

ESSEX THAMES GATEWAY HISTORIC ENVIRONMENT CHARACTERISATION



2007

Frontispiece: Top left is the remains of Hadleigh Castle, top right are the excavations at Dolphin Pit Purfleet, bottom left are the earthworks of the explosive factory within Wat Tyler Country Park, and bottom right is Fobbing Church viewed from the marshes

Abbreviations

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| AA | Anti Aircraft |
| CEGB | Central Electricity Generating Board |
| CTRL | Channel Tunnel Rail Link |
| ECC | Essex County Council |
| HECA | Historic Environment Character Area |
| HECZ | Historic Environment Character Zone |
| HER | Historic Environment Record |
| NMP | National Mapping Programme |
| OS | Ordnance Survey |
| RASC | Royal Army Service Corps |
| RFC | Royal Flying Corps |
| RSPB | Royal Society For the Protection of Birds |
| WW I | World War 1 |
| WW II | World War II |

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1 Essex Thames Gateway Historic Environment Characterisation Project

1.1 Introduction

The historic environment is a central resource for modern life. It has a powerful influence on peoples' sense of identity and civic pride. Its enduring physical presence contributes significantly to the character and 'sense of place' of rural and urban environments. In the Thames Gateway this resource is rich, complex and irreplaceable. It has developed through a history of human activity that spans many thousands of years. Some of the resource lies hidden and often unrecognised beneath the ground in the form of archaeological deposits. Other elements, such as the area's historic landscape, are a highly visible record of millennia of agriculture, industry and commerce and now form an integral aspect of peoples' daily lives. The 'built' part of the historic environment is equally rich, with towns, villages and hamlets.

As a fundamental aspect of the areas environmental infrastructure the historic environment has a major role to play in Thames Gateway's future. At the same time it is sensitive to change and it needs to be properly understood before change is planned in order to ensure proper management and conservation so that the historic environment can make its full contribution to shaping sustainable communities.

It is important that the many opportunities for the enhancement of the historic environment are realised and that adverse impacts associated with development are minimised so as to avoid unnecessary degradation. The historic environment lends character to places and provides a positive template for new development. It can play a key role in creating a 'sense of place' and identities as new communities are created and existing ones enhanced.

Historic Environment Characterisation for the whole of Thames Gateway was produced by Chris Blandford Associates (2004) on behalf of English Heritage, Essex

County Council, and Kent County Council. This study provided characterisation at a strategic level suitable for considering the Gateway as a whole. English Heritage supplied copies of the study to all the local authorities in Thames Gateway. The usefulness of this approach to the study of the Historic Environment is now widely recognised. Rochford District and Chelmsford Borough each commissioned Historic Environment Characterisation Studies, at a scale more appropriate to an individual borough or district, to inform the creation of their Local Development Frameworks.

Through its involvement in the Planarch II Interreg project Essex County Council commissioned Wessex Archaeology to prepare a similar more detailed study for Essex Thames Gateway within the areas for which Essex County Council provides Historic Environment advice (Castle Point, Rochford, Basildon, and Thurrock Unitary). The draft prepared by Wessex Archaeology has been amended and edited by Essex County Council Historic Environment Branch and the results are presented here.

1.2 Purpose of the project

This project has been developed to primarily serve as a tool for the management and enhancement of the historic environment. The report reveals the sensitivity, diversity and value of the historic environment resource within the area. The report should facilitate the development of positive approaches to the integration of historic environment objectives into spatial planning. Historic environment characterisation should inform the production of Local Development Frameworks.

In addition to this primary purpose there are a range of other potential benefits:

- **Provide the opportunity to safeguard and enhance the historic environment as an integrated part of development within Thames Gateway.**

The report provides the starting point for identifying opportunities for the integration of historic environment objectives within action plans for major development proposals

but also offers a means by which conservation and management of the historic environment can be pursued by means outside the traditional planning system.

The report will allow planners, with support from the specialist advisors, to integrate the protection, promotion and management of the historic environment assets both within development master plans and Local Development Documents.

- **Provide Guidance to Planners at the early stages of development proposals**

The report will provide planners with background information on the historic environment covering Thames Gateway. This can be used at an early stage for identifying the Historic Environment elements which will be affected and lead to highlighting the need for informed conservation or enhancement, and effective communication and co-ordination between appropriate services.

- **Provide a means for local communities to engage with their historic environment.**

The report may provide a means of engaging the wider public with the historic environment, with regard to the creation of Village Design Statements and the Community Strategy, cultural strategy and development of Green infrastructure strategies.

Methodology

The Historic Environment has been assessed using specific character assessments of the urban, landscape and archaeological character. The Historic Environment Character Areas originally defined by the Thames Gateway Historic Environment Characterisation Project (CBA 2004) are broken down into more specific and more detailed Historic Environment Character Zones which are more suitable for informing strategic planning, and master planning activity. The project is GIS based and is designed as a polygonal data layer with hyperlinked text information. For a more detailed account of the methodology see section 3.2.

2 Essex Thames Gateway Historic Environment

The Thames Gateway region is often seen as densely developed with a generally degraded landscape. However, the, open areas, creeks, estuaries and historic settlements comprise a complex and varied historic environment.

The historic settlement pattern developed around an intricate and integrated relationship between gravel/London clay upland, grazing marsh, creeks and estuaries. The large marshland embayment bounded to the south by Canvey/Shellhaven to the north and east by Vange/Benfleet/Hadleigh/Leigh and to the west by Fobbing/Corringham, to a surprising extent preserves this relationship. For centuries south Essex had a thriving economy founded on agriculture, grazing, fishing/shellfish and salt production (a kind of Essex equivalent to Mediterranean polyculture) to which may be added trade and transport. Canvey Island seems to have been a major transshipment centre in the Roman and Saxon periods and many of the south Essex villages such as Benfleet and Fobbing were small but flourishing medieval ports.

The field boundaries of south Essex preserve rectilinear landscape patterns of great antiquity. The woods of south-east Essex, were a particularly valuable resource in the medieval period and ownership was divided amongst a number of, often quite distant, manors. The economically very important marshland pasture was often divided up in the same way. Surviving grazing marshes are of great importance as historic landscapes and as wildlife habitats. A number of country parks, nature reserves, and heritage sites in the Thames Gateway area form convenient nodal points from which the historic landscape can be explored and explained.

There are some very good documentary and cartographic sources but the richest historical record is the landscape itself. Many features relating to past land use survive and await discovery and/or interpretation. Even in areas which have seen extensive recent ploughing medieval and earlier remains lie just below and sometimes within the ploughsoil. Deep deposits of gravel and sand contain evidence of human activity stretching back over 450,000 years. The creeks and mudflats fringing the Thames estuary contain numerous archaeological sites and deposits, ranging from prehistoric submerged forests to post medieval shipwrecks.

The strategic location, which today makes Thames Gateway a prime target for development and regeneration, has in the past led to major industrial development and a need to develop fortifications to defend the approaches to London.

Consequently the area has a remarkable range of historic industrial and defence installations. The Essex Thames Gateway area has long been a haven for people seeking recreation, and often escape, from London, the distinctive plotland settlements, which flourished in the interwar years, reflect this, Southend developed as a major seaside resort.

Much-needed enhanced infrastructure, housing development and regeneration schemes can be designed to be sustainable in terms both of the natural and historic environment. There are great opportunities for conserving, enhancing, and explaining, the historic environment of Thames Gateway, in conjunction with local people, which will be beneficial in creating a sense of ownership of particular schemes, fostering local pride developing a clear sense of place and enhancing the image of Essex Thames Gateway.

For a fuller general account of the historic environment of South Essex see 'Finest Prospects: the archaeology of South Essex' (Brown 2005).

3 Creation of Historic Environment Character Zones

3.1.1 General Background

The original Thames Gateway Characterisation Project (CBA 2004) was designed to inform strategic planning for the whole of Thames Gateway. This report is designed to look at the Historic Environment in more detail breaking down the Historic Environment Character Areas into smaller Historic environment Character Zones of a size more suitable for planning purposes in Essex Thames Gateway and at District and Borough level. These can be used at an early stage for identifying the impact on the historic environment, highlighting the need for informed conservation, enhancement and mitigation, providing the framework for engagement as outlined in section 1.1.

3.1.2 Methodology

Through a combination of analysing the main datasets such as Ancient Woodland, historic mapping, Historic Environment Record data, and secondary sources, it was possible to develop a series of character zones within the Historic Environment Character Areas. These zones were digitised as polygonal data and written descriptions for each were prepared as hyperlinked text.

The descriptions drew on a range of sources and attempted to reflect, simply, clearly and briefly the reasoning behind the definition and, where possible, relate that zone to its wider historic context. The descriptions sought to highlight the key characteristics in a zone and identify any particular significant aspects of the zones historic environment. Preparation of the descriptions of the zones clarified their nature and their boundaries, so that an iterative process between description and boundary definition resulted in the creation of robust Historic Environment Character Zones.

For each character zone the description comprises an overall summary, a summary of archaeological character and either a summary of historic landscape character or Historic Urban character as appropriate.

3.1.3 The scoring of the Historic Environment Character Zones

Each character zone has been scored on a range of criteria for which separate scores are retained within the GIS metadata. The following system is based on scoring developed for the English Heritage Monuments Protection Programme (MPP); modified to consider broad zones rather than particular monuments.

Seven criteria have been used:

- Diversity of historic environment assets
- Survival
- Documentation
- Group Value Association
- Potential
- Sensitivity to change
- Amenity Value

Each of these criteria have been scored for each of the zones with a rating of 1, 2, or 3 with, 1 as the lowest and 3 as the highest.

Diversity of historic environment assets

This indicates the range of Historic Environment Assets within the zone, which may be chronologically diverse. For example a zone with multi-period settlement sites, or a zone with a range of assets, such as church, village, farmstead, field systems of the same date would both score highly, whilst a zone containing a limited range of historic environment assets would score low.

- 1 = Very few known assets or many assets of a limited range of categories.
- 2 = Contains a range of assets of different date and character
- 3 = Contains a wide range of assets both in date and character

Survival

This relates to the state of completeness of the range of historic environment assets within the character zone. The zone may be relatively well preserved or it may have been disturbed by hostile land-use/development and/or erosion. Even where such factors have adversely affected assets within a zone there may be potential for well preserved but deeply buried deposits.

1 = Zone extensively disturbed by for instance quarrying or development. Likelihood is that whilst many of the assets have been disturbed or destroyed there is the potential for survival in some areas or of some types of assets.

2 = Zone has little disturbance but there are few known assets, or there are many known assets but there has been some adverse effects from, for instance, development or quarrying.

3 = Zone contains known assets which are well preserved.

Documentation

The level of documentation for a zone reflects the extent of investigations that have taken place. Such work includes; Excavation, field survey/recording, historical documentation, research project work (this includes for example the National Mapping Programme, coastal zone survey etc).

1 = Little or no documentation.

2 = A range of documentation containing elements of the above

3 = A wide range of documentation.

Group Value Association

Two forms of association are considered either historic environment assets of a similar nature or historic environment assets of a similar date. For example a zone with red hills all of the same date or a zone with multi period historic environment assets associated with coastal exploitation would both score highly, whilst a zone with a wide range of diverse assets, which are not associated, would score low.

1 = Contains few historic environment assets of a similar date or nature.

2 = Contains a limited range of historic environment assets which are related or of a similar date.

3 = Contains a range of historic environment assets which are related such as moats with well preserved field systems of medieval origin or salt working sites of different dates.

Potential

The potential is assessed with reference to the expected average circumstances within the zone. The score considers the nature of the historic environment assets based on current evidence and indicates the likelihood of further assets being present.

1 = The potential for surviving historic environment assets within the zone has been significantly reduced by for instance quarrying or development.

2 = There are limited known historic environment assets however the landscape has not been significantly disturbed and current lack of knowledge is probably the result of lack of investigation rather than poor preservation.

3 = Current evidence and little disturbance indicates that a range of high quality assets probably survive within the zone.

Sensitivity to Change

Each Historic Environment Zone is assessed with regard to the sensitivity of the area to medium to large scale development, specifically housing expansion. The score is an indication of the vulnerability of the historic environment assets within the zone to this type of change. A lack of sensitivity to change should not be taken as an indication that no historic environment mitigation would be required to accommodate development. It would be possible to consider sensitivity to other types of change e.g. flood risk management.

1 = The historic environment of the zone could accommodate medium to large scale development, however specific historic environment assets may suffer adverse effects.

2 = Medium to large scale development is likely to have a considerable impact on the historic environment character of the zone.

3 = The zones historic environment is highly sensitive to medium to large scale development.

Amenity Value

Relates to the actual and/or potential amenity value of the historic environment zone and this is indicated in the description box. If there are specific elements which would warrant enhancement these are also indicated in the description box. The score may relate to uniqueness, historical associations, key landmarks, good access, and interest for visitors and educational value etc.

1 = Historic environment do not lend itself to display or visitor attraction. Current knowledge gives limited potential for the historic environment to play a significant role in creating a definable and promotable identity to the area.

2 = Historic environment could does or could help define a sense of place of the area. There may be specific elements which are or could be promoted such as woodlands, castles etc.

3 = The historic environment plays or could play a key role in the zones sense of place for the local people and visitors. Contains assets which are, or could be, promoted for the benefit of local people or visitors.

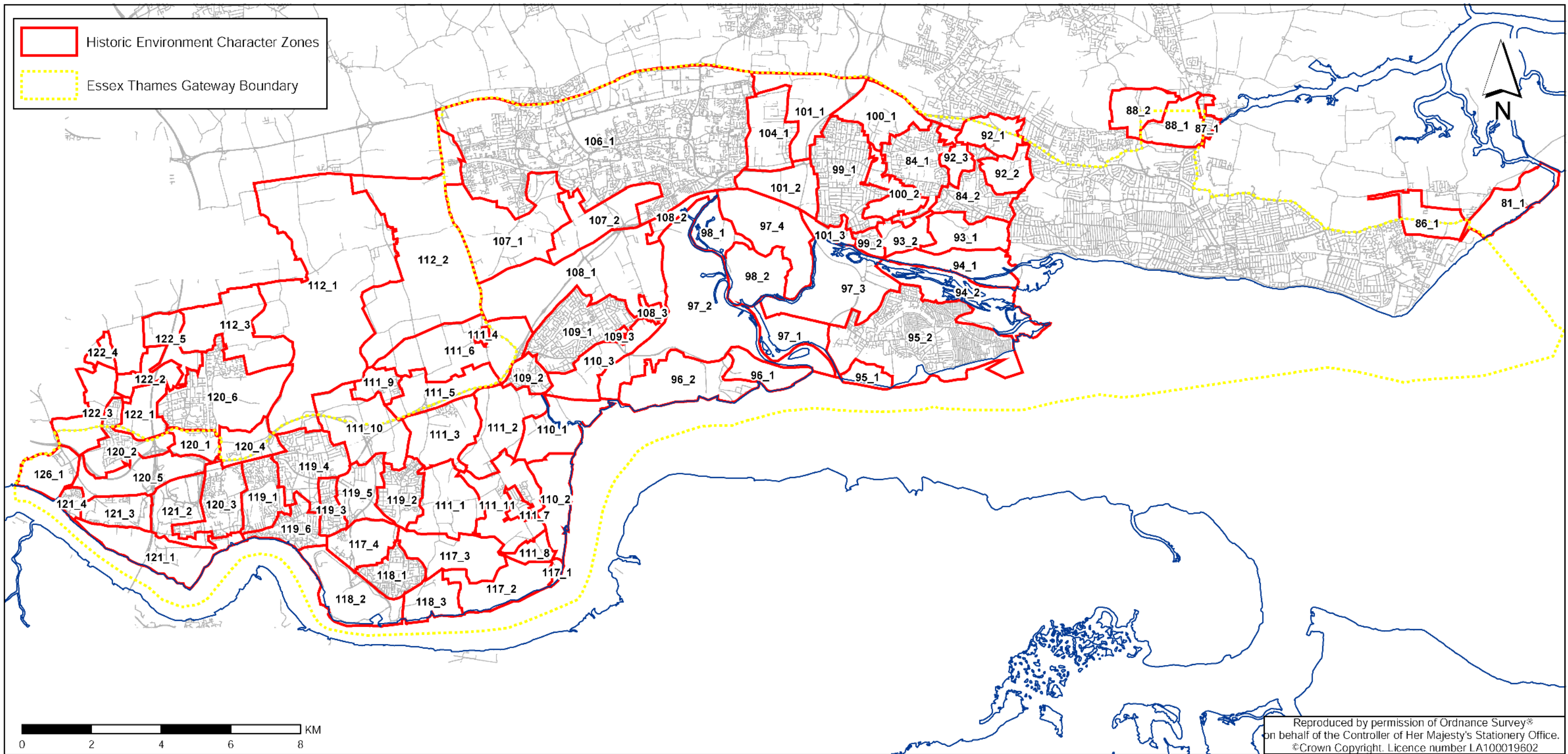


Fig. 1 Historic Environment Character Zones within the study area. Only those zones from Rochford District, for which parts are within the Essex Thames Gateway boundary, have been included. The remainder of Rochford District has been covered by the "Rochford District Historic Environment Characterisation Project" (ECC 2005)

4 The Historic Environment Characterisation Zones

HECA Zone 84_1

Thundersley

Summary: The zone encompasses the built-up area of Thundersley, which has engulfed the ancient dispersed settlement pattern and late 19th and early 20th century plotland development.

Geology: The underlying bedrock consists mainly of Bagshot Formation Sandstone, with localised areas of the upper sandy Claygate Beds of the London Clay Mudstone. These are overlain, over much of the zone, by colluvial head deposits.

Historic Urban Character: Thundersley comprises a 20th century residential developments, although a few buildings survive from the original dispersed settlement pattern. The historic landscape was originally defined by irregular rectilinear fields. The first half of the 20th century saw extensive plotland development, the boundaries of which largely respected the earlier field layout. Most of the plotlands were absorbed into residential developments in the late 20th century although some survive in the centre of the zone, together with secondary woodland. The centre of the zone also contains open school playing fields.

Archaeological Character: There have been individual finds of Iron Age and Romano-British material in the zone, but defining the archaeological character of the zone is hampered by the lack of archaeological investigation prior to development. It is likely, however, that the 20th century development of the town will have truncated or destroyed much of the archaeological deposits, although there is the potential for such deposits in the undeveloped area in the centre of the town.

| | | |
|--|--|---|
| • Diversity of historic environment assets | Limited diversity | 1 |
| • Survival | Some survival of plotland and earlier boundaries in parts of the zone | 2 |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | 20 th century urban and relationship of historic and plotland boundaries. | 2 |
| • Archaeological Potential | Potential for below ground archaeological deposits and surviving landscape boundaries. | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Limited potential for interpretation of historic landscape and urban development with neighbouring zones | 1 |

Summary: The zone encompasses the built-up area of Hadleigh, which has absorbed the pre-existing historic village and the surrounding field systems into a 20th century urban development.

Geology: The bedrock consists of Bagshot Formation Sandstone and the upper sandy Claygate Beds of the London Clay Mudstone. These are overlain by glacio-fluvial deposits at the north, colluvial head deposits towards the centre and undated sand and gravel in the southern half of the zone.

Historic Urban Character: This zone consists of the built-up area of Hadleigh and an open area at its centre. It includes the historic settlement of Hadleigh which developed around a church and green/common. Outside this focal point the settlement was dispersed. The church of St. James has 12th century fabric. The settlement began to expand in the 19th century, there was some plotland development in the 20th century and large scale development occurred from the 1930's. There is a conservation area around Florence Gardens and a 20th century Salvation Army Hall.

Archaeological Character: The zone contains an Iron Age ditched enclosure, and there have been individual finds of Iron Age and Romano-British material, but defining the archaeological character of the zone is hampered by the low level of archaeological investigation prior to development before the end of the 20th century. It is likely, however, that the 20th century development of the town will have damaged the archaeological deposits. There is the potential of below ground archaeological deposits relating to the medieval and post medieval core around the church.

| | | |
|--|---|---|
| • Diversity of historic environment assets | Historic settlement both above and below ground, Multi-period occupation | 2 |
| • Survival | Some survival of archaeological deposits in parts of the zone | 1 |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | Historic settlements and 20 th century urban development | 2 |
| • Archaeological Potential | Some potential for below ground deposits in part of the zone | 2 |
| • Sensitivity to change | Limited sensitivity in most of the zone | 1 |
| • Amenity Value | Potential for presentation and interpretation of the historic settlement and later urban development in relation to neighbouring zones. | 2 |

HECA Zone 92_1**Daws Heath and Pound Wood**

Summary: This zone contains an area of open ground and ancient woodlands south of Rayleigh and on the outskirts of Southend urban area. It contains evidence for Romano-British settlement and land-use.

Geology: The underlying bedrock consists of London Clay Mudstone at the north, with its upper sandy Claygate Beds across the centre, and Bagshot Formation Sandstone at the south. These are overlain by colluvial head deposits at the north and glacio-fluvial gravel deposits to the south.

Historic Landscape Character: This zone represents a remarkable survival of a historic pattern of irregular small fields and ancient woodland, Pound Wood, Tile Wood and Starvelarks Wood. Significant elements of the woods are managed as nature reserves. The zone is bounded to the north by the Southend Arterial Road (A127). North of the road are a number of modern nurseries, which have imposed a new pattern of enclosures over the early field system. There are a range of earthwork woodland boundaries and other earthworks within the woods.

