5.19 Route Window 19: Nashenden Bottom to A229 Maidstone Road (317300)

5.19.1 Baseline Conditions

5.19.1.1 Overall Historic Environment

The basic framework of the landscape in this route window is of ancient origin. The area is dominated by historic woodland and areas of former common on the top of the North Downs. There are very few historic buildings on this relatively elevated area. The non-wooded and non-developed area are fairly intensively farmed, but the large size of the fields particularly west of Rochester Road was already established by 1840. Archaeological remains consist mainly of casual finds and sites associated with the a Roman Road which linked Rochester to Lympne and the Wealden iron workings near Hastings. This was the predecessor of the A229 and probably established this route as an important point for crossing the North Downs. The modern upgrading of the A229 and M2 corridors have created a wide swathe of mixed development amongst remnants of the historic character of the area, while the southern edge of the scarp of the Downs is characterised by large 19th to 20th-century chalk pits. More than half of the CTRL alignment in this section is in bored tunnel.

5.19.1.2 Historic Landscape Features

The western approach of the CTRL to the North Downs Bored Tunnel will cross the northern most tip of Little Monk Wood (OAU No. 2159), and the Portal itself and its approach cutting will be located in the eastern end of Syle Wood (OAU No. 2160), which were part of a very extensive area of woodlands known as Bridge Woods. The boundaries of these two woods have changed little from those shown on the 1830's OS first edition 1" map. The exception is the triangular area of pasture to the south of Upper Nashenden Farm which was formerly part of Syle Wood. These woods are of local value.

In Syle Wood there is a large linear bank or lynchet (OAU No. 1965), 5 m wide and up to 1.5 m high, running on a north-west to south-east alignment, possibly turning a right angle to the SW at its SE end. Several massive, possibly 300 year old beeches and gnarled oak and hazel coppice stools are growing on the bank giving some indication of its relative antiquity. This earthwork follows the contours and peters out in each direction. It is mainly outside the safeguarded area for the CTRL. The only visible earthwork in Bridge Wood is a similar but less distinct bank or lynchet on a north to south alignment running along the slope in the vicinity of the CTRL portal. These earthworks do not correspond to recorded former boundaries of the wood, but it is possible that the woodland was slightly smaller before the 19th century; alternatively these banks could represent much older features of a more ancient field system.

5.19.1.3 Historic Buildings

Close to the head of the Nashenden valley the CTRL will pass in false cutting 40m east of Upper Nashenden Farm (OAU No. 997), a pair of unlisted early 19th-century ragstone estate cottages with slate roofs which are of local value.

5.19.1.4 **Archaeological Remains**

A Roman burial (OAU No. 1581) comprising a skeleton and two vases, one of which was decorated with a yellow scroll, was found by workmen in 1913 within what used to the boundary of Bridge Woods. There might be more burials or it may have been an isolated grave. The area in the vicinity appears to have been subject to some disturbance. The site is now probably only of local interest.

5.19.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.19.2.1 **Upper Nashenden Farm**: Non-significant Negative Effect
During construction the setting of this unlisted 19th-century pair of cottages will be affected by intrusion from the North Downs Tunnel West secondary construction site (Ch.314900-315600) in the open farmland to the south. The permanent landtake and operation of the CTRL in a false cutting immediately next to Upper Nashenden Farm together with the rerouted access road also serving the west end of the North downs Tunnel will result in slight landtake and severe permanent intrusion. This property will qualify for noise insulation.
Incorporated Mitigation: False cutting/ bunding and planting.
Options for Further Mitigation: In detailed design move position of access road crossing of bund further south to avoid gap in bunding close to the cottages.

5.19.2.2 **Little Monk Wood and Syle Woods historic woodland**: Non-significant Negative Effect
Permanent landtake will result in the loss of the edge of one area of historic woodland and loss of another limited area, including minor earthworks. A more impressive earthwork in Syle Wood will be avoided and the overall integrity of the woodlands will not be significantly affected, though parts of the surviving former boundary of Little Monk Wood will become incorporated into the wooded area as a result of the landscape planting.
Incorporated Mitigation: None.
Options for Further Mitigation: None identified.

5.19.2.3 **Roman inhumation burial**: Potential Non-significant Negative Effect
Landtake at the south-east corner of the North Downs Tunnel West secondary construction site (Ch.314900-315600) might reveal further burials, but the landtake will be at some distance and the area appears already to have been disturbed.
Incorporated Mitigation: None
Options for Further Mitigation: Investigation by monitoring and watching brief during site clearance operations.

5.20 ROUTE WINDOW 20: A229 MAIDSTONE ROAD TO BOARLEY LANE

5.20.1 BASELINE CONDITIONS

5.20.1.1 **The Overall Historic Environment**

The south-facing chalk scarp of the North Downs in this section is crossed by a complex network of local and regional roads, tracks and paths of ancient origin, most notably the east-west Pilgrims Way (OAU No. 1052) thought to be of prehistoric origin, and the

Roman road which linked Rochester to Lympne and the Hastings area (OAU No. 1054). The area is of particular importance for the survival of a group of visible prehistoric megalithic funerary and ceremonial monuments, such as Kits Coty (OAU No. 1065), Little Kits Coty and the White Horse Stone (OAU No. 1051), which are among the very few visible remains of Kent's first farmers. Roman burials (OAU Nos. 1584 & 1587) and a probable temple (OAU No. 1584) beside the Rochester Road are also recorded.

Historically settlement was mainly on the lower lying ground at the foot of the scarp. There is a string of farms and villages, often recorded in Domesday along the spring line from further west, such as Tottington (near little Kits Coty), Cossington (west of the A229), Tyland (east of the A229) and Boarley (OAU Nos. 61-62, 70) Farms. The occurrence of prehistoric and Roman finds scatters in similar localities (e.g. around Tottington and Boarley Farms) suggests a potentially much more deeply rooted preference for these spring-line localities, though none has been investigated in any detail.

The main areas of recorded historic woodland were on the steep scarp of the Downs (eg Frith and Westfield Woods) or on lower lying clays, but with occasional patches of wood round the head of steep sided coombes round the scarp foot springs (eg Wellhead). The south facing well drained dry valleys and lower slopes of the scarp have probably always been favoured for arable agriculture. There has been fairly extensive loss of field boundaries, and it is the basic framework of trackways, lanes and main boundaries and the long established position of springline farms which give the landscape its main historic coherence rather than the survival of more detailed patterns of land division.

5.20.1.2 Historic Landscape Features

The CTRL will cross the Pilgrim's Way (OAU No. 1052) in a 4 m deep cutting about 330 m from the south portal of the North Downs Tunnel, close to the point where the long-distance footpath enters an area of historic scarp slope woodland Westfield Wood (OAU No. 2167) climbing to run east-west along the foot of the scarp. At this point the Pilgrim's Way is a very attractive sunken green lane, and the White Horse Stone (see below) stands on its northern bank at the edge of the wood.

5.20.1.3 Historic Buildings

At Boarley Lane the CTRL will pass on embankment 230 m south of Boarley Farm (OAU No. 61) and 200m south of Boarley Cottage (OAU No. 62) both listed Grade II. Boarley Farm, on the west side of the lane, is a modest but attractive late 18th-century farmhouse, symmetrically planned, of chequered red and grey brick with rubbed brick voussoirs. It has some 19th-century window replacement and other original sashes. Boarley Cottage, on the east side of the lane, is a good example of early 17th-century timber framing much of which is exposed. It has a continuous jetty with moulded brackets to the three right bays and a moulded dragon post.

Boarley Oast is a mid 19th-century oast converted to a house (OAU No. 70) situated 100 m south of where the CTRL will cross Boarley Lane. This building was delisted after conversion, but despite its much altered fittings, it still contributes to the historic character of the local landscape because of its characteristic silhouette, and association with Boarley Farm.

5.20.1.4 **Archaeological Remains**

The CTRL will emerge from the North Downs Tunnel virtually on the line of the Rochester-Hastings Roman road (OAU No. 1054). Its route can be inferred from historic map evidence but it is not known whether anything tangible survives beneath the plough soil.

The route will pass in a cutting between 4 and 24 m deep 100 to 300 m west and northwest of the Upper White Horse Stone (OAU No. 1051), which is a scheduled ancient monument (Kent No. 17). It is a single standing stone thought to be part of a Neolithic tomb, and is part of a small, well defined group of such monuments, known as the Medway Megaliths, which divide into two subgroups either side of the river Medway. The eastern group is very closely knit, comprising The Coffin Stone, Kits Coty, Little Kits Coty, The White Horse Stone and the now lost Lower White Horse Stone (OAU No. 1053). The Upper White Horse Stone is a large upright sarsen reminiscent of the side of a burial chamber of a megalithic long barrow. There is no definite trace of a barrow, but a somewhat higher area c.20 m wide extending c.50 m west from the stone, defined by a tongue of Westfield Wood between the Pilgrims Way and open fields to the north, could reflect the shape of a long barrow on an north east-south west axis with the burial chamber at the easterly end. However this could be fortuitous, and recent theories have suggested that the stone seen today is the successor of the original White Horse Stone and/or that the stone was erected to mark the way of the Pilgrims Way or as part of the Ashford Boxley parish boundary (Ashbee 1993). A more detailed treatment of the monument is given in Appendix B, Volume 4.

The Upper White Horse Stone has some amenity value in that it is situated on an attractive stretch of the Pilgrims Way, a long distance footpath, which also provides access to other monuments in the Medway Megalith group. Although the stone is set close to the Pilgrims Way in a wooded section, its topographical setting can be appreciated from the open views north west across the adjacent dry valley and towards Kits Coty House, which is situated at the same height on the next major spur of the scarp, but is not actually visible.

The CTRL route past the White Horse Stone and the adjacent North Downs Tunnel East main construction site (Ch.318500-319400) will occupy a significant part of the dry valley north of the stone in an area of significant archaeological potential, not containing known archaeological remains but with many in the vicinity. The site of the Lower White Horse Stone (OAU No. 1053) also lay alongside the Pilgrims Way south of the CTRL; thought to be one of the group of Megalithic monuments but destroyed in 1823 without excavation (Jessop 1970, 102). Nearby is a cropmark which is thought to show a double ditched round barrow with traces of a central pit (OAU No. 1050).

