



**DEVELOPMENT OF A SUSTAINABLE ENERGY  
PLANT.**

KEMSLEY PAPER MILL,

**ST REGIS PAPER COMPANY LIMITED & E.ON  
ENERGY FROM WASTE UK LIMITED**

ENVIRONMENTAL STATEMENT

CHAPTER 13:

ARCHAEOLOGY AND CULTURAL HERITAGE

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## 13. Introduction

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### 13.1 Introduction

13.1.1 This chapter assesses the likely significant effects on archaeology and cultural heritage of the proposed development of a Sustainable Energy Plant at Kemsley Paper Mill, Sittingbourne, Kent. Full details of the development proposed are presented in Chapter 4, which sets the basis against which this assessment has been conducted.

13.1.2 The proposed development area covers approximately 7ha and is bounded to the south west by the existing paper mill, to the northwest by open land, to the north east by open land and the Saxon Shore Way along the coast of the Swale and to the south east by a drain and a large spoil heap.

13.1.3 The proposed development site currently comprises an area of open ground with extensive dumping of demolition material and arisings from excavations

13.1.4 The solid geology of the proposed development area consists of London Clay (BGS 1:1,250 1996). The drift geology is alluvium. The north eastern part of the proposed development area and the area to the south of the drain forming the south eastern site boundary are recorded as landfill sites. Site investigation has indicated that the proposed development area is underlain by made ground to a depth of between 0.9 metres and 4.6 metres below current ground level.

### 13.2 Legislation and Planning Context

#### Guidance

13.2.1 PPG 16 Planning Policy Guidance: Archaeology and Planning (1990), provides advice to planning authorities regarding the protection of archaeology within the planning process. The guidance makes clear that prospective developers should make provision for the archaeological appraisal of a site when assessing a sites development potential (Section 2B, paragraph 18a, 1990).

13.2.2 PPG15 Planning and the Historic Environment (1994) deals with Conservation Areas, Listed Buildings, World Heritage Sites, Historic Parks and Gardens, Historic Battlefields and the wider historic landscape.

### **Legislation**

13.2.3 Listed buildings are protected under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990 which empowers the Secretary of State for the Department of Culture, Media and Sport (DCMS) to maintain a list of built structures of historic or architectural significance.

13.2.4 Scheduled Monuments are protected through the Ancient Monuments and Archaeological Areas Act 1979, which has been updated in the National Heritage Act 1983. Scheduled Monuments are maintained on a list held by the Secretary of State for DCMS. Any alterations or works to a Scheduled Monument (including archaeological investigation) requires Scheduled Monument Consent (SMC).

13.2.5 The Hedgerow Regulations 1997 includes guidelines that aim to protect hedgerows that have been assessed as 'important' in terms of criteria that include historical elements. Developments that would require the removal of any part of an 'important' hedgerow require a consent from the Local Planning Authority for that removal.

13.2.6 The key Regional and Local Planning Policies relevant to archaeology and cultural heritage are as follows:

### **Regional Planning Guidance**

#### **The South East Plan, Regional Spatial Strategy for the South East**

- POLICY BE6: Management of the Historic Environment
- POLICY NRM15: Location of Renewable Energy Development

#### **Swale Borough Local Plan, adopted February 2008.**

- Policy E14 Development Involving Listed Buildings
- Policy E15 Development Affecting a Conservation Area
- Policy E16 Scheduled Ancient Monuments and Archaeological Sites
- Policy E17 Historic Parks and Gardens

13.2.7 Details of the above policies are given at Appendix 13.2

### 13.3 Assessment Methodology

13.3.1 The study areas in paragraphs 13.3.1 and 13.3.2 are chosen on the basis of the distance from the proposed development outside which a significant adverse effect on the cultural heritage resource is unlikely to occur. The study area given in paragraph 13.3.3 is chosen so that consideration can be given to those remains which may inform the archaeological potential of the proposed development area. For designated cultural heritage resources of international and national significance (World Heritage Sites, Scheduled Monuments, Listed Buildings Grade I and II\*, Registered Parks and Gardens of Special Historic Interest Grade I and II\*, Registered Battlefields), the study area is a circle of 5 kilometre radius centred on the proposed development.

13.3.2 For designated historic environment resources of regional and local significance (Conservation Areas, Listed Buildings Grade II, Registered Parks and Gardens of Special Historic Interest Grade II, locally designated Parks and Gardens, locally listed buildings, locally identified historic landscape areas), the study area is a circle of 2.5 kilometre radius centred on the proposed development.

13.3.3 For buried archaeological sites that are recorded on the Historic Environment Record but not otherwise designated, the study area is a circle of 1 kilometre radius centred on the proposal site.

#### Desk Assessment

13.3.4 The desk based assessment (Appendix 13.1) comprised:

- Consultation with and an examination of information obtained from the Kent Historic Environment Record (HER).
- An examination of information on Scheduled Ancient Monuments, Registered Parks and Gardens and Registered Battlefields obtained from English Heritage.
- A review of relevant documentary and archival material held in the Kent Historic Environment Record and the Kent County Record Office.

13.3.5 A site visit was undertaken in June 2009 to:

- establish the presence of above ground archaeology, whether or not previously recorded.
- assess and validate data collected as part of the desk-based assessment;
- assess the topography and geomorphology of the proposed development area;
- inform an assessment of the site's context within the wider historic landscape.

13.3.6 The site visit also provided an indication of the suitability of any further survey technique. Site notes were made and digital photographs taken of the proposed development area and features, listed buildings etc. visited.

13.3.7 For the purposes of the assessment, archaeological periods are defined as follows:

- Prehistoric [comprising Lower Palaeolithic (pre 30,000 BC), Upper Palaeolithic (30,000 - 10,000BC), Mesolithic (10,000 - 3,500BC), Neolithic (3,500 - 2,000BC), Bronze Age (2,000 - 700BC) and Iron Age (700BC - AD43)]
- Roman (AD43 - AD450)
- Medieval (AD450 - AD1540)
- Post Medieval (AD1540 onwards)

### **Assessment of Resource Importance (Value) – Archaeological Remains**

13.3.8 There are no national government guidelines for evaluating the importance or significance (and hence the 'value' of cultural heritage resources). For archaeological remains, English Heritage has proposed a series of recommended (i.e. non-statutory) criteria for use in the determination of *national* importance when scheduling ancient monuments, and these are expressed in Annex 4 of *Planning Policy Guidance 16: Archaeology and Planning* (PPG 16). The criteria include period, rarity, documentation, group value, survival / condition, fragility / vulnerability, diversity and potential, and can be used as a basis for the assessment of the importance of historic remains and archaeological sites. However the annex also states that *'these criteria should not be regarded as definitive ..... rather they are indicators which contribute to a wider judgement based on the individual circumstances of a case'*.