Archaeological Character: There is substantial evidence of Roman settlement including a Scheduled Roman villa site and a range of finds recovered mainly across the south-western part of the zone. Earthwork remains are present in and around the woods. The lack of disturbance in the zone indicates significant archaeological potential.

| | | |
|--|--|---|
| • Diversity of historic environment assets | Historic field systems, ancient woodland, earthworks, Romano-British occupation | 3 |
| • Survival | Good survival over most of the zone | 3 |
| • Documentation | HER data, historic mapping , archaeological reports, documentary sources | 3 |
| • Group Value Association | Contemporary Romano-British associations, fields and ancient woodlands | 3 |
| • Archaeological Potential | Lack of disturbance indicates good survival. | 3 |
| • Sensitivity to change | The zone is highly sensitive to change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape together with archaeological evidence to enhance appreciation of the historic development of this zone linked to nature reserves | 3 |

HECA Zone 92_2**Hadleigh Great Wood**

Summary: This zone contains Great Wood, an area of ancient woodland, now a nature reserve. It retains much of its pre-20th century character in its field systems. It is bounded to the east by the Southend urban area, and by Hadleigh to the south and west.

Geology: The underlying bedrock includes an area of London Clay Mudstone at the south-east, but consists mainly of its upper sandy Claygate Beds; there is also an area of Bagshot Formation Sandstone in the north-west. These are overlain largely by colluvial head deposits, with an area of glacio-fluvial gravel deposits towards the north.

Historic Landscape Character: Much of the zone consists of an ancient field system of small enclosures, based around a dispersed settlement pattern of historic farmsteads. In the south is a tract of ancient woodland known as Great Wood, now a nature reserve. The woodlands preserve earthwork woodland banks and other earthwork features. There are three 19th century covered reservoirs in the east of the zone built to serve the expanding population of Southend, which borders the zone to the east. The modern conurbation of Hadleigh surrounds the zone to the south and west.

Archaeological Character: Because the areas of enclosed fields and woodland remain undeveloped, there are likely to be well preserved archaeological sites and deposits. Despite a lack of development and associated archaeological investigation there have been a number of prehistoric and Romano-British finds in the west of the zone, and there is the potential for further finds, especially in the areas of historic farmsteads and ancient woodland. The woodlands preserve a number of earthworks.

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| • Diversity of historic environment assets | Dispersed settlement pattern and ancient woodland, some archaeological finds. | 2 |
| • Survival | Good survival due to lack of development | 3 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Historic woodland, woodland earthworks | 2 |
| • Archaeological Potential | Good potential throughout zone due to lack of development | 3 |
| • Sensitivity to change | Historic landscape and woodland is sensitive to development | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape together with archaeological evidence to enhance appreciation of the historic development of this zone linked to nature reserves | 3 |

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| HECA Zone 92_3 | West Wood |
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Summary: This zone contains an area of ancient woodland lying between Thundersley and Hadleigh, as well as small, ancient irregular field enclosures that have also survived largely intact.

Geology: The underlying bedrock consists of alternate zones of sandy Claygate Beds of the upper London Clay Mudstone, and Bagshot Formation Sandstone. These are overlain in part by colluvial head deposits and by an area of glacio-fluvial gravel deposits at the north-east.

Historic Landscape Character: There are no settlements within the zone, which is bounded on all sides by the modern developments of Hadleigh and Thundersley. An area of ancient woodland, West Wood, stretches up the sloping ground at the south, and the rest of the zone comprises a field system of small irregular enclosures dating to the early post-medieval period. The woodland contains a number of earthworks including woodland boundary banks.

Archaeological Character: There has been little archaeological investigation of this zone but it is an undeveloped corridor between urban areas and may contain significant archaeological deposits. There are earthworks surviving within the woodland.

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|--|--|---|
| • Diversity of historic environment assets | Ancient field system and woodland | 2 |
| • Survival | Good survival throughout the zone due to lack of development | 3 |
| • Documentation | HER data, historic mapping | 2 |
| • Group Value Association | Ancient field system and woodland | 2 |
| • Archaeological Potential | Good potential throughout the zone due to lack of development | 3 |
| • Sensitivity to change | Whole zone is sensitive to change | 3 |
| • Amenity Value | Potential for presentation and interpretation of historic landscape and woodland in conjunction with neighbouring zones. | 2 |

HECA Zone 93_1

Hadleigh Castle

Summary: The zone, which contains the historically significant 13th century Hadleigh Castle, has an open rural character with a dispersed settlement pattern and some mixed woodland. It is topographically distinct, comprising largely undeveloped land rising steeply above the marshes and the Thames Estuary. Archaeological deposits from a range of periods have been identified.

Geology: The underlying bedrock of the zone consists of bands of London Clay Mudstone at the south and its upper, sandy Claygate Beds, and Bagshot Formation Sandstone at the north. Above these, along the northern edge of the zone, there are small areas of colluvial head deposits and undated sand and gravel, while the edge of the tidal flat deposits is recorded at the south.

Historic Landscape Character: The zone is an area of steeply rising ground between Hadleigh Marsh and the urban area of Hadleigh. Hadleigh Castle, constructed in the 13th century and extensively remodelled in the 14th century as a royal palace in the reign of Edward III, is a dominant feature in the landscape and is Scheduled. The zone contains a dispersed settlement pattern. A medieval park associated with the castle lay in the north east of this zone. Elements of the landscape are protected within the Hadleigh Castle Country Park.

Archaeological Character: Archaeological deposits from a range of periods have been identified, including a significant Early Iron Age settlement, a Scheduled Roman fortlet, Red Hill saltworking sites and a Scheduled medieval water mill site. The area is particularly notable for the presence of Hadleigh Castle and associated remains. To the west are the remains of a Salvation Army farm colony established in the 19th century which included a brickworks. There is also an important industrial building in the form of a 1930s waterworks. There is potential for palaeo-environmental deposits in the valleys of a number of streams which dissect the ridge. There is a complex of Scheduled WW II anti-aircraft gun emplacements in the western area of the zone.

| | | |
|--|---|---|
| • Diversity of historic environment assets | Diverse historic rural environment | 3 |
| • Survival | Good survival of archaeological deposits | 3 |
| • Documentation | HER data, historic mapping, NMP. Excavation reports, documentary sources | 3 |
| • Group Value Association | Home farm colony and industrial remains. The castle and associated landscape remains. The Roman fort and associated burial remains. | 3 |
| • Archaeological Potential | High potential for archaeological deposits | 3 |
| • Sensitivity to change | This zone is highly sensitive to change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape together with archaeological evidence to enhance appreciation of the historic development of this zone, and its neighboured centred on Hadleigh Castle and the Country Park | 3 |

HECA Zone 93_2

Round Hill

Summary: The zone has an open rural character with dispersed settlement and mixed woodland. It is a topographical distinct unit of land comprised of largely undeveloped rising ground above the marshes and the Thames. There has been minimal archaeological assessment but the zone is likely to contain significant preserved deposits.

Geology: The underlying bedrock of the zone consists of bands of London Clay Mudstone at the south, its upper, sandy Claygate Beds across the centre and areas of Bagshot Formation Sandstone at the north. There is small area of colluvial head deposits at the north-east and tidal flat deposits along the southern edge.

Historic Landscape Character: The zone is an area of steeply rising ground between Hadleigh Marsh and the urban area of South Benfleet. It contains a scatter of buildings, reflecting an historic pattern of sparse, dispersed settlement. The southern part of the zone is within Hadleigh Country Park. The historic field pattern comprises irregular and rectilinear fields, which survive well in the modern landscape.

Archaeological Character: The archaeological character of this zone is hard to define due to the lack of archaeological investigation, however, by comparison with neighbouring zones it is likely to be extensive and well-preserved due to the relatively undisturbed nature of the hilly landscape.

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| • Diversity of historic environment assets | Historic landscape features, dispersed settlement pattern | 2 |
| • Survival | Probable good survival of archaeological deposits | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Historic landscape features | 3 |
| • Archaeological Potential | High potential for archaeological deposits | 2 |
| • Sensitivity to change | Rural landscape and probable surviving archaeological deposits is highly sensitive to change | 3 |
| • Amenity Value | Good potential for promoting and interpreting the historic landscape in conjunction with neighbouring areas linked to the country park. | 3 |

HECA Zone 94_1

Hadleigh Marsh

Summary: This zone, including the western part of Two Tree Island, on the north side of Benfleet Creek and Hadleigh Ray, comprises reclaimed land, marsh and mudflat. This present and former grazing marsh has considerable potential to contain significant archaeological and palaeo-environmental deposits, especially in the inter-tidal zone.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlaid by Holocene beach and tidal flat deposits.

Historic Landscape Character: This zone consists of an estuarine landscape comprising areas of reclaimed present and former grazing marsh. It is open and exposed with broad views of the Thames estuary, Southend, Canvey Island and north Kent. Historically it was largely devoid of settlement, and remains so today. Some field boundaries incorporate former saltmarsh creeks in their boundaries, and in places earthworks survive. Most fields are bounded by drains and are regular in shape. Most of this zone lies within Hadleigh Castle Country Park

Archaeological Character: The zone has considerable potential to contain significant archaeological and palaeoenvironmental deposits, especially in the inter-tidal zone of the creeks and estuaries. Identified sites in the zone include prehistoric find spots and a Romano-British and medieval occupation site along the creek side, as well as salt working sites, inter-tidal fishpond enclosures and reclamation and other earthworks. The site of a mill and a wharf, which once served Hadleigh Castle, lie somewhere within this zone. The zone also contains a former brickworks, the site

of a tide mill and a series of WWII anti-glider trenches. The zone has considerable archaeological potential.

| | | |
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| • Diversity of historic environment assets | Multi-period archaeological deposits and historic landscape features associated with the grazing marsh and the creeks | 3 |
| • Survival | Good survival of archaeological deposits, and a range of landscape features | 3 |
| • Documentation | HER data, historic mapping, NMP, published reports | 2 |
| • Group Value Association | Historic landscape features and archaeological deposits related to marshland exploitation. | 3 |
| • Archaeological Potential | Good potential for archaeological survival | 3 |
| • Sensitivity to change | This zone is very sensitive to change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape together with archaeological evidence to enhance appreciation of the historic development of the zone, especially as a marshland landscape learning resource linked to the Country Park | 3 |

HECA Zone 94_2

Benfleet Creek

Summary: This zone comprises Benfleet Creek and Hadleigh Ray and the saltmarsh and reclaimed marsh to the south. This zone has considerable potential to contain significant archaeological and palaeo-environmental deposits, especially in the inter-tidal zone.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlaid by Holocene beach and tidal flat deposits.

Historic Landscape: This zone consists of an estuarine landscape comprising grazing marsh and mudflats, with some limited areas of reclaimed land. It is open and exposed with broad views of the Thames estuary, Southend, Canvey Island and north Kent. Historically it was largely devoid of settlement, and remains so today. Newlands Caravan Park occupies an area of reclaimed land at the mouth of the inlet, and Castle Point Golf Course occupies landscaped ground to the west. The Canvey Heights Country Park is being developed on former landfill in the south-east of the zone.

Archaeological Character: The zone has potential to contain significant Holocene archaeological and palaeo-environmental deposits. Identified sites in the zone include prehistoric find spots, red Hill salt working sites, and the remains of a wooden ship in Oyster Creek. The marshland and mud flats around Canvey Point and Leigh

Beck have revealed a remarkable range of Roman and Saxon medieval finds, probably indicating some kind of port facility together with a range of red hills and Roman and medieval fish processing. The zone contains the remains of the 16th century 'Dutch' sea wall defence, and a series of WWII anti-glider trenches.

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| • Diversity of historic environment assets | Multi-period archaeological deposits | 3 |
| • Survival | Good survival of deposits, especially in inter-tidal areas | 3 |
| • Documentation | HER data, historic mapping, NMP, Archaeological reports | 3 |
| • Group Value Association | Sites and deposits relating to the exploitation of the marshland and creeks. | 3 |
| • Archaeological Potential | Good potential, especially in inter-tidal areas | 3 |
| • Sensitivity to change | Marshland and creek landscape and associated archaeological deposits very sensitive to change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape together with archaeological evidence to enhance appreciation of the historic development of the zone | 3 |

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| HECA Zone 95_1 | Canvey Island Industrial |
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Summary: This zone consists of a 20th century oil and gas storage facility.

Geology: The underlying bedrock is London Clay Mudstone, which is overlain by tidal flat deposits.

Historic Landscape: This zone consists of a 20th century oil and gas storage site and surrounding open land, lying to the south of the built-up area of Canvey Island. The facility began operation in the 1930's, and has gone through several phases of construction and is still in use today. Prior to this development the land use had been grazing marsh, typical of the historic use of most of Canvey island and a number of red hills are known to exist in this zone.

Archaeological Character: Evidence for late prehistoric, Romano-British, Anglo-Saxon and medieval activity has been identified on Canvey Island, and an Iron Age/Romano-British Red Hill saltworking site and a medieval moated site are recorded in this zone. The storage facility, is itself of industrial significance. The construction of the works have destroyed archaeological deposits, however, there remains undisturbed land within this zone. There is potential of palaeo-environmental deposits surviving across the zone. The zone also contains the remnants of a number of WWII anti-aircraft gun emplacements and pillboxes.

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| • Diversity of historic environment assets | Multi-period archaeological deposits, industrial archaeology | 2 |
| • Survival | Poor survival of below ground deposits in industrial area, but good survival elsewhere | 1 |
| • Documentation | HER data, NMP, Assessment reports | 2 |
| • Group Value Association | 20th-century industrial | 2 |
| • Archaeological Potential | Low potential within industrial area, but good potential elsewhere | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Limited potential as industrial heritage learning resource | 1 |

HECA Zone 95_2 Canvey Island Urban

Summary: Canvey Island has a long history of occupation and land use, this zone comprises the present urban area on the island dominated by 20th century residential development.

Geology: The underlying bedrock is London Clay Mudstone, which is overlain by tidal flat deposits.

Historic Urban Character: Canvey Island has a long history of exploitation of marshland resources. The present urban area developed during the 20th century initially with small scale plotlands, with more substantial development in the 1930's and major expansion in the second half of the 20th century. Some of the form of earlier developments and some of the pre existing landscape features such as creeks and embankments are preserved in the present form of the urban development.

Archaeological Character: Evidence for late prehistoric, Romano-British, Anglo-Saxon and medieval activity, including Roman red hills, reused in the medieval period as campsites for shepherds. Throughout the medieval period the zone was used as grazing marsh and similarly to other zones was embanked in the 16th century. Archaeological deposits extend into the inter tidal zone and there is the potential for surviving palaeo-environmental sequences. The site of a large WWII anti-aircraft battery in the centre of the modern built-up area is protected as a Scheduled Monument. .

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| • Diversity of historic environment assets | Significant multi-period occupation along with 20 th century development | 2 |
| • Survival | Urban development will have adversely affected survival. | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Exploitation of the marshland and 20 th century urban development | 2 |
| • Archaeological Potential | Low potential in built-up area but good potential elsewhere | 2 |
| • Sensitivity to change | Limited sensitive to change | 1 |
| • Amenity Value | Good potential for use of the growth of town and archaeological data provides | 3 |

HECA Zone 96_1

Coryton Oil Refinery

Summary: This zone consists of the Coryton oil refinery, which was constructed during the latter half of the 20th century over part of an earlier explosives factory on reclaimed marshland.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone in the east and Lambeth Group Sandstone in the west. These are overlain by deep Holocene tidal flat deposits.

Historic Landscape Character: This zone occupies former reclaimed marshland. The refinery site has been an industrial site since 1895 when an explosives factory was built here together with a village to house the factory workers. The name Coryton derives from the Cory brothers who bought the site in 1923. Later, the site was used as an oil storage depot. The Coryton refinery was constructed by Mobil and opened in 1953. The village was demolished in the 1970s. Two major expansions of the refinery and many minor improvements have increased the refinery capacity to ten times the original volume.

Archaeological Character: The archaeological character of the zone is defined by the built environment of the oil refinery, and the landscaped ground on which it was built is likely to have had a negative impact on the zone's archaeological potential. However, there are undisturbed areas with significant archaeological potential along the tidal flats which may contain relatively undisturbed deposits below the waterline, and the area at the north end of the refinery contains relatively undisturbed earthwork evidence for the earlier explosives factory and estate housing.

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| • Diversity of historic environment assets | Industrial heritage of the 19th and 20th centuries | 1 |
| • Survival | Poor survival in area of refinery foundations except in pockets but potentially good survival along waterfront | 1 |
| • Documentation | HER data, historic mapping, NMP, archaeological assessment reports | 2 |
| • Group Value Association | 20th-century contemporary associations | 2 |
| • Archaeological Potential | Low potential except in pockets within oil refinery, Palaeo-environmental deposits | 1 |
| • Sensitivity to change | Limited sensitive | 1 |
| • Amenity Value | Limited potential as industrial heritage learning resource | 1 |

HECA Zone 96_2

Shell Haven Oil Refinery West

Summary: This zone consists of the western part of the Shell Haven oil refinery west of Shell Creek, which was constructed on reclaimed marshland in the second half of

the 20th century. The landscaped ground of the refinery and construction works will have had a significant negative impact on archaeological deposits.

Geology: The underlying bedrock consists mainly of Lambeth Group Sandstone, with London Clay Mudstone along the north-west edge of the zone. These are overlain by Holocene tidal flat deposits.

Historic Landscape Character: This zone occupies former reclaimed marshland. It is occupied by the western part of the Shell Haven oil refinery, an industrial complex built in the post-war period that forms an important part of the industrial landscape along this part of the Thames but now partly demolished.

Archaeological Character: The archaeological character is dominated by the remains of the Shell Haven oil refinery, now partially demolished. Although the construction of the refinery has caused significant damage to below ground archaeological deposits and landscape features survey work has identified the potential for pockets of survival within the industrial complex as well as the potential for surviving palaeo-environmental deposits.

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| • Diversity of historic environment assets | Little diversity | 1 |
| • Survival | Poor survival due to refinery construction on previous enclosed fields. Potential for pockets of survival | 2 |
| • Documentation | HER data, historic mapping, extensive archaeological assessment reports | 3 |
| • Group Value Association | Some association of industrial features | 2 |
| • Archaeological Potential | Limited to pockets of survival and deeper deposits | 1 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Potential as industrial heritage learning resource | 1 |

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| HECA Zone 97_1 | Hole Haven Creek East |
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Summary: This zone consists of land east of Hole Haven Creek, which has been significantly impacted by the construction of an oil refinery in the 1960s and a retail centre in the 1980s. A sea wall, constructed in the 17th century and periodically repaired since, runs along the eastern side of the creek, and the inter-tidal area beyond it has archaeological and palaeo-environmental potential.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene tidal flat deposits.

Historic Landscape Character: This zone consists of land to the east of Hole Haven Creek. It is an area of reclaimed marshland that was enclosed as grazing marshes at an early date. A sea wall running along the eastern side of the creek was built in the 17th century, and has been repaired and rebuilt up to the present day. An oil refinery was constructed in the 1960s but never used, and was dismantled during

the 1980s. Its site is now occupied by a retail centre. The northern extent of the Zone consists of made ground.

Archaeological Character: The archaeological potential for this zone will have been negatively impacted by the construction of the refinery and the retail centre. However, the inter-tidal area along the creek has archaeological and palaeo-environmental potential, and the sea wall is also an important archaeological feature.

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| • Diversity of historic environment assets | Little diversity apart from the continuous use of the sea wall | 2 |
| • Survival | Poor survival in the area of refinery and retail centre, but possibly some survival along creekside including the sea wall | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Mainly modern associations | 1 |
| • Archaeological Potential | Low potential except in area alongside the creek | 2 |
| • Sensitivity to change | Limited sensitivity except for sea wall | 2 |
| • Amenity Value | Potential for marshland interpretation boards in retail centre as a socially inclusive learning resource | 2 |

HECA Zone 97_2

Fobbing and Vange Marshes

Summary: This zone consists of land to the west of Hole Haven and Vange Creeks and north of the Shell Haven Oil Refinery. It is a marshland landscape and historically the predominant landuse was as grazing marsh.

Geology: The underlying bedrock of the zone, deeply buried by alluvium, consists mainly of London Clay Mudstone, with a small area of Lambeth Group Sandstone at the south. These are overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: This zone, bounded by Hole Haven Creek and Vange Creek to the east and the Shell Haven oil refinery to the south, consists mostly of marshland, with mudflats along the creek waterfront. This is an area of grazing marsh, small pockets of arable fields exist within the blocks of regular and irregular fields. The fields are bounded by drains and interspersed with several marshy creeks, the boundaries are mainly of medieval/post medieval origin resulting from the creation of grazing marsh, some elements of the earlier salt marsh can be discerned. There are a wide range of archaeological features including earthwork counter walls, and flood defences. Significant areas of this zone are being incorporated into the new RSPB reserve developed in south Essex as part of the Thames Gateway initiative.

Archaeological Character:

Exploitation of the marshland environment has been identified from the Roman period to the present day. There is evidence of stetch (low ridge and furrow designed to facilitate drainage for agricultural purposes), and salt working sites indicating the zone's archaeological potential. In addition, there are remains of numerous WWII

landscape features such as the anti-glider trenches in the north of the zone, gun emplacements to the north of the oil refinery and a bombing decoy related to the Thameside refineries. There is the potential for Palaeo-environmental sequences surviving throughout the zone.

| | | |
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| • Diversity of historic environment assets | Roman, medieval and post medieval land-use and occupation, and WWII sites | 3 |
| • Survival | Good survival | 3 |
| • Documentation | HER data, historic mapping, NMP, Assessment reports | 3 |
| • Group Value Association | Exploitation of the marsh land environment | 2 |
| • Archaeological Potential | Potential for evidence of multi-period marshland exploitation as well as Palaeo-environmental deposits | 3 |
| • Sensitivity to change | The zone is sensitive to change | 3 |
| • Amenity Value | Potential for promotion and interpretation of the marshland exploitation linked to the creation of the RSPB reserve in conjunction with neighbouring zones. | 3 |

HECA Zone 97_3

Canvey Marshes

Summary: This zone contains a relatively undisturbed landscape of marshland, enclosed into field systems for marsh grazing at an early date. It has the potential to contain substantial archaeological resources.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: This zone is bounded to the north by Benfleet Creek and to the west by East Haven Creek. Although the north of the zone, bordering Benfleet Creek, retains its saltmarsh, the zone consists mostly of reclaimed marshland, the central and western part of which has EU-designated Ancient Land status. This is an area of grazing marsh, comprising blocks of regular and irregular fields bounded by drainage ditches with often sinuous boundaries reflecting their origins in marshland creeks. The boundaries are mainly of medieval/post medieval origin resulting from the creation of grazing marsh, some elements of the earlier salt marsh can be discerned. There are a wide range of archaeological features including earthwork counter walls, and flood defences. Significant areas of this zone are being incorporated into the new RSPB reserve developed in south Essex as part of the Thames Gateway initiative.