In the dry valley to the north of the Upper White Horse Stone there may well be further significant prehistoric and possibly later deposits buried beneath ploughwash and colluvial deposits, which themselves may contain valuable evidence of prehistoric and later land use.

Other Neolithic material found in this area includes another probable Neolithic megalithic burial chamber to the north east of the Upper White Horse Stone. This was located during ploughing in 1822-3 when two stones of 6.5 feet by 2 feet were found with a skeleton oriented east-west between them (OAU No. 1585). Further west, just north of the CTRL alignment, an excavation carried out in 1830 seems to have revealed another prehistoric burial (OAU No. 1586). According to the accounts, a burial was found at the

centre of a shallow bowl shaped pit covered with '10 tons' of flint. A stone circle was reported to be present on the surface of this site but this formation is now thought to be a natural phenomenon.

Activity continued in this area during the Roman period in the vicinity of the Rochester-Hastings road. What has been described as a temple or watch-tower (OAU No. 1584) was built alongside this road further north, and Roman interments were found in 1871 (OAU No. 1587) to the east of this building, to the east of Lower Warren Road and rather closer to the CTRL route.

An extensive area of archaeological potential revealed by the surface collection survey of this part of the route lies either side of Boarley Lane suggesting springline settlement predating Boarley Farm (see also Route Window 21). About 500 m west of Boarley Lane a scatter of Roman tile suggests an outlying Roman building (such as a bath house). The full extent northwards of the scatter is unknown. Immediately west of Boarley Lane and south of Boarley farm there is a fairly extensive but diffuse scatter of prehistoric flintwork including an axe fragment, burnt flint and Iron Age, Roman and medieval pottery (OAU No. 1337). The significance of these remains is uncertain but if coherent subsoil settlement remains survive they will be of regional importance.

5.20.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.20.2.1 **White Horse Stone and surrounding area: Cumulative Significant Negative Effect (Unavoidable)**

This effect concerns the accumulation of impacts on the setting and physical context of the White Horse Stone and other archaeological remains and historic landscape features in the immediate area, which contribute to its archaeological context and setting.

Construction impacts contributing to the effect will be as follows:

- Long term temporary intrusion from the North Downs Tunnel East main construction site (Ch.318500-319400) on the setting of the White Horse Stone.
- Landtake for the North Downs Tunnel East main construction site (Ch.318500-319400) would be likely to result in the permanent loss of any archaeological remains associated with the White Horse Stone. Such remains may be well preserved due to colluvial deposits in the dry valley.

Permanent landtake and operational impacts will be as follows:

- The setting of the White Horse Stone would be affected by severe intrusion in the short to long term and moderate to severe permanent intrusion. The approach to the stone up the Pilgrims Way would be affected by the new crossing of the CTRL, while views in the only direction possible from the Stone from which its topographical position may be appreciated would be dominated by the exposed west face of the CTRL cutting and by the enclosing of the dry valley as a result of extensive planting. Planting along the eastern edge of the CTRL cutting would eventually help to hide the exposed west face of the cutting.
- Permanent landtake for the cutting approaching the North Downs Tunnel may result in the destruction of archaeological remains associated with the White Horse Stone, or later deposits, which may be well preserved due to colluvial deposits in the dry valley.

- A short length of the Pilgrims Way will be affected by permanent landtake for the cutting and proposed land bridge.
- 300 m of the route of a possible Roman road will be affected by permanent landtake from the cutting of the portal and landscaping, and possibly a further short length could be affected by the balancing pond by the Old Chatham Road.

Incorporated Mitigation: Archaeological evaluation agreed, to cover both construction and permanent landtake areas; landscape planting; provision of a landbridge on a slightly new alignment to carry Pilgrim's Way over the CTRL.

Options for Further Mitigation:
The following options would do much to mitigate the construction effects, especially in terms of landtake:

- screening of the construction site and careful planning to minimise additional intrusion close to the monument.
- intrusion of construction site to be minimised by screening and keeping most intrusive activities away from vicinity of White Horse Stone;
- archaeological investigation and reporting, and/or protection from disturbance. Detailed design of construction site to be adjusted (if practicable) to avoid ground disturbance in any areas of proven archaeological interest (eg by building up levels over existing topsoil or adjusting layout of site);
- avoid landtake for construction site affecting Roman road if it is shown to survive, and this is feasible.

The following options would help to reduce the permanent landtake and operational effect, which would remain significant:

- Further archaeological investigation and reporting as appropriate and if warranted of the alignment and landscaping area.
- Refinement of detailed landscaping and planting to reduce prominence of western cutting face as seen from the White Horse Stone, and to reduce intrusion of overhead line equipment, trains and electricity substation in views west. Consider remodelling landform of dry valley in area already disturbed by the construction site to retain general landform, but provide a false cutting rather than planting block along east side of the CTRL at chainage 318950-31950. Resite or rearrange access road turning position near electricity station to remove additional scar in west side of cutting. Detailed design of tunnel portal to ensure it is not visible from White Horse Stone over east side of cutting.
- Avoid landtake within wooded area on east side of the CTRL; detailed design of landbridge and Pilgrims Way track either side to retain character of wooded hollow way within this area.
- Archaeological evaluation and recording and/or refine detailed landscaping proposals to reflect line of Roman road

5.20.2.2 **Boarley Farm and Cottage Grade II listed buildings, Boarley Oast historic building: Significant Negative Effect (Unavoidable)**
During construction the Boarley Lane minor/secondary construction site west of Boarley Lane (Ch.320300) and associated construction activity will result in moderate short term temporary intrusion on the setting of this group of historic buildings.

There will be severe intrusion on the currently unspoilt setting of this group of listed and unlisted historic buildings as a result of the permanent landtake for CTRL and its operation where it crosses the small valley which Boarley Lane follows:

- the CTRL embankment will sever the oast from the other buildings;
- the high embankment (up to 7 m to rail level plus false cutting bunds) together with planting, overhead line equipment and (initially) fencing will dominate the immediate area, substantially altering the setting of these historic buildings.

Although the landscaping proposals will reduce the direct intrusion of the railway, they will in themselves substantially alter the historical and topographical character of the Boarley complex. Boarley Farm and Cottages instead of being at the head of a valley will appear to be in an artificial arena of land.
Incorporated Mitigation: False cutting, mounding, planting and noise barrier.
Options for Further Mitigation: None identified.

5.20.2.3 **Finds scatters west of Boarley Farm: Potentially Significant Negative Effect (Mitigable)**
Landtake for the embankments and false cuttings west of Boarley Lane will affect an area of significant archaeological potential indicated by a scatter of Roman tile, the full extent of which is undefined, and a scatter of material including Iron Age, Roman and medieval pottery and prehistoric flint which may indicate multi-period archaeological subsoil remains.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed if appropriate by further investigation and reporting, and/or preservation *in situ* beneath landscape mounding.

5.21 ROUTE WINDOW 21: BOARLEY LANE TO A249 SITTINGBOURNE ROAD

5.21.1 BASELINE CONDITIONS

5.21.1.1 Overall Character of Historic Environment

In this route window both the pattern and surviving integrity of the historic environment are particularly evident. At a broad level the historic pattern of landuse relates closely to the geological and topographical zones running parallel to the North Downs. Most of the parishes along the south scarp of the Downs, including Boxley, typically extend across the geological and topographical zones, presumably to maximise the variety of natural resources. Most of the steeper scarp face retains historic woodland; the village itself and outlying farms are mainly on the springline at c. 55-60 m OD, with extensive arable on the surrounding south facing slopes at the foot of the scarp. The gault clay is marked by a series of woodlands and larger shaws, with intervening areas of mixed farming and more isolated house and farms, and exceptionally in the case of Boxley, a medieval abbey. The sands to the south were partly used as heathland, often in the form of commons, as in the case of Penenden Heath, with houses and farms around the edge. Around Boxley brick making was a significant activity exploiting the combination of suitable clays, sands, fuel and water along the gault clay and Folkestone beds.

This general pattern of landuse and settlement is evident from the post medieval period, and on the basis of the early origin of several of the key settlements and farms was almost certainly the medieval pattern. Earlier patterns of settlement are not clear, but again there is some evidence from artefact scatters of multi-period occupation on or close to the springline.

At a more detailed level the route section can be divided into two halves. In the area from Boarley Lane to Boxley Lane and between the Abbey and village, the basic historic framework of the landscape is well preserved, but the detailed pattern has been subject to intensive agriculture with the removal of field boundaries and paths, with the result that the historic integrity of the landscape between these various interconnected elements has been diminished.

The Boxley Valley between Park Woods West and East and as far south as the M20 contains a number of historic landscape elements which retain a significant degree of historic integrity at a more detailed level. Boxley village itself is a very attractive village and conservation area (OAU No. 2020) with numerous historic buildings and virtually no unsympathetic modern intrusions. Early estate maps of Boxley show a broadly oval area corresponding to the core of the estate. The existence of 'Park' names on this map and some 'Lodge' names round the periphery strongly suggests there was a medieval or later deer park of a typically rounded shape (OAU No. 2023). The 17th-century map shows that the pattern of woods and fields for the most part corresponds to the extant pattern (OAU Nos. 2022, 2024) or is now visible as earthworks (OAU No. 1224).

The area is unusual in its degree of historic integrity in this topographic zone since much of the foot of the scarp of the North Downs from the Medway to Folkestone has been transformed by intensive modern agriculture. The Boxley Valley is thus an important historic landscape for the region.

5.21.1.2 Historic Landscape

Between Boarley Lane and Boxley Road the CTRL will cross parts of three areas of historic woodland: an unnamed shaw north of Boxley Abbey (OAU No. 2124), Donkey Shaw and Park Wood West (OAU Nos. 2021-2022).

The CTRL will cross the Boxley Valley mainly at ground level or on slight embankment, through an area of parkland type landscape which appears to derive from a post-medieval creation round the house (OAU No. 1863) which stood south of the village east of Boxley Road. The park was never very intensively landscaped, even in the 19th century. The main features were the retention of mature trees from hedges, some new plantation and the creation of a pair of ponds. The main effect seems to have been to leave the area relatively untouched by modern intensive agriculture, with a resultant cluster of visible traces of historic features in the landscape, and a surviving historic character which has significant local value for its own sake (as appreciated from the public footpath up the valley) and as part of the setting of the village. The extant features of the Boxley valley parkland include the following:

- At chainage 321730 the CTRL will cross the old road to Boxley which survives as a hollow way immediately to the east (OAU No. 1222). The present Boxley Road post-dates the 1st edition OS maps.