13.3.9 The criteria described above could be used as a basis for the assessment of the importance of archaeological remains of less than national significance. However the categories of regional and district / local importance are less clearly established than that of national, and implicitly relate to local, district and regional priorities which themselves will be varied within and between regions. Local, district and regional research agenda may be available, and local or structure plans may also help.

13.3.10 Clearly a high degree of professional judgement is necessary to ensure the correct assessment of resource importance, guided by acknowledged standards, designations and priorities. It is also important to understand that buried archaeological remains may not be well-understood at the time of assessment, and can therefore be of uncertain value.

13.3.11 The most recent guidance from any national agency regarding cultural heritage and Environmental Impact Assessment is from the Highways Agency, and is expressed in Guidance Note 208/07 (August 2007) that now forms part of the Design Manual for

Roads and Bridges (DMRB, Volume II, section 3, part 2). Guidance Note 208/07 provides the following table as a guide for assessing the value of archaeological resources:

**Table 13.1: Factors for assessing the value of archaeological assets**

Very High	<ul style="list-style-type: none"> <li>• World Heritage Sites</li> <li>• Assets of acknowledged international importance</li> <li>• Assets that can contribute significantly to acknowledged international research objectives</li> </ul>
High	<ul style="list-style-type: none"> <li>• Scheduled Monuments</li> <li>• Undesignated assets of schedulable quality and importance</li> <li>• Assets that can contribute significantly to acknowledged national research objectives</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Designated or undesignated assets that contribute to regional research objectives</li> </ul>
Low	<ul style="list-style-type: none"> <li>• Undesignated assets of local importance</li> <li>• Assets compromised by poor preservation and/or poor survival of contextual associations</li> <li>• Assets of limited value, but with potential to contribute to local research objectives</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• Assets with very little or no surviving archaeological interest</li> </ul>
Unknown	<ul style="list-style-type: none"> <li>• The importance of the resource cannot be ascertained</li> </ul>

### **Assessment of Resource Importance (Value) - Historic Buildings**

13.3.12 For historic buildings, assessment of importance is usually based on the designations used in the Listed Building process. However where historic buildings are not listed, or where the listing grade may be in need of updating, professional judgement will be required.

13.3.13 The criteria used in establishing the value of historic buildings within the listing procedure include architectural interest, historic interest, close historic association (with nationally important people or events), and group value. Age and rarity are also taken into account; in general (where surviving in original or near-original condition)

all buildings of pre-1700 date are listed, most of 1700-1840 date are listed, those of 1840-1914 date are more selectively listed, and thereafter still more selectively listed. Specific criteria have been developed for buildings of 20<sup>th</sup> century date.

13.3.14 At a local level, buildings may be valued for their association with local events and people or for their role in the community.

13.3.15 Guidance Note 208/07 provides the following table as a guide for evaluating the value of historic buildings:

**Table 13.2: Guide for establishing the value of historic buildings**

Very High	<ul style="list-style-type: none"> <li>• Standing buildings inscribed as of universal importance as World Heritage Sites</li> <li>• Other buildings of recognised international importance</li> </ul>
High	<ul style="list-style-type: none"> <li>• Scheduled Monuments with standing remains</li> <li>• Grade I and II* Listed buildings</li> <li>• Other listed buildings that can be shown to have exceptional qualities in their fabric or historical association not adequately reflected in the listing grade</li> <li>• Conservation Areas containing very important buildings</li> <li>• Undesignated structures of clear national importance</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Grade II Listed Buildings</li> <li>• Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical association</li> <li>• Conservation Areas containing important buildings</li> <li>• Historic Townscape or built-up areas with historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> </ul>
Low	<ul style="list-style-type: none"> <li>• 'Locally listed' buildings</li> <li>• Historic (unlisted) buildings of modest quality in their fabric or historical association</li> <li>• Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• Buildings of no architectural or historic note; buildings of an intrusive character</li> </ul>
Unknown	<ul style="list-style-type: none"> <li>• Buildings with some hidden (i.e. inaccessible) potential for historic significance</li> </ul>

### **Assessment of Resource Importance (Value) - Historic Landscape**

13.3.16 The sub-topic of Historic Landscape is recognised as having significant overlaps with other topics such as Landscape and Townscape, and a multi-disciplinary approach to assessment is required. This is partially to avoid double-counting, and also to avoid duplication of effort. There are also significant overlaps with the other Cultural Heritage sub-topics; Archaeological Remains and Historic Buildings. The elements that are considered within those two sub-topics can make significant contributions to the historic landscape, and this latter subtopic should concentrate on the overall historic landscape character and its value rather than the individual elements within it.

13.3.17 All landscapes have some level of historic significance, as all of the present appearance of the urban and rural parts of England is the result of human or human-influenced activities overlain on the physical parameters of climate, geography and geology.

13.3.18 There are number of designations that can apply to historic landscapes, including World Heritage Sites (inscribed for their historic landscape value), Registered Parks and Gardens of Special Historic Interest, Registered Historic Battlefields, and Conservation Areas. Some local plans include locally designated Historic Landscape Areas, and Historic Parks and Gardens (or similar).

13.3.19 A model has been produced by the Council for British Archaeology whereby the historic landscape can be divided up into units that are scaled, from smallest to largest, as follows:

- **Elements** - individual features such as earthworks, structures, hedges, woods etc
- **Parcels** - elements combined to produce, for example farmsteads or fields
- **Components** - larger agglomerations of parcels, such as dispersed settlements or straight-sided field systems
- **Types** - distinctive and repeated combinations of components defining generic historic landscapes such as ancient woodlands or parliamentary enclosure
- **Zones** - characteristic combinations of types, such as Anciently Enclosed Land or Moorland and Rough Grazing
- **Sub-regions** - distinguished on the basis of their unique combination of interrelated components, types and zones
- **Regions** - areas sharing an overall consistency over large geographical tracts

The model described above can be used as the principal part of the overall assessment usually known as Historic Landscape Characterisation (HLC). However, although HLC has been undertaken for much of England, there is no significant

guidance or advice regarding the attribution of significance or value to identified historic landscape units.