Archaeological Character: The archaeological character of the zone is defined by the exploitation of the marshland environment which has been identified from the Roman period to the present day. There is evidence of stetch (low ridge and furrow designed to facilitate drainage for agricultural purposes), and salt working sites indicating the zone's archaeological potential. In addition, there are remains of

numerous WWII landscape features such as the anti-glider trenches. There is the potential for Palaeo-environmental sequences surviving throughout the zone.

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| • Diversity of historic environment assets | Iron Age, Roman, medieval and post medieval land-use and occupation, and WWII sites | 3 |
| • Survival | Good survival | 3 |
| • Documentation | HER data, historic mapping, NMP, Assessment reports | 3 |
| • Group Value Association | Exploitation of the marsh land environment | 2 |
| • Archaeological Potential | Potential for evidence of multi-period marshland exploitation as well as Palaeo-environmental deposits | 3 |
| • Sensitivity to change | The zone is sensitive to change | 3 |
| • Amenity Value | Potential for promotion and interpretation of the marshland exploitation linked to the creation of the RSPB reserve in conjunction with neighbouring zones. | 3 |

HECA Zone 97_4

Bowers Marshes

Summary: This zone, south-west of South Benfleet, contains a relatively undisturbed landscape of marshland that was enclosed into field systems for marsh grazing at an early date, and which has retained much of its integrity and character due to the lack of development.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: This zone is bounded to the north by the railway line and to the south-east by East Haven Creek. It consists mostly of marshland that is likely to have been reclaimed at an early date as it comprises small and irregular grazing enclosures, a field system which has been largely retained. There has been little development or settlement of the zone during the 20th century. The fields are bounded by drains with the boundaries being mainly of medieval/post medieval origin resulting from the creation of grazing marsh, some elements of the earlier salt marsh can be discerned. There are a wide range of archaeological features including earthwork counter walls, and flood defences. Significant areas of this zone are being incorporated into the new RSPB reserve developed in south Essex as part of the Thames Gateway initiative.

Archaeological Character: The archaeological character is defined by exploitation of the marshland environment which has been identified from the Iron Age period to the present day. There is evidence of stetch (low ridge and furrow designed to facilitate drainage for agricultural purposes), and salt working sites indicating the zone's archaeological potential. In addition, there are remains of numerous WWII

landscape features such as the anti-glider trenches. There is the potential for Palaeo-environmental sequences surviving throughout the zone.

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|--|---|---|
| • Diversity of historic environment assets | Iron Age, Roman, medieval and post medieval land-use and occupation, and WWII sites | 3 |
| • Survival | Good survival | 3 |
| • Documentation | HER data, historic mapping, NMP, Assessment reports | 3 |
| • Group Value Association | Exploitation of the marsh land environment | 2 |
| • Archaeological Potential | Potential for evidence of multi-period marshland exploitation as well as Palaeo-environmental deposits | 3 |
| • Sensitivity to change | The zone is sensitive to change | 3 |
| • Amenity Value | Potential for promotion and interpretation of the marshland exploitation linked to the creation of the RSPB reserve in conjunction with neighbouring zones. | 3 |

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| HECA Zone 98_1 | Wat Tyler Country Park |
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Summary: Wat Tyler Country Park is located on an island of London Clay with Vange Marsh to the East and Pitsea Marsh to the North-East. Cartographic evidence indicates little landscape change until the nineteenth century when a cordite and explosives factory was constructed.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: An explosives factory was constructed in the late 19th century. Extensive earthworks and other remains of the factory survive. Features and buildings relating to the military use of Vange and Pitsea Hall creeks during WWII also survive. There is extensive secondary scrub woodland.

Archaeological Character: There is potential for buried palaeo-environmental deposits close to the creeks. There is also potential for remains associate to the exploitation of the waterways. There are extensive remains and earthworks relating to the explosives factory together with a range of WWII features and defences.

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| • Diversity of historic environment assets | Military and industrial remains, Palaeo-environmental deposits | 2 |
| • Survival | Extensive remains relating to military and industrial uses | 3 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Contemporary associations of military and industrial uses | 2 |
| • Archaeological Potential | High potential for military and industrial remains | 2 |
| • Sensitivity to change | Extensive survival of military and | 3 |

| | | |
|-----------------|---|---|
| | industrial remains are sensitive to change | |
| • Amenity Value | Good potential as learning resource relating to military and industrial use and evolution of marshland related to neighbouring zones linked to the country park | 3 |

HECA Zone 98_2 Pitsea Landfill

Summary: Extensive landfill site to the south of Wat Country Park. Both the Historic Landscape and archaeological deposits have been largely destroyed.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: An extensive operational landfill site bordered to the west by Vange Creek and to the South by East Haven Creek.

Archaeological Character: The majority of archaeological sites would have been destroyed by the landfill operations, however there may be the potential for archaeological sites and Palaeo-environmental deposits surviving by the creeks.

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| • Diversity of historic environment assets | Low due to extensive destruction | 1 |
| • Survival | Low due to extensive destruction | 1 |
| • Documentation | HER data, historic mapping, | 1 |
| • Group Value Association | Low due to extensive destruction | 1 |
| • Archaeological Potential | Low due to extensive destruction | 1 |
| • Sensitivity to change | Low due to extensive destruction | 1 |
| • Amenity Value | Limited potential but could promote the marshland landscape of neighbouring zones. | 2 |

HECA Zone 99_1 South Benfleet

Summary: This zone comprises most of the built-up area of South Benfleet, dating from the late 19th and 20th centuries, which was built on an area of ancient small rectilinear fields.

Geology: The underlying bedrock of the zone, located on the South Essex Plateau, consists mostly of London Clay Mudstone, with small areas of it upper sandy Claygate Beds at the east. The London Clay is overlain at the north-west by colluvial head deposits.

Historic Urban Character: This zone formerly comprised a system of small, rectilinear fields, of ancient origin containing a dispersed settlement pattern, now entirely built over. Extensive plotlands began to develop in the 19th century and extended across the entire zone in the early 20th century. The plotland boundaries

reflected the earlier field system. The whole zone has been intensively developed as one urban area during the second half of the 20th century. This development has largely preserved the strongly rectilinear character of the roads which served the plotland development.

Archaeological Character: There have been numerous archaeological finds of multi-period date. The concentrated nature of the urban development will have had a significant negative impact on archaeological deposits, and the archaeological potential in the zone is low.

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| • Diversity of historic environment assets | Very limited | 1 |
| • Survival | Poor survival of archaeological sites and deposits. Strongly rectilinear character of the ancient fields and subsequent plotlands is well preserved | 2 |
| • Documentation | HER data, historic mapping | 2 |
| • Group Value Association | Association of ancient field boundaries and plotland layouts and modern roads | 1 |
| • Archaeological Potential | Low potential | 1 |
| • Sensitivity to change | Limited sensitivity apart from rectilinear nature of the boundaries and roads. | 1 |
| • Amenity Value | Limited potential to explore landscape, plotland and urban development with neighbouring zones. | 1 |

HECA Zone 99_2

South Benfleet Historic Core

Summary: This zone consists of the historic core of South Benfleet, dating from the Anglo-Saxon period, as well as the area immediately around it. It has considerable archaeological potential in terms of both below-ground deposits and historic buildings.

Geology: The underlying bedrock of the zone, located on the South Essex Plateau, consists mostly of London Clay Mudstone, with small areas of it upper sandy Claygate Beds at the east. There are tidal flat deposits at its western margins.

Historic Urban Character: This zone consists of the historic core of South Benfleet, lying on the north-east side of Benfleet Creek, around the medieval church. The settlement, which dates to at least the 9th century, is centred on the church with a probable infilled market place to the south, fronting a former inlet of Benfleet Creek (now infilled). It contains a number of important surviving medieval and post-medieval buildings, including the parish church of St Mary, which includes 12th century fabric. The 19th century London, Tilbury and Southend Railway forms the southern boundary to the zone. The village began to expand in the late 19th century and during the 20th century most of the zone has been filled with housing forming a southern continuation of Zone 99.1.

Archaeological Character: The archaeological character of the zone is defined largely by the historic origins and subsequent development of the historic settlement. Documentary sources indicate that in the 9th century Benfleet was used as a Viking base and it was the scene of a major battle. Recent excavations have revealed stratified Roman deposits, late Saxon and early medieval remains. Apart from St Mary's church, most of the buildings are timber-framed, although the presence of a stone undercroft suggests that the medieval settlement may have contained more high-status stone buildings. Despite the impact of the 19th century railway and 20th century urban development this zone has considerable potential for above- and below-ground archaeology.

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| • Diversity of historic environment assets | Historic buildings and below ground archaeological deposits. | 3 |
| • Survival | Good survival around the core area of the village | 3 |
| • Documentation | HER data, historic mapping, documentary sources | 3 |
| • Group Value Association | Buildings and archaeological deposits associated with the historic settlement. | 3 |
| • Archaeological Potential | Good potential in the core area of the village and the southern part of the zone | 2 |
| • Sensitivity to change | Historic core and southern part of the zone is sensitive to change | 2 |
| • Amenity Value | Historic nature is recognised and there is potential for presentation and interpretation particularly of the historic settlement and its relationship with the creeks of the Thames Estuary | 3 |

HECA Zone 100_1

Thundersley Rural

Summary: This zone consists of a semi-rural area of land that has retained a large proportion of its historic field system fossilised within a complex pattern of plotland boundaries. There is extensive secondary woodland.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone at the west with a ridge of its upper, sandy Claygate Beds to its south-east, and then Bagshot Formation Sandstone. There are small areas of colluvial head deposits overlying the bedrock.

Historic Landscape Character: This zone consists of an area of semi-rural land between South Benfleet, Thundersley and the A127 and A130 road corridors. The field pattern of small rectilinear enclosures of ancient origin, has survived relatively well preserved within plotland boundaries. Many of the individual plots do not seem to have been occupied and there is much secondary woodland. There is an area of historic common land in the eastern tip of the zone, now also mostly wooded.

Archaeological Character: Despite the general absence of threat led archaeological investigation and the land use is not conducive to cropmark recognition there have

been several artefact finds within the zone including Bronze Age and medieval material. There is the potential for good survival of archaeological sites and deposits.

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| • Diversity of historic environment assets | Historic landscape features, archaeological finds | 2 |
| • Survival | Preservation of historic boundaries. Potential for good survival of archaeological sites and deposits. | 2 |
| • Documentation | HER data, historic mapping, | 2 |
| • Group Value Association | Associations of historic field boundaries and secondary woodland | 3 |
| • Archaeological Potential | Good potential for below ground deposits | 2 |
| • Sensitivity to change | field systems and below ground deposits are sensitive | 2 |
| • Amenity Value | Some potential for interpretation of the development of historic landscape including plotlands in conjunction with neighbouring zones | 1 |

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| HECA Zone 100_2 | Thundersley Woods |
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Summary: This zone consists of a combe between the urban areas of South Benfleet and Thundersley. It is mostly covered with woodland and scrub with a golf course in the south west. There is the potential for the survival of archaeological deposits within this relatively undeveloped zone.

Geology: The underlying bedrock of the zone consists largely of a substantial ridge of Claygate Beds, the sandy upper layer of the London Clay Mudstone which lies to the west. To the east is Bagshot Formation Sandstone, over which lie small pockets of colluvial head deposits.

Historic Landscape Character: St Peter's Church, Thundersley, contains 12th century fabric. Jarvis Hall is another important element in the historic environment, representing the original dispersed settlement pattern in this zone. The historic field pattern of ancient origin was one of small irregular rectilinear fields. There are two areas of ancient woodland, Shipwrights Wood and Coombe Wood. Large parts of the zone were divided up as plotlands, although relatively few seem to have been occupied and considerable secondary woodland developed. The south-west corner of the zone is occupied by Boyce Hill Golf Course.

Archaeological Character: Although there have been several archaeological finds within the zone, including prehistoric pottery and a Romano-British cremation burial, there have been no archaeological investigations. Due to the low level of development there is high potential for archaeological deposits to survive.

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| • Diversity of historic environment assets | Historic landscape features, ancient woodland, plotlands and buried archaeological deposits | 2 |
| • Survival | Potentially good survival in most areas | 2 |

| | | |
|----------------------------|--|---|
| • Documentation | HER data, historic mapping | 2 |
| • Group Value Association | Historic landscape features, ancient and secondary woods and plotlands | 3 |
| • Archaeological Potential | Good potential in most areas | 2 |
| • Sensitivity to change | Most of this zone is sensitive to change | 3 |
| • Amenity Value | Potential to promote and interpret the historic landscape and plotland development | 2 |

HECA Zone 101_1

North Benfleet

Summary: This zone comprises relatively well preserved dispersed settlement pattern, including a church/hall complex, set within a rectilinear pattern of ancient origin which was once typical for this part of Essex.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain in places by colluvial head deposits.

Historic Landscape Character: The historical settlement pattern was dispersed, with a church/hall complex, moated sites and scattered farmsteads set within a rectilinear field system of ancient origin. The 20th century saw localised roadside settlement and plotland development. There has been significant boundary loss but the structure of the rectilinear pattern survives and the older field system is relatively well preserved in the northern part of the zone.

Archaeological Character: The clay land is unconducive to cropmark formation and there has been little development led excavation. There are a number of findspots of prehistoric, Romano-British and medieval material within the zone, much of it found through archaeological fieldwalking ahead of the construction of the A130. They give an indication of the archaeological potential of the zone. The line of a WWII tank-trap ditch and series of pill boxes associated with the General Headquarters line of defence passes through the western part of the zone.

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| • Diversity of historic environment assets | Historic landscape and settlement pattern, church hall complex, military remains | 3 |
| • Survival | Survival likely to be good outside and beyond the A130 | 2 |
| • Documentation | HER data, historic mapping , NMP, fieldwalking data, assessment reports. | 2 |
| • Group Value Association | General Headquarters Line, dispersed settlement pattern and landscape features. | 2 |
| • Archaeological Potential | moderate potential in most areas | 2 |
| • Sensitivity to change | Dispersed settlement pattern and field system is sensitive to change | 2 |
| • Amenity Value | Potential for the promotion and presentation of the historic environment with the neighbouring areas. | 2 |

HECA Zone 101_2**Bowers Hall**

Summary: The zone lies on rising ground above Bowers Marshes and is characterised by a dispersed settlement pattern with several medieval moated sites.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain at the north-east by colluvial head deposits.

Historic Landscape Character: This zone is crossed by the A130 and A13 road corridors and a branch of the London, Tilbury and Southend Railway. The zone, which contains the 14th century church of St. Margaret, has a dispersed settlement pattern, including several medieval moated sites, and the field pattern has a strong rectilinear pattern of ancient origin. There has been some significant boundary loss however, the broad rectilinear structure of the landscape survives. The pattern of smaller fields survives reasonably well in the west of the zone. 20th century features include a WWI night landing ground close to the A130/A13 junction, and WWII sites relating to the General Headquarters defence line.

Archaeological Character: There are a number of findspots of prehistoric, Romano-British and medieval material within the zone, much if it found through archaeological fieldwalking ahead of the construction of the A130. They give an indication of the archaeological potential of the zone. 20th century features include a WWI night landing ground close to the A130/A13 junction, and WWII sites relating to the General Headquarters defence line.

| | | |
|--|---|---|
| • Diversity of historic environment assets | Multi-period deposits, settlement pattern and military defences. | 2 |
| • Survival | Survival likely to be good over most of the zone | 2 |
| • Documentation | HER data, historic mapping, NMP, fieldwalking data, Assessment reports | 2 |
| • Group Value Association | Military sites, dispersed settlement pattern and historic fields | 2 |
| • Archaeological Potential | Good potential over most of the zone | 2 |
| • Sensitivity to change | Dispersed settlement pattern and field system is sensitive to change | 2 |
| • Amenity Value | Potential for the promotion and presentation of the historic environment with the neighbouring areas. | 2 |

HECA Zone 101_3**Benfleet Marsh**

Summary: This zone comprises present and former grazing marsh on the urban edge of Benfleet. There is significant disturbance through the construction of a railway and sewage works, but significant open areas with archaeological potential survive.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Holocene beach and tidal flat deposits.

Historic Landscape Character: The zone is situated on the urban edge, with the centre cut by a railway line, bounded to the south by Benfleet Creek. There is a sewage works in the centre of the zone. It consists mostly marshland that was reclaimed at an early date, it comprised small and irregular grazing enclosures but significant boundary loss in the 20th century has largely removed this pattern.

Archaeological Character: Little archaeological investigation has occurred within the zone. During the construction of the A130 quantities of Roman material were recovered. There is the potential for multi-period occupation and land use occupation of marshland environment together with palaeo-environmental deposits. WW II pill boxes are located on the sea wall at the southern edge of the zone.

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| • Diversity of historic environment assets | Limited by lack field work | 1 |
| • Survival | Survival is likely to be good outside areas affected by the railway and sewage works. | 2 |
| • Documentation | HER data, historic mapping, | 1 |
| • Group Value Association | Little group value | 1 |
| • Archaeological Potential | Likely to be high outside sewage works and railway | 2 |
| • Sensitivity to change | Below ground deposits are likely to be sensitive to change. | 2 |
| • Amenity Value | Currently limited by lack of information. | 1 |

HECA Zone 104_1

Bowers Gifford

Summary: The zone includes an area of 20th century plotland development. It contains few known archaeological sites, which reflects a lack of archaeological investigation.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain in places by colluvial head deposits.

Historic Urban Character: Substantial fragments of a rectilinear field system of ancient origin survives. in the west of the zone. The historic settlement pattern was highly dispersed represented in part by moated sites (see zone 101.1). The earlier field boundaries are reflected in the layout of the 20th century plotlands in the north and east of the zone. Plotland developments, once a characteristic feature of this part of Essex, are now largely superseded by modern housing estates.

Archaeological Character: The clay land is unconducive to cropmark formation and there has been little development led excavation. However, the zone has a number of findspots and archaeological sites of prehistoric, Romano-British and medieval date. They include three medieval moated sites that lie outside the area of modern settlement. These finds give an indication of the archaeological potential of the zone. There are also the remains of a series of WWII pillbox defences.

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| • Diversity of historic environment assets | Multi-period occupation, 20 th century development | 2 |
| • Survival | Good survival outside of 20th-century development | 2 |
| • Documentation | HER data, historic mapping, excavation data | 2 |
| • Group Value Association | Contemporary associations at moated sites and 20th-century built environment | 2 |
| • Archaeological Potential | Moderate potential outside developed areas | 2 |
| • Sensitivity to change | Historic field system, character of plotlands and moated sites sensitive to change. | 2 |
| • Amenity Value | Potential for the promotion and presentation of the historic environment with the neighbouring areas. | 2 |

HECA Zone 106_1

Basildon New Town

Summary: This zone consists of Basildon a post war New Town, constructed to bring order and modern living conditions to an extensive area of inter war plotland development. Although few archaeological sites have been identified, Bronze Age, Romano-British and medieval material has been recovered indicating the presence of historic occupation and land-use in the vicinity.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone with pockets of its upper sandy Claygate Beds. This is overlain in places by colluvial head deposits.

Historic Urban Character: A small number of surviving historic buildings mark the location of former farmsteads or moated sites that occupied a rural landscape of enclosed fields, and a few roads still follow early alignments. However, 20th century urban developments have virtually eradicated the earlier historic landscape. The zone still contains elements of the extensive early 20th century enclosed plotlands which the new town was constructed to replace. In the west there are discrete areas around Laindon and Pitsea of residential development which reflect broadly the surviving extent of the more formal pre-WWII development; the linear nature of that housing contrasts to the more irregular form of the later developments. The rest of the zone encompasses Basildon New Town, which consists mostly of a series of planned and interrelated late 20th century housing developments with two discrete areas of industrial and commercial development.

Archaeological Character: Few archaeological sites have been identified in the zone, reflecting the lack of archaeological investigation accompanying the early development of the New Town. However, ring-ditch cropmarks have been identified near Pipp's Hill, a Bronze Age hoard from Vange, and Romano-British remains have also been found in the area. The New Town includes a number of medieval settlement foci. There are open areas within and around the town that may contain

surviving archaeological deposits, although the extensive developments will have had a negative archaeological impact.

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| • Diversity of historic environment assets | Some multi-period archaeological deposits, plotland and New Town | 2 |
| • Survival | Limited survival in pockets of undeveloped land | 1 |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | 20 th century urban developments | 2 |
| • Archaeological Potential | Limited potential outside developed areas | 1 |
| • Sensitivity to change | Limited sensitivity to change | 1 |
| • Amenity Value | Potential for presentation and interpretation of social and economic development of the town in the 20 th century | 2 |

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| HECA Zone 107_1 | Langdon Hills |
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Summary: This zone contains relatively extensive areas of historic woodland. The woodland and historic landscape features survive well across the zone with important earthworks surviving within the ancient woodland. The zone has high archaeological potential.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone at the west and its upper sandy Claygate Beds at the east, with an area of Bagshot Formation Sandstone in the centre overlain by a lens of Stanmore Gravel. The London Clay and Claygate Beds are overlain in places by colluvial head deposits.

Historic Landscape Character: This zone consists of a prominent range of hills dissected by shallow valleys which command wide views of the Thames Estuary. Historically there was a polyfocal settlement pattern of individual farmsteads. The isolated church of St Mary (redundant), which contains 14th century fabric, lies at the crest of an ancient lane climbing the western slope of the Langdon Hills. The area is well wooded with both ancient and secondary wood which has developed on abandoned plotlands. There is a particularly fine group of secondary woodland on abandoned plotlands at Dunton which is a small nature reserve and contains the plotlands museum. The woods contain a number of earthworks, mainly boundary banks of probable medieval origin, but also other features. Discrete areas of both regular and irregular fields of ancient origin survive between the settlements and woodland.

