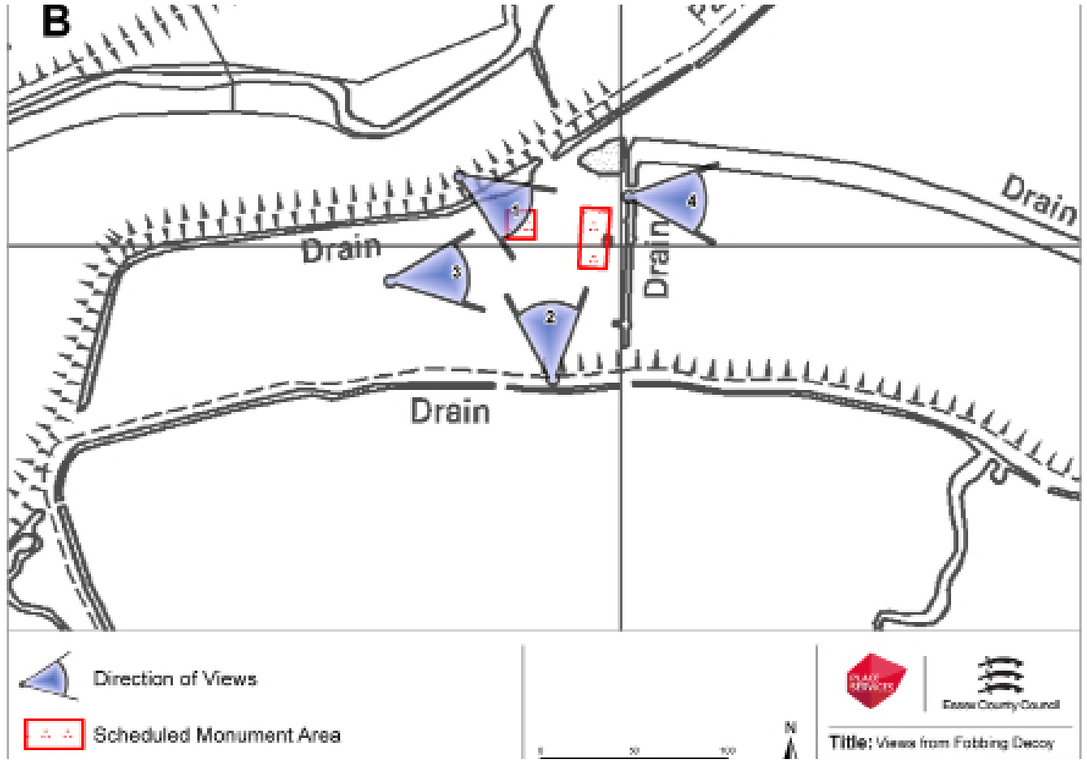


Figure 33 Location plan showing the principal views to and from the monument



View 1: View looking south-east across the storage bays (in the foreground) and the night-shelter (on the left) towards the Shell Haven/Coryton oil refinery in the distance

3.17.1 Location and topography

The monument lies in an area of open marshland known as Fobbing Marshes, to the north of the Shell Haven Oil Refinery which occupies a large site on the north bank of the River Thames. It is a flat, low-lying landscape, averaging only 2m OD. To the immediate north of the SM is Fobbing Creek, which is bordered by sea-walls. The village of Fobbing is located to the north-west on a spur of higher ground which forms the western edge of the grazing-marsh. The site is located on tidal-flat deposits.

3.17.2 Description

The bombing decoy site is documented in wartime records as `Shell Haven, Fobbing' the monument is the night shelter and oil storage bay of a World War II Oil QF (diversionary fire) decoy designed to protect the Shell Haven oil refinery. At the peak of its operation the decoy would have had many burning pools of oil and simulated ring fires from burning oil storage tanks; these would have been ignited electrically from the night shelter, situated some distance away, which also housed the generator and decoy manning personnel. Although nothing remains of the arrangement of decoy fires, the night shelter and the walls of an oil storage facility remain (see Appendix 1 for Designation description).

The night shelter is built of concrete; it is 6m long by 3.2m wide, aligned north-south and has a single sloping entrance on its northern side. Inside are two rooms: the southernmost is the Operations Room, with the smaller Engine Room to its north. 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.

War Office documents relating to the equipment and manning of the bombing decoy show that it was operational in August 1941 (the earliest reference to it dated 1st August) and was certainly in use in March 1942 (latest written reference); although no further specific documentary references can be found it may have continued in use through to the end of the war.

The monument is largely good repair, although there is some bramble growth, which makes accessing the interior of the night shelter difficult and there was some standing-water on the floor.

3.17.3 Assessment of the heritage asset's significance

The starting point for this stage of the assessment is to consider the significance of the heritage asset itself.

3.17.3.1 Archaeological interest

The bombing decoys are located on the site of Great Ilfords farm, which was demolished to make way for them. Great Ilfords has been tentatively identified as the site of the medieval Fobbing manor, but it is more likely that given its location on the reclaimed marsh that it is actually post-medieval in date. The foundations of the demolished structures are still partially visible as brick-footings on the site and associated below-ground remains can be anticipated to survive. The historic grazing marsh is also of archaeological interest (Gascoyne and Medlycott 2014). Apart from the scheduled concrete structures nothing further survives from the bomb decoy itself, largely due to these being ephemeral surface-laid structures, such as shallow- oil-filled pools and lines of electrical wires.

3.17.3.2 Historic interest

QF (diversionary fire) decoy sites were first provided for the night protection of RAF airfields, but from August 1941 their role was extended to protect other facilities (Dobinson 1996). They were smaller than other decoy sites, using a limited range of fire types and were sited for the local protection of specific vulnerable points rather than whole cities or conurbations. The new QF sites of 1941-2 fell into four groups, for the protection of: urban and industrial targets (the `Civil Series'); Royal Navy sites (these were few in number and sited to protect coastal bases); Army sites, to protect ordnance factories or military installations and oil installations and tank farms (the `Oil QF' sites) as at Fobbing. 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-

