

# **Bexhill to Hastings Link Road**

## **Chapter 14: Cultural Heritage**

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## **14 Cultural Heritage**

### **14.1 Introduction**

#### ***Background***

14.1.1 Oxford Archaeology (OA) was commissioned by East Sussex County Council (ESCC) in April 2006 to prepare a cultural heritage Environmental Impact Assessment (EIA) for the proposed Bexhill to Hastings Link Road, in East Sussex.

14.1.2 The proposed Bexhill to Hastings Link Road (hereinafter referred to as the 'Scheme') is 5.58km long from its junction with the A259 in Bexhill (at approximately TQ 7386 0807) to its junction with the B2092 Queensway in Hastings (at approximately TQ 7762 1054). The western part of the Scheme (known as the 'Bexhill Connection') is located on the bed of a former railway line passing through the built environment of Bexhill. This would be constructed to a single two lane carriageway standard. The Scheme then continues north and east across the Combe Haven Valley, before terminating on the western edge of the built environment of Hastings. The latter portion of the road would be constructed to wide two lane single carriageway standard. The proposed Scheme also includes a Greenway to accommodate recreational activities such as cycling, walking and horse riding.

#### ***Planning Context***

##### *Introduction*

14.1.3 This assessment has taken into account relevant national and local legislation, policy and guidance, including:

- Town and Country Planning Act 1990;
- Planning (Listed Buildings and Conservation Areas) Act 1990;
- Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999;
- Ancient Monuments and Archaeological Areas Act 1979;
- DoE Planning Policy Guidance Note 16, Archaeology and Planning 1990;
- DoE/DNH Planning Policy Guidance Note 15, *Planning and the Historic Environment* 1994;
- East Sussex and Brighton and Hove Structure Plan 1991-2011 (Adopted December 1999);
- DoE Hedgerows Regulations 1997 (and new guidance of 2002 expressed in a letter from DEFRA to Chief Planning Officers in England dated 23.05.2002);
- Rother District Local Plan (Adopted July 2006); and,
- Hastings Local Plan (Adopted April 2004).

*Planning Background: the National Context*

14.1.4 The Town and County Planning system, implemented under the Town and Country Planning Act 1990, provides a framework for the protection of archaeological and historic remains threatened by development, principally through the application of the relevant Planning Policy Guidance Notes.

14.1.5 Planning Policy Guidance: Archaeology and Planning (PPG 16) sets out the Secretary of State's policy on archaeological remains. It acknowledges the potentially fragile and finite or irreplaceable nature of such remains (paragraph 6), and states that the desirability of preservation of archaeological remains and their setting is a material consideration within the planning process (paragraph 18). PPG 16 provides that there is a presumption in favour of the physical preservation of nationally important archaeological remains (paragraph 8), and that where preservation *in situ* is not justified it is reasonable for planning authorities to require the developer to make appropriate and satisfactory provision for excavation and recording of remains (paragraph 25).

14.1.6 Paragraph 22 adds: "*Local planning authorities can expect developers to provide the results of such assessments and evaluations as part of their application for sites where there is good reason to believe there are remains of archaeological importance*". PPG 16 also notes that in spite of the best pre-planning application research, there may be occasions when the presence of archaeological remains only becomes apparent once development has commenced (paragraph 31).

14.1.7 Planning Policy Guidance: Planning and the Historic Environment (PPG15) establishes the Secretary of State's policy on historic buildings and conservation areas. It states that: "*It is fundamental to the Government's policies for environmental stewardship that there should be effective protection for all aspects of the historic environment*" (paragraph 1.1). In respect of Development Control, PPG15 says of local planning authorities: "*They should expect developers to assess the likely impact of their proposals on the site or structure in question, and to provide such written information or drawings as may be required to understand the significance of a site or structure before an application is determined*" (paragraph 2.11).

14.1.8 The underlying principle of this guidance is that the archaeological resource represents a finite and non-renewable resource and that its conservation should be the primary goal of archaeological resource management. The principle of PPG 15 and PPG 16 are reflected in the relevant Local Development Plans.

14.1.9 The Hedgerows Regulations 1997 (DoE; and new guidance of 2002) make provision for the protection of hedgerows considered to be of landscape and/or historical and natural history importance. The Regulations state that a hedgerow can be considered to be 'important' if it meets certain criteria. Before the removal of any hedgerow to which these regulations apply, the relevant planning authority must be notified. If the planning authority considers the hedgerow to be of some historic significance, it may serve a hedgerow retention

notice to the effect that the hedgerow should not be removed. *Planning Background: the Regional and Local Context*

14.1.10 East Sussex and Brighton and Hove Structure Plan 1991-2011 (Adopted December 1999) provides strategic land-use and transport policies for the former area covered by East Sussex and the towns of Brighton and Hove. Policies EN 22-25 refers to protection of the cultural heritage.

14.1.11 The majority of the Scheme lies within Rother District therefore the Rother District Local Plan (Adopted July 2006) is relevant. The Local Plan paragraphs 5.21-5.25 refer to protection of the cultural heritage through implementation of PPG 15 and PPG 16, and Policies EN 22-25 of the East Sussex and Brighton and Hove Structure Plan.

14.1.12 A very small portion at the east end of the Scheme lies within the Borough of Hastings which means that the Hastings Local Plan (Adopted April 2004) is also relevant. Policies C2, C4 and C6 refer to protection of the cultural heritage.

## **14.2 Method of Assessment**

### ***Scope of Assessment***

14.2.1 The approach taken in this assessment has been to examine in detail the area of the Scheme and a Study Area of 500m around it (Figure 14.1 A). The Scheme and the Study Area encompasses land within the historic parishes of Bexhill, Crowhurst and Hollington.

14.2.2 In order to examine potential impacts of the changes in traffic beyond the Study Area to designated cultural heritage receptors, a wider Traffic Study Area was used (Figure 14.3). This is based upon detailed mapping and data included as part of the traffic forecasts for thirty-six roads or sections of roads in East Sussex, that is considered in detail in Chapter 6: Travel and Transport.

14.2.3 The general approach and methodology has been to collate and report on information pertaining to the cultural heritage resource, including archaeological sites and monuments, the local geology, ground conditions, historic buildings and historic landscape features within the Study Area. This was undertaken to determine the likely nature, extent, preservation and importance of any cultural heritage receptors that may be present.

14.2.4 The cultural heritage by definition comprises of three 'strands' or key groups of potential receptors:

- Historic buildings and structures (some of which may be Listed or locally designated);
- The historic landscape (elements of which may be protected by legislation or by designation); and,

- Archaeological deposits (elements of which may also be protected by legislation or by designation, and which are generally below-ground).

14.2.5 Note that each strand or key group of receptors is not exclusive: for example, Listed Buildings very often contain or overlie archaeological deposits.

14.2.6 No program of Historic Landscape Characterisation has been applied to the Scheme area nor is there any relevant work in progress at the time of writing. The nature and form of the extant historic landscape within the Study area is discussed below, with reference to ten zones reflecting local topography, geology, and ground conditions. The extant historic landscape consists primarily of groups of historic landscape receptors, including hedgerows, woodland, trackways and farmsteads. These have been fully assessed as individual receptors.

14.2.7 A gazetteer of all identified Cultural Heritage features within the Study Area is provided in Appendix 14-A. These features have each been given an OA site number. Figure 14.1 B-F shows the location of all identified Cultural Heritage features within the Study Area.

14.2.8 In order to clarify the assessment of the potential archaeological resource, the Scheme area has been divided into ten zones that are shown Figure 13.2 and lettered A, B, C, D, E, F, G, H, I and J, from west to east along the length of the Scheme. These are defined later in this Chapter.

14.2.9 This assessment has been conducted with regard to the Institute of Field Archaeologists (IFA) standards as set out in the *Standard and Guidance for archaeological desk-based assessment* (IFA 2001).

### **Summary of Sources Consulted**

14.2.10 In April 2006 OA were commissioned by ESCC to update an Archaeological Desk Based Assessment prepared by Chris Blandford Associates in 2004. Both the updated Addendum (OA 2006a) and the original Assessment (CBA 2004) are included in Volume 2 as Appendices 14-B and 14-C, and include full lists of all sources consulted.

14.2.11 As part of the 2006 assessment, OA undertook a detailed Walkover Survey of the Scheme and the Study Area (OA 2006b), a Geoarchaeological Assessment of the Scheme (OA 2006c, and commissioned a Geophysical Survey of the Scheme (Bartlett-Clark Consultancy 2006). These are submitted in Volume 2 as Appendices 14-D, 14-E, and 14-F. All features identified by these separate studies are included in the Gazetteer, which is contained within Appendix 14-A and are shown on Figure 14.1 B-F.

### **Desk Based Assessment and Addendum**

14.2.12 Much of the archaeological and historical background in this ES has been taken from the Chris Blandford Associates report of 2004, but this

background has also been updated where new sources have been consulted by OA.

14.2.13 The data collated to write the original Chris Blandford Associates Desk Based Assessment was collected in November 2003. Whilst it was not necessary to update most of the sources already consulted (such as aerial photographic analysis) other sources were consulted to gain up to date information. These comprise:

- The National Monuments Record (English Heritage), including details of Activities, Monuments, and designated sites (Listed Buildings, Scheduled Monuments, Registered Parks and Gardens, Historic Battlefields);
- Local, District and County Development Plans (Hastings Borough Council, Rother District Council, ESCC); and
- The Sites and Monument Record (ESCC).

14.2.14 In addition, OA also consulted a range of sources that were not consulted for the CBA assessment of 2004. These comprise:

- Ordnance Survey maps held at the Bodleian Library, Oxford;
- Secondary sources held at the Sackler Library, Oxford;
- Secondary and archive sources held at the premises of OA; and
- The Defence of Britain project website - details of 20th century defence sites.

14.2.15 Two additional sites were identified (from the National Monuments Record and the Sites and Monuments Record) in the OA update of May 2006 located within the Study Area of the Scheme. However, neither is on the actual Scheme route. The additional sites do not significantly alter the results and findings of the original assessment (CBA 2004).

### ***Walkover Survey***

14.2.16 A cultural heritage walkover survey was undertaken by OA on behalf of ESCC as an integral part of the EIA of the proposed Scheme (OA 2006b). This is included in Volume 2 as Appendix 14-D.

14.2.17 The survey was undertaken over a period of eight days between the 9<sup>th</sup> and 31<sup>st</sup> May 2006, and was split into two phases: an archaeological and historic landscape survey; and a built environment survey.

14.2.18 The objectives of the survey were to:

- Confirm the presence/absence ('ground-truth') of previously identified archaeological and historical landscape features noted in the original Desk Based Assessment and it's Addendum (CBA 2004; OA 2006a);
- Identify new features of potential archaeological/historical significance;

- Gain first-hand knowledge of the environs of the Scheme, with particular emphasis on topography, zones of vision, and the nature of the historical and natural landscape;
- Examine Listed and non-Listed historic buildings, structures and their settings within the Study Area.

14.2.19 The walkover survey along the rural part of the Scheme route was constrained by poor visibility of the ground surface within arable fields (approximately 40% of the route was covered with maturing crops) and in woodland or dense scrub (approximately 10% of the route). Access was gained to approximately 90% of the rural land within the Study Area. In the urban environment of Bexhill on Sea, it was possible to access part of the Scheme route along the former railway line, and to view other parts from bridges over the railway. The survey of historic buildings was constrained by lack of access to the interior of buildings.

14.2.20 The walkover survey resulted in the detection of eighty additional archaeological and historic landscape sites or features that had not been previously identified in the Desk Based assessment (CBA 2004), or the Addendum (OA 2006a). These comprise twenty-five Historic Landscape Features, fifty-two Earthworks, and three Surface Artefact Scatters.

14.2.21 The historic structures component of the survey resulted in the detection of eleven previously unidentified historic structures (principally of industrial origin), and assessed the basic forms of seven historic farmsteads.

### ***Geoarchaeological Assessment***

14.2.22 OA was commissioned by ESCC in May 2006 to produce a geoarchaeological assessment as a component of the EIA of the proposed Scheme (OA 2006c). The assessment aimed to review all of the available data and the geo-technical records for the Scheme route in order to identify areas of geoarchaeological or palaeo-environmental potential. The full report of the geoarchaeological assessment is included in Volume 2 as Appendix 14-E.