Archaeological Character: There is evidence of Iron Age occupation including a hillfort and evidence of Romano-British settlement on the higher ground, but the archaeological character of the zone derives largely from the medieval embanked woodland enclosures and ancient field systems established for the purposes of woodland and livestock management, including for coppicing and as a deer park. The relatively undisturbed nature of much of the zone means that there is the potential for archaeological deposits of multi-period date.

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| • Diversity of historic environment assets | Multi-period occupation, ancient woodland and surviving historic landscape features | 3 |
| • Survival | Little development in this zone suggests good survival | 3 |
| • Documentation | HER data, historic mapping, documentary sources | 2 |
| • Group Value Association | Ancient woodlands and associated earthworks and landscape features | 3 |
| • Archaeological Potential | High potential in most areas of surviving multi-period below ground deposits and upstanding earthworks | 3 |
| • Sensitivity to change | Landscape and below ground deposits are highly sensitive to development and change | 3 |
| • Amenity Value | Potential for protection, promotion and interpretation of the historic landscape linked to the nature reserves. | 3 |

HECA Zone 107_2

One Tree Hill

Summary: This zone contains relatively extensive areas of ancient woodland. The woodland and historic landscape features survive well across the zone with important earthworks surviving within the ancient woodland. This zone contains complex multi-period archaeological resource.

Geology: The underlying bedrock of the zone consists mainly of London Clay Mudstone with an area of its upper sandy Claygate Beds at the west. There are small patches of overlying colluvial head deposits at the south-west tip of the zone.

Historic Landscape Character: This zone consists of a prominent range of hills forming the eastward side of the Langdon hills dissected by shallow valleys which command wide views of the Thames Estuary. Historically there was a polyfocal settlement pattern of individual farmsteads the most substantial of which was Dry Street. Discrete areas of both regular and irregular fields of ancient origin survive between the settlements and woodland. The area is well wooded with both ancient and secondary wood which have developed on abandoned plotlands. There are also earth wood banks of ancient origin. 19th century brick and tile works survive in the east and centre of the zone, and there is a landscaped golf course at the north-east.

Archaeological Character: The archaeological character of the zone is defined largely by the medieval embanked woodland enclosures established for the purposes of woodland and livestock management, including for coppicing and as a deer park. The relatively undisturbed nature of much of the zone means that there is the potential for archaeological deposits relating to occupation sites and landscape management. Clear evidence for multi-period occupation has been identified during recent archaeological evaluation in the Dry Street area.

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| • Diversity of historic environment assets | Multi-period occupation, ancient woodland and surviving historic landscape features | 3 |
| • Survival | Good survival of multi-period deposits and upstanding earthworks | 3 |
| • Documentation | HER data, historic mapping, documentary sources | 2 |
| • Group Value Association | Ancient woodlands and associated earthworks | 3 |
| • Archaeological Potential | High potential in most areas of surviving multi-period deposits | 3 |
| • Sensitivity to change | Landscape and below ground deposits are highly sensitive to development and change | 3 |
| • Amenity Value | Potential for protection, promotion and interpretation of the historic landscape. | 2 |

HECA Zone 108_1

Land south of Langdon Hills

Summary: This zone is an area of land between the Langdon Hills to the north and the modern built-up area of Corringham to the south. It is a rural landscape of small, irregular enclosed fields of ancient origin.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone apart from a small area of Harwich Formation Gravel and Lambeth Group Mudstone in the south-west corner. These are overlain in places by colluvial head deposits and river terrace deposits, with small areas of alluvium and tidal flat deposits.

Historic Landscape Character: This zone, to the north of the modern town of Corringham, consists of a largely unspoilt landscape of small, irregular fields of ancient origin which has suffered some boundary loss. It has a highly dispersed settlement pattern. In the eastern part of the zone west of the Fobbing Basildon Road there is extensive ribbon development along the road and a substantial block of plotland development typical of the plotlands which dominated the Basildon landscape between the wars. There are also small areas of ancient woodland, including Northlands Wood. The modern A13 and the London, Southend & Tilbury Railway cut through the zone. To the east of the zone a strong pattern of east west boundaries and tracks running from the high ground down to the marshland (see zone 97.2). Zones 97.2 (Fobbing Marshes) 109.3 (Fobbing) and this zone historically formed an articulated landscape linking upland marsh and creek.

Archaeological Character: The southern part of the zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. A possible Neolithic henge site has been identified from aerial photographs to the east of the village. However, the clay land is unconducive to cropmark formation and there has been little development led excavation. It is probable that any archaeological deposits relating to occupation sites and land use will be relatively undisturbed.

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| • Diversity of historic environment assets | Field system and dispersed settlement pattern. Plotlands | 2 |
| • Survival | Good survival except areas of rail and road cuttings | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Field system and dispersed settlement pattern. Plotlands with characteristic boundaries which respect the old field system. Critical relationship of boundaries east of the zone linking to the marshland. | 3 |
| • Archaeological Potential | Good potential for below ground deposits | 2 |
| • Sensitivity to change | Historic landscape patterns are sensitive to change | 3 |
| • Amenity Value | Promote and interpret the historic development of landscape rectilinear field patterns, link between upland and marsh in conjunction with neighbouring zones. | 2 |

HECA Zone 108_2

Vange Wharf

Summary: This zone consists mostly of unenclosed marshland and mud creeks. Land at the east has yielded evidence for medieval occupation and land-use, and there has been an industrial site in the centre of the zone since the 19th century.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, overlain at the south by colluvial head deposits and along the south-east edge of the zone by tidal flat deposits.

Historic Landscape Character: This zone consists mostly of unenclosed marshland and mud creeks leading down to Pitsea Creek. It is bounded to the north by a road skirting the built-up area of Kingswood, which is part of the Basildon conurbation. There was a WWII anti-aircraft battery located in the west of the zone. Apart from the Vange Wharf industrial site the zone remains retains a relatively open landscape. Significant areas of this zone are being incorporated into the new RSPB reserve developed in south Essex as part of the Thames Gateway initiative.

Archaeological Character: Exploitation of the marshland environment has been identified from the Roman period to the present day. There is a moated site at Pitsea Hall and a medieval pottery scatter to the immediate east, demonstrating medieval use of the marshland, and giving an indication of the archaeological potential of the largely undeveloped zone. There is the potential for Palaeo-environmental sequences surviving throughout the zone.

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| • Diversity of historic environment assets | Roman, Medieval and post medieval land-use and occupation, and WWII site | 3 |
| • Survival | Good survival | 3 |
| • Documentation | HER data, historic mapping, NMP, | 3 |

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| | Assessment reports | |
| • Group Value Association | Exploitation of the marsh land environment | 2 |
| • Archaeological Potential | Potential for evidence of multi-period land-use and occupation as well as Palaeo-environmental deposits | 3 |
| • Sensitivity to change | The zone is sensitive to change outside industrial area. | 2 |
| • Amenity Value | Potential for promotion and interpretation of the marshland exploitation linked to the creation of the RSPB reserve in conjunction with neighbouring zones. | 2 |

HECA Zone 108_3

Fobbing

Summary: This zone is defined by the village of Fobbing and its Conservation Area. Fobbing was a small thriving medieval port, it has a range of important medieval and post-medieval buildings and retains much of its historic character. There is a strong and widely appreciated link with the Peasants revolt of 1381.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, overlain by areas of colluvial head deposits, river terrace deposits and tidal flat deposits.

Historic Landscape Character: This zone consists of the village of Fobbing and surrounding land. Fobbing, located on rising land just north of Fobbing Marshes, is a linear settlement arranged north-south along its High Street. It is Anglo-Saxon in origin and includes the parish church of St Michael, which incorporates 11th century fabric, as well as other important medieval and post-medieval buildings. Recent development has not greatly increased the size of the village although there has been infill and ribbon development to the north.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. The archaeological character of the zone is dominated by the likelihood of buried remains representing the development of Fobbing from the Saxon period to the present day.

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| • Diversity of historic environment assets | Largely limited to the historic settlement | 1 |
| • Survival | Good survival of historic built environment and potentially archaeological deposits | 2 |
| • Documentation | HER data, historic mapping, documentary sources, published sources. | 2 |
| • Group Value Association | Historic built environment and relationship with marshland to the south and east (see zones 110.3 and 97.2) | 3 |

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| • Archaeological Potential | Good potential for below ground deposits | 3 |
| • Sensitivity to change | Conservation area sensitive to change | 3 |
| • Amenity Value | Historic nature is well recognised and there is potential for further presentation and interpretation particularly of its relationship with the creeks and marshes of the Thames Estuary | 3 |

HECA Zone 109_1 Corringham

Summary: This zone consists of the built-up area of Corringham. There has been limited archaeological assessment in this area but the retention of open land within the built-up area means there is some potential for undisturbed archaeological deposits.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone in the central and eastern parts and Lambeth Group Sandstone and Harwich Formation Gravel at the south west. These are overlain by colluvial head deposits, river terrace deposits (Lynch Hill Gravel) on the south-east side and small areas of alluvium at the south-west.

Historic Urban Character: This zone was formerly a landscape of ancient small, irregular field systems with a highly dispersed settlement pattern including some significant medieval farms. It now consists of the 20th century urbanised area of Corringham.

Archaeological Character: The southern part of the zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. A Romano-British burial is recorded from the zone, as well as the below ground deposits relating to medieval farms, and the remains of a WWII anti-aircraft battery that have been covered with housing. Despite the negative impact of the urban development, there are several open areas of undeveloped land where there is the potential for undisturbed archaeological deposits.

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| • Diversity of historic environment assets | Diversity is low due to 20 th century development limiting archaeological survival | 1 |
| • Survival | Poor survival due to development of built-up area | 1 |
| • Documentation | HER data, Historic mapping | 1 |
| • Group Value Association | 20 th century urban development. | 1 |
| • Archaeological Potential | Low due to 20 th century development | 1 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Limited except for the social history and housing development in the 20 th century. | 1 |

HECA Zone 109_2**Stanford le Hope**

Summary: This zone consists of the built-up area of Stanford le Hope forming a continuous built up area with zone 109.1. The 20th century development of the built-up area will have had a negative effect on the survival of any archaeological remains in the zone.

Geology: The underlying bedrock of the zone consists of Lambeth Group Sandstone, with a small pocket of Thanet Sandstone Formation at the south. These are overlain by colluvial head deposits, river terrace deposits (Lynch Hill Gravel) and alluvium.

Historic Urban Character: The settlement of Stanford le Hope is medieval in origins, in effect a church/hall complex adjacent to a triangular green. The parish church of St Margaret, which includes 12th century fabric and the form of the triangular green still survive. There are some 19th century buildings, but the main character of this zone is of 20th century urban development.

Archaeological Character: The southern part of the zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. The archaeological character is defined by the medieval church/hall complex and the associated triangular green.

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| • Diversity of historic environment assets | Medieval church and former Green and 20 th century development | 2 |
| • Survival | Poor survival due to expansion of built-up area. Survival in area of church | 2 |
| • Documentation | HER data, Historic mapping | 1 |
| • Group Value Association | Church and former green | 2 |
| • Archaeological Potential | Low potential except in area of church and green | 2 |
| • Sensitivity to change | Limited sensitivity except within vicinity of church and green | 1 |
| • Amenity Value | Limited potential except in term of presentation and interpretation of settlement history. | 1 |

HECA Zone 109_3**Old Corringham**

Summary: This zone consists of the historic settlement of Corringham and its Conservation Area, which has Saxon origins and contains a number of important medieval and post-medieval buildings.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by river terrace deposits.

Historic Urban Character: This zone consists of the historic settlement of Corringham, formed along its north-west to south-east main street. The village was

positioned to take advantage of the creeks and marshes to the south. The parish church of St Mary contains Anglo-Saxon fabric and there are a number of important medieval and post-medieval buildings within the village. The 20th century expansion of Corringham has infringed on the northern part of the village but it retains its historic integrity within the conservation area.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and a single Palaeolithic flint flake has been found within the village. The archaeological character of the zone is dominated by buried remains reflecting the development of Corringham from the Saxon period onwards.

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| • Diversity of historic environment assets | Largely limited to the historic settlement | 1 |
| • Survival | Good survival of historic built environment and potentially archaeological deposits | 2 |
| • Documentation | HER data, historic mapping, documentary sources | 2 |
| • Group Value Association | Historic built environment and relationship with marshland to the south and east (see zones 110.3 and 97.2) | 3 |
| • Archaeological Potential | Good potential for below ground deposits | 3 |
| • Sensitivity to change | Conservation area sensitive to change | 3 |
| • Amenity Value | Historic nature is recognised and there is potential for further presentation and interpretation particularly of its relationship with the creeks and marshes of the Thames Estuary | 3 |

HECA Zone 110_1

Mucking Marshes

Summary: This zone consists of an area of former grazing marsh, now extensively quarried, bisected by Mucking Creek. There is the potential for the survival of palaeo-environmental evidence.

Geology: The underlying bedrock of the zone, from north to south, consists of London Clay Mudstone, a band of Harwich Formation Gravel and Thanet Sandstone. These are overlain by colluvial head deposits, river terrace deposits and alluvium.

Historic Landscape Character: This zone consists mostly of former grazing marsh and some areas of salt marsh. The majority of the zone has been extensively quarried.

Archaeological Character: There are large areas of quarried and infilled ground throughout the zone, which will have destroyed archaeological deposits. However, undisturbed areas across the zone are likely to preserve archaeological features, and there is a high potential for palaeo-environmental evidence.

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| • Diversity of historic environment assets | Limited diversity | 1 |
| • Survival | Extensively quarried | 1 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Little group value | 1 |
| • Archaeological Potential | Potential for palaeo-environmental sequences and some archaeological survival in unquarried areas and the inter tidal zone | 2 |
| • Sensitivity to change | Sensitivity limited to unquarried areas and inter tidal zone | 1 |
| • Amenity Value | Limited potential for the promotion and presentation of the historic environment with the neighbouring zones. | 1 |

HECA Zone 110_2

East Tilbury Marshes

Summary: This zone comprises a landscape of reclaimed marshland along the riverbank of the Thames now largely quarried. It contains evidence for occupation and land-use from the Iron Age to the present and the survival of archaeological deposits in unquarried areas is likely to be good.

Geology: The underlying bedrock of the zone consists of Thanet Formation Sandstone, with Upper Chalk at the southern tip. These are overlain by alluvium..

Historic Landscape Character: This zone consists mostly of former grazing marsh, and there are several 'counter walls' that represent early draining of the marshes. Extensive quarrying has destroyed most of the historic field layout though some elements including counter walls survive. As with most other marshland in south Essex anti-glider ditches were dug in WWII.

Archaeological Character: In the south of the zone there have been numerous finds of Iron Age and Romano-British pottery suggesting occupation and land-use during these periods, including a Red Hill salt-working site. The tidal flats contain oyster pits from the post-medieval period. Much of the zone now comprises areas of worked, infilled and made ground, with consequently low archaeological potential, but in unquarried areas and inter-tidal zone there is significant potential for archaeological deposits. There is also the possibility of palaeo-environmental deposits surviving.

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| • Diversity of historic environment assets | Multi-period occupation | 2 |
| • Survival | Poor survival due to extensive quarrying except in restricted unquarried areas | 1 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Limited elements of historic marshland landscape | 1 |
| • Archaeological Potential | Limited to unquarried areas and inter tidal zone | 1 |
| • Sensitivity to change | Unquarried areas and inter tidal zone | 2 |

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|-----------------|---|---|
| | are sensitive to change. | |
| • Amenity Value | Limited potential for the promotion and presentation of the historic environment with the neighbouring areas. | 1 |

HECA Zone 110_3 Land south of Fobbing, Corringham and Stanford Le Hope

Summary: This zone comprises the marshland edge and the terrace slope below the historic settlements of Fobbing and Corringham.

Geology: The underlying bedrock consists of London Clay Mudstone. This is overlain by colluvial head deposits, river terrace deposits and alluvium.

Historic Landscape Character: This zone comprises the marshland edge and the terrace slope below the historic settlements of Fobbing and Corringham. The historic field systems were mostly rectilinear and this pattern largely survives although there has been some field boundary loss. Within the northern part of the zone to the south of Fobbing fields are more irregular reflecting former marshland creeks. Historically there were individual farms exploiting the marsh edge location, some of which survive. Within the northern part of the zone 19th century brickworks have marked the landscape with a series of small quarries. The zone is bisected by the A1014 and large power lines running from the south west to the north east.

Archaeological Character: The southern part of the zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. A range of cropmarks, mostly towards the southern part of the zone include ring ditches and trackways probably indicating occupation sites. Just west of Fobbing is a Mesolithic site of some importance. Partial excavation in the 1970s produced evidence of occupation and a large flint assemblage. The zone has produced evidence of subsequent occupation and land-use through to post-medieval period, and has significant archaeological potential.

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| • Diversity of historic environment assets | Mesolithic site, cropmarks, historic pattern of landscape and settlement reflecting the marsh edge location | 3 |
| • Survival | Good survival, some areas of significant field boundary loss | 2 |
| • Documentation | HER data, historic mapping, NMP, archaeological assessment reports | 3 |
| • Group Value Association | Historic settlement pattern and marsh edge location | 2 |
| • Archaeological Potential | High potential over most of the area reflecting its marsh edge location from the Mesolithic onwards | 3 |
| • Sensitivity to change | Below ground deposits and marsh edge landscape sensitive to development | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape and settlement | 3 |

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| pattern together with archaeological evidence to enhance appreciation of the historic development of the zone |
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HECA Zone 111_1

West Tilbury

Summary: This zone includes the historic settlement and Conservation Area of West Tilbury and cultivated farmland with associated farmsteads to the east of Chadwell St Mary. Much of the farmland was enclosed at an early date. Cropmarks have been identified throughout the zone, and excavations in the south west of the zone revealed a number of Bronze Age features, Iron Age domestic enclosures and Romano-British kilns. There is a scheduled site to the south-west of West Tilbury church, which consists of early medieval earthworks.

Geology: The underlying bedrock of the zone consists of Thanet Formation Sandstone with Lambeth Group Sandstone in the central western part. These are overlain by Boyn Hill Gravel at the west and Taplow Gravel at the south-east. There are also several areas of colluvial head deposits, as well as alluvium at the north and south margins.

Historic Landscape Character: The historic dispersed and polyfocal settlement pattern largely survives. West Tilbury, where the parish church of St James (redundant) includes 11th century fabric, formed one of the settlement foci, and the area to its south-west includes a length of rampart with an internal ditch reputed to be the site of a Saxon hall – a high-status residence. Tilbury Common Field lies to the north of another focal point around a road junction and small triangular green. Fields in the northern part of the zone, north of Muckingford Road, are early heathland enclosures dating to 16th century or possibly earlier. Recent boundary loss has created some very large fields but the general historic grain of the landscapes boundaries is preserved, particularly in the south-east of the zone. The network, of ancient origin, of roads, minor lanes and tracks, some distinctly sinuous, survives. The area west of Gun Hill and Turnpike Lane was extensively quarried for gravel during the 19th and 20th centuries.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and finds from the gravel pits at Gun Hill include an Lower Palaeolithic handaxe and several flakes and cores. A possibly Neolithic ditch was excavated at the western edge of the zone, but the archaeological character of the zone is dominated by extensive cropmark complexes comprising rectilinear and circular enclosures, linear features and pits, particularly in the area east of Mill House, north of the Muckingford Road, and around West Tilbury. Excavations in 1969-70 west of West Tilbury revealed a series of Late Bronze Age boundary ditches and postholes, and there was also evidence for Iron Age domestic enclosures and Romano-British pottery kilns in this area. Some of the earthworks south-west of West Tilbury may be associated with a 7th century high-status residence, but the focus of the historic settlement is provided by its medieval church, with the adjacent earthworks indicating an extension of the medieval settlement. West Tilbury Common Field contains cropmarks that may represent a previous settlement centre, as well as

evidence for strip farming which continued there into the 19th century. Quarrying has affected some areas in the south-west but in general the zone contains the potential for a substantial archaeological resource.

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| • Diversity of historic environment assets | Multi-period occupation, extensive cropmarks, Historic settlement | 3 |
| • Survival | Quarrying has affected small areas but elsewhere survival will be good | 3 |
| • Documentation | HER data, excavation data, historic mapping, NMP | 2 |
| • Group Value Association | Landscape features and settlement patterns. Cropmark complexes | 3 |
| • Archaeological Potential | Potential Lower/Middle Palaeolithic remains. West Tilbury settlement area and Common Field have cropmarks. Cropmark evidence indicates widespread multi-period settlement. | 3 |
| • Sensitivity to change | Landscape and archaeological deposits sensitive to change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape and settlement pattern together with archaeological evidence to enhance appreciation of the historic development of the zone | 2 |

HECA Zone 111_2

Mucking and Linford

Summary: The landscape of this zone is characterised by a gravel terrace and the head waters of Mucking Creek. There are extensive 20th century gravel quarries in the western half. The historic village of Mucking is located on the edge of the terrace. Extensive internationally important excavations identified an earlier settlement further to the south west, with evidence for occupation between the Neolithic and Anglo-Saxon periods.

Geology: The underlying bedrock of the zone consists of sandstone of the Lambeth Group and Thanet Formation with an area of London Clay Mudstone in the north-west. These are overlain by areas of Black Park Gravel in the west and Lynch Hill Gravel and Taplow Gravel in the eastern part of the zone, as well as localised colluvial head deposits, and at the north-east by tidal flat deposits.