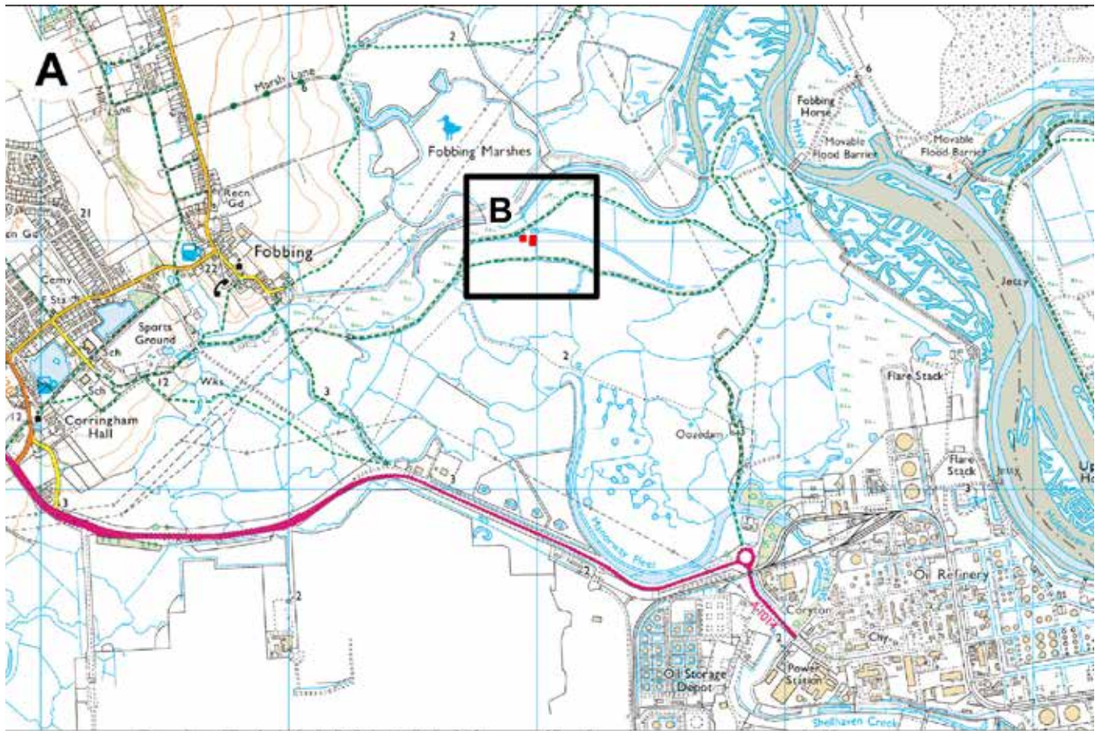


Figure 34 Location plan showing the principal views to and from the monument



View 2: View looking northwards through the bombing decoy site (storage bays to left and night-shelter to right), across the marsh and the Fobbing Creek sea-wall to the higher ground at Vange. Some of the earthworks in the foreground relate to the historic farmstead of Great Ilfords.

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.

3.17.4 Contribution of the setting to the heritage assets significance

3.17.4.1 Topography

The immediate setting of the monument is the historic grazing marsh, which is wide and flat and open in aspect, punctuated by creeks and sea-walls. To the south, also on the marsh, is the Coryton Oil Refinery and beyond that the Thames. The oil refinery and the marsh are the raison d'être for the location of the bomb decoy site, in that it is the oil refinery that it was built to protect and its location on the marsh is intended to both mimic the location of the refinery and to place it safely away from human habitation.

To the north and north-west is Fobbing Creek, beyond that more historic marsh running up to the escarpment of higher ground on which the historic settlements of Fobbing and Vange are sited. The urban areas are largely concealed by trees, the exception being the tower of Fobbing Church which forms a local landmark. To the east beyond the marsh is Holehaven Creek and beyond it the marshes and land-fill sites of Canvey Island (the latter being raised above the original land-surface to form mounds).

The local topography makes a major positive contribution to the setting of the heritage assets, whose siting is in part determined by the topography.

3.17.4.2 Other heritage assets (including buildings, structures, landscapes, areas or archaeological remains)

The marshland landscape in which the Scheduled Monuments are located is historic art of Fobbing Marsh was reclaimed in the 13th century, with much of the remainder reclaimed by the time of the Chapman and Andre map of 1777. Great Ilford Farm, which was demolished to make way for the bombing decoy is likely to have been 16th century in origin. Brick building foundations survive at the site of Great Ilford farmhouse, and there is extensive evidence of 'stetch' cultivation across the marsh. The sea walls depicted on the 1st edition OS map along Fobbing Creek survives, although has been altered, and significant lengths of contemporary, or potentially earlier sea walls or counter walls also survive. Earthwork mounds may represent late Iron Age or Roman salt making sites. An unusually large D-shaped earthwork is likely to have been used as a cattle refuge.

The site of Oozedam and Little Ilfords farm are likely to be 16th century in origin and the modern Oozedam farmhouse sits on a substantial settlement mound, which straddles a raised trackway. The marsh as a whole makes a major positive contribution to the setting of the heritage assets.

Evidence for industrial activity includes the earthworks of brickworks and remnants of a dismantled light railway that ran from Corringham to the docks at Shellhaven and the 19th century Kynochtown/Knocktown explosives factory, this closed in 1919. The Coryton oil refinery began in the interwar years as an oil storage depot, and has gradually expanded over much of the area of the explosives factory. The oil refinery is the reason for the construction of the bombing decoy and therefore makes a major positive contribution to the setting of the heritage assets.

In addition to the bombing decoys the World War II is also represented by anti landing ditches have been identified from aerial photographs and as earthworks on the ground, along with an anti-aircraft gun site, a spigot mortar and pill box and a large number of bomb craters left over from attacks on the refinery during WWII. As a group these make a major positive contribution to the setting of the heritage assets.

3.17.4.3 Land use, greenspace, trees and vegetation

The open marshland setting of the bombing



View 3: Looking eastwards across the storage bays to the historic settlement of Fobbing on the spur of higher ground, Fobbing church- tower is clearly visible above the tree line.

decoy with the backdrop of the oil refinery site reflects the original setting of this assets and makes a major positive contribution to the setting of the monument. On the higher ground to the north and west there has been ongoing development, both in the form of housing and infrastructure, however these are largely hidden by trees and do not noticeably impinge on the immediate setting of the site.

3.17.4.4 **Functional relationships and communications**

There is a relationship between the bombing decoy site and the historic grazing marsh and the oil refinery. The need to protect the refinery from enemy action and the remoteness and riverside location of the marsh in determining both the location of the decoy site and ultimately the refinery itself and the marsh means that the relationship with the monument is integral to the understanding of the monument. This relationship makes a major positive contribution to the monument.

3.17.4.5 **Integrity**

The immediate setting of the bombing decoy site remains largely unchanged, although the oil refinery site has expanded into the area formerly occupied by the explosives factory. The site itself comprises two surviving structures, the night-shelter and the fuel store. The remainder of the elements which made up a decoy site of this nature were largely ephemeral and surface-based. There has been development on the higher ground to the north and west of the site, but this does not impinge on the essentially rural nature of the site. The wider landscape still remains largely rural in nature, despite the development to the north and west. To the east the landforms of Canvey Island have been raised on the landfill sites, but again the setting is largely rural in nature. The integrity of the setting makes a major positive contribution to the setting and significance of the heritage assets.

3.17.4.6 **Associative relationships between heritage assets**

As discussed above there is a relationship between the Scheduled bombing decoy and the historic grazing-marsh and the oil refinery. These relationships make a reciprocal major positive contribution to each other. There is also the relationship between the bombing decoy and the other WWII sites on the marsh, these are contemporaneous and interlinked and make a moderate to major positive contribution to each other.