14.2.23 The following conclusions were made in the geoarchaeological assessment report:

- The four river valleys of the Combe Haven, Watermill Stream, Powdermill Stream and the Decoy Pond Stream dominate the topography of the route. Between 6m and 10m of Holocene sedimentation now fills these valleys. Sequences within three of these valleys contain thick deposits of peat (approximately 1.80 to 5.60m in depth), which are of significant palaeoenvironmental and archaeological potential;
- Without suitable mitigation, the valley sequences would be vulnerable to any de-watering or changes to groundwater conditions that may occur both during construction and operational phases;
- Significant local deposits are likely to be present within the Study Area associated with different environments of deposition and local topographic features;

- There is a high potential for waterlogged remains to exist within the valley bottoms across the route. Such deposits may include the remains of wooden structures, as well as palaeoenvironmental material dating from the Mesolithic period onwards. Such material has the potential to contextualize any archaeological remains present, as well as adding to current research data regarding the palaeoenvironmental history and evolution of the Combe Haven floodplain. The presence of organic remains could also potentially provide further dating material; and,
- The development of the iron smelting industry in the area has had a significant impact on the upper sediment sequence and vegetation history of the valley.

### ***Archaeogeophysical Survey***

14.2.24 OA commissioned the Bartlett-Clark Consultancy to carry out an archaeogeophysical survey of the Scheme in May 2006 (Bartlett-Clark Consultancy 2006). The full report is included in Volume 2 as Appendix 14-F.

14.2.25 The surveyable section of the route extended for some 3.6km from Glover's Farm to the north of Bexhill to the B2092 (Queensway) road to the west of Hastings (from approximately TQ 745 093 to 776 111). The southern section of the route at the Bexhill end (following the former railway line) was unsuitable for geophysical investigation. A number of fields under arable cultivation or including areas of scrub vegetation were also unsuitable for survey. The total area of land surveyed amounted to about 20.5ha, and comprised blocks of land along and encompassing the Scheme route. This is shown in Figure 1 of Appendix 14-F.

14.2.26 The procedure used for the survey was recorded magnetometer surveying, following standard procedures with readings collected along transects 1m apart using Bartington 1m fluxgate magnetometers.

14.2.27 Ten anomalies or groups of anomalies were detected along the proposed route. These are listed in the gazetteer as OA 145-154, and represent probable below-ground archaeological deposits of various forms.

### ***Assessment Methodology***

14.2.28 The methodology used has been to assess the 'Significance of Environmental Impact' upon each receptor impacted by the Scheme. The 'Significance of Environmental Impact' is determined by two variables:

- The 'Sensitivity of the Receptor' (the importance of the cultural heritage feature in local, regional or national terms); and,
- The 'Magnitude of Change' upon the receptor (the level of impact of the proposals upon the receptor).

#### *Identification of Potential Receptors and Definition of Sensitivity*

14.2.29 This methodology was based on guidance and principles set out in DMRB 11 (1993), GOMMS (DETR 2000), and updated by DoT Transport

Analysis Guidance (DoT 2004). The categories used to describe the sensitivity or importance of potential receptors are illustrated in Table 14.1.

**Table 14.1 Criteria Used to Describe the Sensitivity of the Receptor**

<b>Sensitivity of Receptor</b>	<b>Equivalent to</b>
Very High	World Heritage Sites. Scheduled Ancient Monuments. Grade I and II* Listed Historic Buildings.  Sites or structures which appear to be of equivalent status to the above, but which have not been assessed previously for listing or scheduling
High	Registered Historic Park or Garden Conservation Area. Grade II Listed Buildings  Sites which, although not of schedulable quality, are nevertheless rare and important examples of significant monument or site types
Medium	Well preserved examples of common and less significant monument or site types.  Significant sites (see above) which are so badly damaged that too little remains to justify inclusion into a higher grade.
Low	Important Sites on a Local or parish level.  Sites with a Local or parish value or interest for education or cultural appreciation.
Negligible	Sites or features with no significant value or interest.  Sites which are so badly damaged that too little remains to justify inclusion into a higher grade.
Uncertain	Possible archaeological sites for which there is limited existing information. It has not been possible to determine the importance of the site based on current knowledge. Such sites might comprise isolated findspots or cropmarks visible on air photographs.

*Identification of Potential Impacts during Construction and Definition of Magnitude*

14.2.30 Impacts are defined as the physical changes to the environment attributable to the construction and operation of the Scheme. Impacts to the cultural heritage resource may be of a number of kinds:

- Direct impacts resulting in destruction of monuments, buildings or buried remains;
- Direct impacts resulting in destruction e.g. by compression of buried deposits, vibration or by drying out of waterlogged remains;
- Indirect impacts upon setting reducing the appreciation of the resource e.g. by noise, visual intrusion, dust (not assessed here as no data is available); and,
- Severance by removing a monument or site from its context.

14.2.31 Construction impacts are most commonly direct impacts. These may involve:

- Demolition and clearance works, including topsoil stripping; and,
- Excavation e.g. for structures/services, planting, drainage works.

14.2.32 They may also be other direct impacts, for instance:

- Vibration damage to historic buildings and other structures from piling;
- De-watering of environmentally sensitive deposits through drainage alterations; and,
- De-watering may also occur through cumulative minor impacts to drainage.

14.2.33 There may also be setting issues (indirect impacts) affecting Scheduled Monuments, Listed Buildings or other Designated Sites, such as:

- Noise affecting the context and appreciation of historic sites;
- Dust; and,
- Visual intrusion through the removal of screening.

14.2.34 The determination of magnitude of impact is based on the vulnerability of the receptor, its current state of survival/condition and the nature of the impact upon it. The criteria for this are set out in Table 14.2. The survival and extent of archaeological deposits is often uncertain and consequently the magnitude of change is difficult to predict with any certainty.

**Table 14.2 Criteria Used to Determine Magnitude of Impact**

<b>Magnitude of Impact</b>	<b>Description of Impact</b>
High	Complete destruction of the site or feature; Change to the site or feature resulting in a fundamental change in the ability to understand and appreciate the resource and its historical context and setting
Medium	Change to the site or feature resulting in an appreciable change in the ability to understand and appreciate the resource and its historical context and setting
Low	Change to the site or feature resulting in a small change in the ability to understand and appreciate the resource and its historical context and setting
No impact	Negligible change or no material change to the site or feature. No real change in the ability to understand and appreciate the resource and its historical context and setting

*Identification of Significance Criteria*

14.2.35 The significance of adverse environmental impact listed in Table 14.3 informs professional judgement and is an indication of the impact without mitigation. The term 'Neutral' indicates that no significant adverse impact has been identified from the proposals to a specific receptor. It should also be noted that change may also result in corresponding beneficial environmental impacts, though for the cultural heritage resource these are usually only related to setting.

**Table 14.3 The Significance of Adverse Environmental Impact**

<b>Magnitude of Change</b>	<b>Sensitivity of Receptor</b>				
	<b>Very high</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>Negligible</b>
<b>High</b>	Large	Large	Large	Moderate	Neutral
<b>Medium</b>	Large	Large	Moderate	Slight	Neutral
<b>Low</b>	Large	Moderate	Slight	Slight	Neutral
<b>No impact</b>	Neutral	Neutral	Neutral	Neutral	Neutral

### **14.3 Existing Conditions (Cultural Heritage Baseline)**

#### ***Geology and Topography***

14.3.1 The Preferred Route Option runs along the lower slopes of the Battle-Hasting ridge that forms an intricate pattern of minor valleys and ridges. The route crosses the river valleys of the Combe Haven, Watermill Stream, Powdermill Stream and Decoy Pond Stream; skirting around the main Combe Haven basin. It consists of a series of broad low ridges that separate three deeply incised river valleys, which in turn gradually extend down into the low lying area of the main Combe Haven Valley.

14.3.2 The Combe Haven Valley itself is a low lying, poorly drained, flat wetland, where much of the land lies just above sea level. The Combe Haven River runs through the main valley, towards Bulverhythe, from where it flows into the sea. The majority of the land is unimproved pasture with small farmsteads located on the higher ridges of the valleys. To the east and west are the major coastal urban areas of Bexhill and Hastings respectively, and to the north is the historic settlement of Crowhurst.

14.3.3 The British Geological Survey of Great Britain (BGS 320/321) maps the underlying geology of the area as predominantly floodplain valley deposits, surrounded by ridges of predominately Wadhurst Clay overlying Ashdown Sands. These are part of the Hasting Beds formation, that were former Cretaceous seabed deposits that were uplifted through tectonic movement into what now forms parts of South East England.

#### ***Designated Sites***

14.3.4 There are no Scheduled Monuments, Registered Parks and Gardens or Historic Battlefields within the Study Area.

14.3.5 There are nine Listed Buildings within the Study Area, all of which are Listed at Grade II. These comprise:

- OA 407 Bynes Farm;
- OA 408 Royal Oak Cottage;
- OA 409 Adam's Farmhouse;
- OA 410 Upper Wilting Farmhouse;
- OA 411 Mayfield Farmhouse;
- OA 415 The New Inn;
- OA 419 50, 52 and 54 Belle Hill;
- OA 420 60 Belle Hill; and
- OA 421 74 Belle Hill.

14.3.6 There are two Archaeologically Sensitive Areas within the Study area, designated by ESCC. These comprise:

- OA 124 is an Archaeologically Sensitive Area around the location of a Roman bloomery site (OA 109); and,
- OA 125 is an Archaeologically Sensitive Area around the historic core of old Bexhill and the site of the Napoleonic barracks, the majority of which lies outside of the Study Area.

14.3.7 There no other Cultural Heritage Designated Sites within, adjacent, or extending into the Study Area.

### ***Previous Archaeological Work in the Study Area***

14.3.8 With the exception of chance finds and observations, there are five recorded previous archaeological investigations within, or extending into, the Study Area.

14.3.9 OA 109 records an archaeological excavation in the late 1940s that uncovered the site of a Romano-British bloomery or iron-working area dating to the late 1st century or early 2nd century AD. This led to the protection of the environs of this site by the ESCC designated Archaeologically Sensitive Area (OA 124). It is possible that this site actually originated in the Iron Age.

14.3.10 Field investigations in 1992 by the Oxford Archaeological Unit (now OA) along the route of the then proposed Hastings Western Bypass, resulted in the discovery of:

- OA 113 - remains of a possible enclosure to the south-west of Decoy Pond Wood during a walkover survey;
- OA 120 - site of a pond identified during the same walkover survey; and,
- OA 116 - finds recovered in a surface artefact collection survey, comprising a cluster of fire-cracked flint (possibly of late Neolithic/early Bronze Age date) and a scatter of metal slag suggesting later reuse of the site possibly in the Iron Age.

14.3.11 Wessex Archaeology undertook a series of field investigations in the Study Area in 1995 and 1996. These comprise of two phases of work: OA 143, 144 in 1995; and OA 121 in 1996.

14.3.12 The field investigation by Wessex Archaeology, noted here as OA 143, was on land to south of Upper Wilting Farm in 1995. The investigation included a surface artefact collection, limited geophysical survey and trial trenching, and uncovered evidence of activity of prehistoric (Neolithic, Bronze Age and Iron Age), Roman, Post-Medieval and Modern origin. These results comprised of:

- A cluster of Late Neolithic and Roman pottery at east end of field near railway bridge (OA 143 A);
- A hearth associated with Late Bronze Age or Early Iron Age pottery to the west of Monkham Wood (OA 143 B);
- A cluster of Early Bronze Age pottery (OA 143 C);

- Prehistoric pottery sealed beneath deposits of colluvium up to 1.5m in depth (OA 143 D);
- A ditch containing Early Bronze Age pottery (OA 143 E); and,
- A possible hearth containing Early Bronze Age pottery (OA 143 F).

14.3.13 The field investigation by Wessex Archaeology noted here as OA 144 was on land north-east of Little Worsham Farm in 1995, on the southern edge of the Study Area. The evaluation included surface artefact collection, limited geophysical survey, and trial trenching. These results comprised of:

- Limited evidence of prehistoric and Roman activity;
- Post-Medieval field boundaries; and,
- Deposits of Post-Medieval colluvium.

14.3.14 Wessex Archaeology also undertook a field evaluation near Upper Wilting Farm in 1996 (OA 121). Seven trenches were dug to the north (OA 121A and B) and south (OA 121 C to G) of Upper Wilting Farm to test the theory put forward by Mr Austin (a local historian) that Norman invasion forces in 1066 landed here and built a number of structures. No evidence to support this theory was found. Although part of the area investigated lies outside of the Study Area, it is included here as the results of the investigation are significant to discussion of archaeological potential within the Study Area.

### ***Identified Cultural Heritage Features***

14.3.15 The identified cultural heritage features are discussed below by period of origin. They are also discussed in the context of the cultural heritage resource present within the Study Area, and, where necessary, outside of the Study Area. All cultural heritage features noted within the Study Area are included in the Cultural Heritage Gazetteer which is contained within Appendix 14-A. This also includes cross-references to the original Archaeological Desk Based Assessment prepared by Chris Blandford Associates in 2004.