Historic Landscape Character: Mucking village lies close to marshy ground in a shallow valley formed by a tributary that joins Mucking Creek to the south. A road with Roman origins runs through the zone heading north-west from Muckingford and would have provided an important access route into and out of the zone (its course was altered when gravel extraction began in the 20th century). The main historic settlement focus in the zone was Mucking, a village with Late Anglo-Saxon origins, and the parish church of St John (redundant) includes 12th century fabric. The agricultural landscape around the settlement was enclosed at an early date. The western part of the zone was extensively quarried for gravel during the 20th century, the part to the north being now landscaped as St Clere's Hall golf course. The

extreme west of the zone has 20th century industrial and housing development and quarrying at Linford, together with a mixture of Ancient and secondary woodland.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and two handaxes were found to the north-west of Mucking churchyard. Extensive internationally important excavations revealed evidence of the zone's occupation starting in the Early Neolithic. Bronze Age activity is indicated by round barrows, an extensive field system and two circular, Springfield-type enclosures with two concentric ditches. Domestic and burial activity attest to continuing settlement during the Iron Age and Romano-British period. There was an early Anglo-Saxon hamlet with associated with two cemeteries, which was abandoned sometime after the 8th century, when the settlement presumably moved to the present Mucking village. The quarried areas in the west of the zone will have destroyed the archaeological deposits, but there remains high archaeological potential in the eastern part.

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| • Diversity of historic environment assets | Multi-period occupation | 3 |
| • Survival | Quarrying has destroyed large areas in the west but elsewhere survival is relatively good | 2 |
| • Documentation | HER data, published reports, historic mapping, NMP, excavated data | 3 |
| • Group Value Association | Buried archaeological landscapes | 3 |
| • Archaeological Potential | Undisturbed areas likely to contain extensive deposits of multi-period date | 3 |
| • Sensitivity to change | Landscape and archaeological deposits sensitive to change | 2 |
| • Amenity Value | The information from the internationally significant archaeological discoveries in this zone has great potential for presentation and interpretation. | 3 |

HECA Zone 111_3

Mucking Heath

Summary: This zone is characterised by extensive cropmark complexes which include the Orsett Neolithic causewayed enclosure on its western boundary, which has been partly investigated. The cropmarks include tracks, enclosures and ring ditches. The area has suffered some disturbance from quarrying, development and golf course construction.

Geology: The underlying bedrock of the zone consists mainly of Lambeth Group Sandstone, with Thanet Formation Sandstone at the south. They are overlain by Black Park Gravel and Boyn Hill Gravel, with areas of colluvial head deposits particularly at the east.

Historic Landscape Character: The historic settlement pattern was dispersed and polyfocal, and the zone contains an early enclosed agricultural landscape with small

irregular fields with some surviving historic hedgerows. While some of the field boundaries survive, others are represented by cropmarks, but those in the northern part of the zone have largely disappeared amidst field enlargement and housing development along Stanford Road. Between 1917 and 1919, the northern part of the zone was a first class landing ground used by 78 Squadron RFC on home defence duties. Subsequently, a RASC camp was built and AA batteries were installed before WWII. The site has since been exploited for aggregate extraction, and extensively developed with housing, while the central area has been landscaped as a golf course.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic. The main archaeological character is defined by the extensive cropmarks including the Orsett Neolithic causewayed enclosure which lies in the west of the zone. There are cropmarks of trackways, ring ditches and enclosures indicating extensive multi-period occupation. While much of the northern part of the zone has been impacted by development, the south-western part has good archaeological potential.

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| • Diversity of historic environment assets | Multi-period archaeological deposits | 3 |
| • Survival | Quarrying and development has affected some areas but elsewhere survival likely to be relatively good | 2 |
| • Documentation | HER data, excavation reports, NMP | 2 |
| • Group Value Association | Buried landscape features including enclosures, tracks and ring-ditches | 3 |
| • Archaeological Potential | High potential where the archaeological deposits have not been impacted upon | 2 |
| • Sensitivity to change | Landscape and archaeological deposits sensitive to change in south west of the zone | 2 |
| • Amenity Value | Potential for promotion and presentation of archaeological elements and restoration/enhancement of historic landscape. | 2 |

HECA Zone 111_4

Horndon on the Hill

Summary: The zone consists of the historic core of Horndon on the Hill village and the Conservation Area. Its character is derived from the quality of the built environment and associated buried archaeological remains. There are a range of significant medieval and post-medieval buildings along the High Street, and there is a high potential for archaeological deposits related to Anglo-Saxon/medieval buildings within the core of the settlement, and landscaping in the area of the tenement plots to the east.

Geology: The underlying bedrock consists of London Clay Mudstone, overlain by small areas of colluvial head deposits and Black Park Gravel.

Historic Urban Character: This zone consists of the historic core of Horndon on the Hill, an Anglo-Saxon settlement that gained proto-urban status by the mid 11th century when a Royal Mint was located here. The town further developed during the medieval period as a linear settlement based on the High Street, now a conservation Area, where there are a range of surviving historic buildings dating from the 14th century. It is overlooked by the parish church of St Peter and St Paul which is mostly 13th to 15th century in date, built on the highest point of the hill. In the 19th century there was a windmill on Mill Hill to the west of the High Street, probably on the site of an earlier windmill. A small housing estate was built on Mill Hill and to the west during the 20th century.

Archaeological Character: Romano-British and later pottery has been found during small-scale excavations in the village, but the archaeological character of the zone is dominated by extensive archaeological remains relating to the late Saxon and medieval town. Substantial lynchets and rectilinear enclosures to the east of High Street are suggestive of a defended enclosure, most probably Anglo-Saxon. There is a range of mostly timber-framed buildings that incorporate medieval structures along the High Street, in particular the Old Market Hall. There is a high potential for further archaeological deposits dating to these periods.

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| • Diversity of historic environment assets | Standing buildings, below ground Saxon and medieval deposits. | 3 |
| • Survival | Good survival except in the area of the modern housing estate | 2 |
| • Documentation | HER data, excavation data, NMP, historic town report, documentary sources | 3 |
| • Group Value Association | Built environment and archaeological deposits | 3 |
| • Archaeological Potential | High potential outside 20th-century housing estate | 2 |
| • Sensitivity to change | Built environment and archaeological deposits sensitive to change | 2 |
| • Amenity Value | Historic town is already well known and could be further explained and promoted. | 3 |

HECA Zone 111_5 Orsett Cock and land to north of the A13

Summary: This zone consists of an enclosed agricultural landscape of rectilinear fields with individual farmsteads. The southern boundary is defined by the Stanford Road/A13 with Orsett village to the north-west. There are extensive cropmarks throughout the zone demonstrating a range of archaeological features, which should have a high survival ratio due to the relatively undisturbed nature of the landscape. Excavations have revealed Bronze Age burials and an Iron Age settlement.

Geology: The underlying bedrock of the zone consists mainly of Lambeth Group Sandstone and Mudstone, bordered to the north by Harwich Formation Sand and Gravel and London Clay Mudstone. These are overlain by localised areas of Black Park Gravel and colluvial head deposits.

Historic Landscape Character: The zone has no settlement foci, but there are several farmsteads, including the 16th century timber-framed Saffron Garden with its brick walled garden. The zone consists of agricultural land that was enclosed at an early date, and it has kept its ancient rectilinear system of fields with hedgerows, except at the west where there has been some landscaping and aggregate extraction. The landscape is crossed by trackways and footpaths many of which follow the boundaries of fields. The southern boundary of the zone is formed by the Stanford Road, which was recently bypassed by the A13.

Archaeological Character: This zone is characterised by extensive cropmarks indicative of multi-period settlement, in particular to the north-east, east and south of Barrington's Farm. Gully Circle, just to the west of Loft Hall, has been interpreted as a Class 2 Neolithic henge with two opposed entrances. Early Bronze Age burials were discovered in several pits during road widening for the A13, and there are a number of ring ditches. A Late Iron Age triple-ditched enclosure, characteristic of south Essex, was excavated in advance of construction of the Orsett Cock roundabout and an Iron Age open settlement has been excavated in the far south-west of the zone. Other cropmarks include annular and pennanular gullies, rectilinear features, double ditches, pits and trackways, sub-rectangular enclosures and a large curvilinear enclosure to the south-west of Saffron Garden. There are also at least three different superimposed field systems. There was a medieval moated site (now destroyed) in the far eastern part of the zone. Although many of the cropmarks are undated they represent a significant potential for the presence of archaeological deposits.

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| • Diversity of historic environment assets | Wide range of historic assets including excavated sites, cropmarks, and moats. | 3 |
| • Survival | Relatively undisturbed beyond A13 works – good survival | 3 |
| • Documentation | HER data, excavation data, NMP, published reports | 3 |
| • Group Value Association | Surviving Landscape features and articulated cropmark landscapes | 3 |
| • Archaeological Potential | This zone has high potential for multi-period archaeological deposits. | 3 |
| • Sensitivity to change | Landscape and archaeological deposits sensitive to change | 3 |
| • Amenity Value | Amenity value is largely undeveloped but there is great potential for explanation, conservation and enhancement | 2 |

HECA Zone 111_6

Sticking Hill

Summary: This zone, which includes the 20th century housing estate at Horndon on the Hill, but not the historic core of the town (zone 111_4), is characterised by a strongly rectilinear pattern of historic fields, tracks and roads typical of much of HECA 111.

Geology: The underlying bedrock of the zone consists mainly of London Clay Mudstone bordered to the south and east by Harwich Formation Sand and Gravel

and Lambeth Group Sandstone and Mudstone. These are overlain by extensive colluvial head deposits, with a small patch of Black Park Gravel, and alluvium at the east.

Historic Landscape Character: This zone has a few isolated farmsteads, and there are several 16th to 18th century buildings in the zone, including Arden Hall at the north-east, with its associated outbuildings and dovecote. However, the zone is predominantly rural, and it would have been enclosed at an early date, although its fields are more rectilinear than further south in HECA 111. The 20th century housing estate at Horndon on the Hill covers an area of c. 14 hectares and there are small 20th century plantations in the western part of the zone. The zone is bounded at the south-east by the A13 bypass and Brentwood Road passes through the zone at Sticking Hill.

Archaeological Character: There are cropmarks of a ring ditch and a linear track or boundary, but otherwise the archaeological character of the zone is not well defined because the clays of this zone are not conducive to cropmark formation and there has been little threat led excavation. However, there is the potential for significant archaeological deposits within this zone.

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| • Diversity of historic environment assets | Limited diversity of historic assets | 1 |
| • Survival | Survival of archaeological remains likely to be good due to minimal ground disturbance | 2 |
| • Documentation | HER data, NMP, historic mapping | 2 |
| • Group Value Association | Patterns of fields, farms and tracks represent an articulated landscape of ancient origin. | 2 |
| • Archaeological Potential | Given the nature of the historic landscape and the likely presence of earlier occupation there is considerable archaeological potential. | 3 |
| • Sensitivity to change | Landscape field systems sensitive to change | 2 |
| • Amenity Value | Surviving historic landscape features have potential for interpretation in relation to the neighbouring zones. There is also potential for enhancement and restoration of the historic landscape. | 2 |

HECA Zone 111_7

East Tilbury BATA Estate

Summary: This zone consists of the BATA model factory, housing development, and Conservation Area built between the 1930s and the 1960's. It is defined by the built environment of the factory and houses, whose grid pattern was aligned on the Roman road that passes through the zone.

Geology: The underlying bedrock is Thanet Formation Sandstone. This is overlain by Taplow Gravel and a small area of colluvial head deposits at the south.

Historic Urban Character: This zone is defined by the BATA shoe factory and model settlement established in the 1930s. It was designed by Czechoslovakian architects Frantizek Gahura and Vladimir Karfik in the International Modern Movement Style, to be part of a 'garden village' setting. The factory, located on the site of the hamlet of St Cleres, is rectangular in plan with reinforced concrete frames. The 352 houses, laid out on gridiron plan and constructed in concrete, were built in stages between 1933 and the mid 1960s. All the social facilities necessary for the employees were provided by the company, including a cinema and a sports ground to the south of the site. There are nine Grade II Listed buildings within the complex which is protected as a conservation area.

Archaeological Character: The archaeological character of the zone is defined by the built environment of the factory and housing, which is an important example of 20th century International Modern Movement model planning. Little is known about the below ground archaeology except that the main thoroughfare follows the line of a Roman road running north-west – south-east to the Thames. There have been no known archaeological investigations within the zone, and it is not known how much ground disturbance took place during the construction of the estate, so the below-ground archaeological potential of the zone is unknown.

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| • Diversity of historic environment assets | Defined by the BATA estate | 1 |
| • Survival | Good built environment survival | 3 |
| • Documentation | HER data, documentary sources | 3 |
| • Group Value Association | Housing and factory development | 3 |
| • Archaeological Potential | Below ground deposits disturbed by the construction of the estate | 1 |
| • Sensitivity to change | Built environment highly sensitive to change or development | 3 |
| • Amenity Value | Built environment is promoted and this could be further developed linked with (118.1 and 19.6) | 2 |

HECA Zone 111_8

East Tilbury Village

Summary: This zone has a range of historic and archaeological features including substantial finds from the Iron Age, Romano-British, Anglo-Saxon periods, extensive cropmarks and earthworks and several important 19th- and 20th-century military installations. These are located around the settlement of East Tilbury, which is only about 500m from the banks of the Thames. There is scope to use the military presence as an amenity learning resource.

Geology: The underlying bedrock of the zone is Upper Chalk at the south and Thanet Formation Sandstone at the north. These are overlain by Lynch Hill Gravel in

the north-west, and river terrace deposits, colluvial head deposits and alluvium elsewhere.

Historic Urban Character: The main settlement focus is East Tilbury, a Saxon settlement dating to at least the 7th century, established on the course of a Roman road. It was a multi-manor settlement in the Domesday survey of 1086, where it was undifferentiated from West Tilbury. It had a linear form with its oldest part at the southern end closest to the Thames. The parish church of St Margaret (now St Katherine) has early 12th century fabric in the nave. There was minimal enclosure of the open fields to the west of the settlement and during the 19th century there was extensive quarrying of the Chalk that defines the southern border of the zone. In 1889-1890, a battery for six guns was constructed to the immediate east of the village, on a prominent spur that commands broad views over the Thames and Tilbury Docks to the west, in order to strengthen the Thames defences. During WWII there were two groups of anti-aircraft gun emplacements with connecting roads and vehicle parks, magazines and command post, and after the war new 5.25" heavy anti-aircraft guns were deployed until the 1950s. The historic military involvement in the area holds much potential as a learning amenity for the history of Thames defences.

Archaeological Character: The archaeological character of the zone is defined in part by a series of cropmarks and earthworks in the central area of the zone and by finds of different periods. These include Neolithic worked flint from north of the East Tilbury Battery, while cropmarks and earthworks west of the village indicate the presence of ring ditches, linear banks and pits. During quarrying and cemetery extensions south-east of the village, numerous finds were made of Iron Age pottery and Romano-British pottery, tiles and coins suggesting settlement during these periods. The Romano-British settlement would have lain beside the Roman road leading to a Thames crossing point, and so be dated to at least the 1st century AD and possibly earlier. To the west of this area, there have been many finds of Anglo-Saxon *sceattas*, suggesting the continuing importance of the Thames crossing. A possible windmill is indicated by a cropmark on a raise of ground above East Tilbury. Although there have been no controlled excavations in the area to the immediate south-east of the village the archaeological potential of the zone is high due to the group value of recorded features and the potential for continuous settlement since the Neolithic.

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| • Diversity of historic environment assets | Range of multi-period deposits | 3 |
| • Survival | Quarrying has affected some small areas in the south of the zone but elsewhere survival likely to be good | 3 |
| • Documentation | HER data, excavation data, NMP, documentary sources | 3 |
| • Group Value Association | Landscape features and settlement patterns from a range of prehistoric and historic periods | 3 |
| • Archaeological Potential | Good potential in all parts of the zone outside quarried areas | 3 |
| • Sensitivity to change | Landscape and archaeological deposits sensitive to change | 3 |

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| <ul style="list-style-type: none"> • Amenity Value | There is scope to use the military presence to promote the wider historic environment linked to Coalhouse Fort (zone 117.1) the bata factory (zone 111.7) and the Two Forts Way. | 3 |
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HECA Zone 111_9

Orsett

Summary: The character of the zone is defined largely by the settlement of Orsett, and by a scheduled medieval ring and bailey earthwork to the north that belonged to the Bishops of London. The village, which contains a large number of Listed Buildings, expanded during the 20th century. Cropmarks indicate former field systems in the west of the zone.

Geology: The underlying bedrock consists of London Clay Mudstone along the northern and western sides of the zone, bordered by a band of Harwich Formation Sand and Gravel, and with Lambeth Group Sandstone and Mudstone across the rest of the zone. This is overlain at the north and west by colluvial head deposits.

Historic Landscape Character: The focus of settlement is the village of Orsett, which dates from at least the 10th century. To its north-west there is a substantial ring and bailey earthwork comprising a circular enclosure surrounded by a 20m wide ditch, probably a medieval residence of the Bishop of London. In Orsett, the parish church of St Giles and All Saints contains 12th century fabric with later modifications, and there are a range of other historic buildings dating from the 15th to the 19th century. The village was expanded by housing development in the 20th century. To its west there are some small irregular-shaped fields suggesting early enclosure of heathland, and a number of tracks and roads cross the zone.

Archaeological Character: Excavation to the north-west of Orsett revealed a number of Early Bronze Age pits/burials, and Iron Age pottery has been discovered in the village. However, the archaeological character of the zone is also defined by the ring and bailey earthwork and by Orsett's built environment, which contains a number of buildings of archaeological and historic importance. There are a series of gullies to the south of the village that probably delineate the medieval tenement plots, which continued in use into the post-medieval period. A number of linear cropmarks to the west probably represent former field boundaries.

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| <ul style="list-style-type: none"> • Diversity of historic environment assets | Multi-period below ground remains and built heritage | 3 |
| <ul style="list-style-type: none"> • Survival | Survival likely to be good outside of modern developed area around Orsett | 3 |
| <ul style="list-style-type: none"> • Documentation | HER data, excavation reports, NMP | 2 |
| <ul style="list-style-type: none"> • Group Value Association | Built environment, landscape features and settlement patterns | 3 |
| <ul style="list-style-type: none"> • Archaeological Potential | Good potential for discovery of below-ground deposits and analysis of built environment | 3 |
| <ul style="list-style-type: none"> • Sensitivity to change | Landscape and archaeological deposits sensitive to change | 2 |

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| • Amenity Value | The historic village and its environment is relatively well known. Both it and its surrounding landscape could be further explained and promoted | 2 |
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| HECA Zone 111_10 | Baker Street |
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Summary: This zone, bounded by the town of Thurrock to the south and west, is characterised by the extensive cropmarks surveyed from aerial photographs, two areas of which have been scheduled. These represent multiperiod settlement from at least the Bronze Age to the medieval period, and are an important archaeological resource. The zone's field systems also suggest differing periods of enclosure north and south of Stanford Road. This zone is archaeologically very sensitive.

Geology: The underlying bedrock consists of London Clay Mudstone at the north-west bordered by a band of Harwich Formation Sand and Gravel, with Lambeth Group Sandstone and Mudstone across the centre of the zone and Thanet Formation Sandstone at the south. These are overlain, across most of the zone, by the Boyn Hill Gravel, with colluvial head deposits around the northern edges.

Historic Landscape Character: The historic settlement pattern was dispersed, but a nucleated settlement had developed around the Baker Street crossroads by the time of the 1777 Chapman and Andre map. More recently, there has been ribbon development along Baker Street to the south of the crossroads. A strong rectilinear field enclosure pattern in the north of the zone is of ancient origin and typical of large areas of south and east Essex. South of Stanford Road the field systems become smaller and more irregular and would seem to be the result of early enclosures of heathland. The modern A13 and a large road junction with the A1089 are the dominant modern features in this zone.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. Excavated evidence and stray finds from this zone include Mesolithic, Neolithic and Bronze Age material, but its archaeological character is defined mainly by the extensive cropmarks which show a range of ring-ditches, field ditches, trackways, enclosures, pits and other features. In the north-east of the zone, a cropmark complex includes a Springfield-style circular enclosure of Late Bronze Age date. To the west of Heath Place Farm there are cropmarks of a large rectilinear enclosure with internal subdivisions and a double-ditched trackway forming its southern boundary, with another possibly at its northern boundary; this, by analogy with excavated evidence at Mucking, Great Holts and elsewhere, is likely to represent a Romano-British villa complex. Other cropmarks may represent Saxon *grubenhäuser*. These, and other cropmark features, provide insight into the scale and nature of multiperiod occupation in this zone, and those areas not conducive to cropmark formation are likely to have a similar range of archaeological evidence. The archaeological potential in much of this zone is very high.

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| • Diversity of historic environment assets | Multi-period below ground deposits | 3 |
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| • Survival | The construction of the A13 has affected some areas but elsewhere survival likely to be good | 3 |
| • Documentation | HER data, excavation data, NMP, published reports | 3 |
| • Group Value Association | Landscape features and settlement patterns, cropmark complexes | 2 |
| • Archaeological Potential | Much of this zone has high potential for multi-period occupation. | 3 |
| • Sensitivity to change | Archaeological deposits sensitive to change, as are surviving historic landscape features and field boundaries | 3 |
| • Amenity Value | The extensive cropmarks and other evidence offer great potential for enhanced conservation, physical and intellectual access. Could be achieved through appropriate strategic planning, Green Grid implementation and Environmental stewardship. | 3 |

HECA Zone 111_11

East Tilbury and surrounding land

Summary: This zone, bounded to the east by the Tilbury Marshes, surrounds East Tilbury, excluding the BATA estate (zone 111.7). It comprises both rural landscapes and 20th century factory and housing developments. There is evidence for Bronze Age and the Iron Age occupation, and a Roman road forms the dominant axis of this zone, which is also crossed by a railway line established in the 19th century.

Geology: The underlying bedrock of the zone consists of Thanet Formation Sandstone. It is overlain by Taplow Gravel and Lynch Hill Gravel with areas of colluvial head deposits, and with alluvium at the south, east and north.