- The CTRL will pass immediately adjacent to a pair of 19th-century fish/ornamental ponds south of Park House (OAU No. 2088) at chainage 321900 and a small derelict pond with a sluice (OAU No. 2196) at chainage 322080, which is shown on 18th-century maps.

- The CTRL will cross the earthwork of a trackway (OAU No. 1223) at chainage 322050, reputed locally to be a Roman road, and shown as a track on the 6 inch map of 1869.

- Across the foot of the valley the CTRL will cross the remains of fields shown on 17th- and 18th-century estate maps of Boxley, surviving as earthworks mainly south of the CTRL line (OAU No. 1224), but including one boundary running along the outer edge of the landscape bunding on the northern edge of the CTRL.

- The CTRL will pass north of the site of an agricultural building (OAU No. 1854) whose footings are still discernible and which may be a remnant of the group of farm buildings close to another pond (OAU No. 2134) shown on early maps of the Boxley Park estate.

The CTRL will cross a stream rising in the historic copse or shaw north of the Abbey which provided at least part of its water supply (OAU No. 1385), but has been thoroughly cleared out as an agricultural ditch in recent years, reducing its possible historic interest and the potential to elucidate whether its present straight course is of ancient origin.

On the east side of the Boxley valley the CTRL will cross the northern end of Park Wood East (OAU No. 2024) in a cutting. The wood now consists largely of conifers but essentially corresponds to woodland shown on a Boxley estate map of 1697, and retains slight earthworks along rides.

5.21.1.3 Historic Buildings

East of Boarley Lane the CTRL will pass in false cutting 200m north of Boxley Abbey. This complex of buildings and archaeological remains is a conservation area which incorporates a scheduled ancient monument and two important listed buildings. It is a rare survival of a monastic foundation with its gateway and precinct wall almost completely intact, enclosing remains of the Abbey including a Grade I 'Barn'.

Boxley Abbey was the only Cistercian house in Kent (AD 1146-1530). A small part of the church remains beside the Grade II* Abbey House (OAU No. 64). Externally this building has been refaced with 18th and 19th-century details. To its south-west is the remarkable Grade I 'Barn' formerly a domestic or service range, although perhaps partly used as a barn (listed as the *hospitium*). Constructed with typical Cistercian opulence, its vast length probably encompassed several uses, and the survival of its original roof, some flooring of circa 1300 and other medieval fittings is of considerable importance.

Also within the Boxley Abbey Conservation Area are the subsoil archaeological remains of the Abbey and of a Roman building (OAU Nos. 1055-6).

The abbey lies on the gault clay at the foot of a small coombe between two low spurs extending south from the foot of the North Downs. As a result it is somewhat hidden when viewed from the Pilgrims Way and the footpath between Boarley Lane and Boxley which traverse the slope to the north and east of the Abbey. From Boarley lane it is screened by rising ground. The abbey is principally visible from the south where extensive widening of the M20 has resulted in Grove Lane being realigned hard up against the corner of the precinct wall, and from the footpath (KH25) leading from Abbey Gate cottages round the west and north of the abbey to Boxley village.

The CTRL will cross the Boxley valley 350 m south of the conservation area (OAU No. 2020), which encompasses the interesting and historic centre of the village. The very attractive valley and parkland area traversed by the CTRL to the south (see above)

contributes to the setting of the village, and can be seen from above on the Pilgrims' Way. Boxley Old House in the park has gone (OAU No. 1863) and the present Park House is a converted service building of no special architectural importance.

The CTRL will pass 350 m to 450 m north of a group of buildings at the edge of former Penenden Heath, including the multi-period farmhouse of Old Harbourland dating from the 16th century and its converted barn (OAU Nos. 67-8), listed Grade II, together with The Stonehouse of 1758 (OAU No. 69), listed Grade II, unusual in being a built of stone. The setting of The Stonehouse in particular includes the area of parkland to the north.

Immediately west of the A249 the CTRL will pass within 40 m of the unlisted Workhouse Cottage (OAU No. 71) on Sittingbourne Road, in a deep, stepped and retained cutting. This building is an attractive vernacular cottage probably of 18th or early 19th-century date. Although refenestrated, the symmetrical front, hipped roof (internally of pole construction) and decorative tile hanging give this more than passing interest, to which is added its possible institutional use by the parish. Its setting is badly affected by the very busy A249 passing at a slightly higher level within a few metres of the house.

5.21.1.4 Archaeological Remains

East of Boarley Lane the CTRL will cross a diffuse scatter of prehistoric worked flints and burnt flint of uncertain significance (OAU No. 1813). West of Boxley Road the CTRL and its associated landscape mounding and road diversion will cross an area of archaeological potential represented by a range of evidence. Mainly north of the CTRL alignment but on that of the Boxley Road diversion is a multi-period scatter of Iron Age, Roman and medieval pottery and prehistoric worked flint (OAU No. 1339), strongly suggesting an area of prehistoric and later settlement, probably of regional interest.

Immediately west of the Boxley Road on the main alignment is the site of a building or group of buildings shown on the OS Surveyors' drawings of 1799 which more or less coincides with a scatter of medieval pottery (OAU No. 1340), strongly indicating the existence of a medieval farm which survived into the post-medieval period. Its relatively late survival suggests that earlier levels may be much disturbed, and it is doubtful whether this site on its own is of much more than local interest. However, the possibility of there having been a much more ancient origin to settlement in the immediate locality may make this site of greater interest.

More generally from the west side of the Boxley Road and beside Grange Road there have been several individual finds, including Iron Age coins (OAU No. 1058 and OAU No. 1057), a medieval ring broach (OAU No. 1241), a Saxon penny of Harold I (OAU No. 1240), a Medieval purse bar and belt hook (OAU No. 1239), a prehistoric flint scraper (OAU No. 1237), two mesolithic tranchet axes (OAU No. 1779), a polished flint axe fragment (OAU No. 1338) and a medieval seal die and Papal Bull of Gregory IX (OAU No. 1238). These mainly reflect the activity of local collectors, but their quality and range further indicates the area's archaeological potential.

5.21.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.21.2.1 **Secondary Construction sites** Cumulative Non-significant Negative Effect (Unavoidable)
During construction there will be short to medium term intrusion on nearby historic resources which will in any case be affected by permanent intrusion from the CTRL, as described below. Most of the secondary construction sites in this section are in areas of permanent landtake for landscaping purposes.
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.21.2.2 **Boxley Abbey: Significant Negative Effect**
The CTRL will result in intrusion on the setting of Boxley Abbey in the following ways:

- The regraded slope of the false cutting will extend to within 80 m of the precinct wall. This embankment will help to hide the railway in views from the south, but will substantially alter the local landform setting of the Abbey by foreshortening the coombe in which the abbey lies.
- The CTRL will create a strong linear boundary across the landscape, but in a historical context such a boundary is not inappropriate and would reflect the former existence of such boundaries in an area where much of the detailed division of the landscape has been lost.
- The exposed northern face of the cutting through the spur to the north east will also contribute to the effect, though the nature of this impact will change as planting matures.
- From the east and north east Boxley Abbey may appear to be 'islanded' between the CTRL and the M20, since it is unlikely that the landscaping proposals will fully disguise the presence of the CTRL, while the M20 is entirely unhidden.

At the Abbey Gate and within the precinct wall other important aspects of the setting of Boxley Abbey and its buildings will remain largely unaffected.

Incorporated Mitigation: False cutting with graded out slopes to south, with tree planting blocks and/or hedgerows on cutting edges; bridge over the CTRL for realigned footpath from Abbey Gate to Boxley village.

Options for Further Mitigation: Refine profile of false cutting on south side of alignment opposite Boxley Abbey to create an impression of the head of a coombe or valley for the stream emerging from beneath the railway and running into Boxley Abbey. Grade out upper cutting slope and refine design of tree planting between woodland north east of Boxley Abbey and Donkey Shaw to create linear shaw rather than merely filling cutting.

5.21.2.3 **Boxley Valley: Cumulative Significant Negative Effect (Unavoidable)**
The CTRL will result in severance, intrusion and landtake through the area of well preserved historic landscape in the Boxley valley. The cumulative effect is comprised of the following elements:

- Primary severance of an area of good historic landscape integrity.
- Intrusion on the landscape setting of Boxley Conservation Area.

- Visual and noise intrusion within the area of good historic landscape integrity, arising from false cutting, footbridge, fencing, overhead line equipment and trains, and from the diverted Boxley Road.
- Moderate general permanent landtake in area of good historic landscape integrity arising from engineering earthworks and false cutting, mounding around east portal of Park Wood East tunnel, balancing pond and footbridge.
- Limited permanent landtake will affect Park Wood West and the earthworks of former road to Boxley, trackway and fields.
- Severance and moderate landtake from the northern side of Park Wood East historic woodland.

Incorporated Mitigation: The impact of the crossing of the Boxley Valley has already been minimised through design of the alignment and landscaping. This includes the following measures:

- Vertical alignment designed to follow contours across valley floor through provision of Park Wood East Tunnel.
- Horizontal alignment designed where possible to respect existing features along a boundary crossing the valley.
- False cutting to reduce visual and noise intrusion.
- Retained inner edges of false cutting to minimise landtake.
- Outer edges of false cutting graded out and returned to agriculture supplemented by appropriate parkland type planting.
- Provision of footbridge to maintain public access through the valley across the line of the CTRL.
- Height of false cutting bunds to retain views from the train.

Options for Further Mitigation: Very little further refinement of the mitigation incorporated is possible, but the following minor measures may be worthwhile: refine landscaping and slightly relocate balancing pond to retain line of former road to Boxley east of present road; restore small pond with derelict sluice north of alignment at chainage 322080;

The incorporated mitigation will substantially reduce the effect, but cannot eliminate the basic impacts of severance, landtake and intrusion, and the effect therefore remains significant. Any further mitigation would be minor refinement of that already incorporated, and would not significantly reduce the significance of the effect.

5.21.2.4 **Finds scatters east of Boarley Lane: Potentially Significant Negative Effect (Mitigable)**

Permanent landtake for the CTRL embankment, false cutting and landscape mounding east and south of the reservoir at Boarley Lane will result in disturbance of an area of archaeological potential indicated by prehistoric flintwork and burnt flints.