13.3.20 Guidance Note 208/07 provides the following table as a guide for evaluating the value of historic landscape units:

**Table 13.3: Guide for evaluating Historic Landscape Character units**

Very High	<ul style="list-style-type: none"> <li>• World Heritage Sites inscribed for their historic landscape qualities</li> <li>• Historic landscape of international sensitivity, whether designated or not</li> <li>• Extremely well-preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s)</li> </ul>
High	<ul style="list-style-type: none"> <li>• Designated historic landscapes of outstanding interest</li> <li>• Undesignated landscapes of outstanding interest</li> <li>• Undesignated landscapes of high quality and importance, and of demonstrable national sensitivity</li> <li>• Well-preserved historic landscapes exhibiting exceptional coherence, time-depth, or other critical factor(s)</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Designated special historic landscapes</li> <li>• Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional sensitivity</li> <li>• Averagely well-preserved historic landscapes with reasonable coherence, time-depth, or other critical factor(s)</li> </ul>
Low	<ul style="list-style-type: none"> <li>• Robust undesignated historic landscapes</li> <li>• Historic landscapes with specific and substantial importance to local interest groups, but with limited sensitivity</li> <li>• Historic landscapes whose sensitivity is limited by poor preservation and/or poor survival of contextual associations</li> <li>• Robust historic landscapes</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• Landscapes with little or no significant historical interest</li> </ul>

### **Assessment of Impact Magnitude - Archaeological Remains**

13.3.21 The magnitude of impact is assessed without regard to the value of the resource. In terms of the judgement of the magnitude of impact, this is based on the principle

(established in PPG16) that preservation of the resource is preferred, and that total physical loss of the resource is the least preferred.

13.3.22 It is not always possible to assess the physical impact in terms of percentage loss, and therefore it can be important in such cases to try to assess the capacity of the resource to retain its character following any impact. Similarly, impacts on the setting of archaeological remains may also be more difficult to assess as they do not involve physical loss of the resource and may actually be reversible.

13.3.23 Additional methodology regarding the assessment of effects on settings is provided below.

13.3.24 Impact scales are defined (as in DMRB Volume 11, Section 3, Annex 7) thus:

<b>Major</b>	Change to most or all key archaeological elements, such that the resource is totally altered. Comprehensive changes to setting.
<b>Moderate</b>	Changes to many key archaeological elements, such that the resource is clearly modified. Considerable changes to setting.
<b>Minor</b>	Changes to key archaeological elements, such that the asset is slightly altered. Slight changes to setting.
<b>Negligible</b>	Very minor changes to elements or setting.
<b>No change</b>	No change.

### **Assessment of Impact Magnitude - Historic Buildings**

13.3.25 The magnitude of impact is assessed without regard to the value of the resource, so the total destruction of an insignificant building has the same degree of impact as the total loss of a high value building. In terms of the judgement of the magnitude of impact, this is based on the principle that preservation of the resource and its setting is preferred, and that total physical loss of the resource is the least preferred.

13.3.26 Impacts on the setting of historic buildings may include vibration, noise and lighting issues as well as visual impacts, and may be reversible. Additional methodology regarding the assessment of effects on settings is provided below.

13.3.27 Impact scales are defined (as in DMRB Volume 11, Section 3, Annex 7) thus:

<b>Major</b>	Change to key historic building elements, such that the resource is totally altered. Total change to the setting.
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<b>Moderate</b>	Change to many key historic building elements, such that the resource is significantly modified. Changes to the setting of an historic building, such that it is significantly modified.
<b>Minor</b>	Changes to key historic building elements, such that the asset is slightly different. Change to setting of an historic building, such that it is noticeably changed.
<b>Negligible</b>	Slight changes to historic buildings elements or setting that hardly affect it
<b>No change</b>	No change to fabric or setting

### **Assessment of Impact Magnitude - Historic Landscape**

13.3.28 Historic landscapes cannot be destroyed or damaged but impacts on them can change their character. Impacts should be assessed using evaluated historic landscape character units, not the elements/parcels/components that contribute towards the character (see above). There may be impacts on the setting of identified units, especially with regard to designated historic landscapes. Additional methodology regarding the assessment of effects on settings is provided below.

13.3.29 Impact scales are defined (as in DMRB Volume 11, Section 3, Annex 7) thus:

<b>Major</b>	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
<b>Moderate</b>	Changes to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character.
<b>Minor</b>	Changes to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited changes to historic landscape character.
<b>Negligible</b>	Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.

**No change** No change to elements, parcels or components; no visual or audible changes; no changes arising from amenity or community factors.

### Significance of Effects

13.3.30 The significance of effects is a combination of the value of the resource or asset and the magnitude of impact on that resource or asset. Effects can be adverse or beneficial. Beneficial effects are those that mitigate existing impacts and help to restore or enhance heritage assets, therefore allowing for greater understanding and appreciation. In line with Guidance Note 208/07 the following matrix is used for all three sub-topics.

**Table 13.4: Cultural Heritage: Significance of Effects Matrix**

VALUE / SENSITIVITY	MAGNITUDE OF IMPACT				
	No Change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate/ Large	Large or Very Large	Very Large
High	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/ Very Large
Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate
Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight

13.3.31 Where the matrix provides a split in the significance of effects, e.g. Moderate/Slight, the assessor will exercise professional judgement in determining which of the levels of significance is more appropriate.

13.3.32 Moderate or greater effects are considered to be significant.

## Settings

13.3.33 The issues surrounding the identification of the 'setting' of cultural heritage features, and the nature and magnitude of impacts and consequently effects on such 'settings', have been subject to much recent debate within the historic environment profession. Legislation and guidance makes reference to the desirability of preserving or not adversely affecting 'settings', but the term has never really been clearly defined.

13.3.34 English Heritage note that 'Setting' is an established concept that relates to the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. Definition of the setting of a significant place will normally be guided by the extent to which material change within it could affect (enhance or diminish) the place's significance. (English Heritage 2008: 39).

13.3.35 The Institute for Archaeologists has recently established a working party to address this issue. In the meantime Colcutt's (1999) definition of setting, as summarised in Lambrick (2008, below) is used as follows:

- Intrinsic visual interest and listing visual qualities
- Topographic setting, identifying visual relationships to topography and natural features that can be linked with the function of the site or the reason for placement of the site in the landscape
- Landuse setting, identifying whether the landuse is sympathetic to the site's intellectual understanding
- Group setting including both contemporary and diachronic groupings or patterning, listing other sites, above or below ground, that could assist with creating a network of relationships. This should acknowledge any spatial element.