#### *The Palaeolithic Period (c 500,000 BC - 8,500 BC)*

14.3.16 The Palaeolithic is divided into the Lower (c 500,000 BC to 36,000 BC) and Upper Palaeolithic (c 36,000 – 8,500 BC). The evidence for the Upper Palaeolithic is largely characterised by simple lithic technologies. The Lower Palaeolithic is characterised by the handaxes and core and flake tool industries of humans engaged in scavenging, hunting and gathering (CBA 2004).

14.3.17 Evidence of settlement and activity in Britain throughout this period is sparse, due to low levels of population, subsequent significant changes in the landscape and environment, and decay of non-lithic remains. Where Palaeolithic flint artefacts have been found, they have usually been re-located by natural processes and incorporated in later deposits. Palaeolithic flint artefacts found in-situ are rare and considered to be of national significance (Leslie & Short 1999).

14.3.18 No Palaeolithic finds of any form have been recovered from within the Study Area. However, a small cluster of surface finds dating to the middle period of the Palaeolithic were found to the east of the Study Area in Hastings (Leslie & Short 1999). It is very unlikely that any primary Palaeolithic contexts survive within the Study Area, and any artefacts found will have undergone a high degree of transportation and are likely to be abraded (OA 2006c).

*The Mesolithic Period (c 8500 – 3400 BC)*

14.3.19 The landscape of the Mesolithic period was still largely forested, and exploited by hunter gather communities. River and coastal resources were also exploited. Evidence for such activities is sparse, and usually consists of finds of flint tools and waste (CBA 2004).

14.3.20 Geoarchaeological evidence shows that the channels of the Combe Haven Valley and its tributaries began to silt up during this period, and the landscape was covered by a dense forest of oak, elm, ash and lime (OA 2006c), with the wetter valley bottoms being dominated by alder and willow. The sea level slowly rose during this period; the result of this is that the Combe Haven Valley and its tributaries would have become tidal valleys dominated by reed swamp and salt marsh in the valley bottoms with the forest cover remaining on the upper slopes of the surrounding ridges. The tidal conditions resulted in the deposition of silts on the valley floor.

14.3.21 There was a brief interruption to the tidal conditions in the main Combe Haven Valley which resulted in the deposition of peat, but this did not extend into the tributary valleys, and the tidal conditions returned to the whole valley within a few hundred years (OA 2006c).

14.3.22 The valley ridges and channel edges at this time would have provided an attractive location for Mesolithic hunter-gather communities to exploit the rich resources and environments at the estuary edge. Archaeological remains of this period are likely to be buried at depth under later accumulations of peat and estuarine silts within the valleys of the Watermill, Powdermill and Decoy Pond Streams.

14.3.23 There is one recorded Mesolithic Findspot of a flint tranchet axe in the Study Area (OA 139), located approximately 200m east of the Belle Hill Junction. This appears to be a nominal location but the actual findspot is in the Bexhill area.

*The Neolithic Period (c 4000BC – 2400 BC)*

14.3.24 The Neolithic period spans the transition from hunting and gathering to settled, agricultural communities, and is characterised in the archaeological record by the use of pottery and the construction of communal monuments, such as megalithic tombs, long barrows and ceremonial enclosures. Pollen records show that forest clearance occurred over large areas of the British Isles during this period (CBA 2004).

14.3.25 The majority of evidence for this period in Sussex has been located on the lighter soils of the chalk downs but recent work suggests that the heavier clay soils of the Weald were also intensely exploited during the Neolithic (Armstrong 1995). It is likely that small clearings in the Weald woodland were cut in this period (CBA 2004).

14.3.26 Pollen analysis has identified the first significant change in the Combe Haven Valley through woodland clearance at this time, due to effects of either disease or through the adoption of agriculture by Neolithic communities (OA 2006c ). A major retreat of the sea from the valley occurred during the Neolithic and Bronze Age, resulting in the replacement of the salt marsh in the valley bottoms with the return of alder and willow woodland, and the deposition of peat. Analysis has located peat deposits within the valleys of the Watermill Stream, Powdermill Stream and the Decoy Pond Stream, and has shown that it is absent from the upper sections of the Combe Haven Valley.

14.3.27 The valley bottoms would have been very attractive locations to exploit the rich resources present (e.g. fishing or wildfowling). This activity is likely to have been transitory, and to have been primarily focussed on the edges of the wetlands, and any potential gravel islands adjacent to the wetlands. Any artefacts associated with these deposits are likely to have undergone only limited lateral transportation and would have been rapidly sealed by later flooding. Settlements and cultivation are likely to have been confined to the top of the ridges or higher up on the slopes of the valleys, away from seasonal flooding on the valley bottoms.

14.3.28 There are three recorded finds of Neolithic artefacts within the Study Area:

- OA 105 - the findspot of a flint arrowhead of the late Neolithic to early Bronze Age, located approximately 50m east of the route;
- OA 116 - a cluster of fire-cracked flint possibly of late Neolithic/early Bronze Age date found during surface artefact collection by OA, and located approximately 400m south of the route; and,
- OA 143 A - a cluster of Late Neolithic pottery found in topsoils during an evaluation by Wessex Archaeology in 1995, and located approximately 250m south of the route.

#### *The Bronze Age (c 2400 – 700 BC)*

14.3.29 Archaeological evidence for this period is characterised by continuing finds of flint artefacts and increasing evidence of metal-working. Large scale monuments continued to be built but with an increasing emphasis on the creation of ritual landscapes (CBA 2004). Within East Sussex, the majority of evidence for settlement and intense activity has been recovered from the South Downs but the Wealden may have become more densely occupied with the growth in population and development of farming techniques (Leslie & Short 1999; Armstrong 1995).

14.3.30 As noted above, the withdrawal of tidal conditions from the valley occurred during the Neolithic and Bronze Age, resulting in the return of the alder and willow woodland, and leading to the deposition of peat. The upper

section of the peat has been dated to the Middle Bronze Age (3,500 Before Present (BP)) which is characterised at many sites across England as a period of extensive woodland clearance principally to make way for enclosed agricultural fields. There is some evidence to suggest that silt deposits identified within the top of the peat represent colluvial silts. These may have been deposited as a result of woodland clearance of the valley edges, leading to increased soil erosion and runoff.

14.3.31 The valley bottoms would still have been attractive locations for the exploitation of the wetland resources, but the landscape of the Bronze Age is likely to have included some enclosed fields on the side or top of the slopes, close to settlement sites, which would also have been in easy reach of the extensive woodlands remaining on the upper slopes.

14.3.32 At Upper Wilting Farm several possible hearths and pottery finds dated to the Bronze Age (and possibly the Early Iron Age) have been located on the valley edges and at the interface with the wetland zone (OA 116; OA 143B, C, D, E and F; located about 180m south of the Scheme route). This suggests that there may have been a Bronze Age farming settlement located on the higher ground overlooking the Combe Haven river, possibly on land between Monkham Wood and Upper Wilting Farm (to the south of the route).

14.3.33 It has been suggested that a number of the roads and tracks shown on early maps (especially those on top of ridges) may be of Bronze Age origin (CBA 2004). These may include the historic trackways OA 282, 283, 286, 287, 289 and 290.

14.3.34 There is one other recorded find indicating Bronze Age activity within the Study Area. OA 118 records an oak log found near Monkham Wood of Middle Bronze Age date, which appeared to have been cut by tools. The exact location of OA 118 is uncertain but the recorded findspot is located about 400m south of the Scheme route.

#### *The Iron Age (c 700BC-AD43)*

14.3.35 Archaeological evidence from the Iron Age shows the production and use of iron as a worked metal, the intensification and expansion of agriculture onto previously marginal land, the nucleation of settlement, and a worsening climate (CBA 2004). The construction of hillforts suggests increasing social tensions and stronger social structures (CBA 2004).

14.3.36 The Combe Haven Valley had returned to estuarine conditions by about 200BC (late in the Iron Age), with salt marsh and reed swamp environments replacing areas of former alder and willow woodland in the valley bottoms (OA 2006c). These conditions then persisted until some point probably in the middle of the Medieval period, possibly the 11th century (see below). Further forest clearance for agricultural use resulted in the deposition of colluvium (CBA 2004), possibly including that recorded south-west of Upper Wilting Farm (OA 143 D). Rising river water levels during this period could have facilitated the transport by water of iron exports and enhanced trading over a wider area.

14.3.37 It is likely that the exploitation of the iron ores on the valley headlands surrounding the Combe Haven Valley was a significant influence on the Iron Age and later landscapes in the Study Area. Further afield in the Weald, excavated Iron Age settlement sites are usually related to iron extraction/processing sites (CBA 2004). There are several extraction/processing foci located to the north of the Study Area at Pepperingeye, Forewood and Crowhurst Park, whilst Byne's Farm (OA 109 and 124; within the Study Area) is very likely to have originated as an Iron Age extraction/processing site that continued in use into the Roman period.

14.3.38 There are two recorded finds indicating Iron Age activity within the Study Area:

- OA 116 - a small scatter of metal slag suggesting use of the site for iron-working was found during surface artefact collection by OA, and located about 400m south of the Scheme route (Oxford Archaeological Unit 1992). This suggests the presence of an as yet unidentified Iron Age settlement site in this vicinity; and,
- OA 109 and 124 - Byne's Farm excavated Roman bloomery site, which is likely to have originated in the Iron Age, and may also be associated with an as yet unidentified Iron Age settlement site and further iron extraction/processing sites. Located immediately north of the route, this is designated by ESCC as an Archaeologically Sensitive Area.

14.3.39 In addition, and as noted above, a hearth associated with Late Bronze Age or Early Iron Age pottery was found to the west of Monkham Wood (OA 143 B).

#### *The Roman Period (AD 43 – 410)*

14.3.40 The Roman period saw the reorganisation and expansion of settlement over Sussex (CBA 2004). The apparent lack of identified settlement sites on the Wealden clay soils represents a bias in the archaeological record toward sites more easily identified on lighter soils, and does not indicate a radically lower intensity of settlement or exploitation on the Weald compared to other areas.

14.3.41 The significance of the iron industry in the evolution of the landscape and settlement patterns continued and intensified in the Roman period (Leslie & Short 1999). It is possible that some of the land within the Study Area formed part of an imperial or military estate, administered to maximise production and profit (Leslie & Short 1999). If this is so, then settlement density may be of a different form or of a lesser intensity than elsewhere in Sussex.

14.3.42 As noted above, OA 109 and 124 denote an excavated Roman bloomery site, immediately to the north of the Scheme route. Another Romano-British bloomery is located in Little Henniker Wood (OA 108), about 300m west of the route. Small bloomery sites are not easy to detect on the surface and there is a strong possibility that other sites survive undetected within the Study Area (Brandon 1974; CBA 2004).

14.3.43 There are three other recorded possible Roman sites within the Study Area:

- OA 206 - surface finds of possibly Roman pottery about 100m east of the route;
- OA 143 A - Roman pottery found within topsoil about 180m south of the route; and,
- OA 144 - limited evidence of Roman activity on the southern edge of the Study Area.

*The Early Medieval Period (AD 410 – 1066)*

14.3.44 It is likely that Saxon and Roman cultures co-existed for some time prior to the formal withdrawal of Roman administration in AD 410, which resulted in a period of socio-economic decline (CBA 2004). There is generally a low level of both archaeological evidence and historical sources for the early part of this period in Sussex. Archaeological evidence for iron extraction and processing in the early part of this period is particularly rare but what evidence survives suggests that these activities were carried out on a much smaller scale than during the Roman period (Gardiner 2003).

14.3.45 It is thought that this area of Sussex was occupied by the 'Haestingas' group of Saxons, who were relatively isolated from the rest of Sussex. Place-name evidence suggests that they favoured settlement sites on the inlets to the sea, such as the Combe Haven Valley (Brandon 1974). This is supported to some degree by place-name evidence: Pebsham (named Pypfels ham after its founder); Lower and Upper Wilting farms (named after the Wiltingas tribe that may have occupied this area), Hollington (named after the Holingas, meaning 'dwellers of the hollow'), Sidley (meaning wide clearing) and Bexhill (meaning clearing with a covering of box trees) (CBA 2004). This suggests that the area around what is now Lower (OA 423) and Upper Wilting farms (OA 405), and through which the Scheme passes, was the location of an Early Medieval settlement (CBA 2004). However, no firm evidence has been found to support this in recent excavations in the area of Upper Wilting Farm.

14.3.46 Documentary evidence from the 8th century (discussed in CBA 2004) suggests that by the 8th century the Study Area was farmed and settled, and that control of the former tidal inlet to form water-meadows (including those within the Study Area) may have originated in this period. However, it is possible that the formation of the water-meadows started as a natural process, possibly by the 11th century (OA 2006c contained within Appendix 14-E). Pollen analysis from the upper deposits within the Combe Haven Valley has shown a decline in salt marsh plants and its replacement with grasses, sedges and cereals, consistent with the growth of Medieval agricultural activity after the retreat of the sea-water tidal zone.