Incorporated Mitigation: None

Options for Further Mitigation: Archaeological evaluation followed if warranted by more detailed investigation and reporting, and/or preservation *in situ* beneath landscape mounding.

5.21.2.5 **Area of probable prehistoric, Roman and medieval settlement west of Boxley Road: Potentially Significant Negative Effect (Mitigable)**

Permanent landtake for the cut and cover tunnel through Park Wood East, the cutting to its east, the Boxley Road diversion and landscape mounding represents a substantial area of landtake which is very likely to result in the disturbance of remains of a possible

medieval farm and Iron Age and Roman settlement revealed by surface scatter of pottery found during fieldwalking.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed if warranted by more detailed investigation and reporting, and/or preservation *in situ* beneath landscape mounding.

5.21.2.6 **Copse north of Boxley Abbey and Donkey Shaws** Non-significant Effect
These minor areas of historic woodland will be affected by slight to moderate landtake
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.21.2.7 **Workhouse Cottage Unlisted Historic Building:** Non-significant Negative Effect
During construction this unlisted historic roadside house of late 18th or early 19th-century date will be affected by medium term temporary intrusion on its setting from the A249 main construction site (Ch.322900-323200) to its rear, and from the construction of the A249 crossing. Given the existing intrusion of the A249 at the front of the property the extra intrusion of construction activity on the other three sides could potentially make the building at risk of indirect impacts of changes in use or condition.

With respect to permanent land take, the retained cutting of the CTRL will result in additional intrusion on the setting of Workhouse Cottage, particularly as viewed from the north east, but the quality of its setting is already much diminished by the A249.
Incorporated Mitigation: A retaining wall has been included in the design to prevent loss of the building. It is assumed that provision would be made under the Construction Code of Practice for monitoring and maintenance of the building if vacated during construction, together with refurbishment for re-occupation after construction is completed.
Options for Further Mitigation: Detailed design of main A249 construction site (Ch.322900-323200) to keep most intrusive elements away from building together with screening.

5.22 Route Window 22: A249 Sittingbourne Road to Water Lane

5.22.1 Baseline Conditions

5.22.1.1 Overall Historic Environment

Compared with the previous route sections less is known of the archaeology of the area, although there are scheduled ancient monuments at Thurnham Roman Villa (OAU No. 1061), Corbier Hall medieval manor house site (OAU No. 1064) and Thurnham Castle north of Thurnham. Otherwise there are a few prehistoric finds. The basic framework of the landscape has a strong north-east to south-west orientation with numerous roads, tracks, paths and parish boundaries running at right-angles to the underlying geology and topography. The parishes of Detling and Thurnham reflect division of the landscape into blocks, each providing a cross-section of soil and resources from the chalk through to the sand and clay of the Weald. Detling and Thurnham illustrate the typical siting of primary villages on the lower chalk at the foot of the North Downs scarp; the gault clay strip is picked out by a series of large woods, formerly of even greater extent (OAU Nos. 2026, 2029, 2126). Between the woods and tracks, however, intensive modern farming has largely destroyed all trace of former field boundaries. The huge prairie monoculture of

the block of land between Detling and Thurnham, from the Pilgrims Way to Honeyhills Wood is particularly notable in this respect and is the other dominant feature of the landscape.

5.22.1.2 **Historic Landscape Features**

In the western half of this section the CTRL will cross two areas of historic woodland, Horish Wood and Honeyhill s Wood (OAU Nos. 2026, 2029), in cutting. These represent the remains of very large and important historic woodlands which, despite having already been severed by the M20, are dominant features in the landscape, and to a varied extent continue to reflect traditional woodland management. In Honeyhills Wood there are a number of slight ditches and banks, principally in the eastern half of the wood (see below).

Immediately east of Thurnham Lane the CTRL will cross the tip of a narrow band of woodland extending eastwards (OAU No. 2169) which is one of three fragments of Thurnham Wood which once dominated this area, Gore Wood (OAU No. 2126) being one of the others.

5.22.1.3 **Historic Buildings**

Detling Conservation Area lies 550 m north of the CTRL route in an elevated position, like Boxley, but with a less significant landscape setting. The historic centre of Thurnham is also up on the Pilgrims' Way, and below it is Parsonage or Court Farm (OAU No. 72), listed Grade II, perhaps 17th-century in origin but considerably altered. It is 320 m north of CTRL amongst modern farm buildings. Bearsted Green Conservation Area with buildings of many periods laid round a spacious green is situated 700 m south of CTRL at the end of Thurnham Lane.

5.22.1.4 **Archaeological Remains**

The fieldname of 'Windmill Field' (OAU No. 1271) is recorded in the Detling Tithe Award of 1839 and may indicate the presence of archaeological features, though topographically it would be an odd place for a windmill. A late Iron Age site (OAU No. 1060) was found in a pipe trench just east of the A249, extending about 160 m east of the road. It is potentially of regional importance.

Immediately east of Honeyhills Wood is the site of Thurnham Roman Villa, (OAU No. 1061) a scheduled ancient monument. The villa was discovered in 1933 and parts of two buildings were excavated on the line of the Maidstone By-Pass in 1958 (Price 1960). The full extent of the main villa buildings and suggestions of another subsidiary building not previously known were revealed by cropmarks in 1990. The stunted growth of the crop along the lines of the walls suggests the survival of solid foundations despite intensive modern cultivation. The existence of any associated enclosures, fields, etc. is unknown but such features could well extend beyond the area mapped as a scheduled ancient monument. The slight earthworks in Honeyhills Wood are too insubstantial to establish from surface characteristics whether they represent internal woodland divisions or whether they predate the woodland, in which case they could relate to the Roman villa. The area of the villa building is now in intensive arable cultivation, and finds and Roman tile are visible on the surface. Deep ploughing and stone clearing has resulted in the dumping of numerous unworked large limestone blocks in the rough areas around both the wood edge and in the hedge on the north side of the motorway. As a scheduled monument the villa has the status of national importance, though it is not apparently a

particularly extensive or well preserved example. Nevertheless there may be more extensive subsoil remains which add to its interest. A more detailed description of the remains is given in Appendix B, Volume 4.

A second scheduled ancient monument, 'Cropmark, possibly of Corbier Hall' (OAU No. 1064), lies immediately to the east, 80m north of the CTRL alignment. This is a manor house site discovered in 1862 when foundations and a cellar were uncovered and traces of a moat were visible. It is thought to be Corbier Hall, originating in the late 14th century. The site has undergone drastic clearance for agriculture and is now in an intensively cultivated field, and is mainly visible from cropmarks of stunted growth which suggest surviving foundations. There is no superficial trace of the moat. Amorphous markings partly on the line of CTRL (OAU No. 1590) visible on air photographs of the route appear to indicate boundaries shown on the 1st edition 6" OS map. Like Thurnham Roman Villa, as a scheduled monument this site is of national importance, though again it is apparently not well preserved. There is however some added interest in the juxtaposition of two buildings of apparently similar status of quite different periods.

The potential for other deposits is of unknown importance. Mesolithic flints (OAU Nos. 1062, 1063) have been found in the field to the north .

5.22.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.22.2.1 **Thurnham Roman Villa Scheduled Ancient Monument: Significant Negative Effect (Mitigable)**
The site of the Roman Villa including the whole of the scheduled area and areas in Honeyhills Wood to the west, north and east will be lost in permanent landtake for the railway formation, bunding and an autotransformer station, together with an access road and planting.
Mitigation: First stage archaeological evaluation agreed.
Options for Further Mitigation: The principal means of mitigating this effect would be to undertake detailed archaeological recording of the main villa building, any subsidiary buildings and other associated remains such as paddocks, yards, farm buildings etc. The exact scope of this work would need to be defined on the basis of prior evaluation. The scheduled monument including the recorded building is unavoidable. It might be possible to reduce the landtake affecting any significant remains in the immediate surroundings by relocating the electricity station (e.g. east of Thurnham Lane at chainage 325250) and by refining the detailed landscaping proposals, but it is not possible to tell at this stage whether this would be worthwhile.

5.22.2.2 **Horish and Honeyhills Wood - historic woodlands: Significant Negative Effect (Unavoidable)**
These historic woodlands will be affected by severance and permanent landtake.
Incorporated Mitigation: None
Options for Further Mitigation: None identified.

5.22.2.3 **Cropmarks south of Corbier Hall:** Non-Significant Effect
Linear cropmarks of possible boundaries will be affected by landtake.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation (as part of Thurnham Villa evaluation in same field), followed by further investigation and reporting only if unexpectedly significant remains are located.

5.22.2.4 **Detling Conservation Area:** Non-significant Negative Effect
During construction there will be intrusion at Detling Conservation Area from an increase in HGV traffic along Hockers Lane. There will also be intrusion from an increase in HGV traffic and in general traffic along the road past the church at the south west end of the conservation area.
Incorporated Mitigation: None
Options for further mitigation: Limit HGV and other construction traffic through the conservation area to a minimum.

5.22.2.5 **Bearsted Green Conservation Area:** Non-significant Negative Effect
At Bearsted Green Conservation Area during construction there will be intrusion from an increase in HGV traffic and in general traffic along Thurnham Lane.
Incorporated Mitigation: None
Options for further mitigation: Limit HGV and other construction traffic through the conservation area to a minimum.

5.23 ROUTE WINDOW 23: WATER LANE TO MUSKET LANE

5.23.1 BASELINE CONDITIONS

5.23.1.1 The Overall Historic Environment

The overall historic environment in this route section is in general similar to the previous one. There is even less known archaeology, but the location of significant artefact scatters on the CTRL alignment where it passes the proposed Motorway service area south of Snarkhurst Wood suggests that the absence of material is as likely to reflect the lack of prospection as any real pattern. As in the previous section there are few historic buildings, and these gault clay areas are dominated by historic woodland.

5.23.1.2 Historic Landscape Features

East of Water Lane CTRL will cross the southern end of Longham Wood (OAU No. 2031). This wood is actively managed and contains a mixture of broad leaved species in the form of coppice with standards. Longham Wood is shown on the 1781 estate map of Thurnham and Detling, although since the 18th century it has been enlarged. The west boundary of the wood, which is now very straight, was originally more sinuous as shown on the 1880's OS first edition 6" map. The triangular area to the south of the water-filled channel is also shown as part of the wood on this map.