## Limitations

13.3.36 No limitations were encountered during the preparation of the desk based archaeological assessment in connection with this project. However, a degree of uncertainty is attached to the baseline data sources used in any desk based assessed. These include:

- The SMR can be limited because it depends on random opportunities for research, fieldwork and discovery. This is particularly true in this case, where there have been no pieces of documented archaeological fieldwork having taken place within 1km of the centre of the application area.
- Documentary sources are rare before the medieval period, and many historic documents are inherently biased. Older primary sources often fail to accurately locate sites and interpretation can be subjective.

- Geotechnical information regarding made ground does not necessarily preclude the existence of archaeological deposits. Made ground could either be imported/disturbed material of no archaeological value or may actually represent archaeological deposits.

## 13.4 Baseline Conditions

### Prehistoric and Roman.

- 13.4.1 The proposed development area is located at the junction of the higher ground of the Kemsley Ridge, which lies on London Clay, and the alluvial floodplain, underlying the proposed development site and which in general has the potential to contain deposits of palaeo-environmental significance.
- 13.4.2 The wider area saw extensive activity from early times, with remains of ritual, settlement and agricultural origin being recorded on the mainland and on Sheppey.
- 13.4.3 A prehistoric log boat was found in 1924, apparently during river drainage in Milton Creek, while a greenstone celt found in the vicinity was apparently a separate find (HER number TQ96NW12).
- 13.4.4 Remains dating to the Neolithic and/ or Bronze Age were recorded during an archaeological evaluation to the north of Ridham Avenue, some 700 metres west of the proposed development area. The remains comprised ditches gullies pits and postholes in an area approximately 300 metres in length (HER number TQ96NW96 & 97). On the slightly higher ground to the south, two intercutting features of mid to late Bronze Age date were revealed (HER number TW96NW98). The remains were interpreted as being an extension of the known settlement activity to the south (TQ96NW99).
- 13.4.5 Salt making was a major activity locally in the later prehistoric and Roman periods and later. The remains of two salterns are located some 700 metres and 800 metres from the proposed development area, and finds including briquetage, pottery, burnt flint and animal bone have been made (HER numbers TQ96NW1108 & TQ961110).
- 13.4.6 The wider area was heavily Romanised with the line of Roman Watling Street leading from London to the coast running rather less than 3 kilometres to the south of the proposed development area.
- 13.4.7 Three ditches of Roman date were recorded during an archaeological evaluation to the north of Ridham Avenue, some 700 metres from the proposed development area (HER number TQ96NW98).

13.4.8 In summary at least part of the higher ground of the Kemsley Ridge is known to have been used for occupation activity during the prehistoric and Roman periods, while the alluvial floodplain would have been marshland and would have been exploited for a number of purposes, including salt making and pottery manufacture as well as hunting and fishing.

### **Medieval**

13.4.9 There is relatively little physical evidence for an Anglo-Saxon presence in the area, although several local place names appear in early records. The place name Milton first appears in the Anglo Saxon Chronicle in 893. Its derivation indicates that it was the meeting place for the Hundred of Milton and it would have been located at its centre (Wallenberg: 254). The adjacent parish of Tonge is first mentioned in the Domesday Book of 1086 and probably derives from its topographical location on a projection of land (Wallenberg: 265). The place name Kemsley seems to be post Norman conquest in origin (Wallenberg: 255), while Sittingbourne first appears in 1200 (Wallenberg 264).

13.4.10 A possible Anglo Saxon site of unknown type is recorded as being located some 200 metres south of the proposed development area. The source is antiquarian and the site type and location uncertain, although it may be based on place name evidence (HER number TQ96NW13).

13.4.11 There is documentary evidence for oyster beds in the area being exploited from the end of the 12<sup>th</sup> century onwards. The oyster grounds probably included Milton Creek and a stretch of the Swale (HER number TQ96NW1007).

13.4.12 The old church at Murston, located some 1.9 kilometres south of the proposed development area, is known to have been in existence by 1291. A new church was constructed in a more convenient location close to the London to Canterbury road in 1873 and much of the medieval church was demolished. The remains of the church is a Scheduled Monument (number 25469).

13.4.13 A moated site, Castle Rough, is located some 500 metres south of the proposed development area. The site is located below the 5 metre contour and comprises a rectangular earthwork island surrounded on four sides by a moat. Excavations during the early 1970s indicated that the site was constructed during the 13<sup>th</sup> or 14<sup>th</sup> century. Numerous earlier artefacts were recovered dating from the Mesolithic and Roman periods. These were interpreted by the excavators as having been brought in with material from elsewhere. It is not entirely clear from the available material whether material was imported from some distance or whether the dumped material represents upcast from the moat (HER number TQ96NW10, SAM Kent 115).

13.4.14 The parish church of the Holy Trinity, Milton church is flint-faced with Stone Quoins. The roof is of the 14<sup>th</sup> century, while the south porch is of the 15<sup>th</sup> century. The church was subject to restoration during the 1880s. The building is listed at grade I and is located some 1.5 kilometres southwest of the proposed development area.

### **Post-medieval**

13.4.15 There are numerous remains of timber structures and vessels recorded along the foreshore. The vast majority of these are probably post medieval in origin and when recognisable this seems to be the case, although some remains may be earlier. The proposed development area itself appears to have been used for agricultural purposes until the 19<sup>th</sup> century, although nearby fields were used for brick making and other industries.

13.4.16 Little Murston Farmhouse, located some 1.4 kilometres southwest of the proposed development area is a farmhouse of the 18<sup>th</sup> century or earlier. It is of two storeys in brown brick, now partly pebble-dashed. The building has a hipped tiled roof with one chimney stack. The building is listed at Grade II.

13.4.17 The earliest detailed map of the area is probably William Barlow's Map of the hundreds of Milton and Teynham of 1800, published in Halstead's Topographical Survey of Kent, shows the wider area as being divided into three zones, which seem to represent water, marshland and dry land. The settlement of Milton with its parish church is located within the latter, while the proposed development area and Castle Rough are located in the marsh.

13.4.18 William Mudge's Map of 1801 shows Milton as being a rather larger settlement than Sittingbourne. Castle Rough is shown with a drain into Milton Creek. The proposed development area is shown as enclosed fields.