14.3.47 The latter part of this period is better understood, mainly due to the larger number of surviving documents, as archaeological evidence is still comparatively sparse outside of the regional towns such as Bexhill and Hastings. At about this time, the former manors or Saxon Minsters were replaced by the parochial system of local administration that still survives

today. The Study Area includes land in the historic parishes of Bexhill, Crowhurst and Hollington. It is likely that some of the boundaries of the historic parishes followed earlier, Saxon manorial boundaries (Friar 1991), some of which themselves may have had a Roman origin.

14.3.48 In addition to the place-name evidence relating to Lower and Upper Wilting Farms (OA 423 and OA 405), there is one other recorded site indicating activity within the Study Area in the Early Medieval period: OA 140. This notes a reference in a document of AD 722 suggesting the presence of an Early Medieval monastery in the Bexhill area. It is located about 100m east of the Belle Hill Junction but this is a nominal location for a reference that probably applies to the historic core of Bexhill.

*The Later Medieval Period (AD1066-1550) - The Norman Conquest of 1066*

14.3.49 The Norman Conquest of 1066 is traditionally seen as marking the transition from the Early to Later Medieval periods in England.

14.3.50 There have been a number of claims previously made by Mr Austin (a local historian) regarding the possible use of the Combe Haven Valley by the invading Norman forces in 1066, and events in and around the area of Upper Wilting Farm. Mr Austin has conducted historical research and carried out excavation work in this area. Mr Austin's assertions are complex, but can be summarised as:

- An Early Medieval village named after the 'Haestingas' existed on the edge of the Combe Haven;
- The Norman invasion fleet landed in the Combe Haven Valley, at a site close to Redgeland Wood (located about 700m south of the Preferred Route Option), and that surviving earthworks and wooden remains on the flood plain of the Combe Haven are the remains of the Norman landing site, a burial mound, and of some of their boats.
- The Normans then erected an earthwork fortification at the landing site or possibly re-used an existing earthwork; and,
- A second fortification and camp was erected to the north of Upper Wilting Farm, on the site of an earlier, dilapidated Early Medieval fortification.

14.3.51 In response to Mr Austin's assertions, which were formally produced in evidence during a planning enquiry in 1996, the Highways Agency commissioned Wessex Archaeology to carry out an archaeological field evaluation of seven key features referred to by Mr Austin (Wessex Archaeology 1996). These are noted here as OA 121A to OA 121G, and extend to the south of the Study Area. The results of the field evaluation in relation to specific elements of Mr Austin's theory presented by Wessex Archaeology in 1996 were:

- No firm evidence was found of any settlement on the edge of the Combe Haven pre-dating the Later Medieval settlement in the area of Upper Wilting Farm. A buried soil located in trench G (OA 121G) was possibly of

prehistoric origin but there was “*no clear evidence for either domestic settlement or industrial activity*”;

- No evidence was found of any landing site or associated earthworks. Trench C showed the ‘burial mound’ to be a natural feature with no evidence of burials within it (OA 121C). Trenches E and G showed that the proposed remains of jetties were natural features well above the sea level of the 11th century (OA 121E and G). No remains were found in Trench F of boats nor was there any evidence that such deposits may have been removed (OA 121F);
- The proposed site of the earthwork fortification at the landing site was found to consist of two infilled, natural palaeochannels (Trench D, OA 121D), with some evidence of agricultural activity on the marsh edge in the 19th or 20th centuries;
- The earthworks on the site of the proposed second fortification and camp to the north of Upper Wilting Farm was shown to be of 12th to 14th century date, and to be of domestic or farming origin (Trench A; OA 121A). This activity was also seen in Trench B. No evidence was recovered of any fortification, castle or chapel site (Trench B; OA121B).

14.3.52 In summary, no archaeological evidence was found to support any of Mr Austin’s assertions during the course of the investigation recorded as OA 121, or in any previous or subsequent recorded archaeological investigation.

#### *The Later Medieval Period (AD1066-1550) - Post - 1066*

14.3.53 The 12th to 14th centuries was a period of expanding population, resulting in the creation of a number of small settlements scattered through each parish on the downland or in the river valleys (Leslie & Short 1999). This is possibly the origin of the dispersed, historic farmsteads OA 401, 402, 404, 405, 406 and 423.

14.3.54 The landscape of the Later Medieval period within the Study Area would have been divided into patterns of open fields, woodland, parkland, meadow and marsh, linked by tracks or paths (CBA 2004). It is likely that many of the historic landscape features identified within the Study Area date from this period, or from early in the Post-Medieval period. These include possible cultivation terraces (e.g. OA 202), field boundary banks (e.g. OA 238), woodland boundaries (e.g. OA 211) or trackways (e.g. OA 232). It is possible that some of the English Nature designated ‘Ancient Woodland’ within the Study Area may have been maintained as woodland in the Later Medieval period, but direct archaeological evidence is lacking (OA 126 - 137). Most of the ‘Ancient Woodland’ within the Study Area consists of formerly coppiced Hornbeam and Sweet Chestnut, with some Alder and Field Maple. It is also possible that some land within the Study Area (e.g. OA 134) formed part of parkland established and maintained during this period.

14.3.55 As noted above, the formation of the current fresh water-meadows in the Combe Haven Valley was probably achieved in the Later Medieval period, and the former salt marshes were replaced by grasses, sedges and cereals (OA 2006c contained within Appendix 14-E).

14.3.56 The iron industry continued to be a significant factor in shaping the landscape and economy in and around the Study Area in the Later Medieval period (CBA 2004). There are five identified sites within the Study Area which appear to indicate extraction/processing sites, and which may be of Later Medieval origin:

- OA 119 - bell-pits in Monkham Wood;
- OA 103, 104, 141 - possible medieval bloomery sites; and,
- OA 107 - surface finds of slag waste products.

*The Post-Medieval Period (AD1550-1900)*

14.3.57 Maps of the historic landscape and individual features become gradually more common and accurate during this period, as do written, secondary sources recording land use, ownership and land management. Although there are several historic maps showing the Study Area from the 16th, 17th and 18th centuries, most are small-scale or show little detail. This includes maps by Norden (1595), Speed (1610), and Budgen (1724) (CBA 2004).

14.3.58 The 1795 map of Sussex by Yeakell, Gardener and Gream shows the Study Area in reasonable detail for the first time in Figure 3.7 of Appendix 14-B. Farms, villages, trackways, water-courses and most field boundaries are shown in relation to the basic topography of the region. The First Series Ordnance Survey One Inch map of 1813 and the Greenwood map of 1825 show slightly less detail than the 1795 map, see Appendix 14-B, Figures 3.8 and 3.9. The tithe maps of the parishes of Bexhill (1843), Crowhurst (1841) and Hollington (1843) are the first highly detailed maps of land within the Study Area. Later Ordnance Survey mapping at scales of Six and Twenty-Five inches to the mile are also highly detailed. This sequence of maps shows that the landscape within the Study Area had essentially stabilised by the late 18th century, and that the current drainage pattern of the Combe Haven Valley was also well established by the late 18th century.

14.3.59 The iron industry remained a significant factor in the local economy and landscape in the early part of the Post-Medieval period (CBA 2004). The construction of turnpike roads in the 18th and 19th centuries resulted in widespread loss of, particularly, Roman iron-working sites, as the waste slag was highly prized for road surfacing and many of these sites were quarried away (CBA 2004). As noted above, many of the features of the historic landscape date either from this period or from the Later Medieval period.

14.3.60 Although some of the Historic Farmsteads within the Study Area could have originated in the Later Medieval period (e.g. OA 404 or 405), it is equally possible that some could have developed early in the Post-Medieval period and were established before the large-scale mapping surveyed from the late 18th century onwards. All of the identified buildings and structures within the Study Area are of Post-Medieval or Modern origin.

14.3.61 The land within the Study Area in the latter part of the Post Medieval period was predominantly a rural landscape. The last recorded breach of the

sea-defences (permitting sea-water to enter the lower part of the Combe Haven Valley) was in the 17th century (OA 2006c). By the late 18th century, the Wealden iron industry was in decline (Barber 2003) and industrial production ceased early in the 19th century.

#### *The Modern Period (1900AD-Present)*

14.3.62 The most obvious change to the landscape within the Study Area shown on the 3<sup>rd</sup> Edition OS map of 1907-10 (CBA 2004, Figure 3.12) is the Bexhill Branch railway (OA 292), with its attendant structures and features (OA 300 -304, 412-14, 416, and 418). Also apparent are water-pumping stations on the Combe Haven Valley floor, with associated access and service features (OA 110, 224, 305 - 310). However, there is on this, and all subsequent OS mapping of the Modern period, little or no significant change to the basic form of the landscape within the Study Area. It is predominantly a rural environment, that has not changed significantly and demonstrably since the late 18th century (as shown on the Yeakaell map of 1795 contained in Appendix 14-B, Figure 3.7), and has probably not changed significantly since at least the Later Medieval period.

#### *The Historic Landscape*

14.3.63 No program of Historic Landscape Characterisation has been applied to the Scheme area nor is there any evolving text available at the time of writing.

14.3.64 The published County Landscape Assessment (ESCC 2004) divides the county into a series of fairly broad landscape zones based on their visual landscape qualities. The Scheme through the Combe Haven lies within Area 10 which was referred to as “*Darwell Valley and Combe Haven Valley in the High Weal*”. The key characteristics of the Combe Haven Basin are described as:

- “*Focal open, flat winding valley floor with wetland.*”
- “*Intricate terrain of small, winding valleys and ridges around levels with abundant woods and ghylls. Extensive areas of ancient woodland.*”
- “*Contrast between open valley floor and slopes.*”

14.3.65 As discussed in detail below and shown in Figure 14.2, the Scheme has been divided into ten zones, reflecting local topography, geology, and ground conditions. These conditions are significant factors in the evolution and form of the historic landscape evident in each zone.

14.3.66 Zone A extends along the former railway line built in the early 20th century, and lies entirely within a built environment of primarily 20th century origin.

14.3.67 ‘Lower’ Zones C, E, G and I comprise the base of the upper Combe Haven Valley, and the valleys of the Watermill, Powdermill and Decoy Pond Streams. The landscape within these Zones is basically flat, and is principally divided by both natural and artificial water-ways, with fewer hedgerows than in

Zones B, D, F, H and J and comparatively little woodland. The main form of land-use is either pasture or water-meadow. Zone C differs slightly due to the topography, which includes sloping ground, and is used for arable farmland. It is very likely that these Zones have been used mainly as grassland or water-meadow since at least the Later Medieval period.

14.3.68 'Upper' Zones B, D, F, H and J comprise the upper slopes and tops of the ridges surrounding the Combe Haven Valley. The landscape within these Zones includes both relatively steep and slight slopes; and is principally divided by hedgerows, lanes, and woodlands. Land-use is mixed but is dominated by arable and pasture farmland and dispersed settlement. The hedgerows and woodlands are the dominant visual features. Zones B, D, F, H and J have been used primarily for settlement, agriculture and industry since at least the Iron Age, although the current, visible and accessible landscape is primarily of Later Medieval origin.

14.3.69 Both the upper and lower groups of landscape zones are linked and crossed by a series of trackways (eg OA 232). Some of the trackways may have had a prehistoric origin but most are likely to be of Later Medieval date.

14.3.70 There are a large number of extant hedgerows within the Study Area, each of which is an individual feature of the Historic Landscape. A high proportion of the hedgerows meet the historical value criteria to be designated as 'Important' under Schedule 1 to the Hedgerow Regulations 1997. All hedgerows recorded during the OA Walkover Survey are shown on Figure 2 of Appendix 14-D. Those hedgerows that are impacted by the Scheme are depicted on Figure 14.1, and are individually numbered and recorded in the Cultural Heritage Gazetteer which is contained in Appendix 14-A. These comprise OA 500 - 503, 506 - 523, 525 - 530, 533 - 540, 542 - 543 and 546 - 548.

14.3.71 All of the hedgerows noted above, except OA 520, meet the historical value criteria to be designated as 'Important' under Schedule 1, Paragraph 5. Paragraph 5 refers to hedgerows that form an integral part of a field system pre-dating the Short Titles Act of 1845. All of these hedgerows are shown as field boundaries on the tithe maps of Bexhill (1839), Crowhurst (1840), and Hollington (1844).

14.3.72 Hedgerow OA 520 meets the historical value criteria to be designated as 'Important' under Schedule 1, Paragraphs 1 and 5. Paragraph 1 refers to hedgerows that mark the boundary of an historic (pre-1850) parish.