There is also the relationship between the Scheduled site and the historic farm of Great Ilfords, which was demolished to make way for the bombing decoy, as well as the relationship between the site and the wider historic settlement of Fobbing (largely encompassed by the Conservation Area), including the Grade I parish church which forms a local landmark. These relationships make a moderate to major positive contribution to each other.

3.17.4.7 **History & degree of change over time**

The setting of the Fobbing bombing decoy site has remained relatively unchanged in the 70 years since the end of WWII. The oil refinery and the open marshland setting remain much as they were when the bombing decoy was built to protect the refinery, although the refinery has expanded in size in the intervening years and there has been the introduction of electricity pylons crossing the marsh. The wider backdrop has also changed little, with raised landscape levels due to landfill on Canvey Island being perhaps the most prominent change.

3.17.5 **Experience of the asset**

As set out in the Historic England guidance The Setting of Heritage Assets, significant identifiable views have been identified by this study, there are however numerous others that could have a role to play in assessing the impact of any individual development on the setting of the heritage assets, so this list should not be considered as definitive.

3.17.5.1 **Views from, towards, through, across and including the assets**

3.17.6 **The rarity of comparable survivals of setting**

Only twelve Oil QFs were constructed in Britain, of which only three survive (Fobbing; All Hallows, Kent and East Halton,



View 4: View to the east from the night-shelter to Canvey Island showing the open aspect of the marshland in this direction. The structure in the middle distance is the flood barrier on Holehaven Creek. The raised ground to the left of this is the Canvey Island land-fill site

Lincolnshire). The survival therefore of both the site itself and its virtually intact setting is very rare indeed.

3.17.7 Future developments and impacts within the setting of the heritage asset

Employment area: Known impacts at present comprise potential employment area allocations to the south of the heritage asset, which have the potential to have a detrimental effect on the monuments and its immediate setting. Other planning applications within the setting of the monument also have the potential to impact on its significance.

3.17.8 Recommendations

The historic open marshland setting remains remarkably intact and opportunities should be sought to ensure that it remains this way. Bramble-growth around the monuments should be kept in check. Opportunities should be sought to enhance the experience of the heritage asset, through information boards and other appropriate promotion and interpretation.

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Appendix 1

SCHEDULED MONUMENT DESIGNATIONS

1 BISHOP BONNER'S PALACE (Scheduled Monument 1002196)

DesigUID: 1002196 **Type** Scheduled Monument **Status:** Active
Preferred Ref **National Ref** **Other Ref**
1002196 1002196 DEX22381
Name: Bishop Bonner's Palace, Orsett
Grade: - **Date Assigned:** 01/04/1999 **Amended:** - Revoked: -

Legal Description
Circular enclosure surrounded by a ditch about 50ft wide. To the north is an oblong bailey by a well-defined ditch said to have been the residence of the Bishops of London.

Curatorial Notes
Previously scheduled as EX36
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 641 822 (137m by 144m)
Map sheet: TQ68SW Area (Ha): 13,344.11
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - None recorded

Associated Monuments -
1855 Monument: Orsett - Bishop Bonner's Palace

2 BULPHAN WORLD WAR II BOMBING DECOY (Scheduled Monument 1020998)

DesigUID: 1020998 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1020998 DEX23311
Name: Bulphan World War Two Bombing Decoy
Grade: - **Date Assigned:** 25/02/2004 **Amended:** -

Legal Description
The monument includes two shelters, in separate areas of protection, designed to control a wartime decoy or `dummy' aerodrome located on the lower slopes of a hillside, 850m and 890m south west of Doesgate Farm. Documented in contemporary records from World War II, `Bulphan' was constructed to replicate and thus draw bombing raids away from RAF Hornchurch located about 11km to the west. The decoy was both a `K' site, designed for daytime use, and a night-time `Q' site. During the day the decoy displayed grassed runways, sandbagged defence positions, ammunition dumps and plywood dummy aircraft among their simulations. At night the decoy had electric lighting illuminating two traversing `runways', obstruction/recognition lights and moving `headlamps'. Most of these structures were ephemeral and are no longer present on the site. However, the decoy airfield was controlled from two bunkers, known as night shelters. These have both survived and are included in the scheduling.
The first night shelter to be built was constructed below ground level. Of concrete construction it had two entrances, one with steps halfway along the southern face and one taking the form of an

escape hatch with vertical steel ladder (the former is now infilled). These gave access to at least two underground rooms. The only part of this shelter visible above-ground is the escape hatch and a steel chimney pipe. This structure was found to be prone to flooding and was replaced by an above-ground night shelter, located to the east, during the course of the war.
The above-ground shelter is constructed of brick rendered with cement and measures 13m long by 6m wide. The design is to a known wartime standard (Type 3395/40) comprising an Engine (or Generator) Room and an Operations Room, but with the addition of a small toilet cubicle just inside the entrance in the southern wall. The easternmost room, the Engine Room, has survived in its original form complete with engine plinth set into the floor. The Operations Room retains the original escape hatch in the roof at its westernmost end. Local residents recall that the decoy airfield at Bulphan was manned by six airmen. The decoy was in use throughout much of the war, being successful on at least one occasion when it drew upon itself the incendiaries and high explosives of a heavy night-time bombing raid intended for nearby RAF Hornchurch.

Curatorial Notes
In two parts
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 6526 8611 (55m by 20m)
Map sheet: TQ68NE Area (Ha): 127.48
Administrative Areas
Community Bulphan, THURROCK, ESSEX
Unitary Authority THURROCK, ESSEX

Sources - None recorded

Associated Monuments -
16682 Monument: WWII Bombing Decoy, "Bulphan", Essex

3 CAUSEWAYED ENCLOSURE AND ANGLO-SAXON CEMETERY 500m ENE of Heath Place (Scheduled Monument 1009286)

DesigUID: 1009286 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1009286 DEX2553
Name: Causewayed enclosure and Anglo-Saxon cemetery 500m ENE of Heath Place
Grade: - **Date Assigned:** 29/07/1994 **Amended:** -

Legal Description
The monument includes a Neolithic causewayed enclosure and an Anglo-Saxon round barrow cemetery situated on a natural platform on the Thames terraces.
The land slopes gently away from the monument towards the south into the valley of a small tributary of the Thames. To the east and west it slopes into smaller dry valleys.
Although there are no visible earthworks at ground level the monument survives as buried features which have been recognised as cropmarks from aerial photographs. These include three roughly circular concentric interrupted ditches (i.e.they are not continuous but are, rather, crossed by causeways at irregular intervals), enclosing an area at least 160m in diameter.
The outer two ditches are 10m apart. A palisade trench lies between the inner and middle ditches. This palisade trench has three breaks in it, coinciding with those in the outer ditches. The inner ditch is between 30m and 40m from the middle ditch and encloses an area measuring between 80m and 95m across.