13.4.19 The Milton Next Sittingbourne Tithing Map of 1838 shows the proposed development area and much of the surrounding area as being owned by William Marshall. The area was being used for pasture, with parcels occasionally being recorded as 'pasture and water'. Castle Rough is shown and is recorded as being recorded as 'wood' at that time.

13.4.20 The first edition six inch to the mile Ordnance Survey map of 1869 shows the proposed development area as being in fields with a sheepfold on its north eastern boundary. The proposed development area is indicated as being within Kemsley Down and Kemsley Marshes. The proposed development area is divided into two by a field boundary and is crossed by a north-south running tramway. A further tramway runs roughly east to west approximately 200 metres south of the proposed development area and connects with that running through the proposed development area. A brick field is marked immediately south of New Milton. In the wider area a

large duck decoy is marked 950 metres to the northwest of the proposed development area.

13.4.21 The OS six inch edition of 1898 shows a number of brickworks established in the area, including buildings constructed on the brick field marked on the OS edition of 1869 (paragraph 4.4.4, above). Along the shore line, saltings and a disused oyster pond are marked. By the time of the OS edition of 1909, the brickworks were disused and the Govehurst Dock had been dug.

13.4.22 The post First World War shortage of wood pulp saw an increased value in paper. Frank Lloyd, the owner of the Sittingbourne paper mill therefore expanded the operation and built a new paper mill at Kemsley. Construction began in 1923 and the mill was in operation in 1924. The mill was coal powered and featured an aerial ropeway from Ridham Dock, which brought in logs for grinding. Kemsley village was constructed for the paper mill workers. Of the planned 750 houses, 188 had been completed by the summer of 1927 (Bellingham1996: 67-69). The 1938 edition of the OS shows these buildings.

13.4.23 The mill was supplied from Ridham Dock by a tramway which extended into Sittingbourne to the south, from where it acted as a passenger railway, bringing workers to and from the mill. In 1969 the railway was handed over to the Locomotive Club of Great Britain's Light Railway Section which became the Sittingbourne & Kemsley Light Railway. The southern half of the railway, south of the proposed development area, continues in use as a preserved railway, while the section of the northern part which forms the western boundary of the proposed development area has been replaced by the perimeter road around the paper mill.

13.4.24 An aerial photograph taken in 1945 shows the paper mill with conical mounds of material to its north. Most of the proposed development area, in particular the western half, has material piled upon it. The OS edition of 1950 indicates a similar disposition. The OS edition of 1979 indicates that material has been deposited on the eastern half of the proposed development area.

13.4.25 The site visit indicated that the proposed development area is located within the perimeter fence of the paper mill, but lies outside the perimeter road around the main paper mill buildings and is divided from the main area by a deep ditch. There has been significant tipping of arisings from excavations and building material to a depth of c. 1.8 metres in places. The tipping covers over half of the proposed development area.

### **Geotechnical Survey**

13.4.26 A Phase Two geotechnical site investigation was undertaken by RPS in 2009. Intrusive works comprised 3 cable percussion boreholes, 15 trial pits and 8 window sample boreholes. Interventions were undertaken from the base of any arisings.

13.4.27 The survey revealed made ground across the whole of the site, comprising brown grey gravelly sands and clays with frequent infill materials including bricks, plastics, and wood, with peat and gravels of coal dust, ash and clinker noted as being present in places level. These infill materials were more commonly found in locations within the northern and western site areas such as Trial Pits TP10, TP11 and TP13. The made ground extended to depths of between 0.9metres and 4.6metres below current ground level

13.4.28 Peat was occasionally present within Made Ground in the north and east of the site and was encountered as a peaty silt / clay layer within the made ground at 1.6 to 1.8m below current ground level in boreholes WS3 and WS5 or as occasional pockets in the made ground in Trial Pits TP1 and TP14.

13.4.29 Superficial Deposits were encountered directly beneath the Made Ground in the majority of the borehole and trial pit locations. The superficial deposits typically comprised grey brown orange mottled firm to stiff clays and appear to be Alluvium, as mapped in the area by the BGS. These were sandy, gravelly and friable in places. Below the made ground the borehole logs from WS1 and WS3 indicate the possible presence of organic matter.

### **Historic Landscape**

13.4.30 The proposed development area is located within HLC type 12.3: Industrial complexes and factories. The Kent Historic Landscape Characterisation project notes that this type represents *largely recent industrial developments which have become established within industrial parks out of town and in rural locations*. The HLC types is *identified on 1:25,000 and 1:10,000 maps by name and consisting predominantly of large structures*.

13.4.31 The area to the east of the proposed development area is HLC Type: 8.7: Mud flats. The Kent Historic Landscape Characterisation project notes that this type comprises *Natural marine deposits of silt and clay particles* and that they are identified by *reference to annotations on OS maps*. In addition *mudflats are to be found in low energy environments along the north and south Kent coasts*.

13.4.32 The area to the west of the proposed development area is HLC Type 1.14: "Fields predominantly bounded by tracks, roads and other rights of way"

13.4.33 The Kent Historic Landscape Characterisation project notes that this type *generally occurs on chalk uplands - especially the dip slopes and has resulted from post-medieval informal enclosures. The roads and tracks are possibly old drove roads to and from the downlands. Other examples include extensive areas of 20<sup>th</sup>-century market gardening.* The HLC type can be identified by *typically large enclosures bounded by wavy roads, tracks and other public rights of way.*

13.4.34 The area to the north of the proposed development area is HLC Type 5.1 : Reclaimed Marsh - Small irregular enclosures

13.4.35 The Kent Historic Landscape Characterisation project notes that this HLC type comprises *reclaimed marshland enclosures, with often highly irregular shapes and very wavy irregular boundaries. Boundaries typically consist of natural drainage channels with larger straighter built drainage channels also being present. Age is often indeterminate, from medieval to modern. Age of reclaimed marshland enclosures can also vary across Kent.*

13.4.36 This HLC type is *generally found in Romney Marsh, the Hoo peninsular and the Isle of Sheppey.*

13.4.37 The northern part of Sittingbourne, to the south and south west of the proposed development area is HLC Type 9.6 : Post 1801 Settlement

13.4.38 The Kent Historic Landscape Characterisation project notes that this HLC type comprises *settlement which has developed since 1801. Includes expansion of hamlets, villages, towns and cities as well as new settlement groups.*

## **13.5 Incorporated Enhancement and Mitigation**

13.5.1 Much of the proposed mitigation for the proposed Development is built into the design as embedded mitigation.

## **13.6 Identification and Evaluation of Likely Significant Effects**

### **Buried Archaeological Remains**

13.6.1 The proposed development area lies within a wider landscape which generally has high potential to contain remains of all dates from the prehistoric onwards.