### ***Archaeological Potential of the Scheme***

#### *Introduction*

14.3.73 The archaeological potential of the Scheme area and its immediate environs is based on the identified archaeological and historical resource recorded across the Study Area, including the results of the geoarchaeological assessment (that comprises Appendix 14-E).

14.3.74 In order to clarify the assessment of the cultural heritage resource, the Scheme has been divided into ten zones, reflecting local topography, geology, and ground conditions. Figure 14.2 shows a map displaying the positions of the ten zones. The definition of the limits of each Zone are approximate only, as each Zone is based on data such as recorded results from boreholes and trial pits, where the exact limits of local geological conditions are not precisely known at present. The Zones comprise:

- Zone A - the former railway route, from the Bexhill Junction (Approximate Chainage (Ch) 0) to Glovers Farm (Ch 1500);
- Zone B - the Scheme route from Glovers Farm (Ch 1500) to the southern edge of the upper Combe Haven silts (Ch 2200);
- Zone C - the Scheme route over the upper Combe Haven silts (from Ch 2200 to Ch 2400);
- Zone D - the Scheme route from the north edge of the upper Combe Haven silts (Ch 2400) to the west edge of the Watermill Stream peat and silt deposits (Ch 3100);
- Zone E - the Scheme route over the Watermill Stream peat and silt deposits (from Ch 3100 to Ch 3350);
- Zone F - the Scheme route from the east edge of the Watermill Stream peat and silt deposits (Ch 3350) to the west edge of the Powdermill Stream peat and silt deposits (Ch 3650);
- Zone G - the Scheme route over the Powdermill Stream peat and silt deposits (from Ch 3650 to Ch 3950);
- Zone H - the Scheme route from the east edge of the Powdermill Stream peat and silt deposits (Ch 3650) to the west edge of the Decoy Pond Stream peat and silt deposits (Ch 4400);
- Zone I - the Scheme route over the Decoy Pond Stream peat and silt deposits (from Ch 4400 to Ch 4600); and,
- Zone J - the Scheme route from the east edge of the Decoy Pond Stream peat and silt deposits (Ch 4600) to the Queensway Junction (Ch 5500).

#### *Previous Impacts*

14.3.75 The archaeological potential of each Zone will have been compromised to varying degrees by previous impacts, which are mainly related to previous land-use.

14.3.76 Zone A extends along the Bexhill Connection: a former railway line built in the early 20th century. The Scheme route along the railway line lies in an existing cutting from the terminus of the railway line near OA 418, until the Scheme route begins to diverge to the north-west of the former railway line near Glovers Farm. The cutting is very likely to have removed or substantially truncated any archaeological deposits that may have been present prior to the construction of the railway line in the early 20th century. Housing and industrial development from the 19th, 20th and 21st centuries lie between OA 418 and the A259 Bexhill Junction at the southern end of the Scheme. These buildings are likely to have substantially truncated or removed any archaeological deposits present prior to their construction. The condition and

extent of any archaeological deposits present in Zone A are, therefore, very likely to have been significantly compromised due to the previous impacts of the railway cutting and building construction.

14.3.77 Zones C E, G and I comprise the approximate extent of Holocene peat and/or estuarine silt deposits within the upper Combe Haven Valley, and the valleys of the Watermill, Powdermill and Decoy Pond Streams. The silt deposits were laid down during the Mesolithic and Neolithic periods (between approximately 6 and 3000 BC), and the peat was formed during the Neolithic, Bronze Age and Iron Age periods (between approximately 3000 and 200 BC).

14.3.78 The 'blanketing' effect of the peat and the silts is very likely to have protected any Mesolithic, Neolithic, Bronze Age or Iron Age archaeological deposits present below, and, to slightly lesser extent within the silt or peat deposits may be protected from later intrusion and damage (such as that caused by ploughing) by forming a physical barrier. Therefore, the soils and land surfaces that lie on top of the peat and silt deposits in Zones C E, G and I will have been damaged to a lesser degree than those present in Zones B, D, F, H and J. This is because the soils and land surfaces in the 'wet' Zones C E, G and I would have been seasonally flooded and difficult to cultivate, compared to the better-drained soils and land surfaces in the 'dry' Zones B, D, F, H and J. Therefore, any archaeological deposits present within Zones C, E, G and I dating from the Mesolithic, Neolithic, Bronze Age and Iron Age periods are very likely to survive in exceptionally good condition.

14.3.79 Zones B, D, F, H and J comprise the upper slopes and tops of the ridges surrounding the Combe Haven Valley, which now comprise a modern, rural environment of mixed farming and dispersed settlement, and which have been used primarily for settlement, agriculture and industry since at least the Iron Age. Impacts associated with these activities (e.g. plough damage) may have affected the levels of survival of any archaeological deposits present by truncation. Such impacts are likely to have been more intense and widespread than those in the 'wet' Zones (C E, G and I). Therefore, any archaeological deposits present within Zones B, D, F, H and J are therefore likely to be less well preserved than those that may be present in Zones C, E, G and I.

#### *The Palaeolithic period - all Zones*

14.3.80 The potential for land within all Zones to contain primary archaeological deposits dating from the Palaeolithic period is very low. The land surfaces associated with primary Palaeolithic deposits have been eroded away, including the buried land surfaces within Zones C, E, G and I (OA 2006c). The potential for land within the Scheme to contain dislocated artefacts of the Palaeolithic period is uncertain, but probably low. Any artefacts that survive within the Scheme "*will have undergone a high degree of transportation and are likely to be abraded.*" (OA 2006c). Any such artefacts, however, would be of high archaeological significance.

### *The Mesolithic to Post-Medieval periods*

#### *Zone A*

14.3.81 Previous impacts to Zone A (the early 20th century railway line and building along the Scheme route from the 19th century) have seriously compromised the archaeological potential within this zone. Zone A has, therefore, an uncertain but probably low potential to contain significant archaeological deposits of any period.

#### *Zone C*

14.3.82 Zone C comprises the approximate extent of estuarine silt deposits in the upper Combe Haven Valley, which were laid down during the Mesolithic and Neolithic periods (between c 6-3000 BC). No peat deposits are currently recorded in the upper Combe Haven valley in which Zone C lies.

14.3.83 The potential for Zone C to include significant archaeological deposits of the Neolithic, Bronze Age and Iron Age periods (between c 3000- 200 BC) is uncertain but possibly high. Such deposits are most likely to include primary evidence of activities relating to the exploitation of the wetlands in the valley bottom, and may include preserved organic materials such as wood or leather. Deposits of this nature are likely to be regarded as of potentially national significance.

14.3.84 Zone C has an uncertain but probably moderate to high potential to include significant archaeological deposits of the Mesolithic and Roman periods, an uncertain potential for the Early Medieval period, and a high potential to include deposits of the Later-Medieval, Post-Medieval and Modern periods.

#### *Zones E, G and I*

14.3.85 Zones E, G and I comprise the approximate extent of Holocene peat and/or estuarine silt deposits laid down in the valleys of the Watermill, Powdermill and Decoy Pond Streams. The silt deposits were laid down during the Mesolithic and Neolithic periods (between c 6-3000 BC), and the peat was formed during the Neolithic, Bronze Age and Iron Age periods (between c 3000- 200 BC). No peat deposits are recorded in the upper Combe Haven Valley (Zone C).

14.3.86 The potential for Zones E, G and I to include significant archaeological deposits of the Mesolithic, Neolithic, Bronze Age and Iron Age is uncertain but possibly high. Such deposits are most likely to include primary evidence of activities relating to the exploitation of the wetlands in the valley bottom, and may include preserved organic materials such as wood or leather. Deposits of this nature are likely to be regarded as of potentially national significance. Zones E, G and I have an uncertain but probably moderate to high potential to include significant archaeological deposits of the Roman period, an uncertain potential for the Early Medieval period, and a high potential to include deposits of the Later-Medieval, Post-Medieval and Modern

periods. Archaeological evidence within these Zones from the late Iron Age onwards is very likely to be dominated by exploitation of the salt marsh, the rivers and water-meadows.

#### *Zones B, D, F, H and J*

14.3.87 Zones B, D, F, H and J comprise the upper slopes and tops of the ridges surrounding the Combe Haven Valley. The recorded archaeological resource within these Zones is dominated by features, deposits and structures related to settlement, agriculture and industry. Archaeological evidence uncovered at Bynes Farm (OA 109) at Upper Wilting Farm (OA 143) and, possibly, at Little Henniker Wood (OA 108), suggest that the lower slopes of Zones B, D, F, H and J were favourable locations for two groups of activities: iron extraction and processing; and for activity related to exploitation of the salt marshes or water-meadows (e.g. hunting, fishing, food-processing). The activities related to exploitation of the salt marshes or water-meadows is likely to have been at its most intense at the interzone between the wet and dry zones, i.e. between B, C, D, E, F, G, H, I and J. The upper slopes and the ridge tops are most likely to have been primarily used for settlement, farming and managed woodland.

14.3.88 Zones B, D, F, H and J have an uncertain but probably low potential to include significant archaeological deposits of the Mesolithic and Neolithic periods, away from the interface with the 'wet' zones (Zones C, E, G and I). They also have an uncertain but probably high potential to include significant archaeological deposits of the Bronze Age, Iron Age, and Roman periods; an uncertain potential to include significant archaeological deposits of the Early Medieval period; and a moderate to high potential to include significant archaeological deposits of the Later-Medieval and Post-Medieval periods. Most of the visible historic landscape features and buildings identified within these zones are of Later-Medieval and Post-Medieval origin.

#### *Palaeoenvironmental evidence,*

14.3.89 Zones E, G and I have a very high potential to include significant palaeoenvironmental evidence, such as preserved pollen or plant macro-fossils, dating from between the Mesolithic and Iron Age periods. Zone C has a very high potential to include significant deposits of palaeoenvironmental evidence, such as preserved pollen or plant macro-fossils, dating from the Neolithic and Iron Age periods. Zones A, B, D, F, H and J have an uncertain but probably moderate potential to include less significant palaeoenvironmental evidence.

## **14.4 Mitigation**

### ***Standing buildings and historic structures - removal***

14.4.1 Mitigation of direct construction impacts (i.e. removal) on the historic structures listed below can be achieved through a programme of recording prior to removal. All of these buildings have been assessed as of low sensitivity. The details of this would need to be agreed with the Local Planning

Authority but would probably take the form of photographic recording to RCHME Level 1 or 2 record (RCHME 1996).

- OA 300: Brick archway access tunnel beneath railway;
- OA 301: Brick road bridge to west of Glover's Farm;
- OA 302: Arched brick road bridge (Ninfield Road Overbridge);
- OA 424: Cowshed to south of Adam's Farmhouse; and,
- OA 425: Brick barn to south-east of Adam's Farmhouse.

### ***Mitigation of Indirect Impacts (Noise and Visual Intrusion)***

14.4.2 Four measures to mitigate potential visual impacts are noted in the Visual Impact Schedule which can be found in Chapter 13: Landscape and Visual Impacts:

- Alignment of Scheme;
- Earthworks (i.e. bunding/landscaping);
- Planting (new); and,
- The management of existing vegetation.

14.4.3 These measures are noted below in Table 14.4. Note that the effectiveness of the latter two measures are time-dependant, and will not achieve full effectiveness until the Design Year (Year 15). Thus the assessed Significance of Impact can vary between the assessed years 2010 and 2025.

14.4.4 Two measures are proposed to mitigate potential impacts from noise. These are fully discussed in Chapter 11: Noise and Vibration. These comprise:

- Earthworks (i.e. bunding/landscaping); and,
- Barriers.

### ***Archaeological Deposits***

14.4.5 In addition to the evaluative work already undertaken (comprising a walkover survey, a desk-based assessment and a geoarchaeological assessment), a program of further evaluation is proposed that would aim to clarify the archaeological potential of the available land within the Scheme area. It has been agreed with the ESCC County Archaeological Officer that the evaluation would be undertaken in two stages. Stage one would be undertaken prior to final determination of the planning application, and consists of three components:

- A specialist geoarchaeological field investigation of the four 'wet' zones;
- An assessment of a LIDAR (Lasar Imaging Detection and Ranging) survey of the Scheme route to identify any archaeological features; and
- A surface collection survey (fieldwalking).

14.4.6 Stage two would involve a more extensive trial trenching exercise.

14.4.7 There is currently no specific information available on the nature of the archaeological resource (if any) present in the 'wet' Zones C, E, G and I. However, previous work has indicated the presence of sediments within the Combe Haven which are likely to be the result of human action. The natural (environmental) and human (anthropogenic) elements are therefore intimately linked. If remains do exist in these zones they would have the potential to be of high significance and to be sensitive to the construction of the Scheme depending on the construction methodology adopted.