Other internal features such as postholes and pits can be seen within the enclosed area on aerial photographs. Also visible on aerial photographs, within the southern half of the inner circuit, are at least 5 round barrows represented by ring ditch cropmarks.
These are between 8m and 13m in diameter with a circular ditch from 1m-2m wide and up to 0.35m deep. In 1975 trial trenching and small scale excavation took place in order to verify the interpretation of the monument. Parts of the ditches and palisade slot were excavated which confirmed their Neolithic date. A continuous bank was found to have been originally constructed on the berm between the two outer ditches, the material for which was quarried from the interrupted ditches. The palisade was an additional, contemporary, defensive feature inside the middle ditch.
Within the enclosed area various pits and post holes were investigated. A number of the features identified during excavation were shown to be Iron Age in date. A period of Early Iron Age settlement was followed in the Middle Iron Age by an enclosed settlement within a rectilinear ditched enclosure, which lies within the southern part of the monument.
In addition, two of the five ring ditches were fully excavated and were found to represent round barrows containing Saxon inhumation burials in wooden coffins.

Curatorial Notes
Previously scheduled as EX153
Designating Organisation: English Heritage

Location
Grid Reference: TQ 6515 8053 (point)
Map sheet: TQ68SE **Area (Ha):**
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - None recorded

Associated Monuments
5158 Monument: Orsett Causewayed Enclosure
5159 Monument: Orsett-Causewayed Enclosure
5160 Find Spot: Orsett-Causewayed Enclosure
5162 Monument: Orsett-Causewayed Enclosure
5163 Monument: Orsett-Causewayed Enclosure
5164 Monument: Orsett-Causewayed Enclosure
5165 Monument: Orsett-Causewayed Enclosure

4 COALHOUSE FORT BATTERY AND ARTILLERY DEFENCES (Scheduled Monument 1013943)

DesigUID: 1013943 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1013943 DEX965
Name: Coalhouse Fort battery and artillery defences
Grade: - **Date Assigned:** 02/04/1990 **Amended:** -

Legal Description
The monument comprises the Victorian Coalhouse Fort at East Tilbury, with its associated railway link and jetty and its rifle range, as well as the foundations of an Henrician `blockhouse' coastal battery, a late 19th century `Quick-Firer' battery and a low-level radar tower dating from World War II.
The earliest of this remarkable seguence of Thameside defences is the blockhouse, the construction of which was ordered by Henry VIII in 1539/40. It was built of stone and timber robbed from St Margaret's Chantry nearby. Nothing is visible of the structure itself but the landward ditch

survives as a creek, and timber palisading running along the shore in the area may belong to this phase. Beside the blockhouse a jetty was built, perhaps initially to support the blockhouse but later to land coal. After several phases of rebuilding, the jetty served Coalhouse Fort, to which it was joined by a full-gauge railway line which survives almost intact but for the tracks themselves.
The first phase of the fort, begun in 1799, was replaced in 1847-55 by a more complex structure which was in turn superseded by the present buildings between 1861-74. This latest fort was added to in the First and Second World Wars and only went out of military use in 1949. Near the waterfront a little distance from the fort are a 19th century battery for Quick-Firer guns and searchlights, a rifle range and a World War II low-level radar tower. The structures form a remarkable group of defensive sites at the strategically important Coalhouse Point.

Curatorial Notes
Previously scheduled as EX128 and 12707
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 6910 7663 (point)
Map sheet: TQ67SNE **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - None recorded

Associated Monuments -
10296 Monument: Radar Tower, Coalhouse Point
10297 Monument: Spigot Mortar Pedestals (2) at Coalhouse Fort
10298 Monument: Tett Turret (destroyed), Coalhouse Fort
10299 Monument: Minefield Control Tower at Coalhouse Fort
10300 Monument: Concrete Building, Coalhouse Fort
1756 Monument: East Tilbury - Coalhouse Fort
1757 Monument: East Tilbury - Coalhouse Point, Site of 1540 blockhouse
1758 Monument: East Tilbury - Coalhouse Fort, Quick Firing Battery
1760 Monument: East Tilbury - Coalhouse Fort
1761 Monument: East Tilbury - Coalhouse Fort
45786 Monument: Coalhouse Wharf and Coastguard Station

5 CROPMARK COMPLEX, ORSETT (Scheduled Monument 1002134)

DesigUID: 1002134 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002134 DEX22385
Name: Cropmark complex, Orsett
rsett
Grade: - **Date Assigned:** 02/04/1990 **Amended:** -

Legal Description
An extremely complex crop mark picture showing, against a background of extinct field systems and river systems, rectllinear enclosures of possibly RB date, ring ditches which probably represent ploughed out barrows and a mass of very substantial pits. In many cases these pits may be the sites of Early Saxon "Grubenhouses". Recent research would seem to indicate that this may often be the case.
Finds in excavations already conducted at Thurrock, may be seen as confirmation of this.
(d) The aerial photograph shows that the already scheduled features to the W, including a complex of rectilinear continue eastwards in this field.

The field is under cultivation at the moment (with the exception of a small patch of grass to the NW by the wood) but there is a possibility of an application for mineral extraction.
(e) A continuation of the ditch system is visible in this field from aerial photographic evidence. The field is under cultivation.
The site lies in a number of fields on either side of the A13. Parts of the site have been obliterated by the road construction.

Curatorial Notes
Previously scheduled as EX174. Scheduled area in 5 parts.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 627 810 (1018m by 658m)
Map sheet: TQ68SW **Area (Ha)**: 377,228.47
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments -
5237 Monument: Orsett-Grey Goose Farm
5238 Monument: Orsett-Grey Goose Farm
5239 Find Spot: Orsett-Grey Goose Farm
5240 Find Spot: Orsett-Grey Goose Farm
5241 Find Spot: Orsett-Grey Goose Farm
5242 Find Spot: Orsett-Grey Goose Farm
5243 Monument: Orsett-Grey Goose Farm
5244 Monument: Orsett-Grey Goose Farm
5245 No finds or features: Orsett-Baker Street Pit
5246 Find Spot: Orsett-Baker Street Pit

6 DENE HOLES IN HANGMAN'S WOOD (Scheduled Monument 1002156)

DesigUID: DEX22387 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002156
Name: Dene holes in Hangman's Wood
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
Only three of this group of holes now visible, and only one open. Extensive exploration of these deneholes was made by Essex Field Club in 1880's. They were shown to have shafts 80ft deep, chalkside chambers, three on each side of shaft.
Three deneholes visible, two open.