13.6.2 Recent archaeological work on the Sittingbourne Northern Relief Road has indicated that the higher ground of the Kemsley Ridge has the potential to contain remains from the prehistoric through to the medieval periods, with further activity taking place in the lower lying marshlands now represented by areas of alluvium.

- 13.6.3 The site visit, however, has indicated that there has been significant tipping of arisings from excavations and building material to a depth of c. 1.8 metres in places. The tipping covers over half of the proposed development area and is located in its north and west.
- 13.6.4 A phase two geotechnical site investigation was undertaken by RPS in 2009. Interventions were undertaken from the base of any arisings. The survey revealed made ground, comprising brown grey gravelly sands and clays with frequent infill materials including bricks, plastics, and wood, with peat and gravels of coal dust, ash and clinker noted as being present in places extended to depths of between 0.9metres and 4.6metres below current ground level.
- 13.6.5 The made ground was underlain by the natural alluvium. Borehole logs indicate that this material contains organic matter in places. On this basis there may be some potential for surviving palaeo-environmental remains.
- 13.6.6 There is no evidence for the proposed development area to contain below ground remains of national importance, or of sufficient importance to warrant preservation in situ of archaeological remains.
- 13.6.7 Both the nature of the 20<sup>th</sup> century land-use at the site and the associated ground disturbance suggests that the potential for the survival of previously unidentified sub-surface archaeological remains of national importance, or of sufficient importance to warrant preservation in situ, is unlikely. In addition there is no evidence for a surviving soil horizon beneath the made ground, it is likely that any archaeological deposits have been damaged or removed and that the potential for the survival of archaeological remains immediately below the former land surface is low.
- 13.6.8 The proposed development area is now of low archaeological potential, with the possible exception of very deeply buried deposits under alluvium. It is noted that the proposed development, with the exception of the fuel storage pit, lies on top of and within the area of made ground and an additional layer of general fill to be imported as part of the proposed development.
- 13.6.9 The fuel storage pit would have a finished floor level of approximately -1.2mAOD. The fuel storage bunker within the building envelope will have dimensions of 32 m in length and 71.6 m in width .

### **Scheduled Monuments**

- 13.6.10 The nearest statutorily protected cultural heritage receptor is Castle Rough, a Scheduled Monument (County Number 115). The SAM is of high value. The SAM is located some 500 metres south of the proposed development area.

- 13.6.11 The SAM itself is low lying and not visible from any distance away. Its position in the landscape is indicated by trees. Perhaps the clearest view of the SAM and the proposed development area is obtained from the southwest. From here, the SAM itself is not visible but the trees growing on it are visible against a background of the existing paper mill buildings.
- 13.6.12 There would be no physical impact upon the SAM from the proposed development and any impact would be on the setting of the site.
- 13.6.13 The impact magnitude on the site is assessed as being negligible. The effect of the proposed Development on the site would be slight adverse, and this would be an indirect effect.
- 13.6.14 Murston Old Church, Sittingbourne is a Scheduled Ancient Monument (number 25469). The SAM is of high value and the scheduled area includes both the above ground and buried remains of the church building and encompasses the churchyard. The SAM is bounded on its north side by modern business/ industrial units which provide an effective northern boundary to the setting of the SAM.
- 13.6.15 There would be no physical impact upon the SAM from the proposed development and any impact would be on the setting of the site.
- 13.6.16 The impact magnitude on the site is assessed as being no change. The effect of the proposed Development on the site would be neutral.
- 13.6.17 A World War II Heavy anti aircraft gunsite (known as Thames South 2), is located some 300m west of Chetney Cottages and is a Scheduled Monument (SAM34302). The SAM is of high value and is located some 3 kilometres northwest of the proposed development area. The scheduling description indicates that the site was chosen to defend the industrial and military targets in the Lower Thames and Medway areas from high flying strategic bombers approaching from the south and east. The site overlooks the River Medway and the Chetney Marshes.
- 13.6.18 The setting of the SAM is dependant on its defensive purpose and is wide ranging. The paper mill at Kemsley would have been in existence during the period of use of the SAM and would presumably have been an area for the guns to avoid, assuming they could be depressed that far. There has been considerable large scale development on the Kemsley Ridge to the northwest of the proposed development area. This development provides a partial visual barrier and means that the original paper mill is not the landscape feature that it would have been during the period of use of the SAM. The proposed development would fit into this area and would add little visible mass.

13.6.19 There would be no physical impact upon the SAM from the proposed development and any impact would be on the setting of the site.

13.6.20 The impact magnitude on the site is assessed as being no change. The effect of the proposed development on the site would be neutral.

### **Historic Buildings**

13.6.21 The closest listed building to the proposed development is Little Murston Farmhouse, listed at Grade II. The listed building is of medium value.

13.6.22 The listed building is located some 1.4 kilometres southwest of the proposed development area. The setting of the listed building comprises the surrounding fields, those to the west having been subject to gravel extraction. The setting of the listed building is now rather degraded. There is currently no intervisibility with the proposed development area. Much of the proposed development would lie on a line of sight between the listed building and the existing paper mill and would be located adjacent to the latter.

13.6.23 The proposed development is taller than the adjacent buildings and although partly screened by the adjacent restored landfill, part of the body of the proposed development would be visible from the listed building. There would be no physical impact upon the listed building from the proposed development and any impact would be on its setting.

13.6.24 The impact magnitude on the site is assessed as being minor adverse. The effect of the proposed Development on the site would be slight adverse, and this would be an indirect effect.

13.6.25 Tonge Corner Farmhouse is located some 2.1 kilometres south east of the proposed development area and is listed at Grade II. The listed building is of medium value. The setting of the listed building comprises the surrounding fields, There is currently little or no intervisibility with the proposed development area, although the stacks of the existing paper mill are likely to be visible from the listed building. The proposed development is likely to be only partly visible from the listed building, being screened by the high ground of the adjacent land fill site and existing farm buildings.

13.6.26 There would be no physical impact upon the listed building from the proposed development and any impact would be on its setting. The magnitude of impact would be minor adverse and the effect of the proposed development on the listed building would be slight adverse.