East of the main north to south track through the wood in the area crossed by the CTRL there are two substantial banks and ditches, at right angles to one another on a totally different alignment to the more recent boundaries which follow the basic rectangular outline of the wood. These older earthworks are particularly well preserved, one being a north-east to south-west bank, 2.5 m wide and 0.4 m high with a ditch on the east side, the other, running north-west to south-east, being even more substantial, up to 3.5 m wide and 0.8 m high, with a slight ditch on its south-west side. A hollow 8 x 2.5 m across and 0.8 m deep with a mound to one side was also noted. The two substantial banks and ditches and the even larger water-filled channel could represent earlier woodland boundaries on a different alignment to the modern ones. Alternatively they could be relic boundaries of a much earlier field system.

East of Longham Wood the CTRL will pass close to or just into Poer Meadow Shaw and Cottage Wood (OAU Nos. 2032 & 2071), further examples of gault clay woodlands.

Musket Lane is discussed with Eyhorne Street in route window 24.

5.23.1.3 **Historic Buildings**

Musketstone, an unlisted house (OAU No. 300) in Musket Lane, is the only historic building close to the CTRL in this route window, and is more meaningfully considered in the next window in relation to Eyhorne Street.

5.23.1.4 **Archaeological Remains**

No archaeological remains are known within the route corridor on the clay to the east of Corbier Hall and west of Crismill Lane, except for the findspot of a quantity of baked brick south of the M20 close its intersection with the NSE railway and Crismill Lane (OAU No. 1244).

East of Crismill Lane the CTRL will cross an area of significant archaeological potential indicated by a series of artefact scatters located by the surface collection survey for this project. In the angle formed by the M20 and the NSE railway south of Snarkhurst Wood a scatter of prehistoric worked flint was found including a polished axe fragment (OAU No. 1342). To the east of this a scatter of late Iron Age and 1st to 2nd-century Roman pottery and prehistoric worked flint (OAU No. 1343) was located. Also within this area a flint knife was found (OAU No. 1345). Both main scatters, but particularly that containing the Iron Age and Roman pottery, have significant potential. The Iron Age and Roman site almost certainly represents a settlement and is potentially of regional importance.

5.23.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.23.2.1 **Area of Archaeological Potential south of Snarkhurst Wood: Potentially Significant Negative Effect (Mitigable)**
During construction this area of probable prehistoric and Roman activity and settlement will be affected by slight landtake for the CTRL secondary construction sites (Ch.400200;Ch.400500;Ch.400700;Ch.401 100) in this area. The southern side of this area of archaeological potential will be affected by moderate to severe landtake for the CTRL embankment and cutting, and a small access road. The area is designated for a motorway service area, and it is possible that at least some of the area will be destroyed prior to construction of the CTRL.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed if warranted by more detailed investigation and reporting.

5.23.2.2 **Longham Wood - historic woodland:** Non-significant Effect
The south west edge of Longham Wood and parts of the earthworks within it will be affected by landtake.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological survey followed by monitoring and watching brief during construction.

5.23.2.3 **Cottage Wood:** Non-significant Negative Effect
During construction this historic wood will be affected by slight landtake and severance from the proposed haul road crossing the narrow neck of historic Woodland at the junction of Cottage and Snarkhurst Wood.
Incorporated Mitigation: The haul road is aligned to cause least impact
Options for Further Mitigation: None identified

5.24 ROUTE WINDOW 24: MUSKET LANE TO GREENWAY COURT ROAD

5.24.1 BASELINE CONDITIONS

5.24.1.1 Overall Historic Environment

Hollingbourne is one of the series of scarpfoot parishes where typically the main village centre is on the Lower Chalk, as in previous route windows, but with a secondary settlement south of the gault clay on the sands of the Folkestone Beds. Eyhorne Street is such an outlier of Hollingbourne.

In this section the CTRL moves from the gault clay to the Folkestone beds. A feature of the Folkestone beds is the much greater density of historic buildings either in isolation or in small, often quite diffuse, clusters. Some of these groups represent important manorial centres, others occur along older transport corridors such as the A20, and others are associated with heaths or parks, which are a further characteristic of the topography and underlying geology. Historic woodland is again a prominent feature of the landscape on the gault clay.

The archaeology of the area is poorly known. Roman pottery has been found in Eyhorne Street (OAU No. 1068) and a Saxon coin (OAU No. 1067) was found at Eyhorne Green. Saxon cemeteries occur about 1 km to the west and to the south. A Saxon bead and Mesolithic flakes come from south of Warren Wood (OAU Nos. 1069, 1070), and historic maps indicate a local rearrangement of roads (OAU Nos. 1196, 1197, 1574) just east of Warren Wood.

This route window is dominated by three major, more or less conjoining elements of the historic landscape: Eyhorne Street Conservation Area and its surroundings, Warren Wood, and Leeds Park and Castle. The A20 with its adjoining scatter of historic houses is an old transport corridor through the area, with Eyhorne Street and Warren Wood to the north and Leeds Park to the south. The area thus has a significant degree of historic interest, only diminished by the severance effect of the M20. Leeds Park and its constituent elements (Grade I Park, scheduled ancient monument and Grade I listed buildings) constitute a major national monument of high amenity value, and much of the surrounding land (including Warren Wood) belongs to the estate and has historic association with it.

5.24.1.2 Historic Landscape Features

Eyhorne Street Conservation Area (OAU No. 2033) has a particularly attractive curving street almost entirely composed of historic buildings which has considerable amenity value. Within the surrounding landscape a number of historic features contribute to the setting of the Conservation area. These are as follows:

- Musket Lane (OAU No. 1396) is an attractive ancient sunken lane and forms the historic approach to Eyhorne Street, superseded by the A20 and approach to the village from the south, and then cut off by the M20.
- Along the present short approach to the village from the south-west there is a mixture of rather scrubby regeneration and mature garden trees on the west (once the grounds of Eyhorne House) and a small park-like area and open grassland on the east. These areas contribute significantly to the approach and setting of the village and were avoided by the M20, the impact of which is thereby somewhat buffered. These areas were included within the conservation area until 1977, but were then excluded following demolition of Eyhorne House (OAU No. 1402).
- Further east there is an attractive steep-sided valley with a series of ponds related to former mills. The largest of these ponds (OAU No. 2317) has been very substantially reduced by the M20, leaving only two small remnants. Nevertheless what remains contributes to the setting of Eyhorne Street and is accessible along public footpaths.

Warren Wood, adjoining Leeds Park, and perhaps related to an estate rabbit warren, is a major area of historic woodland, mostly on the gault clay but extending onto drift deposits and Folkestone beds, which remained essentially intact until the construction of the M20 through its southern end. This part of the wood has already been affected by windthrow and clearance and retains no particular features of interest.

5.24.1.3 Historic Buildings

Eyhorne Street Conservation Area (OAU No. 2033) contains 27 listed buildings (OAU Nos. 73-4, 76-98, 304-5) and nine others of some architectural interest (OAU Nos. 301-3, 306-9, 311-12), ranging in date from the 15th to the early 20th century and forming a compact group of great interest. As with the historic landscape elements a number of outlying historic buildings contribute to the wider setting of the conservation area. The CTRL will pass close to the following buildings or groups of buildings at Eyhorne Street:

- The CTRL will pass in slight cutting within 15 m of Musketstone (OAU No. 300), an unlisted house in Musket Lane which was built about 1900 as a pair of labourers' cottages. This building has retained much of its original appearance, including striped tile-hanging, vertical divisions of the sash glazing and original porches.
- West of the B2163 Eyhorne Street the CTRL will pass in cut and cover tunnel about 50 m south of the conservation area. The houses on the south side of the conservation area include Grade II Eyhorne Manor (OAU No. 74), a pair of Grade II cottages (OAU Nos. 304-5), and the unlisted Eyhorne Cottage (OAU No. 301). Eyhorne Manor is an excellent example of a late medieval wealden house, which through careful restoration has realised some of its hidden potential. A smoke bay has been opened up in the back wing, and in the main house the stages by which the open hall was floored in can be seen and have been explained in drawings and models. The house was opened to the public by its previous owners and the garden was an additional feature. The pair of tile-hung cottages on Eyhorne Street next to the manor are probably 17th or 18th-century in origin although modernised in the 19th century. Eyhorne Cottage is rather more substantial than its name suggests, its 19th-century brickwork perhaps refacing an earlier house. All these buildings are of importance for their contribution to the conservation area.
- East of Eyhorne Street, and outside the conservation area the CTRL will pass within 80 m of unlisted Grove Mill House (OAU No. 570) in a retained false cutting graded

out to the north east. This is an attractive, well preserved brick villa of the mid-19th century, retaining its original fenestration. It was originally the house of a paper mill.

The CTRL will pass north of a number of scattered properties along the Ashford Road, situated on the other side of the M20 motorway from the CTRL route (OAU Nos. 99-104, 109, 313-5), include 18th and 19th-century houses, cottages and an oast house, all Grade II except for one (OAU No. 315).

5.24.1.4 Archaeological Remains

A Saxon coin (OAU No. 1067) was found at Eyhorne Green. Saxon cemeteries about 1 km to the west and to the south, together with the topographical situation of Eyhorne Street on a flat sandy ridge between two steeply cut streams suggest an area of some archaeological potential, though much of it west of the road approaching the village from the south has been disturbed.

West of the B2163, as it enters Eyhorne Street, the CTRL will cross the site of Eyhorne House (OAU No. 1402) where the footings of an 18th-century mansion are still visible.

The CTRL will cross a small 19th-century patch of woodland called The Chestnuts which contains a small earthwork (OAU No. 1968). The ground surface within the wood is at a lower level than the field surfaces to the east with a steep incline between, though whether this is a natural phenomenon or has resulted from soil movement in the adjacent fields or quarrying is difficult to determine. Towards the base of the incline there is a curving bank, c.1.30 m wide and 0.20 m high with a possible ditch to the south-west side. The age of this earthwork is unknown, but curving banks are much rarer in woodland than linear examples, and a large mature oak at least 250 years old grows on the bank indicating that the earthwork is of some antiquity.