14.4.8 A detailed Method Statement for the geoarchaeological investigation has been approved by the ESCC Archaeological Officer and is included in Appendix 14-H. Subject to available access, it would be carried out using up to 10 boreholes and 8 mechanically excavated trial pits as located on the accompanying plan. The primary objective of the investigation would be to identify the main sediment packages within Zones C, E, G and I and assess their archaeological significance. A LIDAR survey of the route has been undertaken and it is expected that the processed data from this exercise will be available in May 2007. The survey data would be assessed for the presence of potential archaeological features.

14.4.9 A surface collection survey (fieldwalking) has been completed and the results will be made available during the planning application period.

14.4.10 Stage two of the evaluation process would involve the trial trenching of the areas to be impacted by the Scheme and would be undertaken after planning approval is granted. The results of investigations already completed and of the stage one evaluation exercises would be used to fully inform a detailed method statement including the exact location and number of trial trenches. Trenches would be targeted to investigate any known features or anomalies and also located to provide good overall coverage of the Scheme area. Plan 13.8 A in Appendix 14-H also provides a provisional layout for the trial trenches, including trenches specifically targeting anomalies from the geophysical survey and field walkover surveys. The method statement for the second stage of evaluation work will be agreed with the ESCC Archaeological Officer prior to fieldwork commencing.

14.4.11 Once the program of archaeological evaluation has been completed, then a detailed program of archaeological mitigation can be formulated (in conjunction with the County Archaeological Officer) and implemented. This may include measures such as an archaeological watching-brief on certain areas or operations, targeted excavation of specific areas, or topographic survey/recording of earthworks and historic landscape features. It is anticipated that a combination of evaluation, detailed recording, and preservation in situ would mitigate most of the significant impacts of the Scheme.

## 14.5 Construction Impacts

### ***Scheme Impacts: Sources***

14.5.1 The assessment of potential impacts has been guided by four key sources:

- Chapter 3B: Construction Strategy;
- AutoCAD drawings issued by Owen Williams Consultants (Preliminary Scheme Layout, sheets 1 and 2);
- AutoCAD drawings issued by Owen Williams Consultants (Cut/Fill Areas, sheets 1 and 2); and,
- AutoCAD drawings issued by the Transport and Environment Department of ESCC.

14.5.2 In addition to the sources noted above, guidance on potential impacts of the Scheme has been derived from specialist data. These comprise:

- Visual Impact Schedule detailed in Chapter 13: Landscape and Visual Impacts; and,
- Noise level data detailed in Chapter 11: Noise and Vibration.

### ***Scheme Impacts: Description***

14.5.3 Chapter 3B: Construction Strategy details all the potential impacts associated with the construction of the Scheme. The location of each of these impacts and of the identified cultural heritage sites and features are shown on Figures 14.1 B to F.

14.5.4 Chapter 3B: Construction Strategy describes the basic engineering approach to the Scheme. Specific operations or techniques that may result in impacts to the Cultural Heritage resource have also been identified. These are briefly summarised here as:

- Site clearance would result in the removal of all existing structures within the area of the Scheme unless otherwise specified;
- Insertion, diversion and removal of both temporary and permanent services may impact upon areas of ground and to depths that may have been previously undisturbed;
- To enable construction of the Scheme, services are required to the main and satellite offices and site compounds;
- The excavation of cuttings and at grade earthworks would result in the removal of all topsoils and subsoils to a pre-determined depth;
- Enabling works would result in local or specific areas of disturbance to depths previously undisturbed;
- Following site clearance works and the removal of debris, topsoil would be stripped and stockpiled. Area used in a temporary capacity would not be stripped beyond vegetation clearance, leaving the root mat intact;

- The structures where piling would be required are the retaining walls east of Ninfield Road (in cutting), Watermill Stream, Powdermill Valley Stream, Powdermill Stream and Decoy Pond Stream; and,
- The construction compounds would be prepared using the appropriate measures.

14.5.5 The precise nature and extent of each of the potential impacts noted above would depend upon detailed engineering and construction methodologies proposed by the successful contractor at a later stage in the project. It should be emphasised that the construction strategy set out in this document represents a way in which the Scheme can be built, not necessarily the way in which it will be built. That will develop as the detailed design for the Scheme progresses through the planning stage of the process.

14.5.6 However, it is anticipated that the combination of archaeological evaluation, detailed recording, and preservation in situ would mitigate most of the significant impacts of the Scheme.

14.5.7 A number of assumptions have been made regarding potential impacts based upon the sources noted above in. The assumptions comprise:

- All earthworks in cutting and at grade would result in the removal of all top and subsoils to a pre-determined depth;
- All areas of permanent fill (i.e. bunds or mounds) would be prepared as for earthworks noted above;
- The preparation of temporary Scheme areas (i.e. construction compounds, access areas and temporary soil storage mounds) would be as stated in Chapter 3B: Construction Strategy;
- Disturbance to the existing drainage and hydrology of the Combe Haven Valley may result in temporary de-watering of sensitive flooded archaeological and palaeoenvironmental deposits through changes in local hydrological conditions - this represents a significant adverse direct impact to any archaeological or palaeoenvironmental deposits that may be present;
- Soil stockpiling may also result in compression of any deposits below the stockpile - this represents a significant adverse direct impact to any archaeological deposits that may be present;
- Construction traffic on-site may result in erosion and compression of underlying deposits - this represents a significant adverse direct impact to any archaeological deposits that may be present;
- Construction traffic on- and off-site may impact upon standing structures indirectly through noise impacts to settings - this represents a significant adverse indirect impact to any archaeological deposits that may be present; and,
- Construction operations would result in indirect impacts on the settings of sites, features and structures through dust and visual intrusion.

14.5.8 As indicated in Chapter 11: Noise and Vibration it is not anticipated that the Scheme would result in any impacts to buildings or structures

(whether Listed or not) through the impacts of vibration. The potential impacts of noise are discussed below.

14.5.9 The proposed changes to the setting of the Grade II Listed Building Adam's Farmhouse would require Listed Building Consent to be granted by the Local Planning Authority. The Hedgerow Regulations of 1997 also require that the Local Planning Authority is notified in advance of any operations that would partially or wholly remove any Important Hedgerow (as defined in the 1997 Act).

### ***Construction Impacts Without Mitigation***

14.5.10 The assessed impacts and the environmental impacts of the proposals with and without mitigation are set out below in Table 14.4.

14.5.11 The proposals would result in direct impacts to two Cultural Heritage Designated Sites, both of High sensitivity:

- OA 409 Grade II Listed Building (Adam's Farm) - removal of part of current curtilage of Listed Building (including cowshed OA 424) by construction earthworks resulting in a Large significant impact; and,
- OA 124 Archaeologically Sensitive Area (Roman bloomery) - removal of part of Area by construction earthworks for Greenway and for landscaping, resulting in an Uncertain significant impact.

14.5.12 The proposals would have no direct impact upon nine other Cultural Heritage Designated Sites of High sensitivity. These comprise Grade II Listed Buildings OA 408, 407, 410, 411, 415, 419, 420 and 421; and the Archaeologically Sensitive Area OA 125 (Bexhill historic core).

14.5.13 The proposals would result in direct impacts to ninety-five identified and non-designated Cultural Heritage receptors, comprising thirty-nine Important Hedgerows, nineteen earthworks, ten historic landscape features, four historic trackways, one map feature, one historic farmstead, eight historic structures, three archaeological sites and ten geophysical survey anomalies (possible archaeological sites).

14.5.14 The impacts comprise direct, partial or complete physical removal of each of the receptors, through site clearance, construction of earthworks, enabling works, construction of drainage ponds and construction of new structures.

14.5.15 Of the ninety-five identified and non-designated Cultural Heritage receptors:

- Thirty-nine are assessed as of Medium sensitivity, resulting in a Large significant impact to twelve receptors, a Moderate significant impact to six receptors, and a Slight significant impact to twenty-one receptors;
- One is assessed as of Low or Medium sensitivity, resulting in a Moderate or Large significant impact;

- Thirty-six are assessed as of Low sensitivity, resulting in a Moderate significant impact to seventeen receptors, a Slight significant impact to eighteen receptors, and an Uncertain significant impact to one receptor;
- Three are assessed as of Negligible sensitivity, resulting in a Neutral significant impact; and,
- Sixteen are assessed as of Uncertain sensitivity, resulting in an Uncertain significant impact in all cases.

#### *Impacts to Unidentified Archaeological Deposits*

14.5.16 Most of the construction impacts noted above could potentially apply to archaeological deposits within the Scheme area that are currently unidentified. This includes direct impacts resulting in the partial or complete destruction of such deposits, and direct impacts resulting in, for example, the compression of buried deposits, or the de-watering of sensitive, waterlogged remains.

#### **Construction Phase - Temporary Indirect Impacts**

14.5.17 It is anticipated that there would be temporary indirect impacts to the settings of a number of cultural heritage receptors (including Designated Sites) during the Construction phase of the Scheme. The two sources of indirect impacts during the Construction phase would be visual and noise intrusion into the setting of receptors. Predicted indirect impacts are presented below in Table 14.4.

#### *Temporary Indirect Impacts - Visual*

14.5.18 As noted above, the key data source of potential visual impacts is the detailed data presented as the Visual Impact Schedule in Chapter 13: Landscape and Visual Impact. .

14.5.19 The predicted temporary indirect visual impacts to settings comprise:

- A Large significant impact to one Grade II Listed Buildings (OA 409 Adams Farmhouse);
- A Moderate significant impact to two Grade II Listed Buildings (OA 407 Bynes Farm; OA 410 Upper Wilting Farm);
- A Moderate significant impact to three Historic Farmsteads (OA 401 Actons Farm; OA 403 Hillcroft Farm; OA 404 Adams Farm);
- A Slight significant impact to four Historic Farmsteads (OA 400 Glovers Farm; OA 402 Bynes Farm; OA 405 Upper Wilting Farm; and OA 423 Lower Wilting Farm).

#### *Temporary Indirect Impacts - Noise*

14.5.20 The key data source of potential construction noise impacts is the detailed data compiled for Appendix 11-H Construction Noise Levels in Chapter 11: Noise and Vibration. The predicted change (increase or decrease) is 'banded' according to the following methodology, which is in accordance with the methodology outlined in Chapter 11: Noise and Vibration:

- 1 - 3dB: Minimal or No effect;
- 3 - 5 dB: Low magnitude of impact;
- 5 - 10 dB: Medium magnitude of impact; and.
- 10dB +: High magnitude of impact.

14.5.21 The predicted temporary indirect noise impacts to settings comprise:

- A Large significant impact to five Grade II Listed Buildings (OA 407 Bynes Farm; OA 408 Royal Oak Cottage; OA 409 Adams Farmhouse; OA 410 Upper Wilting Farm; OA 411 Mayfield Farmhouse); and,
- A Moderate significant impact to eight Historic Farmsteads (OA 400 Glovers Farm; OA 401 Actons Farm; OA 402 Bynes Farm; OA 403 Hillcroft Farm; OA 404 Adams Farm; OA 405 Upper Wilting Farm; OA 406 Mayfield Farm; OA 423 Lower Wilting Farm).

14.5.22 The Large significant impact to the five Grade II Listed Buildings (OA 407 to OA 411) would be caused by the predicted change in noise levels during the construction period exceeding 15dB.

### ***Residual Impacts (after mitigation)***

14.5.23 As noted in Table 14.4 mitigation of Construction impacts can be achieved, to a certain extent, by the application of a range of mitigation options. However, mitigation of construction impacts resulting in a 'Neutral' significant impact cannot always be achieved. This applies particularly to Designated Sites.

14.5.24 Two Designated Site cultural heritage receptors would be subject to direct physical impacts: OA 409 and OA 124.

14.5.25 Mitigation by recording (direct impact from construction earthworks) to OA 409 (Grade II Listed Building, Adam's Farm) would result in mitigation of the significant impact from Large to Moderate.

14.5.26 There is no change in the significance impact from direct impacts after mitigation to OA 124 (Archaeologically Sensitive Area, Roman bloomery), as the Sensitivity and Magnitude of Change remain Uncertain. It is anticipated that the proposed program of archaeological evaluation would clarify the current uncertainty, and would enable effective mitigation of potential impacts.

14.5.27 The assessed impacts (direct impacts) of the proposals to the ninety-five identified and non-designated Cultural Heritage receptors after mitigation comprise:

- Moderate significant impact to nine receptors;
- Slight significant impact to sixty-four receptors;
- Uncertain significant impact to seventeen receptors; and,
- Neutral (or no) significant impact to five receptors

14.5.28 Note that the program of evaluation outlined above would aim to clarify the archaeological potential of the available land within the Scheme area, and in particular any impacts to receptors identified as Uncertain in this assessment. It is very likely, therefore, that the number of receptors subject to an Uncertain significant impact would be very substantially or wholly reduced.