13.6.27 The medieval parish church of the Holy Trinity, Milton church is listed at grade I and is of high value. The listed building is located some 1.5 kilometres southwest of the proposed development area. Development, including existing paper mill buildings

and stacks, is located between the listed building and the proposed development area and the housing development on the west, north and east side of the listed building effectively limits its setting. There would be little intervisibility between the proposed development and the listed building. There would be no physical impact upon the listed building from the proposed development. Any effect would be on its setting. The magnitude of impact is assessed as being negligible. The effect of the proposed development on the setting of the listed building would be slight adverse.

13.6.28 Kingshill Farmhouse and the barn adjoining the cattleshed immediately north of Kingshill Farmhouse are located some 1.9 kilometres northeast of the proposed development area on the Island of Sheppey and are listed at Grade II. The listed buildings are of medium value. Each listed building and the space between them forms the primary setting of the other. The setting of the listed buildings also comprises the surrounding fields. The proposed development area is visible from the listed buildings but the proposed development would be seen against a background of the existing paper mill buildings.

13.6.29 There would be no physical impact upon the listed buildings from the proposed development and any impact would be on the setting of the site.

13.6.30 The impact magnitude on the site is assessed as being negligible. The effect of the proposed development on the site would be neutral.

13.6.31 The church of All Saints, Iwade is listed at Grade I, is of high value and is located approximately 2.4 kilometres north west of the proposed development area. The church is located within a surrounding churchyard which forms its primary setting. The eastern side of the churchyard is bordered by agricultural fields which form a secondary setting. .

13.6.32 There has been considerable large scale development on the Kemsley Ridge to the northwest of the proposed development area. This development provides a partial visual barrier. The proposed development would fit into this area and would add little visible mass to the view in this direction from the listed building.

13.6.33 There would be no physical impact upon the listed building from the proposed development and any impact would be on the setting of the site.

13.6.34 The impact magnitude on the site is assessed as being no change. The effect of the proposed development on the site would be neutral.

13.6.35 The church of St Giles is located some 2.9 kilometres southeast of the proposed development area, is listed at Grade I and is of high value. Although nominally within the ZTV, the proposed development would not be visible from the listed building. There would be no physical impact upon the listed building from the proposed

development. The magnitude of impact would be no change and the effect of the proposed development on the listed building would be neutral.

13.6.36 Claxfield Farmhouse is listed at Grade II\*, is of high value and is located some 4.5 kilometres southwest of the proposed development area. Although nominally within the ZTV, the proposed development would not be visible from the listed building. There would be no physical impact upon the listed building from the proposed development. The magnitude of impact would be no change and the effect of the proposed development on the listed building would be neutral.

13.6.37 There are further Grade II listed buildings at 66 North Street, Kemsley 2 kilometres south west of the proposed development area and to the west of Kemsley, Pheasants Cottage and Bramblefield Farmhouse, 2.25 kilometres and 1.9 kilometres west of the proposed development area respectively. These buildings are of medium value. In each case their settings have been rather degraded. Any view of the proposed development from the listed buildings would be through Kemsley and the existing paper mill buildings. The magnitude of impact would be no change and the effect of the proposed development on the listed building would be neutral.

13.6.38 Mere Court and East Hall, both listed at Grade II are located some 2 kilometres and 2.35 kilometres south of the proposed development area respectively. Development, including recent industrial development, as well as the existing paper mill buildings and stacks, is located between the listed building and the proposed development area. There would be little intervisibility between the proposed development and the listed buildings. There would be no physical impact upon the listed building from the proposed development. Any effect would be on their setting. The magnitude of impact would be negligible and the effect of the proposed development on the listed buildings would be slight adverse.

### **Conservation Areas**

13.6.39 The nearest Conservation Area is Milton Regis High Street, located some 2.5 kilometres south west of the proposed development area. The Conservation Area is of medium value and contains a number of listed buildings which are assessed as part of the Conservation Area. The conservation area is inward looking and on its eastern side, much of it is bounded by trees in back gardens of houses and its setting to the east is thus limited. Views of the proposed development area could not be obtained from any part of the Conservation Area within the public realm and it is unlikely that the proposed development would be visible from the Conservation Area

13.6.40 At most only the stack of the proposed development would be visible from the Conservation Area. There would be no physical impact upon the Conservation Area from the proposed development. Any impact would be on the setting of the Conservation Area. The impact magnitude on the Conservation Area is assessed as

being negligible. The effect of the proposed Development on the site would be slight adverse, and this would be an indirect effect.

13.6.41 Sittingbourne High Street Conservation Area is located some 2.9 kilometres south of the proposed development area. The Conservation Area is of medium value and contains a number of listed buildings which are assessed as part of the Conservation Area. The conservation area is inward looking and its setting is therefore very limited. Views of the proposed development area, or of the proposed location of the stack were not obtained from any part of the Conservation Area within the public realm.

13.6.42 At most only the stack of the proposed development would be visible from the Conservation Area. There would be no physical impact upon the Conservation Area from the proposed development. Any impact would be on the setting of the Conservation Area. The impact magnitude on the Conservation Area is assessed as being negligible. The effect of the proposed Development on the Conservation Area would be slight adverse, and this would be an indirect effect.

13.6.43 The Tonge Conservation Area is located some 2.9 kilometres south west of the proposed development area. The Conservation Area is of medium value.

13.6.44 The Conservation Area Character Appraisal (paragraph 18) notes that *the railway embankment, aligned east-west along the northern edge of Tonge, is an important feature in the local landscape, especially where the banks are covered with tree growth. This embankment has, in effect, severed Tonge visually from the wide sweep of low lying land to the north including the marshes so that it now forms a well defined northern edge to the settlement. The trees now comprise an important background to Tonge when viewed from the south.*

13.6.45 This defined edge limits the setting of the Conservation Area to the north. It is likely that part of the stack of the proposed development would be visible from the Conservation Area. There would be no physical impact upon the Conservation Area from the proposed development. Any impact would be on the setting of the Conservation Area. The impact magnitude on the Conservation Area is assessed as being negligible. The effect of the proposed Development on the Conservation Area would be slight adverse, and this would be an indirect effect.

### **Historic Parks and Gardens and Historic Battlefields**

13.6.46 The nearest Registered Park and Garden is Doddington Place, some 9 kilometres to the south of the proposed development area. There would be no physical impact upon the Registered Park and Garden from the proposed development and no effect on its setting.