Curatorial Notes
Previously scheduled as EX131.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 631 792 (256m by 134m)
Map sheet: TQ67NW **Area (Ha)**: 16,274.87
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
1681 Monument: Dene Holes, Hangman's Wood, Little Thurrock

7 DOVECOTE AT HIGH HOUSE PURFLEET (Scheduled Monument 1017234)

DesigUID: DEX3601 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1017234
Name: Dovecote at High House Purfleet
Grade: - **Date Assigned:** 12/01/2000 **Amended:** -

Legal Description
The monument includes a late 17th century brick dovecote located to the east of High House, some 900m north of the River Thames on a slightly elevated position overlooking the West Thurrock Marshes.
The dovecote, which is Listed Grade II, is octagonal with brick walls rising 3m above the exterior cemented plinth towards a smooth cemented eaves cornice (originally carved plaster). The roof is tiled with a wooden louver surmounted by a weather vane and has a dormer window of two lights facing north. The entrance faces west towards the house and has a unusual double door. The massive inner door is constructed entirely of iron and originally had an elaborate lock activating three bolts (parts of which survive), while the outer wooden door is reinforced and secured by iron straps padlocked over staples. The interior of the dovecote is largely unaltered and contains 517 brick nest boxes set into the walls with a continuous alighting ledge to each tier. The first tier of nests is 0.36m from the ground, and between this tier and the floor are two brick string courses projecting about 0.5m, possibly a precaution against vermin entering the nests. The nests have entrance holes which are 0.13m by 0.16m leading into `L'-shaped compartments measuring some 0.28m deep. The nests were thus designed in order to accommodate two broods.
The dovecote also retains its two armed wooden potence complete with ladder, (a rotating structure designed to provide access to the nest boxes), which is supported upon a circular brick table (cemented over) some 1.25m in diameter.
The main beam of the potence is housed in the intersection of two alighting beams which also carry the framework of the louver. The internal roof timbers are to some extent restored but retain a fair number of the original timbers.
The security entrance is unique and was probably fitted to keep out pigeon thieves who often stole birds for London pigeon shoots in the 18th century.
Documentary sources refer to the dovecote having been used as a temporary village lock up.
A brick wall abuts the dovecote on its western side, where this impinges on the monument's protective margin, it is excluded from the scheduling, although the ground beneath it is included.

Curatorial Notes
Designating Organisation: English Heritage

Location
Grid Reference: TQ 5673 7800 (point)
Map sheet: TQ57NE **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources –
Scheduling record: English Heritage. 2000. Dovecote at High House, Purfleet - SM 32420

Associated Monuments *-*
35284 Listed Building: Dovecote at High House Purfleet

8 EARTHWORKS NEAR CHURCH, WEST TILBURY (Scheduled Monument 1002199)

DesigUID: DEX22380 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002199
Name: Earthworks near church, West Tilbury
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
Earthworks obsured by gravel diggings and farm buildings. The church yard stands upon a slight mound suggesting the site of an early camp. SW of the church is a length of rampart with an internal ditch which turns at right angles towards the N.

Curatorial Notes
Previously scheduled as EX40.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 660 777 (212m by 235m)
Map sheet: TQ67NE **Area (Ha)**: 24,837.31
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
1674 Monument: West Tilbury

9 EAST TILBURY BATTERY (Scheduled Monument 1013880)

DesigUID: DEX966 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1013880
Name: East Tilbury Battery
Grade: - **Date Assigned:** 21/08/1990 **Amended:** -

Legal Description
East Tilbury battery, separate from the nearby Coalhouse Fort, was built in 1889/90 to support Coalhouse Fort with long-range fire. Its form rejected the stark outline of its predecessors, instead being blended into the landscape by means of a long and sloping earthen frontal area so that from a distance it was invisible (`Twydall Profile'). The guns at the battery, two 10-inch and four 6-inch, extended the tactical doctrine of invisibility, being mounted on `disappearing carriages' which lay flat in deep emplacements for reloading and aiming but which were raised above the parapet for the few seconds of firing. Below the gun mountings were magazines and accommodation blocks, and to the rear of the battery were a cookhouse and the battery office. Unclimbable `Dacoit fencing', set in a steeply-sided ditch, surrounds the battery.
Although the guns were removed when the battery was decommissioned before the First World War, the remainder of the fortification is remarkably well-preserved. Many structural details are discernible and machinery used to raise shells and cartridges from the magazines to the emplacements is virtually intact.

Curatorial Notes

Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 6869 7735 (point)
Map sheet: TQ67NE **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - *None recorded*

Associated Monuments -
1823 Monument: East Tilbury Battery
1824 Monument: East Tilbury Battery

10 GATEHOUSE AND MOAT OF SOUTH OCKENDEN OLD HALL (Scheduled Monument 1002155)

DesigUID: DEX22388 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002155

Name: Gatehouse and moat of South Ockenden Old Hall
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
A large irregular quadrilateral moat enclosing an area of some 500' and 300'. Lower part of outer wall of gatehouse is of finely dressed ashlar and is Medieval, upper part Tudor or Stuart. Evidently an important house, only an orchard inside now.

Curatorial Notes
Previously scheduled as EX130.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 60367 83143 (141m by 199m)
Map sheet: TQ68SW **Area (Ha)**: 18,686.27
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - *None recorded*

Associated Monuments -
1863 Monument: South Ockendon Old Hall
1864 Monument: South Ockendon Old Hall

11 PURFLEET MAGAZINE (Scheduled Monument 1005561)

DesigUID: DEX22387 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1005561
Name: Purfleet magazine
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
1. The Central magazine of five built 1761-1763 as the principle ordnance depot for the Thames and Medway, brick vaulted, slate roof, condition good.
2. Small office/test house, once part of complex of buildings used as proof houses etc. Clock Tower nearby. All probably date from original building programme.
The information on the AM7 is ambiguous as it is not clear whether it is referring to the entrance monument that remained in 1970 or to the small proportion which is scheduled. The historic circumstances are as follows:
i) The government gun powder magazine was moved from Greenwich to Purfleet in the early 1760's. The complex include a quay, five identical storehouses and magazines, the proofing house and, some distance from the stores, shielded by an earthbank and large garden, the Commandants house.
ii) The magazine continued to operate through the 19th century and was used as an ammunition store in first World War.
iii) The magazine was occupied by the army until the 1960's when it was purchased by Thurrock Council.
iv) In 1976 the quay, four magazines and Commandants house were demolished except for the part of garden wall and clock tower.
Thus the scheduled ancient monument consists of;
a) One of the magazines (No 5). This is a brick vaulted rectangular building with a slate roof. There are doors on each side and six small windows on each long side. The walls are thick and internally, the magazine would be divided into bays for storing the barrels.
b) The Proofing House - A two storey brick building with slate roof.
c) The Clock Tower. This was part of the garden wall of the commandants house. It is a small square arched brick tower with clock face. One possibly original wooden door remains.

Curatorial Notes
Previously scheduled as EX151.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 549 785 (141m by 98m)
Map sheet: TQ57NW **Area (Ha)**: 1,256.64
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources - *None recorded*

Associated Monuments -
5000 Monument: Purfleet Gunpowder Magazines

12 Roman barrow 260m NE of South Ockenden Hall (Scheduled Monument 1002156)

DesigUID: DEX22387 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002156
Name: Roman barrow 260m NE of South Okenden Hall
Grade: - **Date Assigned:** 07/07/2000 **Amended:** -

Legal Description
The monument includes a Roman burial mound, or barrow, located some 260m north east of South Ockendon Hall, on a terrace of fairly high ground on the western slope of the Mar Dyke river valley.