14.5.29 Residual impacts could potentially apply to archaeological deposits within the Scheme area that are currently unidentified. These impacts may be derived from direct impacts resulting in, for example, the compression of buried deposits.

### ***Collective Impacts***

14.5.30 An evaluation and mitigation strategy has been outlined above which should mitigate all adverse impacts of the Scheme on both the known and unknown archaeological resource.

14.5.31 The exception to this is the residual impact caused by the collective impacts of the Scheme on the cultural heritage resource, whereby features of varying (and often Low) significance would be affected. Such features might contribute to the character of all three strands of the cultural heritage resource (historic buildings and structures, archaeological deposits and the historic landscape). However, the collective impacts of the Scheme are likely to have the most significant impact to the historic landscape strand in the Study Area.

14.5.32 As noted above, no program of Historic Landscape Characterisation has been applied to the Scheme area nor is there any evolving text available at the time of writing. However, based upon the description of the Combe Haven Area 10 within the County Landscape Assessment (ESCC 2004), and the division of the Scheme area into 'Lower' Zones C E, G and I, and the 'Upper' Zones B, D, F, H and J, the Scheme may be assessed as having a Moderate significant collective impact upon the historic landscape.

14.5.33 The principal source of the impact is the visual and noise intrusion on the key characteristics of the visible and accessible landscape, as well as the collective impacts of the Scheme on individual receptors including historic trackways and historic hedgerows. The latter have been assessed individually and are set out below in Table 14.4.

### ***Assessed Environmental Impacts***

14.5.34 Table 14.4 summarises all of the assessed impacts of the Scheme on identified individual receptors. This table includes assessed direct and indirect impacts in both the Construction and Operation phases, as indicated by the abbreviation C or O respectively in the last column.

**Table 14.4 Assessed Environmental Impacts**

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 407: Listed Building, Grade II, Bynes Farm.	High	Low (Indirect: visual impact on setting)	Moderate	Alignment Earthworks Planting Management of existing vegetation	C - Moderate O - 2010 - Slight O - 2025 - Neutral
		High (Indirect: noise impact on setting)	Large		C - Large O - Large
		High (Indirect: noise impact on setting)	Large		C - Large O - 2010 - Large O - 2025 - Moderate
OA 408: Listed Building; Grade II; Royal Oak Cottage	High	High (Direct: Partial removal of curtilage)	Large	Recording Alignment	C - Moderate
		High (Indirect: visual impact on setting)	Large	Alignment Earthworks Planting	C - Large O - 2010 - Large O - 2025 - Moderate
OA 409: Listed Building, Grade II, Adams Farmhouse	High				

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
		Medium (Indirect: noise impact on setting)	Large	Alignment Earthworks Planting	C - Large O - 2010 - Large O - 2025 - Large
OA 410: Listed Building; Grade II; Upper Wiltling Farm	High	Low (Indirect: visual impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - 2010 - Neutral O - 2025 - Neutral
		High (Indirect: noise impact on setting)	Large	Alignment Earthworks Planting	C - Large O - 2010 - Neutral O - 2025 - Neutral
OA 411: Listed Building; Grade II; Mayfield Farmhouse.	High	High (Indirect: noise impact on setting)	Large	Alignment Earthworks Planting	C - Large O - 2010 - Neutral O - 2025 - Neutral
OA 415: Listed Building; Grade II; The New Inn.	High	No impact	Neutral	-	-

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 419: Listed Building; Grade II; 50, 52 and 54 Belle Hill	High	No impact	Neutral	-	-
OA 420: Listed Building; Grade II; 60 Belle Hill	High	No impact	Neutral	-	-
OA 421: Listed Building; Grade II; 74 Belle Hill	High	No impact	Neutral	-	-
OA 124: Cultural Heritage Designated Site; Archaeologically Sensitive Area (ESCC).	High	Uncertain (Direct: Partial Removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 125: Cultural Heritage Designated Site; Archaeologically Sensitive Area (ESCC).	High	No impact	Neutral	-	-
OA 500: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate
OA 501: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 502: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate
OA 503: Important Hedgerow	Medium	Medium (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 506: Important Hedgerow	Medium	High (Direct: Complete removal)	Large	Recording	C - Moderate
OA 507: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Slight
OA 508: Important Hedgerow	Medium	Medium (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 509: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Slight
OA 510: Important Hedgerow	Medium	Low (Direct; Partial removal)	Slight	Recording	C - Slight
OA 511: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 512: Important Hedgerow	Medium	Medium (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 513: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 514: Important Hedgerow	Medium	High (Direct: Complete removal)	Large	Recording	C - Slight
OA 515: Important Hedgerow	Medium	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 516: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 517: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 518: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 520: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate
OA 521: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 523: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 525: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 526: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 527: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 528: Important Hedgerow	Medium	High (Direct: Complete removal)	Large	Recording	C - Moderate
OA 529: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 530: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 533: Important Hedgerow	Medium	Medium (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 534: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 535: Important Hedgerow	Medium	High (Direct: Partial removal)	Large	Recording	C - Moderate
OA 536: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 537: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 538: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 539: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 540: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 542: Important Hedgerow	Medium	Medium (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 543: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 546: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 547: Important Hedgerow	Medium	High (Direct: Complete removal)	Large	Recording	C - Moderate
OA 548: Important Hedgerow	Medium	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 102: Earthwork; curvilinear terrace	Low	Low (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Neutral
OA 110: Earthwork; Part of Pumping Station tramway route.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 115: Earthworks/ Map Feature Kiln Field.	Uncertain	Uncertain (Direct: Partial removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 220: Earthworks; two linked terraces or lynchets	Low	Medium (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Slight
OA 221: Earthwork; Terrace or lynchet	Low	Low (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Neutral
OA 225: Earthwork; Terrace or lynchet	Low	Medium (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 233: Earthwork; Raised bank across water-meadows. Probably modern services.	Negligible	High (Direct: Partial removal)	Neutral	-	-
OA 234: Earthwork; Terrace or lynchet;	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 235: Earthwork; Terrace or lynchet.	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 237: Earthwork; Terrace or lynchet;	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 238: Earthwork; Terrace or lynchet.	Low	Medium (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Slight
OA 240: Earthwork Terrace or lynchet.	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 241: Earthwork; Terrace or lynchet;	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 244: Earthwork; Possible site of silted up duck decoy pond.	Low or medium	High (Direct: Complete removal)	Moderate or Large	Archaeological Evaluation	C - Slight

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
OA 246: Earthwork; Substantial curvilinear terrace or lynchet .	Low	Low (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Neutral
OA 249: Earthwork; Substantial curvilinear terrace or lynchet .	Low	Low (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Neutral
OA 252: Earthwork; curvilinear terrace or lynchet and possible holloway.	Low	Uncertain (Direct: Partial removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 257: Earthwork; terrace or lynchet on south side of wood.	Low	Low (Direct: Partial removal)	Slight	Archaeological Evaluation	C - Neutral
OA 269: Earthwork; Bank across top of hill. ?Modern feature	Uncertain	Uncertain (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 207: Historic Landscape Feature, Woodland boundary.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 212: Historic Landscape Feature; Quarry site;	Uncertain	Low (Direct: Partial removal)	Uncertain	Archaeological Evaluation	C - Uncertain

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 232: Historic Landscape Feature; Holloway.	Low	Medium (Direct: Partial Removal).	Slight	Recording	C - Slight
OA 224: Historic Landscape Feature; Access track.	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 256: Historic Landscape Feature, Woodland boundary.	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 266: Historic Landscape Feature; Woodland boundary.	Low	High (Direct; Partial removal)	Moderate	Recording	C - Slight
OA 268: Historic Landscape Feature; Woodland boundary.	Low	High (Direct: Partial removal)	Moderate	Recording	C - Slight
OA 278: Historic Landscape Feature; Woodland boundary.	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 279: Historic Landscape Feature; Woodland boundary.	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
OA 292: Historic Landscape Feature; Route of former railway branch line.	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 282: Route of historic trackway	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 284: Route of historic trackway	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 286: Route of historic trackway	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 288: Route of historic trackway	Low	Low (Direct: Partial removal)	Slight	Recording	C - Slight
OA 122 Map Feature; Chapel Field on Wiltling Farm.	Uncertain	Uncertain (Direct: Partial removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 400 Historic Farmstead - Glovers Farm	Low	Medium (Indirect: visual impact on setting)	Slight	Alignment Earthworks Planting Management of existing vegetation	C - Slight O - 2010 - Slight O - 2025 - Neutral

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting Management of existing vegetation	C - Moderate O - 2010 - Moderate O - 2025 - Moderate
OA 401 Historic Farmstead - Actons Farm	Low	High (Indirect: visual impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - 2010 - Moderate O - 2025 - Slight
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - 2010 - Moderate O - 2025 - Moderate
OA 402 Historic Farmstead - Bynes Farm	Low	Medium (Indirect: visual impact on setting)	Slight	Alignment Earthworks Planting	C - Slight O - 2010 - Slight O - 2025 - Slight
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - Moderate

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
OA 403 Historic Farmstead - Hillcroft Farm	Low	High (Indirect: visual impact on setting)	Moderate	Alignment Earthworks Planting Management of existing vegetation	C - Moderate O - 2010 - Moderate O - 2025 - Slight
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting Management of existing vegetation	C - Moderate O - 2010 - Moderate O - 2025 - Moderate
		High (Direct: partial removal)	Moderate	Recording Alignment Earthworks Planting	C - Direct: Slight
OA 404: Historic Farmstead - Adams Farm	Low	High (Indirect: visual impact on setting)	Moderate	Alignment Earthworks Planting	C - Indirect: Moderate O - 2010 - Moderate O - 2025 - Slight
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - 2010 - Moderate O - 2025 - Moderate

Receptor	Baseline Sensitivity	Magnitude and form of Impact	Significance of Impact (without mitigation)	Mitigation measure	Significance of Impact (after mitigation)
OA 405: Historic Farmstead - Upper Witting Farm	Low	Medium (Indirect: visual impact on setting)	Slight	Alignment Earthworks Planting Management of existing vegetation	C - Slight O - 2010 - Neutral O - 2025 - Neutral
OA 405: Historic Farmstead - Upper Witting Farm	Low	High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - 2010 - Slight O - 2025 - Neutral

OA 406: Historic Farmstead - Mayfield Farm	Low	High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting	C - Moderate O - Neutral
OA 423: Historic Farmstead - Lower Witting Farm	Low	Low (Indirect: visual impact on setting)	Slight	Alignment Earthworks Planting Management of existing vegetation	C - Slight O - 2010 - Neutral O - 2025 - Neutral
		High (Indirect: noise impact on setting)	Moderate	Alignment Earthworks Planting Management of existing vegetation	C - Moderate O - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 406: Historic Farmstead - Mayfield Farm	Low	High (Indirect: noise impact on setting)	Moderate	Alignment Management of existing vegetation	C - Moderate O - Neutral
OA 300: Historic Structure; Brick archway access tunnel beneath railway.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 301: Historic Structure; Brick road bridge to west of Glover's Farm.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 302: Historic Structure; Arched brick road bridge.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 305: Historic Structure; Concrete footings of Pumping Station.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 306: Historic Structure; Concrete footings of Pumping Station.	Negligible	High (Direct: Complete removal)	Neutral	-	-
OA 424: Historic Structure; Cowshed to south of Adam's Farmhouse; Post-Medieval.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 425: Historic Structure; Brick barn to south-east of Adam's Farmhouse. First shown on Crowhurst tithe map of 1840.	Low	High (Direct: Complete removal)	Moderate	Recording	C - Slight
OA 426: Historic Structure; Agricultural building (?cow-shed); Modern.	Negligible	High (Direct: Complete removal)	Neutral	-	-
OA 104: Archaeological Site; Possible medieval bloomery	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 121B Archaeological Site.	Low	High (Direct: Complete removal)	Moderate	Archaeological Evaluation	C - Slight
OA 143A: Archaeological Site	Uncertain	High (Direct: Partial removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 145: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 146: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 147: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 148: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 149: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 150: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 151: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 152: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain

<b>Receptor</b>	<b>Baseline Sensitivity</b>	<b>Magnitude and form of Impact</b>	<b>Significance of Impact (without mitigation)</b>	<b>Mitigation measure</b>	<b>Significance of Impact (after mitigation)</b>
OA 153: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
OA 154: Geophysical survey anomaly (possible archaeological site)	Uncertain	High (Direct: Complete removal)	Uncertain	Archaeological Evaluation	C - Uncertain
Unidentified archaeology	Uncertain	Uncertain	Uncertain	Archaeological Evaluation	Uncertain (at time of writing)

## 14.6 Operational Impacts

### ***Operational Impacts to Settings - Noise***

14.6.1 It is predicted that implementation of the Scheme would result in operational impacts on the settings of three Designated Cultural Heritage receptors (Grade II Listed Buildings) through predicted change in noise levels during the operational period. These comprise:

- OIA 407 (Grade II Listed Building, Bynes Farm) - Large significant impact in both 2010 and 2025;
- OA 409 (Grade II Listed Building, Adams Farmhouse) - Large significant impact in both 2010 and 2025; and,
- OA 408 (Grade II Listed Building, Royal Oak Cottage) - Large significant impact in 2010 and a Moderate significant impact in 2025.