13.6.47 There are no registered battlefields within 15 kilometres of the proposed development area and there would be no effect on any registered battlefield or its setting arising from the proposed development.

### **Historic Landscapes**

13.6.48 The proposed development area is located within HLC type 12.3 Industrial complexes and factories. This HLC type has a high ability to withstand change. The proposed development would introduce further large built development of an industrial nature and would be consistent with the existing historic landscape character.

13.6.49 The nature of the proposed development and its location within an area already containing an industrial complexes means that there would be no effect on any other HLC.

13.6.50 Overall, the effect on the historic landscape is considered to be neutral.

### **13.7 Cumulative Impacts**

13.7.1 A number of potential cumulative impacts have been identified as follows

13.7.2 Kent County Council have recently issued Formal Scoping Opinions for two sites at Ridham Dock for proposed biomass combined heat and power plants. One of these is located at the Countryside Recycling site which already has a MRF and composting facility and the other nearer to the dock itself where Brett Aggregates operates a mortar Plant.

13.7.3 Swale Borough Council have identified the following potential cumulative impacts as follows:

13.7.4 Sittingbourne Town Centre regeneration - (major regeneration scheme south and north of the railway line. South of the railway line will include new retail floor space, office, community and learning, open space and residential and will be delivered first. North of the railway line will be the second phase of development to include mainly 1000 residential units with open space, school and other community facilities.

13.7.5 East Hall Farm – (residential development of circa 800 houses).

13.7.6 Kent Science Park (4ha expansion and new units).

13.7.7 Kemsley Industrial Development.

13.7.8 Iwade Expansion (Residential development of 450 houses).

13.7.9 Thistle Hill (Residential development of 1750 houses).

13.7.10 Queenborough and Rushenden Reperation Project (New residential and mixed use development and employment land development).

13.7.11 Port of Sheerness (Wind farm, Port expansion)

- 13.7.12 Northern Relief Road (New access road to relieve the traffic through Sittingbourne. The first section to Eurolink has been approved and will commence construction in the autumn. The final link to Bapchild will go out to consultation on a preferred route later this year).
- 13.7.13 Stones Farm (nr Bapchild to the south of East Hall Farm) has been allocated for housing.
- 13.7.14 The Meads (near the A249 in Sittingbourne) and Fulston Manor (to the south of Sittingbourne). The Meads is close to completion with retail space being constructed. Fulston Manor is a 615 unit housing scheme.
- 13.7.15 It is noted that none of the proposals with potential cumulative impacts would lie within the same historic landscape character area as the proposed development. A number of the proposals with potential cumulative impacts may impact upon below ground archaeology including the palaeo-environment. There is also the potential for the proposed development to impact upon below ground archaeology, including the palaeo-environment. It is noted that the proposed development area covers a comparatively small footprint, which has been previously disturbed. It is considered that the cumulative effect of the various other proposed developments on the below ground archaeological resource is considerable but that the additional impact of the proposed development would not be significant.
- 13.7.16 Of the above potential cumulative impacts, the Sittingbourne Town Centre regeneration, The Meads, located to the west of Sittingbourne, Fulston Manor, Kent Science Park, the Queenborough and Rushenden Regeneration Project, Thistle Hill and the Port of Sheerness projects are located either within existing areas of development and/ or in locations where they would have no effect on cultural heritage features impacted by the proposed development. There would therefore be no cumulative impacts with regard to these sites.
- 13.7.17 The two power projects at Ridham Dock may have an effect on the setting of the Scheduled Heavy anti aircraft gunsite (SAM34302). Any effect is likely to be insignificant however. The Kemsley Industrial Development in effect provides a visual barrier to the setting of the Scheduled Monument and there would therefore be no cumulative impacts with regard to these sites.
- 13.7.18 Effects on the surrounding cultural heritage features from the Northern Relief Road are assessed in the Environmental Statement accompanying the planning application. There were no significant effects caused by the Northern Relief Road. It is considered, therefore, that cumulative impacts would not be significant.
- 13.7.19 Development at East Hall Farm is likely to affect the setting of the Grade II listed East Hall and potentially that of the similarly listed Mere Court. The effect of the proposed

development on the listed buildings is assessed elsewhere in this chapter as being slight adverse. This effect from the proposed development is likely to be reduced as development takes place closer to the listed buildings. It is considered, therefore, that cumulative impacts would not be significant.

13.7.20 The Iwade Expansion would involve development on the south and east sides of the village, with a small area on the north east side also included. This is likely to constrain views to the north and southeast from the Grade I listed church. The effect of the proposed development on the listed building is assessed elsewhere in this chapter as being neutral. It is considered, therefore, that cumulative impacts would not be significant.

## **13.8 Mitigation**

13.8.1 Much of the proposed mitigation for the proposed Development is built into the design as embedded mitigation.

13.8.2 In addition to embedded mitigation, it is intended to carry out an appropriate programme of fieldwork in consultation with the County Archaeologist to mitigate any effect on palaeo-environmental remains and deeply buried archaeological deposits.

13.8.3 In the first instance archaeological mitigation would comprise the monitoring of a further tranche of geotechnical test pits further to assess the survival or otherwise of below ground archaeological remains. Depending on results, it may be appropriate to undertake further work, including a borehole survey of the alluvium and/ or archaeological trial trenching. These works may lead to further mitigation in the form of excavation and/ or a watching brief.

## **13.9 Residual Impacts**

13.9.1 Any direct effect on cultural heritage features would be permanent and non-reversible. No such effects are predicted.

## **13.10 Conclusions**

13.10.1 The study has indicated that the proposed development area is located within a landscape that has seen activity since early times and is of high archaeological potential.

13.10.2 No statutorily designated sites (e.g. Scheduled Monuments, Listed Buildings) are present within the application site. The closest statutorily protected cultural heritage receptor is Castle Rough, a Scheduled Ancient Monument (County Number 115), located some 500 metres south of the proposed development area.

13.10.3 There would be no direct effects on cultural heritage receptors through the proposed development. There would be no indirect effect on the setting of a cultural heritage receptor or a greater significance than slight adverse.

13.10.4 It is concluded that, although the proposed development area is located on what was an area suitable for occupation in antiquity, following the landfilling of the entire area, the potential for such remains is low.

13.10.5 No likely significant effects have been identified requiring mitigation and no mitigation measures against direct impacts other than those indicated in section 13.8, above, are necessary or proposed within the boundaries of the proposed Development

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