5.24.2 Construction, Permanent Landtake and Operational Effects

5.24.2.1 Eyhorne Street Conservation Area and its Surroundings: Cumulative Significant Negative Effect (Unavoidable)

Eyhorne Street and its setting of historic landscape features and historic buildings will be affected by a series of impacts arising from moderate intrusion on the setting of the conservation area and its buildings, more severe intrusion on some unlisted buildings and landtake affecting topography, vegetation and historic landscape features which contribute to the historic character of the surroundings.

The construction impacts will be as follows:

- Moderate to severe medium term impacts arising from temporary landtake for construction and intrusion will affect the setting of the conservation area and a number of listed and unlisted buildings during the 18 month construction of the cut and cover tunnel and subsequent landscaping works. The extensive mitigation works designed to protect Eyhorne Street will inevitably involve a relatively long and complicated construction programme.
- During construction there will be intrusion from an increase in HGV traffic of and general traffic along the southern end of Eyhorne Street.

The permanent landtake and operational effects will be as follows:

- Landtake resulting in the loss of 240 m of the west end of Musket Lane
- Severe intrusion on unlisted Musketstone from the CTRL track, overhead line equipment, fencing, noise barrier, and trains; the building will be 'islanded' between the CTRL and the M20 which passes in cutting to the south. There is a risk that this building will not be viable for domestic use. This property will qualify for noise insulation.
- Loss of mature trees and general relandscaping of approach to Eyhorne Street from the south along the B2163, affecting the approach to and setting of the conservation area and the setting of Grade II Eyhorne Manor (OAU No. 74), a pair of Grade II cottages (OAU Nos. 304-5), and the unlisted Eyhorne Cottage (OAU No. 301).
- Landtake reducing still further the remains of Grove Mill pond, already much diminished by the M20
- Moderate to severe intrusion from the false cutting embankment and planting on the setting of unlisted Grove Mill House.

Incorporated Mitigation: Several mitigation measures have already been incorporated in the design of the CTRL which will very substantially reduce, though not eliminate its impact at Eyhorne Street. These include the following:

- 240 m of cut and cover tunnel to allow the relandscaping of the approach to the conservation area
- Retained false cutting and mounding to screen the CTRL south of conservation area and in the area of Grove Mill
- Parkland type planting scheme to recreate historic character of approach to Eyhorne Street

Options for Further Mitigation: The detailed design of the incorporated mitigation will be critical to how far it succeeds in recreating the historic character of the approach to Eyhorne Street, and reduces the impact on other features contributing to the landscape setting of the village. Options include:

- Design construction method of cut and cover tunnel and programme of landscaping to minimise intrusion.
- Limit HGV and other construction traffic to the south of the conservation area to a minimum.
- Where possible existing mature vegetation especially any healthy large trees should be retained. The planting scheme should be designed to take into account historical evidence for the area's character (parkland with scattered trees and clumps but not formal avenues etc).
- Design of noise barrier at Musketstone; basic building recording if the property proves unviable.
- Detailed design of landscaping and balancing pond at Grove Mill House to recreate larger linear pond and avoid excessive planting at base of false cutting.

The provision of a cut and cover tunnel will substantially mitigate what would otherwise be a much more serious effect at Eyhorne Street. Nevertheless the intrusion during construction and more particularly the overall degree of change to the historic character of the setting of the conservation area and its listed buildings in terms of alterations to landform and vegetation, together with the impacts on other features of historic interest, will cumulatively be a significant effect.

5.24.2.2 **Warren Wood historic woodland:** Non-significant Negative Effect
There will be limited landtake from the southern edge of the wood.
Incorporated Mitigation: Planting of new cutting slopes
Options for Further Mitigation: None identified

5.24.2.3 **Find of Saxon coin:** Non-significant Negative Effect
An early saxon silver coin found here suggests potential for further archaeological material of a similar date in an area which would be subject to landtake.
Incorporated Mitigation: None
Options for Further Mitigation: None identified, other than general provision for general staged process of archaeological mitigation (see below, chapter 6).

5.24.2.4 **Site of Eyhorne House:** Non-significant Negative Effect
Archaeological remains of this 18th-century house and any structures which stood previously on the site would be subject to landtake for landscaping. The house was demolished relatively recently and is not thought to have any wider historical and archaeological significance.
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.24.2.5 **Earthwork in The Chestnuts Woodland:** Non-significant Negative Effect
Much of this earthwork will be lost as a result of permanent landtake.
Incorporated Mitigation: None
Options for Further Mitigation: Monitoring and watching brief during site clearance as part of general archaeological provision.

5.25 Route Window 25: Greenway Court Road to SE of Harrietsham (406550)

5.25.1 Baseline Conditions

5.25.1.1 Overall Historic Environment

Harrietsham is another polyfocal settlement straddling the lower chalk gault clay and sand, with its southern elements consisting of West and East Street, the latter being a conservation area with a notable concentration of listed buildings. To the south the Len river was characterised by a series of mills and areas of alder carr, with a series of manorial centres along the Len valley at Chegworth, Polhill and Runham, each of which retains a cluster of historic buildings. Harrietsham lay between two basic parallel north west to south east routeways following better drained soils, the old Pilgrims Way at the foot of the chalk scarp with another route along the lower chalk, and the sinuous Lenham Heath road along the sand of the Folkestone beds. At Harrietsham the turnpike road from Maidstone to the east through Lenham and Charing to Ashford and Folkestone (the A20) crosses the intervening band of gault clay which is relatively narrow at this point. The NSE railway passing just to the north and most recently the motorway close by on the south represent further developments in the particular concentration of transport corridors in this area. The CTRL alignment will closely hug that of the M20.

As in the previous route window archaeological remains are relatively few. Most significant are the large quantities of Mesolithic flintwork which have been found on three sites on the west side of Harrietsham above the River Len. The presence of large

quantities of waste flakes and working debris as well as finished blades and scrapers indicate that this may have been an occupation site.

The combination of the M20, some modern development and some areas of intensive modern agriculture mean that rather few historic landscape features have survived and the overall coherence and interest of the historic environment is rather patchy. The principal historic and cultural interest of this section of route lies in the numerous historic buildings within the study corridor.

5.25.1.2 Historic Landscape Features

Along the stream west of the village is an area of alder carr (OAU Nos. 2042) below a series of large modern lakes.

5.25.1.3 Historic Buildings

The CTRL will pass 70 m south of Grade II Holm Mill House (OAU No. 117) in a false cutting. The building will be adjacent to the eastern end of the realigned A20. It is a modest stone and brick house of the 18th century, possibly including earlier work. To its east along the lane are two unlisted houses that may be of similar date or later; Holm Mill Cottage (OAU No. 541), which is entirely weatherboarded, and Fairview (OAU No. 542), which is tile-hung over a rubble base and is presumably timber-framed.

The CTRL will pass about 150-180 m south of Harrietsham West Street in a false cutting. It is not a conservation area, but contains 21 buildings of architectural interest (9 Grade II, 12 unlisted of historic interest), dating to between the 16th and 19th centuries (OAU Nos. 122-30, 336-47). There is modern housing between West Street and the CTRL line.

The CTRL will pass about 120 m south of Harrietsham East Street Conservation Area (OAU No. 2040), again in a false cutting. East Street contains 17 buildings of architectural interest (one Grade I, 14 Grade II and 2 unlisted but within the conservation area), dating to between the 15th and 19th centuries (OAU Nos. 131-44, 348-9, 375). Half the buildings are 17th-century or earlier, and they include the Grade I Old House (OAU No. 141), an exceptionally well-preserved 15th-century wealden house with very high quality carpentry and as yet unspoilt by restoration. Opposite this is a fine row of twelve Almshouses of the Fishmonger's Company dated 1770 (OAU Nos. 134-7). The concentration of exceptional buildings in this small conservation area makes it especially desirable that its character is not altered.

The CTRL will pass about 100 to 200 m north of two important groups of historic buildings at Chegworth and Pollhill, which lie south of the motorway. Chegworth Manor Farmhouse (OAU No. 115) is a well preserved Grade II timber-framed house of the 15th century, most attractively refronted in the early 19th century with weatherboarding and broad sash windows. It is surrounded by several buildings that form an important group, including a Grade II five-bay framed barn (OAU No. 116), an unlisted 19th-century granary, store, and stables (OAU No. 319-21), the nearby 18th/19th-century Grade II Chegworth Mill and mid 19th-century Mill House (OAU Nos. 113, 114) and the Grade II 17th-century Cottage (OAU No. 112). A short distance to the north is Grade II Fir Cottage (OAU No. 318), a very well-preserved framed farmhouse of the early 17th century. Pollhill is a Grade II pair of cottages converted from a wealden house, and Grade II Pollhill Mill is a fine framed house with a continuous jetty; nearby is a small

barn also Grade II and an unlisted, converted oast house (OAU No. 325). The unlisted Red House (OAU No. 326) on Fairbourne Lane is a modest double-fronted brick house of about 1860, and Grade II Ramchild (OAU No. 121) is an early 17th-century timber-framed house underbuilt in brick and tile-hung.

5.25.1.4 Archaeological Remains

The realigned A20 west of Holm Mill will pass within about 30 m of cropmarks of a ring ditch and other features discovered by air photography in 1990. This site may be of regional importance. A series of linear features in the same area are of unknown importance (OAU No. 1315).

The CTRL will pass between three findspots of Mesolithic flintwork clustered on a low spur west of Harrietsham (OAU Nos. 1072, 1073, 1074). These are recorded as concentrations within a general scatter of material of this date, OAU No. 1072 being the principal concentration. Other scatters nearby include one at Fairbourne Court which is the only example in this part of Kent of the 'Wealden technology' (Jacobi 1982). An area of alder carr woodland (OAU No. 2042) suggests the possibility of waterlogged deposits in the alluvial deposits of the Len and its tributary streams. The significant narrowing of the Len floodplain downstream at Chegworth reinforces this possibility. Much may have been destroyed by the A20 and M20 in this area, but quite small areas would still have regionally significant potential for palaeo-environmental studies.

South of East Street, between the sewage works and Ridding Lane, the CTRL will cross an area of slight earthworks of old fields or paddocks (OAU No. 1170), which appear to be transected by the larger, more regular present field pattern. These remains have already been severed by the M20, and are not of more than local interest.