Historic Landscape Character: The Roman road, running towards a former Thames crossing, continues to provide a very clear axial route through the zone. The historic settlement pattern within this zone was dispersed, but some ribbon development had already been established along the Roman road by the time of the 1777 Chapman and Andre map. The field pattern suggests early enclosure, with small irregular fields characteristic of heathland assarts. The west of the zone contains East Tilbury Great Common Field which had been partially enclosed by the late 19th century, by when also the London, Tilbury & Southend Railway was constructed through the zone. In 1904, The South Essex Waterworks Co. opened a brick-built pumping station in the northern part of the zone, around the east and north of which the nucleated settlement of Linford developed. The areas of nucleated settlement at East Tilbury, to the immediate east and north-west of the BATA estate, were also developed as housing during the 20th century. There were three areas of sand and gravel extraction in the southern part of the zone, and the Low Street Brick Works, situated north-west of Gravelpit Farm, operated between the early 1900s and 1967.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, although no Palaeolithic finds are known from this zone. There is a range of cropmarks in the zone and recent archaeological evaluation around East Tilbury has revealed extensive multi-period occupation. In the north-west of the zone an important earlier Bronze Age double-ditch round barrow was excavated in 1960, and there are ring-ditch and rectilinear enclosure cropmarks in the eastern and northern parts of the zone. An Iron Age enclosure was excavated at the south, and the Roman road that runs north-west – south-east through the zone to a Thames crossing point south of East Tilbury, may be pre-Roman in origin, and is likely to have been a major influence on settlement patterns in this zone. The zone has high archaeological potential.

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| • Diversity of historic environment assets | Multi-period occupation | 2 |
| • Survival | Archaeological deposits appear to survive well in much of the area, although quarrying at the south and 20th century housing development in East Tilbury will have caused some damage. | 2 |
| • Documentation | HER data, Archaeological reports, NMP | 2 |
| • Group Value Association | Buried prehistoric landscape | 2 |
| • Archaeological Potential | Archaeological evidence of multi-period occupation likely to be widespread outside built up area | 3 |
| • Sensitivity to change | Archaeological remains sensitive to development | 2 |
| • Amenity Value | Considerable potential for explanation and interpretation, of archaeological remains, landscape development. Could be pursued in relation to neighbouring zones. | 2 |

HECA Zone 112_1

Bulphan and Orsett Fen

Summary: This is a predominantly rural zone, which retains some of its historic features. The field system of small, rectilinear enclosures probably relates to the early enclosure of former fenland. The zone includes the upper reaches of the Mar Dyke Basin which has palaeo-environmental potential.

Geology: The underlying bedrock of the zone consists mostly of London Clay Mudstone bordered at the south by band of Harwich Formation Sand and Gravel and then Lambeth Group Sandstone and Mudstone. These are overlain by Boyn Hill Gravel at the west, colluvial head deposits across the zone and alluvium in the Mar Dyke Basin.

Historic Landscape Character: This zone includes the medieval village of Bulphan, and contains a number of medieval moated sites indicative of the dispersed

settlement pattern. Much of the area is a low-lying basin rising steadily to the east, which is intensively farmed and strongly rural in character. The fields are generally regular in shape, with long slightly sinuous boundaries running down from high ground to the north, possibly reflecting the enclosure of fenland common. In the low lying areas they are bounded by drains. Distinctive hawthorn/elm hedgerows follow wide, verged historic lanes and tracks across the area. The area contains a scattering of smaller ponds along with some small reservoirs.

Archaeological Character: The zone includes the Mar Dyke Basin, characterised by Holocene alluvial clays and silts, with high potential for palaeo-environmental deposits. Its archaeological character is also derived from small concentrations of archaeological deposits and sites, including an excavated Iron Age/Romano-British farmstead in the southern tip of the zone, and evidence of medieval settlement. The zone, therefore, has archaeological potential relating to a long history of occupation, and it is possible that significant archaeological sites may lie undisturbed within the 'bowl-like' landscape.

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| • Diversity of historic environment assets | Diverse historic rural environment | 2 |
| • Survival | Good survival of archaeological and palaeo-environmental deposits in all areas | 3 |
| • Documentation | HER data, historic mapping, NMP | 3 |
| • Group Value Association | Historic landscape of fields village and farms | 3 |
| • Archaeological Potential | High potential for surviving archaeological and palaeo-environmental deposits | 3 |
| • Sensitivity to change | Historic rural landscape and potential below ground archaeological deposits are sensitive to change. | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape and settlement pattern together with archaeological evidence to enhance appreciation of the historic development of the zone | 3 |

HECA Zone 112_2 Land between Bulphan and Langdon Hills

Summary: The area comprises the eastern part of Bulphan Fen and the slopes rising to higher ground at Dunton, Langdon and Horndon. This is a predominantly rural zone, which retains much of its historic landscape. The dispersed settlement pattern in the area has a long history of occupation, and the field system of rectilinear enclosures is of ancient origin.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by colluvial head deposits and alluvium.

Historic Landscape Character: This zone contains a number of medieval moated sites, as well as timber-framed farmhouses and barns of 15th-18th century date, that demonstrate the survival of a dispersed settlement pattern. It has retained its historic

field system of rectilinear enclosures, although suffering some boundary loss. It is intensively farmed and strongly rural in character. Distinctive hawthorn/elm hedgerows follow wide verged historic lanes and tracks across the area. The area contains a scattering of smaller ponds and some small reservoirs.

Archaeological Character: The clay land is unconducive to cropmark formation and there has been little development led excavation. However, localised concentrations of archaeological deposits and sites indicate prehistoric, Romano-British and medieval settlement activity in this zone. These indicate the long history of occupation and landuse, and the potential for undisturbed archaeological sites within the landscape. The built environment, consisting of various historic timber structures form an important part of the historic character, as well as a WWI and WWII airfield.

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| • Diversity of historic environment assets | Multi-period settlement pattern | 2 |
| • Survival | Good survival of archaeological and palaeo-environmental deposits. Historic landscape survives well | 3 |
| • Documentation | HER data, historic mapping | 2 |
| • Group Value Association | Historic field and settlement pattern | 3 |
| • Archaeological Potential | Good potential for discovering archaeological and palaeo-environmental deposits | 3 |
| • Sensitivity to change | Rural landscape is highly sensitive to development and change | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape and settlement pattern together with archaeological evidence to enhance appreciation of the historic development of the zone | 3 |

HECA Zone 112_3

South Ockenden Rural

Summary: This is a predominantly rural zone, surrounding the northern part of South Ockenden. It retains its field system of small, rectilinear enclosures of ancient origin. There are a substantial range of cropmarks, and a number of medieval moated sites, which suggest that this zone has potential for undisturbed archaeological deposits.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by areas of Lynch Hill Gravel, Boyn Hill Gravel and colluvial head deposits.

Historic Landscape Character: This zone, bordered on its southern side by the settlement of South Ockenden, contains a number of medieval moated sites, as at South Ockenden Hall which is a particularly fine example of a moated enclosure with a stone built gate house. The zone is intensively farmed and strongly rural in character, and has retained its historic field system of small, rectilinear enclosures.

Archaeological Character: There is a substantial number of cropmark sites within this zone, and localised concentrations of archaeological deposits and sites indicate prehistoric, Romano-British and medieval settlement activity including the moated sites, pointing to the zone's long history of occupation. Although the area contains a number of quarried areas, there is a high potential for significant undisturbed archaeological sites within the landscape. There was a WWI night landing site in the north of the zone.

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| • Diversity of historic environment assets | Diverse historic rural environment | 3 |
| • Survival | Good survival of historic landscape and below ground archaeological deposits | 3 |
| • Documentation | HER data, historic mapping, NMP, published reports | 3 |
| • Group Value Association | Historic field system and medieval moats | 3 |
| • Archaeological Potential | Good potential for below ground archaeological deposits | 3 |
| • Sensitivity to change | Rural landscape is highly sensitive to development | 3 |
| • Amenity Value | Potential for the promotion and presentation of the historic environment with the neighbouring areas. | 2 |

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| HECA Zone 117_1 | Coalhouse Fort |
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Summary: This zone is characterised by Coalhouse Fort, which commands a position overlooking the Thames. It was a multi-period fort although it is the 19th century structure and earthworks that survive best.

Geology: The underlying bedrock of the zone consists of Upper Chalk, which is overlain by alluvium.

Historic Landscape Character: This zone is defined by Coalhouse Fort, the site of a series of fortifications dating back to the time of Henry VIII. Little is known about the pre-18th century fort, although an unlocated blockhouse was constructed near Coalhouse Point in the 16th century, but was in ruins by 1735. In 1795, an open earthen battery was built to take four 32-pounder guns. This was demolished in 1855, to be replaced by a second open battery for 17 guns. Following a Royal Commission report of 1860 a fort was built as a curved casemate face with defensible, bastioned barracks closing the gap at the rear. It was two-storied, the lower tier containing magazines and storehouses protected at the front by 7m of granite, overlaid by an earth slope or glacis. A moat surrounded the front (river) face. Shortly after 1892, however, both guns and fort were obsolete, and soon after 1900 a dry ditch in front of the fort was filled in and an earthen bank thrown up against the face of the casemates for better protection, and possibly to render the fort less conspicuous. In 1905 an earthen searchlight battery was constructed about 200m to the south. For a while during WWII the fort was used as a naval monitoring station.

Archaeological Character: Coalhouse Fort is located at the southern end of a Roman road that seems to have been in almost continuous use up to the present day. This road ends at a crossing point/wharf on the Thames and deposits not destroyed by the fort's foundations may yield archaeological evidence for previous use of this crossing point/wharf, and there is potential for deposits to survive in the marsh and inter-tidal zone. However, the archaeological character of this zone is dependent on the fort itself, as described above. The main archaeological potential of the zone is for the discovery of previous phases of the fort, although there is also a possibility of locating the 16th century blockhouse.

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| • Diversity of historic environment assets | Multi phased military development | 2 |
| • Survival | Good survival of military remains | 3 |
| • Documentation | HER data, historic mapping, documentary sources | 2 |
| • Group Value Association | Military remains (see also 111.3) | 3 |
| • Archaeological Potential | Military remains and some potential for earlier deposits and palaeo-environmental sequences. | 3 |
| • Sensitivity to change | Military remains sensitive to change | 3 |
| • Amenity Value | Considerable value as an amenity educational resource, which could be developed in conjunction with the Two Forts Way, Bata factory and zone 111.3 | 3 |

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| HECA Zone 117_2 | East Tilbury Marshes |
|------------------------|-----------------------------|

Summary: This area historically comprised grazing marsh with a field system of small, irregular enclosures, most of which has now been quarried with extensive dumping. The coastal area was utilised during the Romano-British period for settlement and as an economic resource. A medieval sea wall was located in the south-west of the zone and inland the fields were criss-crossed with WWII anti-glider trenches.

Geology: The underlying bedrock of the zone consists of Upper Chalk, which is overlain by alluvium.

Historic Landscape Character: There is no settlement focus in this zone, which is defined on its southern border by the Thames. The rural landscape consisted of predominantly small, irregular fields with extensive drainage ditches that might suggest enclosure at an early date. This marshland reclamation would have provided extensive grazing, a characteristic feature of the Essex marshes. The zone has had extensive quarrying and dumping during the 20th century with the exception of the most easterly portion. Despite this extensive disturbance some possible early counter walls and track ways appear to survive.

Archaeological Character: The zone is predominantly characterised by evidence for Romano-British settlement and land-use along the coastal marshland area. At the south-west, below the present high tide level, there are remains of hut circles,

associated with much 1st-2nd century AD pottery. To their east, a shallow channel with traces of flanking stakes, running north-east – south-west, may have been a former trackway from the old river edge. Further pottery was found elsewhere along and close to the shoreline, and there is a possible 'Red Hill' Romano-British saltworking site in the north of the zone. A medieval sea wall was located in the south-west of the zone. The character of the zone is also partly defined by the remains of anti-glider trench, which appear as low earthworks or cropmarks forming crosses within the fields. The archaeological potential of the eastern part of this zone is likely to be significant, as may be the coastal zone. There is potential for Palaeo-environmental sequences.

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| • Diversity of historic environment assets | Roman occupation and historic grazing marsh | 2 |
| • Survival | Much of the area affected by quarrying and dumping, eastern end survives well | 1 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Roman occupation and coastal exploitation | 2 |
| • Archaeological Potential | Romano-British settlement and land-use in coastal area. Palaeo-environmental deposits | 2 |
| • Sensitivity to change | Limited areas of survival will be sensitive to change | 1 |
| • Amenity Value | Potential for the promotion and presentation of the historic environment with the neighbouring areas. | 1 |

HECA Zone 117_3 Low Street and West Tilbury Marshes

Summary: This zone is partly characterised by the hamlet of Low Street, which developed around the secondary West Tilbury manor of Condovers. Beyond Low Street the zone is a rural area of small enclosed field systems on the grazing marsh to the south.

Geology: The underlying bedrock of the zone consists mostly of Upper Chalk, overlain by alluvium. This is bordered at the north by Thanet Formation Sandstone overlain by Taplow Gravel, Lynch Hill Gravel and colluvial head deposits.

Historic Landscape Character: The hamlet and Conservation Area of Low Street provides the focus of settlement focus in this zone. It developed around the secondary West Tilbury manor of Condovers, created in the 15th century, and Walnut Tree Cottage was the manor farm. The rural landscape consists of small, rectilinear fields with extensive drainage ditches on the grazing marsh to the south. There are several commons south-west of Low Street, some of which were dissected when the London, Tilbury & Southend Railway was built in the 19th century. The zone has not been developed to any extent during the 20th century although the construction of anti-glider trenches during WWII (see below) would have changed temporarily the character of the historic landscape. There are major power lines running north from Tilbury power station across this zone.

Archaeological Character: There are two potential Romano-British 'Red Hill' saltworking sites at the east of the zone and some Romano-British pottery was found in a gravel pit immediately south of Low Street. There are also a series of undated linear cropmarks in the north east corner of the zone, in fields to the north of Bucklands House. It is likely that there will be buried remains relating to the late medieval development of Low Street. The remains of anti-glider trenches appear as low earthworks or cropmarks forming crosses within fields. The archaeological potential of this zone could be significant, although much will depend upon the scale of the 20th century dumping on reclaimed marshes.

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| • Diversity of historic environment assets | Historic built environment assets and landscape features | 2 |
| • Survival | Relatively undisturbed soils, much of which is former grazing marsh. Relationship between Low Street and the grazing marsh | 3 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Some landscape features and contemporary built environment associations | 2 |
| • Archaeological Potential | Probably good survival of buried archaeological remains | 2 |
| • Sensitivity to change | Low Street built environment sensitive to change, as is historic enclosed landscape | 2 |
| • Amenity Value | Nature of historic settlement and grazing marsh could be promoted and presented in conjunction with neighbouring zones. | 2 |

HECA Zone 117_4

Tilbury Marshes

Summary: This zone is bounded by the 20th century developments of Grays to the north-west, Tilbury to the south-east and Chadwell St Mary to the north, and by the London, Tilbury & Southend Railway line to the south-west. Most of the zone consists of ditched fields of historic grazing marsh. The potential for archaeological deposits in this zone is good.

Geology: The underlying bedrock of the zone consists mostly of Upper Chalk, with Thanet Formation Sandstone on the northern edge. These are overlain by alluvium.

Historic Landscape Character: Much of this zone is shown as grazing marsh in the Chapman and Andre map of 1777 and probably developed from the medieval period onwards. It is characterised by a rectilinear pattern of fields divided by drainage ditches. The western part of the zone was radically altered during the 20th century by a pocket of development from Grays, by railway works to the south and by the construction of the A1089 trunk road, which runs north-south through the zone.

Archaeological Character: The zone has received a limited amount of archaeological assessment but has the potential to hold significant deposits of

archaeological evidence for occupation and land-use and palaeo-environmental sequences. There are WWII gun emplacements (destroyed) and remains of WWII anti-glider trenches, which appear as low earthworks or cropmarks forming crosses within fields.

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| • Diversity of historic environment assets | Historic landscape of enclosed marshland, Second World War monuments | 2 |
| • Survival | Survival of historic grazing marsh is good and survival of below ground deposits is likely to be good | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Integrity of historic marshland features. World War II remains | 2 |
| • Archaeological Potential | Good potential for archaeological and palaeo-environmental deposits | 2 |
| • Sensitivity to change | Landscape and archaeological deposits are sensitive to change | 3 |
| • Amenity Value | Potential for promotion and presentation of the historic environment particularly of marshland development in association with neighbouring zones. | 2 |

HECA Zone 118_1

Tilbury Urban

Summary: This zone consists of the urbanised area of Tilbury, which has developed from the late 19th century. There is limited archaeological character within the zone, and the main historic characterisation rests with the 19th and 20th century process of urbanisation.

Geology: The underlying bedrock of the zone consists of Upper Chalk, which is overlain by alluvium.

Historic Urban Character: This zone consists of the urbanised area of Tilbury, located on the Chadwell grazing marshes. The town was originally developed in conjunction with the port of Tilbury, which opened in 1886, and grew during the 20th century, particularly after WWII. There were WWI anti-aircraft emplacements at the north of the town during.

Archaeological Character: A Lower Palaeolithic handaxe was found near the centre of the zone, with another handaxe and a scatter of worked flints in the south of the zone. A 3rd century AD Romano-British coin was also found within the town. The archaeological character of the zone is likely to be dependent on the extent of below-ground disturbance to any archaeological deposits caused by the 20th century development of the town. There may be possible for deeply buried palaeo-environmental deposits.

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| • Diversity of historic environment assets | Late 19th and 20th-century development linked to Tilbury Docks | 1 |
| • Survival | Poor survival due to urbanisation on | 1 |

| | | |
|----------------------------|--|---|
| | previous enclosed fields. Possible Palaeo-environmental sequences | |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | Late 19th and 20th-century development linked to Tilbury Docks | 2 |
| • Archaeological Potential | Low potential within urban area, with possible potential in open pockets. Possible Palaeo-environmental sequences | 1 |
| • Sensitivity to change | Late 19th and 20th-century development linked to Tilbury Docks will be sensitive to change | 2 |
| • Amenity Value | Potential for presentation and interpretation of social and economic development of the town and port. Potential for links with zone 111.3 | 2 |

HECA Zone 118_2 Tilbury Docks

Summary: This zone is defined by the area of Tilbury Docks. The docks were opened in 1886 and their development into a major shipping port during the 20th century has shaped the nature of this zone and the landscape surrounding it. Much of the earlier archaeological and historical character of the zone has been submerged by the docks. However, there is the potential for areas of Paleo-archaeological deposits to survive across the zone.

Geology: The underlying bedrock of the zone consists of Upper Chalk, overlain by alluvium.

Historic Landscape Character: The zone formerly consisted of Little Thurrock Marsh, which was subsequently reclaimed. Its historic landscape is now defined by Tilbury Docks which were built by the East and West India Docks Company in the 1880s and opened in 1886. In order to meet the growing needs of the areas, Tilbury Cottage Hospital was opened by John Passmore Edwards in 1896, close to the railway in the east of the zone. It was enlarged during the 1920s and 1930s but demolished in 1992. During the 20th century the docks grew into a major port and during WWII it was the assembly site for a pipeline to pump oil under the Channel to the allies after D-Day. Tilbury Docks was the landing point of the Empire Windrush which has become an iconic event with regard to the post war arrival of commonwealth immigrants to Britain. By 1972 the docks were the leading container port in Britain but have been subsequently overtaken by Felixstowe.

Archaeological Character: Construction works at the docks produced a number of finds, including two Mousterian handaxes and worked flint flakes dated to the Middle Palaeolithic, as well as Neolithic/Early Bronze Age burials and worked flint and two Romano-British burials. The zone also includes the site of brickworks owned by the author Daniel Defoe, operational between 1694 and 1703. The works were exposed in 1860, and were seen to comprise claypits, drying floors, foundations of kilns and other buildings, as described by William Lee, a biographer of Defoe. Although much

of the zone comprises made ground, those areas that have not been developed have archaeological potential relating both to prehistoric and Romano-British occupation, and to post-medieval and modern industrial developments. There is considerable potential for survival of Palaeo-environmental sequences.

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| • Diversity of historic environment assets | 19th and 20th century Docks | 1 |
| • Survival | Industrial archaeology of the docks and Palaeo-environmental deposits. | 2 |
| • Documentation | HER data, historic mapping, published sources | 2 |
| • Group Value Association | Limited to the 19 th and 20 th century docks | 2 |
| • Archaeological Potential | Palaeo-environmental deposits | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Promotion of the development of the docks. | 2 |

HECA Zone 118_3

Tilbury Fort and Power Station

Summary: This zone is characterised by the presence of Tilbury Fort and Tilbury Power Station. The 16th-20th century fort already acts as a learning and tourist resource and has been the subject of an extensive programme of investigation. Tilbury Power Station dominates the surrounding landscape and is an important example of mid-20th century industrial architecture.

Geology: The underlying bedrock of the zone consists of Upper Chalk, overlain by alluvium.

Historic Landscape Character: The historic landscape of this zone is dominated by Tilbury Fort and Tilbury Power Station. The first fort was constructed in the 16th century. The present fort is substantially that constructed in the late 17th century as artillery fortress designed by Sir Bernard De Gomme. It is the best preserved example of late 17th century military engineering in England. It was further extended and re-armed between 1861 and 1888. During WWII anti-aircraft guns were mounted on its south-east and north-west bastions. It is currently managed by English heritage and is open to the public.

The two Tilbury Power Stations, A and B, were built on made ground previously reclaimed from marsh and their construction obliterated the only historic farmstead in the zone – Marsh Farm. Tilbury A was planned by the County of London Electricity Supply Co. in 1947 and completed for CEGB in 1958. It is similar in layout to many mid-20th century power stations with boilers and related plant located in a long rectangular building, with a parallel turbine hall attached to one side. Tilbury B, completed in 1969, is much larger and is architecturally similar to other power stations of its period. The stations, each of which has a full complement of ancillary buildings, form part of the Thames corridor industrial landscape, and are considered to be of national importance although they are not listed.