14.6.2 The settings of seven non-designated cultural heritage receptors would be subject to increased levels of noise during the operational period. These comprise:

- OA 400 (Glovers Farm Historic Farmstead) - Moderate significant impact in both 2010 and 2025;
- OA 401 (Actons Farm Historic Farmstead) - Moderate significant impact in both 2010 and 2025;
- OA 402 (Bynes Farm Historic Farmstead) - Moderate significant impact in both 2010 and 2025;
- OA 403 (Hillcroft Farm Historic Farmstead) - Moderate significant impact in both 2010 and 2025;
- OA 404 (Adams Farm Historic Farmstead) - Moderate significant impact in both 2010 and 2025;
- OA 405 (Upper Wilting Historic Farmstead) - Slight significant impact in 2010, neutral significant impact in 2025; and,
- OA 423 (Lower Wilting Historic Farmstead) - Slight significant impact in both 2010 and 2025.

### ***Operational Impacts to Settings - Visual***

14.6.3 It is predicted that implementation of the Scheme would result in operational impacts on the settings of seven receptors through visual intrusion. These comprise:

- OA 407 (Grade II Listed Building, Bynes Farm) - Slight significant impact in 2010, Neutral in 2025;
- OA 409 (Grade II Listed Building, Adams Farm) - Large significant impact in 2010, Moderate in 2025;
- OA 400 (Glovers Farm Historic Farmstead) - Slight significant impact in 2010, Neutral in 2025;

- OA 401 (Actons Farm Historic Farmstead) - Moderate significant impact in 2010, Slight in 2025;
- OA 402 (Bynes Farm Historic Farmstead) - Slight significant impact in 2010, Slight in 2025;
- OA 403 (Hillcroft Farm Historic Farmstead) - Moderate significant impact in 2010, Slight in 2025; and,
- OA 404 (Adams Farm Historic Farmstead) - Moderate significant impact in 2010, Slight in 2025.

### ***Operational Impacts to Settings - Traffic***

14.6.4 Details of traffic forecasts are provided within Chapter 6: Travel and Transport of the ES and the Traffic and Transport Report submitted in support of the planning application for the Scheme. These comprise:

- Annual Average Daily Traffic (24 hours);
- Annual Average Daily Traffic (24 hours) Hastings Town Centre; and,
- Annual Average Daily Traffic (24 hours) Bexhill Town Centre.

14.6.5 The traffic forecasts show thirty-six roads or sections of roads in East Sussex which are shown in Figure 14.3 and are expressed as a forecasted percentage increase or decrease of traffic on a particular road or section of road, for the Opening Year (Year 1) and the Design Year (Year 15). This traffic data has been compared against a set of data provided by English Heritage for the cultural heritage receptor groups of Listed Buildings (Grades I, II\* and II), Scheduled Monuments, Registered Parks and Gardens and Historic Battlefields. Additional data for Conservation Areas (shp.files) was provided by Rother District Council and Hastings Borough Council. The three sets of data were compared spatially by means of Geographical Information System software (ArcGis), which enabled the locations of the receptors to be plotted against the roads.

14.6.6 In order to 'filter out' the relevant receptors, two nominal buffer zones were used either side of the centre-line of the road: at 20m and at 20 to 100m. Thus all cultural heritage receptors described above (and recorded in the English Heritage, Rother District Council and Hastings Borough Council data) within 20m, and within 20 to 100m of the roads were identified and quantified. Note that Conservation Areas have been assessed where the road runs either directly through the Conservation Area or is adjacent to it. Thus Conservation Areas that lie within the buffer zones are not assessed. This information is presented as Table 1 in Appendix 14-G. A summary of this information is presented below in Table 14.5. The percentage change (increase or decrease) is 'banded' according to the following methodology:

- 0 - 15% No impact;
- 15 - 50% Low magnitude of impact; and,
- >50% Medium magnitude of impact.

14.6.7 This is in accordance with the methodology outlined in Chapter 13: Landscape and Visual Impacts.

14.6.8 Note also that no Scheduled Monuments, Registered Parks and Gardens or Historic Battlefields are recorded within either the 20m or 20 to 100m buffer zones for any of the roads, and that no Grade I or Grade II\* Listed Buildings are recorded within the 20m buffer zone.

**Table 14.5 Predicted Traffic Levels (Operational)**

	Significance of Impact (Beneficial or Adverse)			
	Opening Year (Year 1)		Design Year (Year 15)	
Receptor group	Moderate	Large	Moderate	Large
Listed Building - Grade I (20>100m buffer)	-	-	-	-
Listed Building - Grade II* (20>100m buffer)	-	-	-	-
Listed Building - Grade II (20m buffer)	3 Beneficial 1 Adverse	2 Beneficial	3 Beneficial	2 Beneficial
Listed Building - Grade II (20>100m buffer)	11 Beneficial 4 Adverse	12 Beneficial 3 Adverse	11 Beneficial 4 Adverse	12 Beneficial 3 Adverse
Conservation Areas	2 Beneficial	-	2 Beneficial	-

14.6.9 For the Opening Year implementation of the Scheme would therefore result in:

- No impacts to any Grade I or Grade II\* Listed Buildings, Scheduled Monuments, Registered Parks and Gardens or Historic Battlefields Grade Large beneficial impact to a Grade II\* Listed Building within either the 20m or 20-100m buffer;
- Three Moderate and two Large beneficial impacts to Grade II Listed Buildings within the 20m buffer, and one Moderate adverse impact to a Grade II Listed Building within the 20m buffer;
- Eleven Moderate and twelve Large beneficial impacts to Grade II Listed Buildings within the 20-100m buffer, and four Moderate and three Large adverse impacts to Grade II Listed Buildings within the 20-100m buffer; and,
- Moderate beneficial impacts to two Conservation Areas.

14.6.10 For the Design Year, implementation of the Scheme would therefore result in:

- No impacts to any Grade I or Grade II\* Listed Buildings, Scheduled Monuments, Registered Parks and Gardens or Historic Battlefields Grade Large beneficial impact to a Grade II\* Listed Building within either the 20m or 20-100m buffer;
- Three Moderate and two Large beneficial impacts to Grade II Listed Buildings within the 20m buffer;
- Eleven Moderate and twelve Large beneficial impacts to Grade II Listed Buildings within the 20-100m buffer, and four Moderate and three Large adverse impacts to Grade II Listed Buildings within the 20-100m buffer; and
- Moderate beneficial impacts to two Conservation Areas.

14.6.11 On balance, the proposals would thus constitute an overall positive (beneficial) impact, although there are predicted to be localised negative (adverse) impacts.

## **14.7 Conclusions**

14.7.1 This assessment has been primarily based on the results of five archaeological investigations, comprising a Desk Based Assessment of 2004, an updated Addendum to the 2004 assessment in 2006; and a Walkover Survey, a Geoarchaeological Assessment, and a Archaeogeophysical survey all undertaken in 2006.

14.7.2 In order to clarify the assessment of the cultural heritage resource, the Scheme has been divided into ten zones, reflecting local topography, geology, and ground conditions. Four of the zones comprise low-lying wet valleys, where prehistoric archaeological deposits may be preserved beneath layers of peat and silt. Five of the zones comprise the upper slopes and tops of the ridges surrounding the wet valleys, where settlement and agriculture were most likely focussed. One zone includes the built environment of Bexhill, where the Scheme area has been heavily disturbed by previous impacts. The archaeological potential of each Zone depends upon a combination of topography, geology and previous land-use or impacts. The four 'wet' zones are likely to include significant archaeological deposits relating to prehistoric exploitation of former wetlands, and the five 'dry' zones are likely to include archaeological deposits relating to agriculture, industry and settlement. The zone within Bexhill, where they survive, may include mixed deposits.

14.7.3 No archaeological evidence was found to support any of Mr Austin's (a local historian) assertions regarding the events of the Norman invasion of 1066.

14.7.4 The impacts of the construction of the Scheme have been assessed both with and without mitigation.

14.7.5 A range of mitigation options have been proposed. These comprise the recording of standing structures that would be removed, and a two stage program of archaeological evaluation to inform a more detailed archaeological mitigation strategy. The program of archaeological evaluation would aim to clarify the archaeological potential of the available land within the Scheme area, and in particular any impacts to receptors identified as Uncertain in this assessment. The evaluation has been agreed with the ESCC Archaeological Officer.

14.7.6 Stage one of the evaluation would be undertaken prior to final determination of the planning application, and would consist of a specialist geoarchaeological field investigation of the four 'wet' zones, an assessment of a LIDAR survey of the Scheme, and a surface collection survey (fieldwalking).

14.7.7 Stage two of the evaluation process would involve the trial trenching of the areas to be impacted by the Scheme and would be undertaken after planning approval is granted. The results of investigations already completed and of the stage one evaluation exercises would be used to fully inform a detailed method statement including the exact location and number of trial trenches.

14.7.8 The archaeological and geoarchaeological investigations proposed as part of the evaluation and mitigation would make a significant local and regional contribution to our understanding of human settlement and exploitation of the Combe Haven, and of the Sussex coastal hinterland.

14.7.9 After mitigation, the impacts of the Scheme to non-designated Cultural Heritage receptors would range between Moderate Adverse and Slight Adverse, and would include Uncertain significant impacts to seventeen receptors. These receptors include historic buildings and structures, elements of the historic landscape, and below-ground archaeological deposits.

14.7.10 After mitigation, the Scheme would result in a large indirect adverse impact upon the setting of the Adam's Farmhouse Grade II Listed Building. This would be due to increased levels of noise during the construction phase, and in the years 2010 and 2025. The Scheme would also result in a large adverse impact to the setting of the Listed Building resulting from a change in the visual setting during the construction phase and in the year 2010. In the year 2025 after screening planting has become established, it is predicted that changes in the visual setting would reduce to moderate adverse.

14.7.11 After mitigation, the Scheme would result in a large indirect adverse impact upon the setting of the Bynes Farm Grade II Listed Building resulting from increased levels of noise during the construction phase, and in the years 2010, and 2025. The Scheme would result in a moderate adverse impact to the setting of the Listed Building resulting from a change in the visual setting during the construction phase, a slight adverse impact in the year 2010, and no effect in 2025

14.7.12 After mitigation, the Scheme would result in a large indirect adverse impact upon the setting of the Royal Oak Farmhouse Grade II Listed Building resulting from increased levels of noise during the construction phase and in

the Opening Year. The indirect impact upon the Royal Oak Farmhouse would decrease to moderate adverse in 2025. It is not predicted that the visual setting of Royal Oak Farmhouse Grade II Listed Building would be impacted by the Scheme.

14.7.13 An Archaeologically Sensitive Area (a Roman bloomery) has been assessed as subject to a direct impact, the significance of which is Uncertain at the time of writing, as the sensitivity of the site and the magnitude of change remain Uncertain. However, it is anticipated that the program of archaeological evaluation would clarify the archaeological potential of this receptor.

14.7.14 On balance, the proposals would constitute an overall positive (beneficial) impact through the reduction of road traffic in the vicinity of Designated Cultural Heritage receptors, although there are predicted to be localised negative (adverse) impacts.

14.7.15 The evaluation and mitigation strategy should mitigate all adverse impacts of the Scheme on both the known and unknown archaeological resource. The exception to this is the residual impact caused by the collective impacts of the Scheme on the cultural heritage resource, whereby features of varying (and often Low) significance would be affected, that contribute to the character of all three strands of the cultural heritage resource (historic buildings and structures, archaeological deposits and the historic landscape). The collective impacts of the Scheme are likely to have the most impact. However, impacts to the historic landscape strand in the Study Area would be particularly caused by the visual and noise intrusion on the key characteristics of the visible and accessible landscape.

14.7.16 Overall, the balanced impacts of the Scheme have been assessed as representing a slight adverse impact on the cultural heritage of the Scheme area.

14.7.17 The proposed changes to the setting of the Grade II Listed Building Adam's Farmhouse would require Listed Building Consent to be granted by the Local Planning Authority. The Hedgerow Regulations of 1997 also require that the Local Planning Authority is notified in advance of any operations that would partially or wholly remove any Important Hedgerow (as defined in the 1997 Act).