5.25.2 Construction, Permanent Landtake and Operational Effects

5.25.2.1 Harrietsham Mesolithic Finds: Potentially Significant Negative Effect (Mitigable)

During construction an area of potential for mesolithic remains may be subject to landtake for the secondary construction site between CTRL and Ashford Road opposite Hook Road (Ch.405600). The permanent landtake for the CTRL and its landscaping and balancing ponds may also result in disturbance of significant mesolithic remains and possibly associated palaeo-environmental deposits.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting, and/or protection from disturbance.

5.25.2.2 Holm Mill House listed building, Holm Mill Cottage and Fairview historic buildings:

Non-significant Negative Effect
Setting of Grade II listed 18th-century or earlier Holm Mill House will be subject to some intrusion from the realigned A20 and the false cutting of the CTRL, and possibly slight landtake from its curtilage for planting. Holm Mill Cottage and Fairview will be affected by slight intrusion.
Incorporated Mitigation: False cutting, landscaping
Options for Further Mitigation: None identified

5.25.2.3 Parkwood House historic building: Non-significant Negative Effect

The setting of unlisted 19th-century house in Arts and Crafts style will be subject to slight intrusion, but it is already affected by the M20 and A20.

Incorporated Mitigation: None
Options for Further Mitigation: None identified.

5.25.2.4 **Harrietsham West Street and Harrietsham East Street Conservation Area and listed buildings:** Non-significant Negative Effect
During construction the historic village with a number of listed and historic buildings will be affected by medium term slight to moderate intrusion on its setting from the Harrietsham main construction site (Ch.406000-406200), formerly used for M20 construction. At East Street Conservation Area there will be intrusion from an increase in HGV traffic and in general traffic of along East Street.

The permanent landtake and operation of the CTRL will result in slight intrusion on the setting of the conservation area and a few of its many listed buildings. This will arise mainly from the visual intrusion of the CTRL false cutting in the medium term before planting matures, and from the landtake for the false cutting which will affect an area of old fields and earthworks which contribute to the wider landscape setting of the conservation area.

Incorporated Mitigation: False cutting, graded out slopes for return to agriculture and planting.
Options for Further Mitigation: Limit HGV and other construction traffic through the conservation areas to a minimum.

5.26 ROUTE WINDOW 26: SE OF HARRIETSHAM TO LENHAM HEATH ROAD

5.26.1 BASELINE CONDITIONS

5.26.1.1 Overall Historic Environment

East of East Harrietsham and north of the Sandway Road are restricted areas of small irregular fields and sand pits. It is an area of former heaths, now enclosed, one of which occurs at Sandway Common (OAU No. 2045). The cluster of houses at Sandway is a conservation area (OAU No. 2046). There are three historic woods within the study area: Stream Wood (OAU No. 2043), Baldock Wood (OAU No.2327) and Kiln Wood (OAU No. 2326).

In Lenham parish, there are outlying settlements on the sands south of the main village at Sandway and further east around Lenham Heath, which are linked by the Lenham Heath Road following the band of Folkestone Beds sand and Sandgate beds eastwards to Charing Heath. Chilston Park, at the end of the route section and mainly in the next, forms a northward extension of Boughton Malherbe parish between Sandway and Lenham Heath.

In this route window rather more archaeological information is available as a result of local interest and the surface collection survey. Much of the land around Lower Runham Farmhouse has been walked and trenched by the owner, Lord Monckton, who has located extensive early prehistoric activity in the form of dense scatters of struck flint (OAU Nos. 1371 and 1372) on and close to the line of the M20 and Roman pottery at Lower Runham. Further to the south, there are extensive Iron Age and Roman sites which were involved with iron smelting. Surface collection survey to the southwest of Sandway

revealed a collection of good quality struck flint including some implements and cores (OAU No. 1346), a scatter of prehistoric worked flint and medieval pottery (OAU No. 1347) and a number of spot finds (OAU Nos. 1351, 1245, 1350, 1349) of similar date range.

The overall degree of historic integrity is variable, relying more on the occurrence of clusters of historic buildings and the basic framework of roads and the general mixed landuse and woodland than any extensive survival of detailed land division and use. The intrusion of the M20, fairly extensive field boundary loss and some quarrying and waste disposal activity have tended to detract from the historic coherence of the area.

5.26.1.2 Historic Landscape Features

The CTRL will intersect a series of historic roads converging on Sandway at five places. These are the Sandway Road, Old Ham Lane, Headcorn Road, Boughton Road, and Lenham Heath Road. Although metalled and in constant use as Class B or unclassified roads, their alignments and, over much of their length, the roadside vegetation retain a reasonable degree of historic character.

At the eastern end of this route window the diverted Lenham Heath road diversion and its associated landscaping will impinge upon Chilston Park, which is listed Grade II in the English Heritage register of parks and gardens, and Grade II in the Kent County Council register. It has already been severed by the M20 motorway. It is dealt with in more detail in the next route window.

5.26.1.3 Historic Buildings

At the beginning of this route window the CTRL will pass in cutting 80 m south of The Coppice (OAU No. 974), an unlisted building typical of a late 19th-century roadside cottage. It is modestly built of red brick with brick voussoirs to the ground floor windows.

About 200 m north of the CTRL, along the unspoilt Old Ham Lane, lies Keepers Farmhouse (OAU No. 776). This is a Grade II 17th-century timber framed house with 19th century red brick facing on the ground floor but with the timbers exposed on the first floor.

East of Old Ham Lane the CTRL will pass in cutting about 150 m north of Cygnet Cottages, Lenham Heath Road (OAU No. 330) a 19th-century pair of small brick and weatherboarded cottages which still retain some of their original iron framed casement windows, and two Grade II listed buildings on the north side of the Lenham Heath Road. These are the 19th-century Nos. 1 and 2 Coast Cottages (OAU No. 148), and Bank House (OAU No. 149), an early 18th-century red brick house, within the Sandway Conservation Area.

At Sandway the CTRL will pass 30 m north of the northern tip of the conservation area in a 170 m cut and cover tunnel, approached at each end in cutting or false cutting. Sandway is a group of small mostly 18th/19th-century houses and cottages (OAU Nos. 149, 331-5), situated between 75 and 200 m from the CTRL. The Sandway Conservation Area (OAU No. 2046) contains mostly unlisted buildings (only OAU No. 149 is listed): although none of these is exceptional, they represent a variety of cottage types in traditional materials and are of value as a group. The group is

characterised by the tight clustering of buildings fronting a crossroads of sunken lanes and views to and from the conservation area are relatively restricted.

East of the conservation area the CTRL will pass in false cutting and retained cutting 50-150 m north of a compact and interesting group of farm and related buildings. Closest to the CTRL alignment is the unlisted, probably purpose built, White Horse Inn (OAU No. 382), a fine 19th-century large stone inn with good details. On the south side of the Lenham Heath Road, Home Farm House (OAU No. 379) is a Grade II early to mid 19th-century house replacing the end wing of the adjacent medieval hall house, also Grade II listed (OAU No. 380). This timber framed 15th-century hall house has been covered with tiles and divided into two cottages. A Grade II 15th/16th-century timber framed barn (OAU No. 152), within this group, has been converted to an office. Some farm buildings remain around the barn, including the unlisted 19th-century framed weatherboarded, store building with an open fronted cartshed on the ground floor (OAU No. 381). Grade II Home Cottages (OAU No. 150), is another pair of cottages converted from a mid 15th-century timber framed hall house, now hung with 19th-century fishscale tiles.

At its crossing of Boughton Road the CTRL will pass in retained cutting 50 m south of Grade II listed Oxley House (OAU No. 975), a two-storey brick house of the 18th century with sash windows and period fittings. The house, formerly the bailiff's house on the Chilston estate, stands on an eminence facing south in a fine garden which is currently opened to the public under the National Gardens Scheme.

5.26.1.4 **Archaeological Remains**

In this route window the CTRL will not cross any currently known archaeological sites, although, as indicated above, the area has significant potential for prehistoric and later remains.

5.26.2 Construction, Permanent Landtake and Operational Effects

5.26.2.1 **Sandway Conservation Area, Oxley House and Other Historic Buildings: Cumulative Significant Negative Effect (Unavoidable).**

This effect concerns the cumulative effect of construction, permanent landtake and operational impacts at Sandway, where the CTRL will intrude on the setting of the conservation area and nearby historic buildings, most notably Grade II Oxley House. The effects would be as follows:

- Moderate to severe medium term temporary intrusion on the landscape setting of Sandway from construction activity (especially for example in the vicinity of unlisted White Horse public house), including an increase in HGV traffic and general traffic along Headcorn Road, Sandway Road and Lenham Heath Road.
- Long term moderate, reducing to slight permanent intrusion from cuttings and false cutting and associated landscaping for the permanent landtake and operation of the CTRL.
- Moderate permanent landtake and severance of historic roads leading to Sandway resulting from realignment of Sandway Road, Old Ham Lane, Boughton Road and Lenham Heath Road
- Moderate/severe permanent intrusion on the setting of Grade II Oxley House from the retained cutting alongside the southern boundary of its curtilage, and slight landtake for planting. There is a possible indirect effect that the quality of its current

setting might be affected if the building changed hands as a result of the CTRL proposals and the garden ceased to be maintained and visited; however this is an eventuality which could arise independently of the CTRL.

- Moderate permanent intrusion on the setting of unlisted White Horse Public House
- Slight intrusion for Grade II listed Home Farm complex and unlisted Cygnet Cottage mainly from landscaping and road realignments

Incorporated Mitigation: The effects that would arise at Sandway are already significantly reduced by the incorporated mitigation measures. These include:

- 170 m cut and cover tunnel past the conservation area
- False cutting to screen the CTRL at east end of cut and cover tunnel
- Partly retained cuttings either side of Boughton Road to avoid landtake within curtilage of Oxley House and behind the White Horse public house.

Options for Further Mitigation:

- Limit HGV and other construction traffic through the conservation area to a minimum.
- Detailed design of some of the mitigation may allow some slight improvements to be made to the mitigation or some effects to be reduced (eg design of retaining walls and structures and detailed design of the road realignments).

The overall effect of significant change to the historic character of the area round Sandway and intrusion at Oxley House is unavoidable, and while some further mitigation would be possible, the effect would remain significant.