It originally stood as one of three such barrows sited along the valley side at intervals of about 500m apart. The other two barrows have long since been destroyed, although one was excavated prior to destruction and found to date to the late second century AD.
The mound is oval in plan with a rounded profile rising to a flat summit at a height of about 5m. It has a maximum diameter of 50m at the base where it is surrounded by a largely buried ditch, visible as a slight depression measuring up to 10m in width. A single trench excavated across the ditch and into the edge of the mound in 1957 yielded 17 sherds of Roman pottery, indicating that this barrow was also constructed in the second century. The interior of the mound, including the central burial, was not disturbed.

Curatorial Notes
Previously scheduled as EX129.
Designating Organisation: English Heritage

Location
Grid Reference: TQ 6031 8336 (point)
Map sheet: TQ68SW **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
5135 Monument: Roman Barrow 260m NE of South Ockendon Hall

13 Second World War anti-aircraft battery at Bowaters Farm (Scheduled Monument 1002156)

DesigUID: DEX22387 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1002156
Name: Second World War anti-aircraft battery at Bowaters Farm
Grade: - **Date Assigned:** 31/07/1991 **Amended:** -
Legal Description
The monument includes eight concrete gun emplacements with their connecting roads and vehicle parks, magazine and command post. The battery forms two groups of anti-aircraft artillery. The earlier group comprises four octagonal emplacements of concrete covered by asphalt, which measure some 16m across. Two entrances are located on opposite sides of the emplacements and earthen banks protect their outer sides. Inside the emplacements, the ten bolts which fixed the guns to the ground survive, as do the ammunition lockers against the walls. Between the middle two emplacements is a rectangular magazine building some 12m long with five compartments for shells with different fuses. At the rear of the group is a larger building which formed a command post and which included height and range-finding equipment, although this no longer survives. This group housed 4.5 inch guns from mid-1940 to 1944.
To the east is a second group of four emplacements, these examples comprising a deep circular pit lined with concrete, again measuring some 16m across, with an adjoining sunken engine room to the west or south-west. A gun turret, which no longer survives, capped the circular pit, and housed a 5.25 inch gun. This group superseded the 4.5 inch guns in 1944 and continued in use until after the war.

Curatorial Notes
Designating Organisation: English Heritage

Location
Grid Reference: TQ 6786 7707 (point)
Map sheet: TQ67NE **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
9082 Monument: WWII HAA Gun Site "TN13 Bucklands", Bowaters Farm, Thurrock

14 SITE OF MOATED MANOR HOUSE E OF ST MICHAEL'S CHURCH, AVELEY (Scheduled Monument 1005562)

DesigUID: DEX22384 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1005562
Name: Site of moated manor house E of St Michael's Church, Aveley
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
'The Manor House of Aveley anciently stood in a little field of about 20 acres, adjoining the SE corner of the churchyard.' (Morant Vol 1 P77). In 1287 the manor's described messuage, garden and curtilage, in 1399 as a capital messuage, with access to the church through the court. In 1360 a capital messuage. In 1374 a capital messuage with the park 'badly enclosed with a ditch and feeble palings!. In 1506 a messuage, and in 1578 the manor is Marshfods House on a different site. The 1598 map indicates the site thus "it is said the manor house of Aveley stood in this place". The moats on the S side are still wet and the interior is under rough pasture. Interior now dense scrubby woodland.

Curatorial Notes
Previously scheduled as EX179.
Designating Organisation: English Heritage

Location
Grid Reference: Centred TQ 568 800 (101m by 89m)
Map sheet: TQ58SE **Area (Ha)**: 6,524.17
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
5079 Monument: Aveley Manor

15 SPRINGFIELD STYLE ENCLOSURE AND IRON AGE ENCLOSURES SOUTH OF HILL HOUSE, BAKER STREET (Scheduled Monument 1009287)

DesigUID: DEX2554 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1009287
Name: Springfield style enclosure and Iron Age enclosures south of Hill House, Baker Street
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
The monument includes a Springfield style enclosure, and an overlying enclosed domestic settlement believed to date to the Iron Age period. The monument is located on a low flat topped ridge on a sand and gravel terrace overlooking Orsett Fen to the north.
The monument is represented by a series of buried features which have been recognised as cropmarks from aerial photography. The Springfield style enclosure includes an external ditch, enclosing an area of c.70m in diameter, with an entrance on the eastern side. The traces of a circular building and pits are visible as cropmarks on aerial photographs within the enclosure.
Overlying the Springfield style enclosure is an enclosed domestic settlement and associated field system. This settlement complex includes an `L'shaped enclosed area measuring 210m by 130m, surrounded by an enclosure ditch, with at least one entrance on the eastern side. Within it are at least four roughly rectangular compounds which vary in size from 25m by 30m to 60m by 40m, most of which are believed to represent stock paddocks and pens or distinct areas for cultivation and industrial purposes. In an internal enclosure in the north west corner of the complex are the remains of two circular buildings.
These are visible on aerial photographs as cropmark ring ditches 10m in diameter along with cropmarks representing pits and other features. This compound measures 60m x 40m and probably represents the main dwelling area of the enclosure complex.

Curatorial Notes
Designating Organisation: English Heritage

Location
Grid Reference: TQ 6389 8152 (point)
Map sheet: TQ68SW **Area (Ha)**:
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources *- None recorded*

Associated Monuments *-*
14444 Monument: Cropmarks S of Hill House, Baker Street
5212 Monument: Cropmarks S of Hill House, Baker Street

16 TILBURY FORT (Scheduled Monument 1021092)

DesigUID: DEX2730 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1021092
Name: Tilbury Fort
Grade: - **Date Assigned:** 17/04/1997 **Amended:** -