In the north of the zone element of the grazing marsh survive (see 117.4).

Archaeological Character: The archaeological character of this zone is largely defined by the fort and power stations as described above. There has been archaeological investigations at the fort in advance of maintenance work by English Heritage, and this military complex remains a major military resource for further study. Archaeology in the area of the power station will have been mostly destroyed by the construction of foundations and made-ground but the built environment of the power station is an important historical and archaeological resource. This zone contains stratified palaeo-environmental deposits of critical importance for understanding the development of the Thames Estuary. The open ground to the north of the fort and power station may contain a range of archaeological sites and deposits.

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| • Diversity of historic environment assets | Palaeo-environmental deposits. Long term military usage and 20th-century industrial use | 3 |
| • Survival | Palaeo-environmental deposits, survival of previous fort phases and earlier archaeology. Built environment of power station | 3 |
| • Documentation | HER data, historic mapping, NMP, documentary sources, published reports | 3 |
| • Group Value Association | Post-medieval military and industrial associations | 3 |
| • Archaeological Potential | Palaeo-environmental deposits are extensive, study of military defences | 3 |
| • Sensitivity to change | Open landscape, palaeo-environmental deposits and fort sensitive to change | 3 |
| • Amenity Value | Learning and educational resource for military and commercial history of the site. Intellectual access to archaeological data through dissemination of research | 3 |

HECA Zone 119_1

Grays Chalk Quarries

Summary: This zone consists of extensive chalk quarries and brickworks, which operated between the 18th and 20th centuries. Some of this area has been developed with housing in the post-war period and part of it is a nature reserve.

Geology: The underlying bedrock of the zone consists of Upper Chalk with small areas of Thanet Formation Sandstone zone. These are overlain by Taplow Gravel at the south small areas of Black Park Gravel and colluvial head deposits elsewhere.

Historic Landscape Character: The historic character of this zone is defined to a large extent by the extensive chalk quarries and brickworks that covered its central and northern area. A 19th century gasworks was located at the former entrance to the quarries on London Road which were operational between 1853 and 1931. The southern part of the main brickworks site was developed for housing in the late 20th

century, while the area to the north has reverted to woodland with open areas and is now a designated nature reserve.

Archaeological Character: Quarrying activity has identified surviving Palaeolithic deposits which will extend beyond the quarried areas. Excavations in the west of the zone have revealed evidence of prehistoric and Romano-British activity. Most of the evidence consisted of pits, ditches and gullies related to a medieval rural settlement occupied between the 11th and 14th centuries. There are several deneholes in the zone. All were sealed by landscaping relating to construction of Belmont Castle in the 18th century, and the cultivation of allotments in the 20th century. The archaeological character of this zone is also defined by the former brickworks, of which relatively large areas have been left undisturbed in the middle of the zone.

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| • Diversity of historic environment assets | Palaeolithic and industrial remains | 2 |
| • Survival | Despite extensive quarrying there is reasonably good survival of Palaeolithic and industrial remains. | 2 |
| • Documentation | HER data, historic mapping, | 2 |
| • Group Value Association | Industrial sites | 2 |
| • Archaeological Potential | Good potential in the north and south of the zone and quarry sides | 2 |
| • Sensitivity to change | Surviving Palaeolithic deposits are sensitive to further development | 2 |
| • Amenity Value | Potential for promotion of the areas Palaeolithic and industrial heritage | 2 |

HECA Zone 119_2

Chadwell St Mary

Summary: This zone consists of the 20th century urbanised area of Chadwell St Mary, which expanded from the medieval village of Chadwell. There are also several Palaeolithic findspots throughout the zone, and a range of cropmarks outside the built-up areas. Excavations within the historic core of the settlement have yielded evidence of the Romano-British and Anglo-Saxon settlements.

Geology: The underlying bedrock of the zone consists of Sandstones of the Thanet Formation and Lambeth Group. These are overlain by Boyn Hill Gravel and areas of colluvial head deposits towards the south, with a small area alluvium on the southern border.

Historic Urban Character: The zone is characterised by the 20th century development of Chadwell St Mary, a settlement with Anglo-Saxon origins. The medieval village, centred on the parish church of St Mary which contains 12th-century elements within a predominantly 13th-15th century structure, was linear in form aligned on the main north-south road. The field system of small, irregular enclosures surrounding the village was largely obliterated by the 20th century development of the town, although there remain small pockets of undeveloped land within the zone.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and four handaxes have been found in the zone. There are also a number of mainly rectilinear cropmarks at the south-west that have been associated with Iron Age and Romano-British pottery, and there are cropmarks of two small enclosures at the north-east. Excavations within the historic core of Chadwell have revealed features belonging to Romano-British and Anglo-Saxon settlements, indicating the potential for more extensive archaeological deposits of these and later periods in the town, in particular outside of 20th century developed sites.

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| • Diversity of historic environment assets | Multi-period buried remains, core of historic village and 20 th century development. | 2 |
| • Survival | Survival of below ground deposits in open areas and in the area of the historic core. Limited survival of historic built environment. | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Relationship between the historic core and later expansion | 1 |
| • Archaeological Potential | Potential of survival in open areas and in the area of the historic core. | 2 |
| • Sensitivity to change | Limited | 1 |
| • Amenity Value | Potential for use of archaeological information to enhance appreciation of the historic development of the zone | 2 |

HECA Zone 119_3 Little Thurrock

Summary: This zone consists of an area defined by the medieval settlement of Little Thurrock within the urbanised area of Grays, which has engulfed the medieval settlement.

Geology: The underlying bedrock of the zone consists of Upper Chalk at the south and Thanet Formation Sandstone at the north. These are overlain by Taplow Gravel at the south bordered by Ilford Silt, with Boyn Hill Gravel at the north-west and colluvial head deposits at the north-east.

Historic Urban Character: This zone currently forms a western portion of the 20th century urban area of Grays, incorporating Little Thurrock. The medieval settlement of Little Thurrock occupied the southern part of the zone, and the surviving parish church of St Mary includes 12th-15th century fabric. The open fields to the north were enclosed during the 15th or 16th centuries.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and two handaxes have been found in the north of the zone. Although the lack of archaeological investigation in this zone makes it hard to define its character, it is likely that the urban development will have had a negative impact

on much of the zone's archaeological potential. However, there may be undisturbed deposits at deeper stratigraphic levels.

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| • Diversity of historic environment assets | Limited diversity | 1 |
| • Survival | Limited survival | 1 |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | Limited Palaeolithic group value | 1 |
| • Archaeological Potential | Little potential apart from below ground deposits associated with the historic settlement of Little Thurrock around the church | 1 |
| • Sensitivity to change | Limited sensitivity due to modern development | 1 |
| • Amenity Value | Very limited | 1 |

HECA Zone 119_4 Grays

Summary: This zone consists of part of the urbanised area of Grays, which has developed from the late 19th century. There is limited archaeological character within the zone, and the main historic characterisation rests with the 20th century process of urbanisation.

Geology: The underlying bedrock of the zone consists of Upper Chalk at the south-west, Thanet Sandstone Formation in the central and eastern areas and Lambeth Group Sandstone at the north. These are overlain, over much of the zone by Boyn Hill Gravel, with area of colluvial head deposits at the south-west.

Historic Urban Landscape: This zone consists of part of the urbanised area of Grays which developed during the 20th century. This was formerly a rural landscape of fields that were probably enclosed at an early date. A smallpox isolation hospital was built in 1893 and extended in 1913, the remains of which are incorporated within the current Thurrock Hospital.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and a single handaxe has been found in the zone. Although there are a number of other prehistoric findspots, the scale of 20th century development within the zone limits the likelihood of any extensive surviving deposits. The most likely area may be open grounds in the area of Thurrock Hospital.

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| • Diversity of historic environment assets | 20th-century built environment | 1 |
| • Survival | Poor survival due to urbanisation | 1 |
| • Documentation | HER data, historic mapping | 1 |
| • Group Value Association | Few associations | 1 |
| • Archaeological Potential | Low potential except in open areas | 1 |
| • Sensitivity to change | Limited sensitivity due to modern development | 1 |
| • Amenity Value | Limited potential | 1 |

HECA Zone 119_5**Hangman's Wood**

Summary: This zone, lying between the urban environments of Chadwell St Mary and Little Thurrock, contains a band of relatively undisturbed land through the central area currently used as school recreation grounds, parts of which have yielded archaeological deposits. The small area of deciduous woodland known as Hangman's Wood contains an important landscape of denehole chalk quarries.

Geology: The underlying bedrock of the zone consists of a small area of Upper Chalk at the south-west, and Thanet Formation Sandstone over the rest of the zone. These are overlain by Boyn Hill Gravel over the central and northern parts, with areas of colluvial head deposits towards the south.

Historic Landscape Character: This zone comprises a semi-urban environment between Chadwell St Mary and Little Thurrock. 19th century OS maps show an array of small irregular fields probably representing early heathland assarts, as demonstrated by existing place-names such as Terrel's Heath. These fields no longer survive. Hangman's Wood is a small pocket of surviving deciduous woodland that incorporates some important examples of deneholes, which were sunk to exploit the seams of Upper Chalk Formation during the medieval and post-medieval periods. The zone is criss-crossed with recent main roads, including the A1089.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and there have been several finds of Palaeolithic handaxes. Romano-British activity in this area is indicated by burials and kilns and there is a strong possibility of further kiln sites in the zone. There are also the scheduled deneholes in Hangman's Wood. The zone incorporates recreation grounds around the schools in the centre of the zone which have not been extensively developed and have the potential for undisturbed archaeological deposits.

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| • Diversity of historic environment assets | Below grounds archaeological deposits, ancient woodland and deneholes | 2 |
| • Survival | Poor survival in built-up areas but potentially good survival elsewhere | 2 |
| • Documentation | HER data, historic mapping | 2 |
| • Group Value Association | Deneholes | 2 |
| • Archaeological Potential | Low potential in urban areas but good potential in Hangman's Wood and recreation grounds | 2 |
| • Sensitivity to change | Limited sensitivity in urban areas but Hangman's Wood and recreation grounds sensitive to change | 2 |
| • Amenity Value | Potential for promotion and presentation of the historic environment particularly in regard the deneholes. | 2 |

HECA Zone 119_6**Old Grays**

Summary: This zone contains the medieval core of the settlement of Grays, which has been developed during the 19th and 20th centuries with housing, a railway line and waterfront industrialisation. The archaeological character of the zone is partly defined by important Palaeolithic activity, but much of the archaeology will have been destroyed by development.

Geology: The underlying bedrock of the zone consists mostly of Upper Chalk, apart from an area of Thanet Formation Sandstone at the north-east. These are overlain by a series of drift deposits, consisting of, from north to south, Boyn Hill Gravel, colluvial head deposits, Ilford Silt, Taplow Gravel, alluvium and tidal river deposits.

Historic Urban Character: This zone contains the medieval settlement of Grays, the historic centre of which still contains its parish church containing some 13th-century fabric. The settlement was linear, aligned north-south, with access to the river at the south. A combination of the 19th century railway construction, the industrialisation of the riverside and the 20th century development of Grays has radically changed the character of the landscape. 19th and 20th century brickworks at the east of the zone have been redeveloped and incorporated within the conurbation of Grays, which also contains examples of 'scattered houses' for poor law children that are relatively rare in Essex and help define the history of the town.

Archaeological Character: The majority of the zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and the zone contains two important Palaeolithic sites, although these have been disturbed by extraction and development. Any future development close to these areas may allow for further discoveries of deeply stratified deposits. Otherwise, the archaeological character of the zone is defined by its built environment. Industrial works along the river and urban expansion will have had negative impacts on archaeological deposits, although there may survive pockets of undisturbed stratigraphy close to the waterfront relating to the development of the historic settlement of Grays.

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| • Diversity of historic environment assets | Little diversity mainly dominated by 19 th and 20 th century development. | 1 |
| • Survival | Extensive disturbance, but Palaeolithic potential remains | 1 |
| • Documentation | HER data, historic mapping, | 2 |
| • Group Value Association | 19 th and 20 th century development | 2 |
| • Archaeological Potential | Possible Palaeolithic and palaeo-environmental deposits and medieval remains relating to Grays | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Potential to enhance understanding of the development of the town in the 19 th and 20 th century. See also zones 118.1 and 111.3. | 2 |

HECA Zone 120_1 Brannett's Wood and Mar Dyke Valley

Summary: This zone is defined by an area of woodland sloping down to the Mar Dyke between South Ockenden and the A13. Palaeo-environmental evidence along the valley points to woodland clearance and cultivation from the Early Neolithic onwards, and the Mar Dyke may have been a navigable watercourse.

Geology: The underlying bedrock consists of London Clay Mudstone at the north, bordered by bands of Harwich Formation Sand and Gravel and Lambeth Group Sandstone and Mudstone across the centre of the zone, and Thanet Formation Sandstone at the south. There is a small area of Upper Chalk at the south-east. These are overlain, from the north, by Lynch Hill Gravel and colluvial head deposits, with alluvium along the Mar Dyke.

Historic Landscape Character: This zone consists of a small area of semi-ancient woodland bisected by the Mardyke Valley with its distinctive valley bottom pasture of ancient origin. In the early 20th century a railway line was cut through the zone and the Davy Down pumping station, a 1920s borehole water-pumping works lies in the east of the zone. The extent of the woodland has not changed much in the last century although it has been encroached on at the north by modern housing on the southern edge of the 20th century development of South Ockenden. The zone is an important 'green lung' between South Ockenden and the modern retail landscape bordered by the A13.

Archaeological Character: Palaeo-environmental evidence in the Mar Dyke valley obtained from alluvial deposits in the west of the zone points to a decrease in woodland from the early Neolithic period, accompanied by a growth of cereal cultivation, and occasional finds of flint and charcoal have been made during archaeological trenching. From the Iron Age to the Saxon period the river valley appears to have been deep enough in this zone to navigate from the Thames. It is likely that this zone, with the exception of the built-up area in the north, will have a high palaeo-environmental potential to yield data about its past occupation and landuse.

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| • Diversity of historic environment assets | Woodland and valley bottom landscape together with Davy Down and Palaeo-environmental remains. | 2 |
| • Survival | Good landscape and palaeo-environmental survival | 3 |
| • Documentation | HER data, NMP, historic mapping, published reports | 3 |
| • Group Value Association | Good landscape association | 3 |
| • Archaeological Potential | Good potential for buried archaeological, including Palaeo-environmental deposits. Potential for earthwork survival in some areas | 3 |
| • Sensitivity to change | This zone is sensitive to change | 3 |
| • Amenity Value | Considerable potential as a learning resource with regard to landscape history and Palaeo-environmental deposits linked to the wider | 3 |

HECA Zone 120_2**Aveley**

Summary: This zone consists of the medieval settlement of Aveley, which has expanded greatly during the 20th century. Although modern developments, including the M25/A13 junction which dominates the eastern half of the zone, will have had a negative impacts, the presence of a medieval moated site and a number of denehole quarries indicates the archaeological potential of undeveloped areas.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone at the north, bordered by a band of Harwich Formation Sand and Gravel, with Lambeth Group Sandstone and Mudstone across the centre of the zone, and Thanet Formation Sandstone at the south. These are overlain by areas of Black Park Gravel and Lynch Hill Gravel with intervening areas of colluvial head deposits.

Historic Landscape: This zone contains the historic settlement of Aveley, which contains the parish church of St Michael which has 12th century fabric, as well as several late medieval houses. The open fields around the village were enclosed during the 16th century, creating fields that were larger than usual for this part of Essex. Aveley expanded significantly during the 20th century and the M25/A13 junction has had a large impact upon the landscape in the east of the zone.

Archaeological Character: Construction of the A13 has revealed considerable potential for Pleistocene deposits. Finds of prehistoric flint and charcoal have been made during archaeological trenching at the north-east of the zone. Medieval occupation is indicated by a medieval moated site and there is potential for deposits associated with the medieval settlement of Aveley itself. A number of post medieval deneholes are recorded to the east and south of Aveley.

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| • Diversity of historic environment assets | A wide range of archaeological and historic assets | 2 |
| • Survival | Despite recent development there is high potential in undeveloped areas. | 2 |
| • Documentation | HER data, Historic mapping, published reports | 2 |
| • Group Value Association | Pleistocene deposits, medieval occupation. | 2 |
| • Archaeological Potential | Low archaeological potential within built-up area but good potential on undisturbed land to the south and west of the zone. | 2 |
| • Sensitivity to change | Limited sensitivity except in undisturbed land | 2 |
| • Amenity Value | Potential for enhanced understanding of the Pleistocene deposits in relation to other zones. | 2 |

HECA Zone 120_3**South Stifford**

Summary: This zone contains the 20th century developments of South Stifford and West Thurrock. Although most of the zone has been impacted by the expansion of the built-up areas and by large-scale aggregate extraction, pockets of archaeological deposits may survive.

Geology: The underlying bedrock consists mostly of Upper Chalk with areas of Thanet Formation Sandstone in the centre and north of the zone. These are overlain by a band of Taplow Gravel across the south, with small areas of Boyn Hill, Lynch Hill and Black Park Gravels, and colluvial head deposits, elsewhere in the zone.

Historic Landscape: This zone was formerly characterised by a rectilinear field system typical of the area. The central and north east areas of the zone, subject to extensive aggregate extraction, now comprise a relatively open landscape of former quarries including a major nature reserve 'Chafford Gorges'. The north west and southern parts of the zone consists of recently built housing development.

Archaeological Character: Important Palaeolithic deposits have been identified and recorded in this zone. Although there has been extensive quarrying and residential development there are unquarried areas and quarry edges which contain significant deposits.

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| • Diversity of historic environment assets | Limited diversity | 1 |
| • Survival | Despite poor survival in majority of zone due to expansion of built-up environment and aggregate extraction there are significant Palaeolithic deposits. | 2 |
| • Documentation | HER data, Published reports | 2 |
| • Group Value Association | Palaeolithic deposits | 2 |
| • Archaeological Potential | High potential in unquarried and quarry edges. | 2 |
| • Sensitivity to change | Unquarried and quarry edges highly sensitive | 2 |
| • Amenity Value | Good potential for dissemination of internationally important Palaeolithic/geological deposits linked to the nature reserve. | 2 |

HECA Zone 120_4

North Stifford and Mardyke Valley

Summary: This zone contains the historic settlement of North Stifford, which lies on the south side of the Mar Dyke valley, between the urbanised areas of Grays and South Ockenden. There are a range of archaeological deposits and features within the zone dating from the Palaeolithic onwards and the potential for further archaeological and palaeo-environmental investigation is high.

Geology: The underlying bedrock consists of London Clay Mudstone at the north, bordered by bands of Harwich Formation Sand and Gravel and Lambeth Group Sandstone and Mudstone, and Thanet Formation Sandstone over the central and southern parts. There are small areas of Upper Chalk at the south-east and south-west. These are overlain by Lynch Hill Gravel, and a small area of Boyn Hill Gravel at the east, with colluvial head deposits mostly flanking the alluvium in the Mar Dyke Valley.

Historic Landscape Character: This zone contains the historic settlement of Stifford, which has Anglo-Saxon origins. The village retains its historic character, and contains several important buildings, including its parish church incorporating 12th century fabric. The Mar Dyke is a major tributary of the Thames, which has ancient woodland on its slopes and an ancient system of managed valley bottom pasture represented by a series of ditched enclosures.

Archaeological Character: A Lower Palaeolithic handaxe has been found close to Stifford. Holocene alluvial deposits within the Mar Dyke valley have produced palaeo-environmental evidence suggesting a decrease in the woodland and the growth of cereal cultivation from the early Neolithic period. The archaeological character of the zone is also represented by cropmarks indicating ring ditches, linear ditches and rectangular enclosures. There is evidence of settlement to the south-east of Stifford, occupied from the Iron Age through to the early Saxon period, during which time the river valley appears to have been deep enough in this zone to navigate from the Thames. Despite the construction of the A13 passing through the south of the zone, it has a high potential for palaeo-environmental and archaeological deposits relating to continuous occupation.

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| <ul style="list-style-type: none"> Diversity of historic environment assets | Range of assets from several periods including settlement patterns, diverse field systems reflecting differing use of Mardyke Valley and surrounding area. Potential for extensive buried remains. | 3 |
| <ul style="list-style-type: none"> Survival | Good survival likely particularly in the Mardyke valley | 2 |
| <ul style="list-style-type: none"> Documentation | HER data, NMP, published reports | 3 |
| <ul style="list-style-type: none"> Group Value Association | Assets associated with the Mardyke and the settlement of North Stifford. | 3 |
| <ul style="list-style-type: none"> Archaeological Potential | Good potential especially for palaeo-environmental deposits in Mar Dyke Valley and below ground remains | 3 |
| <ul style="list-style-type: none"> Sensitivity to change | The zone is sensitive to any type of development | 3 |
| <ul style="list-style-type: none"> Amenity Value | Potential for exploring the archaeology and history of this zone in relation to the wider area. | 3 |

HECA Zone 120_5

Lower Mar Dyke

Summary: This zone contains an ancient system of managed valley bottom pasture represented by a series of ditched enclosures on either side of the Mar Dyke. The east of the zone has been heavily impacted by aggregate extraction and the

construction of the M25, but the western half retains its archaeological and historical integrity, and has a high archaeological and palaeo-environmental potential.

Geology: The underlying bedrock of the zone consists mainly of Upper Chalk at the south with a band of Thanet Formation Sandstone at the north, with Lambeth Group Sandstone and Mudstones on its northern edge. These are overlain by areas of Taplow Gravels and Lynch Hill Gravel, with colluvial head deposits mostly flanking the alluvium in the Mar Dyke Valley.