Legal Description
Tilbury Fort is situated on low lying ground on the north bank of the River Thames, south east of the modern outskirts of Tilbury. The monument includes the buried remains of an Henrician blockhouse, the far larger and more complex fort and battery which succeeded the blockhouse in the late 17th century, the late 19th and early 20th century alterations to the fort and a World War II pillbox.
The blockhouse, the first permanent defensive structure in this location, was constructed in 1539 as part of Henry VIII's campaign to improve the coastal defences. Small fortified barracks were sited both here and at East Tilbury (about 5km distant), and on the opposite side of the estuary at Gravesend, Milton and Higham. None of these buildings now survive above ground, although contemporary illustrations provide details of their appearance. The Tilbury blockhouse, like the others, had two stories and was D-shaped in plan - the curved elevation, pierced by gun ports, provided a wide field of fire across the river. Alterations to the blockhouse were occasioned by the threat of Spanish invasion in the late 16th century and, following the defeat of the Armada in 1588, the building was encircled by a ditch and counterscarp bank with drawbridge and timber palisade. Within this enclosure (which was located roughly in the centre of the southern side of the present fort) stood barracks and store buildings.
The Thames blockhouses were maintained through the period of the English Civil War, but played little part in the conflict. After the Restoration in 1660, Charles II began a complete reorganisation of the national defences which, following a highly successful Dutch raid up the Thames and Medway in 1667, came to include Tilbury. The new fort and battery, based on principles pioneered in the Low Countries, were designed by Charles' chief engineer Sir Bernard de Gomme. Work began in 1670 and the resulting fortifications remain substantially unaltered to this day. The fighting front of the new fort was a linear battery extending along the shoreline for approximately 250m to either side of the Henrician blockhouse, which was retained as a powder magazine. Of the 14 original gun positions (renewed with brick revetments towards the end of the 18th century) 12 survive along the West Gun Line, marked by triangular projections on the seaward side of an earthen rampart. The East Gun Line has been more severely eroded over the years leaving only a single gun platform. Behind each line are the remains of artillery store buildings dating from the 1840s and the buried foundations of earlier structures. The two gun lines were separated by a square quay (now largely overlain by modern flood defences) where stores and munitions were landed. These were then taken via a narrow causeway (the Powder Bridge) to the blockhouse and the new fort which guarded the landward side of the battery.
De Gomme's fort is pentagonal in plan, with arrowhead-shaped bastions projecting from four of the angles, allowing guns positioned behind the parapets to command wide areas and to be mutually supportive in close quarter defence. Pilings in the intertidal zone in front of the site of the blockhouse indicate an intention to add a fifth bastion to complete the regular appearance of the fort, but work is thought to have been abandoned at an early stage. The scheduling extends across the foreshore in front of the fort (approximately 50m below the modern flood wall) in order to protect these remains and those of various other jetties and piers associated with the frontage of the fort. Some of these are recorded on early maps, others have been identified by recent survey work. The original jetty for the Gravesend ferry, for example, stood here before it was relocated in 1681.
The brick built curtain wall which both encloses and links the bastions is largely original, with some later heightening of the parapet, and survives around all but the south eastern bastion and side of the fort. It supports massive internal earthen banks designed to absorb the impact of bombardment and to provide a firing platform for the defenders. The pentagonal area within the ramparts, known as `The Parade', covers about a hectare, and is raised above the level of the surrounding marsh by layers of chalk, clay and gravel surfaced with stone paving.
The Soldiers' Barracks, a rectangular building some 50m in length with 20 rooms, was situated along the western edge of the parade parallel to the curtain wall. It was damaged by bombing in World War II, together with the kitchen, mess hall, hospital and other structures, and has since been demolished. Unlike these other structures, the footings of the barrack block remain marked out on the ground. On the opposite side of the Parade stands the 18th century terrace of the Officer's Barracks.
On the north side of the parade are two brick built powder magazines dating from 1716, the eastern of which is used as a visitors centre and display area. Each magazine has two entrances in the south wall with wooden doors reinforced with copper sheeting. The magazines are surrounded by a

brick blast wall constructed in 1746. This originally had entrances corresponding to those of the magazines themselves, although these were later blocked and new staggered entrances added for more effective blast containment. Though altered in the 19th century the magazines still contain many of their original features, including ventilation slits and (within the eastern magazine) raised wooden floors to prevent damp affecting the powder. The two magazines are separated by a passage giving access to the Parade from the Landport Gate directly to the north. The gateway consists of a brick vaulted entrance hall supporting an upper storey with a single room containing some original plaster work and fragments of 18th century wall paintings. The main entrance to the fort, known as the Water Gate, is situated in the middle of the south curtain.

This is a two storied brick structure with an elaborate outer facade faced with ashlar and including a frieze with a dedication to Charles II with supporting motifs of gun carriages and other military regalia. A blocked doorway in the east wall would have originally given access to the house of the sutler (camp follower who sold drink and provisions to the troops) which now only survives as foundations. Adjacent to the west side of the Water Gate is a two storied building, the lower part of which served as a guard room and the upper floor as a chapel. There is no direct access between the two floors, the entrance to the chapel being provided from the curtain wall. Also within the parade are three mid-19th century hand pumps used to draw rainwater from underground cisterns.

The elaborate outworks which surround the landward sides of the fort remain substantially unaltered. The curtain wall and bastions are flanked by a broad terrace, or berm, in turn surrounded by a 50m wide moat following the outline of the fort. A narrow strip of dry land separates this channel from a more sinuous outer moat and contains a complex of defensive structures, the main element of which is a rampart, or covered way, traceable as a low earthwork running along most of its length. The covered way, with internal firing step, or banquette, acted as a communications channel linking the outer gun positions with the main body of the fort. In the middle of its eastern and western arms are triangular projections known as `places of arms' which served as muster points for troops defending the covered way, and originally contained platforms for cannon. The covered way to the south of the eastern place of arms was modified in 1779 to provide an additional battery of six guns providing a field of fire down river. Access to the Landport Gate was by a wooden drawbridge across the inner moat. This has not survived but has been replaced by a modern replica. The northern end of this bridge stands on an arrowhead shaped island, or ravelin, within the inner moat. The ravelin would have contained gun emplacements to defend the Landport Gate from direct bombardment and provide covering fire for the northern bastions. A further wooden bridge, also a modern replacement, links the north western side of the ravelin to the covered way between the moats. The approach continues northward over causeways which cross a second triangular island, known as a redan, in the outer moat. The low earthworks of a redoubt (an enclosed area containing further gun emplacements) remain visible on the redan. The two moats are connected by a sluice to the east of the ravelin, and the water level is controlled by a second sluice between the south eastern corner of the outer moat and the adjacent tidal creek (Bill Meroy Creek). Water management formed a significant part of the fort's system of defences. The ability to drain the moats was vital both for periodic removal of silts and to prevent attack over the frozen surface in winter.

Beyond the moats, wider areas of the marsh were enclosed by banks and could be partly flooded to hinder an approaching force and prevent the construction of adjacent siege works. This wider basin is defined to the west by Fort Road (which runs along the top of part of the containment bank), to the north by a bank linking Fort Road to the head of Bill Meroy Creek, and to the east by the creek itself - which effectively provided a third moat along this side. These earthworks, and the area which they contain, are included in the scheduling along with the earthen dam across Bill Meroy Creek which regulated the water level.

Tilbury Fort remained at the forefront of the defence of the Thames and London through the 18th and early 19th centuries, although it never saw the action for which it was designed, and it was partly superseded by forward batteries established down river at Coalhouse Point, Hope Point and Shornemead in 1795. The Royal Commission on the Defence of the United Kingdom in 1859 found all these defences inadequate and shortly afterwards larger forts were constructed at Coalhouse, Shornemead and Cliffe Creek. It was recommended that Tilbury be made more efficient, but as it was now relegated to a secondary position the alterations were far from radical, allowing the 17th century layout to survive. Embrasures and platforms for new heavy guns were added to cover the river from the north east and west bastions in 1868, the pivots and racers for which remain in position. Each gun was supplied by a brick vaulted expense magazine containing lifts and ventilators from chambers below where the powder and shot were combined.

These chambers were joined by passages and linked to main underground magazines situated beneath the centres of the bastions. Separate passages contained lamps which shone through plate glass windows into the magazines and passageways. Both bastions also have positions for 10 inch smooth bore howitzers mounted on the northern flanks to cover the landward approach.

The mid-19th century 32 pound guns presently mounted on the west and north east bastions are not original armaments. Towards the end of the 19th century, a light narrow gauge railway was laid out across the Parade to aid the transport of ammunition and stores. A section of the rails can still be seen on the quay, near the powder magazines and in the modern gateway to the east of the Water Gate.

The 1868 gun positions on the east bastion and south eastern curtain wall are masked by later emplacements built shortly before World War I. The curtain wall was realigned to give a better field of fire and four positions with concrete emplacements were let into the earlier embrasures on the wall for breech loading guns. Two more massive emplacements were constructed on the bastion for heavier guns, probably naval 6 inch. The mechanical hoists which served the larger guns still survive. The new defences never saw action in World War I, although anti-aircraft guns mounted in the parade did provide a spectacular military success by bringing down a German airship. In the early stages of World War II the chapel housed the Operations Room which controlled the antiaircraft defences of the Thames and Medway (North) Gun Zone, until it was relocated to a purpose built structure at Vange in 1940. A small rectangular pillbox, located slightly to the north of the western end of the West Gun Line, was added at this time to control the river front approach to the fort and provide enfilade fire across the rear of the old battery positions. This is included in the scheduling. In 1948 the Commissioner of Crown Lands placed Tilbury Fort in the guardianship of the Ministry of Works to ensure conservation and public display. It is in the care of the Secretary of State.

A number of features within the area are excluded from the scheduling; these are the replica bridges, the Officer's Barracks and attached stable, the 19th century workshop to the south east of the Parade, the public toilets, all fences, fenceposts and signposts, the modern surfaces of all roads and car parks, the replica sentry boxes flanking the passage between the powder magazines, all guns presently positioned on the batteries and within the fort and all modern fixtures such as light fittings and flagpoles; the ground beneath these features and the structures to which they are attached, are included in the scheduling.

The line of the modern flood wall, built along the front of the East and West Gun Lines in the mid-1980s, is totally excluded from the scheduling both above and below ground.

Curatorial Notes

Previously scheduled as EX80.

Designating Organisation: English Heritage

Location

Grid Reference: TQ 6515 7543 (point)

Map sheet: TQ67NE **Area (Ha)**:

Administrative Areas

Unitary Authority THURROCK, ESSEX

Sources -

Scheduling record: English Heritage. 1997. Tilbury Fort - SM 26309

Associated Monuments -

10279 Monument: Spigot Mortar Base, NW Bastion, Tilbury

10280 Monument: Spigot Mortar Base, SE Bastion, Tilbury Fort

1677 Monument: Tilbury Fort, West Tilbury

1678 Monument: Tilbury Fort

1679 Monument: Tilbury Fort

17 WORLD WAR II BOMBING DECOY ON FOBBING MARSHES, 1.11KM AND 1.15KM NORTH WEST OF OOZEBARN (Scheduled Monument 1020489)

DesigUID: DEX3621 **Type** Scheduled Monument **Status:** Active
National Ref **Other Ref**
1020489
Name: World War II bombing decoy on Fobbing Marshes, 1.11km and 1.15km north west of Oozebarn
Grade: - **Date Assigned:** 01/04/1999 **Amended:** -

Legal Description
The monument lies in an area of open marshland known as Fobbing Marshes, to the north of the Shell Haven Oil Refinery which occupies a large site on the north bank of the River Thames. It is in two areas of protection. Documented in wartime records as `Shell Haven, Fobbing' the monument is the night shelter and oil storage bay of a World War II Oil QF (diversionary fire) decoy designed to protect the Shell Haven oil refinery. At the peak of its operation the decoy would have had many burning pools of oil and simulated ring fires from burning oil storage tanks; these would have been ignited electrically from the night shelter, situated some distance away, which also housed the generator and decoy manning personnel. Although nothing remains of the arrangement of decoy fires, the night shelter and the walls of an oil storage facility remain.
The night shelter is built of concrete; it is 6m long by 3.2m wide, aligned north-south and has a single sloping entrance on its northern side. Inside are two rooms: the southernmost is the Operations Room, with the smaller Engine Room to its north. The Operations Room measures 2.9m by 2.5m and has an escape hatch in the roof at its southern end with steel rungs leading up to it. Two steel connection pipes which match up with pipework on the outside, probably contained the wiring terminals for the electrical ignition of the decoy devices. The Engine Room measures 2.5m by 2.3m and would have contained the generator (no longer present), bolted onto a low concrete base which still survives.
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.
War Office documents relating to the equipment and manning of the bombing decoy show that it was operational in August 1941 (the earliest reference to it dated 1st August) and was certainly in use in March 1942 (latest written reference); although no further specific documentary references can be found it may have continued in use through to the end of the war.
All modern fencelines are excluded from the scheduling, although the ground beneath them is included.

Curatorial Notes
In two parts TQ72988400 and TQ72948401
Designating Organisation: English Heritage

Location
Grid Reference: TQ 7298 8400 (point)
Map sheet: TQ58SE **Area (Ha)**: 6,524.17
Administrative Areas
Unitary Authority THURROCK, ESSEX

Sources -

Scheduling record: English Heritage. 2002. World War II bombing decoy on Fobbing Marshes - SM 32445.

Associated Monuments -
10328 Monument: World War II bombing decoy on Fobbing Marshes, 1.11km and 1.15km north west of Oozedam

Appendix 2

DEFINITION OF THE CONTRIBUTION MADE BY SETTING TO THE SIGNIFICANCE OF HERITAGE ASSETS

Major positive contribution	The element or attribute of the assets setting makes a major positive contribution to the significance of the asset and/or the ability to appreciate/understand the significance of the asset
Moderate positive contribution	The element or attribute of the assets setting makes a moderate positive contribution to the significance of the asset and/or the ability to appreciate/understand the significance of the asset.
Minor positive contribution	The element or attribute of the assets setting makes a minor positive contribution to the significance of the asset and/or the ability to appreciate/understand the significance of the asset.
Neutral / uncertain contribution	The element or attribute of the assets setting makes a neutral contribution to the significance of an asset and/or the ability to appreciate/understand the significance of the asset, or its contribution to the significance of the asset is currently unknown.
Minor negative contribution	The element or attribute of the assets setting makes a minor negative contribution to the significance of an asset, and/or ability to appreciate/understand the significance of the asset.
Moderate **Negative contribution**	The element or attribute of the assets setting makes a moderate negative contribution to the significance of the asset and/or the ability to appreciate/understand the significance of the asset.
Major negative contribution	The element or attribute of the assets setting makes a major negative contribution to the significance of the asset and/or the ability to appreciate/understand the significance of the asset

Table 2: Contribution of the of the asset's setting to the significance of the heritage asset, and/or the ability to appreciate the significance of the heritage asset.



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