Historic Landscape: This zone consists of a shallow valley of the Mar Dyke, a major tributary of the Thames, with ancient woodland on its slopes and managed valley bottom pasture. A sequence of small, enclosed fields running along either side of the Mardyke, as shown on 19th century OS maps, are still partially represented by drainage ditches and represent an ancient system of managed valley bottom pasture. The landscape in the eastern half of the zone has been impacted by the construction of the M25.

Archaeological Character: Palaeo-environmental evidence from the Mar Dyke valley points to a decrease in woodland from the early Neolithic period, accompanied by a growth of cereal cultivation. There are a series of pit and ditch cropmarks in the zone, and the remains of ditched enclosures on the valley floor indicate the management of riverside pasture. Although aggregate extraction and road construction has destroyed much of the archaeological potential in the eastern part of the zone, there remains high potential in the western part both for palaeo-environmental data and archaeological deposits relating the zone's past occupation and landuse.

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| • Diversity of historic environment assets | Woodland, managed pasture, cropmarks | 2 |
| • Survival | Good palaeo-environmental survival | 3 |
| • Documentation | HER data, historic mapping, NMP, published reports | 3 |
| • Group Value Association | Historic landscape | 3 |
| • Archaeological Potential | Good potential for buried archaeological, including Palaeo-environmental deposits. Potential for earthwork survival in some areas | 3 |
| • Sensitivity to change | This zone is sensitive to change | 2 |
| • Amenity Value | Considerable potential as a learning resource with regard to landscape history and Palaeo-environmental deposits linked to the wider presentation of the Mardyke | 3 |

HECA Zone 120_6

South Ockenden

Summary: This zone contains the settlement of South Ockenden, which contains an historic core but which expanded during the 20th century to fill the western half of the zone. The main character of the zone derives from the range of cropmarks that

survive both within and without the built-up area, although these have been affected by extensive quarrying.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Lynch Hill Gravel over much of the zone, with an area of Boyn Hill Gravel at the north-east and colluvial head deposits flanking the Mar Dyke valley to the south-east.

Historic Landscape Character: This zone contains the settlement of South Ockenden, originally an Anglo-Saxon settlement located around a crossroads in the northern tip of the zone. In the eastern half of the zone, in areas not impacted by extensive gravel and clay extraction, there are remnants of an historic field system comprising small and irregular enclosures. During the 20th century the built-up area of South Ockenden expanded to cover the entire western half of the zone. The site of a 1930s psychiatric hospital in the north-east of the zone is now residential development.

Archaeological Character: The archaeological character of the zone is defined in part by a series of cropmarks both within and outside the built-up area. These include a possible Neolithic mortuary enclosure, a number of ring ditches, as well as pits and enclosures. There are also woodland boundary banks and the remains of WWII slit trenches. Despite much of the zone quarried and the expansion of South Ockenden, this zone has the potential to contain archaeological deposits within its pockets of undisturbed or partially disturbed land.

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| <ul style="list-style-type: none"> Diversity of historic environment assets | Limited diversity in surviving remains | 1 |
| <ul style="list-style-type: none"> Survival | Negative impact of quarrying and built-up area, but good survival in pockets of undisturbed land, however these are limited | 1 |
| <ul style="list-style-type: none"> Documentation | HER data, historic mapping, Excavation reports, NMP | 2 |
| <ul style="list-style-type: none"> Group Value Association | Cropmark evidence | 2 |
| <ul style="list-style-type: none"> Archaeological Potential | Good potential in undisturbed areas, however these are of limited extent | 1 |
| <ul style="list-style-type: none"> Sensitivity to change | Limited sensitivity | 1 |
| <ul style="list-style-type: none"> Amenity Value | Some potential linked to neighbouring areas | 2 |

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| HECA Zone 121_1 | West Thurrock Marshes |
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Summary: This zone contains a modern industrial and commercial waterside development built on made ground covering the whole zone. There is a fine medieval church and an important disused 1950s power station. The zone is visually dominated by the presence of the Queen Elizabeth Bridge.

Geology: The underlying bedrock of the zone consists of Upper Chalk Formation, which is overlain with alluvium.

Historic Landscape Character: The zone, which contains the medieval church of St Clement, possibly associated with medieval settlement, comprised reclaimed marshland that was enclosed into rectilinear fields running north south in the western part of the zone and more irregular fields in the east. The zone also contains a derelict 19th century paper mill. The zone is predominantly composed of industrial and commercial areas along the waterfront dating to the post-WWII period. The Queen Elizabeth Bridge provides the main crossing for the clockwise M25 and is visually dominant. The industrial complex includes a 1950s power station, closed in 1994, that is of national importance due to its unusual design.

Archaeological Character: A Lower Palaeolithic handaxe was discovered in the north-west of the zone, but the archaeological character of the zone, defined in part by the remains of the medieval St Clement's church and potential buried medieval remains associated with it has been impacted by the 20th century industrial developments built on made ground which covers almost the entire zone, whilst this would have caused considerable disturbance there is the potential for survival of palaeo-environmental deposits.

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| • Diversity of historic environment assets | Medieval occupation, palaeo-environmental remains and modern industrial development. | 2 |
| • Survival | Generally poor survival due to modern disturbance | 1 |
| • Documentation | HER data, NMP, published reports | 2 |
| • Group Value Association | Some contemporary associations for 20th-century industrial buildings | 1 |
| • Archaeological Potential | Potential for palaeo-environmental and medieval deposits | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | The church could provide a focus for dissemination of information on the local historic environment. | 2 |

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| HECA Zone 121_2 | Lakeside Retail Park |
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Summary: This zone consists of the Lakeside Retail Park and associated depots. The park was constructed in the base of extensive quarrying.

Geology: The underlying bedrock of the zone consists of Upper Chalk. This is overlain by Taplow Gravel at the south and the north-west corner, and by Lynch Hill Gravel around the northern edge.

Historic Landscape Character: This zone historically contained a field system comprised of long, thin, rectilinear fields. The area has been extensively quarried. Industrial buildings at the south-west of the zone include a 19th century cement works, and the zone is now dominated by the modern Lakeside Retail Park.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and a Lower Palaeolithic handaxe was discovered in the south of

the zone. The Palaeolithic remains were recorded during 19th and 20th century quarrying. There is potential for surviving deposits in unquarried areas and quarry edges.

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| • Diversity of historic environment assets | Little diversity | 1 |
| • Survival | Poor survival due to extensive quarrying. | 1 |
| • Documentation | HER data, published reports | 2 |
| • Group Value Association | Few associations | 1 |
| • Archaeological Potential | Palaeolithic and palaeo-environmental potential | 2 |
| • Sensitivity to change | Limited sensitivity except in quarry edges and unquarried edges | 1 |
| • Amenity Value | Potential for promotion of wider understanding of internationally significant remains in association. with other zones. | 2 |

HECA Zone 121_3

Greensands Quarries

Summary: This zone, which consists of a partially industrialised landscape to the east of Purfleet, is characterised by numerous Palaeolithic sites, and there is good archaeological potential in the surviving areas of undeveloped land.

Geology: The underlying bedrock of the zone consists of Upper Chalk, which is overlaid by Lynch Hill Gravel and Taplow Gravel at the north.

Historic Landscape Character: This zone, to the east of Purfleet, was characterised by a rectilinear field system between the Mar Dyke to the North and the Marshland of the Thames Estuary to the South. This has been largely destroyed by development and extensive quarrying in the post medieval period. The historic built environment includes the important 17th century High House farm complex and a late 19th century cement works.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains from the Lower and Middle Palaeolithic, and its archaeological character is largely defined by the large amount of Palaeolithic material that has been found within it. A number of assemblages of flint tools and environmental evidence has been recovered, especially from the areas of Greensands Quarries (now partly covered by an industrial depot) and along the route of the Purfleet Bypass. Areas of the zone may well contain further archaeological and palaeo-environmental evidence, but it is likely that most archaeological deposits have been destroyed by aggregate extraction and the built-up area. Recent excavations in advance of CTRL have demonstrated that unquarried areas contain complex multi-period archaeological deposits.

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| • Diversity of historic environment assets | Palaeolithic, and other remains in unquarried areas. Some built heritage assets | 2 |
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| • Survival | Poor survival in quarried areas. Some survival in unquarried areas including quarry edges | 2 |
| • Documentation | HER data, NMP, excavation data, published reports | 2 |
| • Group Value Association | Palaeolithic group associations | 3 |
| • Archaeological Potential | Potential for further palaeo-environmental and other deposits | 2 |
| • Sensitivity to change | Landscape has limited sensitivity but palaeo-archaeological deposits are sensitive | 2 |
| • Amenity Value | Potential for wider understanding of the areas internationally important Palaeolithic remains and industrial history | 2 |

HECA Zone 121_4

Purfleet

Summary: This zone contains the small medieval Thames side settlement of Purfleet, which developed during the 18th century after the location here of a military magazine. Despite much 20th century development, the zone retains areas of undisturbed land and an important historic built environment.

Geology: The underlying bedrock of the zone consists of Upper Chalk, which is overlain by a band of Lynch Hill Gravel in the centre of the zone, and alluvium around its north and south edges.

Historic Landscape Character: This zone contains the medieval settlement of Purfleet, which grew around a small trading post on the Thames. The landscape of the settlement was changed in the 18th century when a military magazine, with associated buildings including a chapel and a schoolhouse, was constructed. Significant elements of this built heritage are preserved within the Conservation Area. The village grew during the 20th century but still retains much of its 18th century character.

Archaeological Character: The archaeological character of the zone is partly defined by the presence of an 18th century military magazine, which contains both standing structures and below-ground archaeology. Industrial remains including limekilns associated with chalk quarrying are also present. Buried remains of the medieval period are also likely to be present. Despite some quarrying and 20th century development this zone retains undeveloped areas and both the waterfront and Conservation Area are of particular significance.

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| • Diversity of historic environment assets | Range of historic assets both buried archaeological deposits and built heritage | 2 |
| • Survival | Good survival outside of 20th-century development and quarried areas | 2 |
| • Documentation | HER data, NMP, historical sources | 2 |
| • Group Value Association | Military and industrial remains | 2 |

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| • Archaeological Potential | Potential outside 20th-century development and quarried areas | 2 |
| • Sensitivity to change | Purfleet Conservation Area and waterfront is highly sensitive. | 2 |
| • Amenity Value | Potential as an educational learning resource for post-medieval military and industrial activity | 3 |

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| HECA Zone 122_1 | Belhus Park |
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Summary: This zone contains an Iron Age and Romano-British occupations site as well as the 18th century landscaped park of Belhus House, designed by Capability Brown. The potential for the discovery of further archaeological deposits within this relatively undeveloped landscape, now a golf course, is high.

Geology: The underlying bedrock of the zone consists of London Clay, which is overlain across much of the zone by Lynch Hill Gravel, with colluvial head deposits at the north and west and a small area of alluvium at the north.

Historic Landscape Character: The majority of this zone is made up of the landscaped park of Belhus Park, created in the mid 18th century by Capability Brown to coincide with the restructuring of the late medieval house, which was demolished in the 1960s. Several of the landscaped features remain, including the serpentine lake, viewing mound and plantations. The park is now a landscaped golf course.

Archaeological Character: The archaeological character of the zone is defined in part by a complex of cropmarks in the east of the zone around the M25, where partial excavation has revealed a Iron Age and Romano-British occupation site. Otherwise, its character derives from the surviving features of the landscaped park. The zone has potential for the preservation of archaeological deposits relating to both main phases of activity.

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| • Diversity of historic environment assets | Significant range of historic landscape components | 2 |
| • Survival | Good survival except within vicinity of M25 | 2 |
| • Documentation | HER data, historic mapping, NMP, excavation reports, documentary sources | 2 |
| • Group Value Association | Contemporary post-medieval associations and non-contemporary occupation evidence from a range of periods | 3 |
| • Archaeological Potential | Good potential | 2 |
| • Sensitivity to change | Open landscape sensitive to development and/or change | 3 |
| • Amenity Value | Potential for interpretation, preservation and interpretation of the of the historic environment, particularly the historic landscape possible linked to the golf course | 3 |

HECA Zone 122_2**Brick Kiln Wood**

Summary: This zone consists of an area affected by quarrying, but which retains much of its pre-20th century character in its field systems. Lack of development outside the quarry areas and a series of cropmarks suggestive of occupation means there is the potential for undisturbed archaeological deposits.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain by Lynch Hill Gravel, colluvial head deposits and localised alluvium.

Historic Landscape Character: The northern and eastern part of the zone consists mainly of quarries that historically exploited the London Clay. The site of a former 19th century brickworks with associated kilns is now covered by Brick Kiln Wood, a small area of deciduous woodland. The enclosed fields are relatively large and uniform for this part of Essex and have changed little since the 19th century. A large part of Belhus Woods Country Park lies within this zone. The M25 crosses the eastern part of the zone and forms part of its eastern boundary.

Archaeological Character: A series of cropmarks of circular and rectilinear features have been recorded across much of the zone and include a probable Romano-British settlement site at the east. Evidence of the brick making industry survives within the present woodland. However the archaeological potential of the eastern and northern parts of the zone will have been impacted by 19th and 20th century quarry sites. Outside these areas, the presence of cropmarks indicate the zone's archaeological potential.

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| • Diversity of historic environment assets | Below ground archaeological deposits, and elements of historic landscape | 2 |
| • Survival | Poor survival within quarry areas, but good survival elsewhere | 2 |
| • Documentation | HER data, historic mapping, NMP, excavation reports | 2 |
| • Group Value Association | Limited | 1 |
| • Archaeological Potential | Low potential in quarry areas, good potential elsewhere, especially in vicinity of cropmarks | 2 |
| • Sensitivity to change | Surviving historic landscape is sensitive to development | 2 |
| • Amenity Value | Potential for interpretation and presentation of the historic environment linked to the Country Park | 3 |

HECA Zone 122_3**Bretts and Kennington**

Summary: This zone is characterised by important medieval buildings and the presence of multi-phase occupation sites. There has been extensive quarrying over all the central part of the zone, but in other areas the survival of archaeological deposits is likely to be good.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone. The overlying geology is complex, but consists of areas of Taplow Gravel, Lynch Hill Gravel, Boyn Hill Gravel and Black Park Gravel, with colluvial head deposits and localised alluvium.

Historic Landscape Character: The settlement pattern in this zone is one of dispersed farmsteads and there are two important moated medieval buildings – Bretts and Kennington in the northern part of the zone. The historic field system comprises small rectilinear enclosures which survives in places, but has been destroyed in the central part of the zone by 20th century quarrying and industrial buildings.

Archaeological Character: The zone lies within a Pleistocene River Valley, with the potential for deposits containing artefacts and faunal remains (the famous Aveley Elephants were excavated in the east of this zone in the 1960's) from the Lower and Middle Palaeolithic, and a Lower Palaeolithic handaxe has been found in the south of the zone. The archaeological character of the zone can be derived from the excavation of a site occupied from the Bronze Age through to the Saxon period indicating multi-period occupation. Also an Iron Age farmstead has been excavated. The western and eastern areas, have considerable potential for relatively undisturbed archaeological deposits, while the built environment and surrounding moated areas of the medieval farmsteads are important resources.

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| • Diversity of historic environment assets | Significant Palaeolithic remains and multi-period occupation sites from the Bronze Age. | 3 |
| • Survival | Good survival on undeveloped and unquarried land | 2 |
| • Documentation | HER data, Historic mapping NMP, excavation reports | 2 |
| • Group Value Association | Palaeolithic deposits and Medieval moated sites | 2 |
| • Archaeological Potential | Good potential in unquarried areas | 2 |
| • Sensitivity to change | High sensitivity to change outside quarried areas | 2 |
| • Amenity Value | Potential for promotion of the historic environment and internationally significant Palaeolithic remains in conjunction with the adjacent zones. | 2 |

HECA Zone 122_4

Warwick Wood

Summary: This small zone consists of two areas of ancient woodland and an intact 19th century field systems. It contains a prehistoric and Romano-British occupation site, and has a good potential for the survival of further archaeological and landscape features.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain over most of the zone by Lynch Hill Gravel, with an area of colluvial head deposits at the west.

Historic Landscape Character: There are two small areas of ancient deciduous woodland in the zone, Warwick Wood and White Post Wood, and the small enclosed field systems have been maintained from at least the 19th century. The woodland has recently been linked by new planting as part of the Thames Chase Community Forest. A ditched watercourse forms the southern boundary of the zone.

Archaeological Character: Excavations to the west of the zone, around Hunts Hill Farm, have yielded evidence for extensive multi-period occupation dating between the Bronze Age and the medieval period which extends into this zone identified by a series of rectilinear cropmarks. Archaeological deposits within the whole zone are likely to be well preserved due to lack of development and quarrying.

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| • Diversity of historic environment assets | Historic woodland and below ground archaeological deposits | 2 |
| • Survival | Good survival | 3 |
| • Documentation | HER data, historic mapping, NMP, excavation reports | 3 |
| • Group Value Association | Ancient woodland | 2 |
| • Archaeological Potential | Good potential for surviving deposits | 3 |
| • Sensitivity to change | This zone is sensitive to development | 3 |
| • Amenity Value | Potential to use the surviving elements of the historic landscape and settlement pattern together with archaeological evidence to present and promote the historic environment linked to Thames Chase | 3 |

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| HECA Zone 122_5 | Kemps Farm |
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Summary: This zone consists of areas of land to either side of the M25, which have been partly quarried during the 20th century.

Geology: The underlying bedrock of the zone consists of London Clay Mudstone, which is overlain over most of the zone by Lynch Hill Gravel, with small areas of colluvial head deposits and alluvium at the south-west.

Historic Landscape Character: Elements of the former rectilinear landscape survive, however, most of the historic field enclosures in this zone have been broken up to form larger fields, and its historic character has been further radically altered with the construction of the M25.

Archaeological Character: Apart from the medieval moated site in the west of the zone and the area of Kemps Farm, there is little archaeological data, and the zone includes extensive areas of worked and infilled ground where the archaeological potential will have been severely impacted. However, it is likely in unquarried areas archaeological deposits will survive.

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| • Diversity of historic environment assets | Little diversity | 1 |
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| • Survival | Reasonable survival in unquarried areas | 2 |
| • Documentation | HER data, historic mapping, NMP | 2 |
| • Group Value Association | Few associations | 1 |
| • Archaeological Potential | Unquarried areas may have below ground deposits | 2 |
| • Sensitivity to change | Limited sensitivity | 1 |
| • Amenity Value | Limited | 1 |

HECA Zone 126_1

Aveley Marshes

Summary: This area is a rare survival of medieval reclaimed marshland at the edge of the Thames on the outskirts of Greater London. Extensive prehistoric peat deposits are present beneath the grazing marsh and exposed in the adjacent inter-tidal zone. The area has a very high potential to contain significant archaeological and palaeo-environmental deposits.

Geology: The underlying bedrock of the zone consists of Upper Chalk in the southern half of the zone and Thanet Formation Sandstone to its north, with Lambeth Group Sandstone and Mudstone on the northern edge. These are overlain by small areas of Taplow Gravel and colluvial head deposits at the north-east and alluvium across the rest of the zone.

Historic Landscape Character: The zone includes a rare survival of grazing marsh within the inner Thames estuary on the outskirts of Greater London. Irregular fields bounded by drains, of medieval and early post-medieval origin, survive over much of the zone, although a number of modern land-uses have encroached on them. These include waste tips, silt lagoons and the disused shooting butts (largely demolished) of a large early 20th century rifle range. The aesthetics of the otherwise wide flat landscape are infringed upon by the Purfleet Bypass and the raised waste tips.

Archaeological Character: Extensive prehistoric peat deposits are present beneath the grazing marsh and exposed in the adjacent inter-tidal zone. Identified sites include prehistoric land surfaces associated with Mesolithic, Neolithic and Bronze Age remains. The medieval reclaimed marshland has survived relatively intact across most of the area and has been overlain by a 20th-century military firing range (shooting butts partially demolished), although 20th century silt lagoons have covered its western end. The area under the silt lagoons was not quarried prior to their construction and is likely to contain significant archaeological deposits. The landfill site to the northern part of the zone will have negatively impacted any archaeological remains there, and only palaeo-environmental deposits may survive at deep levels. Otherwise the area has a very high potential to contain significant archaeological and palaeo-environmental deposits.

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| • Diversity of historic environment assets | Range of medieval and post-medieval assets associated with marshes, military remains, prehistoric and palaeo-environmental deposits. | 3 |
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| • Survival | Survival is good, some disturbance in the north of the zone. Some military remains demolished. | 2 |
| • Documentation | HER data, NMP, documentary sources, fieldwork reports | 3 |
| • Group Value Association | Historic marshland, military remains | 3 |
| • Archaeological Potential | Good potential | 3 |
| • Sensitivity to change | A complex historic environment is highly sensitive to change | 3 |
| • Amenity Value | High potential to utilise the archaeological data as a local educational learning resource for marshland history linked to the presentation of the RSPB reserve | 3 |

Glossary of Terms Used

Bronze Age: The period from about 2,000 BC, when bronze-working first began in Britain, until about 700BC when the use of iron begins.

Cropmarks : Variations in the sub-soil caused by buried archaeological features results in different crop growth visible from the air.

Iron Age: The period from about 700 BC when iron-working arrived in Britain until the Roman invasion of 43 AD.

Medieval: This is the period between the Norman Conquest of England in 1066 and the dissolution of the monasteries in 1538.

Mesolithic: The period following the end of the last ice age and prior to the introduction of farming in the Neolithic.

Neolithic: The period from about 4000BC when farming and pottery manufacture began in Britain, until about 2000BC when metalworking began.

Paleolithic: The Palaeolithic period covers the time span from the initial colonisation of Britain, c. 700,000 years ago to the end of the last ice age c 10,000 years ago.

Post-medieval: The period from 1538-1900

Roman: The period of Roman occupation from 43AD through to 410AD.

Saxon: The period of Saxon occupation from 410 to 1066.

Scheduled Monument (Formerly Scheduled Ancient Monument): A site of nationally archaeological importance protected under the 1979 Ancient Monuments and Archaeological Areas Act.