5.26.2.2 **Oxley House Grade II Listed Building: Significant Negative Effect (Mitigable)**
During construction the southern edge of the curtilage of Grade II listed 18th-century Oxley House will be affected by slight medium to long term temporary landtake for the haul road along the northern side of the CTRL alignment.
Incorporated Mitigation: None
Options for Further Mitigation: Realign haul road to south side of the CTRL alignment or keep it within cutting.

This mitigation would make the specific construction impact at Oxley House non-significant, and might obviate the need for any permanent landtake from its garden.

5.27 Route Window 27: Lenham Heath Road to Ashford/Maidstone Boundary

5.27.1 Baseline Conditions

5.27.1.1 Overall Historic Environment

In this section the CTRL continues to follow the Folkestone Beds, generally parallel to the line of the Lenham Heath Road which passes between scattered farms and houses. Many of these may represent later medieval and post-medieval expansion of settlement from primary settlements on more fertile soil to the north. The Lenham Heath Road forms the northern boundary of Chilston Park (OAU No. 2047) which is a major historic feature in the landscape.

Lenham Heath (OAU No. 2055) has been enclosed, but there are areas of old fields around it. Within the former Heath there are the remains of a smock mill (OAU No. 1077) which was reduced to base level in 1925. The field name 'Tainter Field' occurs near Marshall Farm, possibly indicating fulling and finishing of cloth (OAU No. 1202).

In this section of the route there are various archaeological indications of the area's long history. An extensive area of cropmarks of ring ditches and complex linear features north-east of Chilston Park (OAU No. 1317) is known from aerial photographic survey. A variety of finds from close to Royton Chapel, including an Iron Age coin hoard (OAU No. 1126) and a La Tène III broach and a Gallo-Belgic stater and five Roman Coins, also suggests significant archaeological potential. Further to the north aerial photography has revealed a small patch of indistinct cropmarks possibly indicating a small building (OAU No. 1374). The Marshall Farm Alder Beds (OAU No. 2058) could have potential for peat deposits.

The historic buildings within this section broadly represent three components of the settlement pattern: significant farms and manors such as Royton Manor 250 m north of the CTRL and Hubbards Farm 200 m to the south, other scattered houses such as Old and Water Street Cottages and Yew Tree Cottage, and various farms and houses clustering around the heath.

Royton Manor (OAU No. 158) is a Grade II* medieval hall house with much original timberwork of several periods visible inside and important features such as a solid timber stair and some 16th-century wall-paintings. Nearby is the site of the possibly 13th-century manorial chapel (OAU No. 1076). The adjacent farm buildings are of no special importance, but amongst them is Chapel Mill (OAU No. 157) begun as a house, probably 17th-century, against which the mill was built in the 19th century.

Several historic buildings mark the south side of the former heath between 80 and 350 m north of CTRL. The former Bull Inn (OAU No. 160), listed grade II, of early 19th-century date is the best of a number of minor buildings at the west end of Lenham Heath. It has regular Georgian features including two dormers. Further east are Grade II Sheathers Farm (OAU No. 165), a 15th-century hall house, Norham Farm (OAU No. 166) in red brick with good casement windows and unlisted barn (OAU No. 167), and Grade II Wilks Farm (OAU No. 168), a 17th-century red brick farmhouse extended in the 19th century, which forms part of a cluster of three buildings at the edge of the former Heath.

The overall coherence and integrity of the historic landscape is fairly average: Lenham Heath has long since been enclosed and there has been much infill around its edges, there is no special survival of old field patterns and the M20 has already carved a modern transport corridor through the area.

5.27.1.2 Historic Landscape

In the first part of this route window the CTRL will cut across the northern edge of Chilston Park (OAU No.2047), which has already been severed by the M20 to the south. Chilston Park is listed Grade II in the English Heritage register of parks and gardens, and Grade II in the Kent County Council register. It was described by John Evelyn in the 17th century. A substantial strip of the northern edge of the park was severed from the main body of the park by the construction of the M20 and its screen bunding, although the severed northern section still retains some important features.

In crossing the park the CTRL will avoid the circular ice pond and icehouse (OAU Nos. 2048 and 153) and fine specimen trees in the north west corner of the park and will pass on low embankment within a couple of metres of a small beast pond further east (OAU No. 2049). The CTRL will cross the remains of a long straight walk along the axial

vista of the park which survives as an earthwork (OAU No. 1979), 5 m north of a somewhat ruinous bridge over the small stream which enters the park from the north. East of this the CTRL will pass south of the remains of a once much thicker belt of Scots pines which stand on a substantial rise forming the north east corner of the park.

The CTRL and a balancing pond will cross the Lenham Heath Road which currently is an attractive country road forming the sinuous northern boundary of the park.

South of Marshall Farm the CTRL will cross the alder beds at Marshall Farm (OAU No. 2058).

5.27.1.3 **Historic Buildings**

The CTRL will pass 500 m north of Grade I Chilston Park House and its ancillary buildings which lie south of the M20. The setting of the house (now an hotel) includes the registered park (OAU No. 2047), and the M20 and traffic upon it is screened by a high landscaped bund. The house is a substantial building round a central courtyard and has an imposing brick front of 1728 added to an earlier core.

Immediately east of the park the CTRL will pass in false cutting 75 m south of the unlisted Chapel Farm Cottages (OAU Nos. 383-4), two pairs of unspoilt mirror plan 19th-century cottages. Both are built of stone, but 3-4 Chapel Farm Cottages are tile hung on the first floor. They are of local interest as part of the Chapel Farm/Mill complex.

Further east two Grade II listed buildings will be left within the thin strip of land between the CTRL and the motorway.

At chainage 410800 the CTRL will pass 30 m north of Grade II Old and Water Street Cottages (OAU No. 159) in a 5 m deep partly retained cutting. The cottages form a long brick building with a tile-hung first floor obscuring the timber frame. This was in origin a small farmhouse of about 1600, extended towards the south when converted into cottages in the late 19th century. There is a narrow green lane (the former Water Street) leading to the cottage from the north, cut off by the motorway, which is 60 m to the south and partly screened by low cutting.

Further east, south of Hook Green, the CTRL will pass 30 m north of Grade II Yew Tree Cottage (OAU No. 161) in an 8 m deep unretained cutting. Despite its altered exterior, this small cottage has many surviving elements of a late medieval timber frame, and was rebuilt in the 16th or 17th century (the stairs in its outshot having solid timber treads). It is now covered with painted pebbledash. The M20 is 40 m to the south and screened by bunding and, round the garden of the cottage, a short section of noise fence. The cottage is reached down a sunken lane, formerly the access to Hubbards Farm, now cut off by the motorway.

Hubbards Farm (OAU No. 162), south of the motorway, is an important medieval house, possibly aisled, with exposed jetties and a moulded dragon post. The first floor is weatherboarded and the ground floor is rendered. Beyond it to the east is the stone built 18th-century Burnt Mill and Mill House (OAU Nos. 164 & 163).

5.27.1.4 **Archaeological Remains**

Within Chilston Park the CTRL will cross some minor earthworks of former fields (OAU No. 1166) which prior to the construction of the motorway were more extensive but still partly survive to the south.

5.27.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.27.2.1 **Old and Water Street Cottages Grade II Listed Building: Significant Negative Effect (Unavoidable)**

This listed building will be islanded between the CTRL and the M20 motorway, and will be affected by the following impacts:

- During construction the haul road will pass along the historic lane to the west within c.4 m of the building.
- There will be slight permanent landtake from its curtilage despite the low retaining wall designed to reduce landtake
- Severe permanent intrusion on its setting from the railway, trains, fencing and overhead line equipment. Its setting will be further affected by the loss of the historic track forming the present access.
- There is a substantial possibility of the building being unviable for residential use and hence a likelihood of indirect effects of change of use and condition, or future demolition. This property will qualify for noise insulation.

Incorporated Mitigation: Partial retaining wall to avoid main landtake from curtilage, provision of new access road. The project policy on listed buildings which will potentially be unviable allows for consideration of further reasonable mitigation if their viability can realistically be secured, or recording and consideration of relocation if appropriate and feasible, should demolition under normal consent procedures be the final resort.

Options for Further Mitigation: In this case the following measures could significantly reduce the effect, and could secure the viability of the property:

- Re-route haul road away from immediate proximity to the property;
- Full height longer retaining wall with noise fence wall on top the latter to extend round north and west sides of building;
- provide planting to west;
- provide extra land for enlarged garden to east to help offset risk of becoming unviable;

If the property nevertheless becomes at risk or is demolished, full investigation and recording prior to demolition would be appropriate.

This mitigation could substantially reduce the likelihood of this listed building being unviable and the indirect possibility of physical alteration or demolition. Even if the future of the building was secured the effect on its setting would remain significant.

5.27.2.2 **Yew Tree Cottage Grade II Listed Building: Significant Negative Effect (Unavoidable)**

This listed building will be islanded between the CTRL and the M20 motorway, and will be affected by slight landtake from its curtilage as a result of the alignment of an access road to the Lenham Heath passing loops to the east which will follow the top edge of the CTRL cutting within 1-2 m of the building. The building will be affected by severe intrusion on its setting from the railway, trains, fencing and overhead line equipment and the 10 m retaining wall on the other side of the railway. The visual intrusion will

eventually lessen as the planting along the top of the cutting matures. The setting of the cottage will be further affected by the loss of the ancient hollow way forming the present access, and by planting. There is a substantial risk of the building being unviable for residential use and hence the potential for indirect effects of change of use or condition or possibly demolition. This property will qualify for noise insulation.
Incorporated Mitigation: Planting along upper cutting slope and to the east, provision of new access road. The project policy on listed buildings which will potentially be unviable allows for consideration of further reasonable mitigation if their viability can realistically be secured, or recording and consideration of relocation if appropriate and feasible, should demolition under normal consent procedures be the final resort.
Options for Further Mitigation: The following measures could significantly reduce the effect:

- Retaining wall to provide better screening through reduced proximity of the cutting and enlarged buffer zone for additional mitigation and realignment of access road to passing loops to east;
- provide extra land for enlarged garden to west to help offset risk of becoming unviable;

If the property nevertheless becomes at risk or is demolished, full investigation and recording prior to demolition and consideration of relocation would be appropriate.

This mitigation could substantially reduce the likelihood of this listed building being unviable and the indirect possibility of physical alteration or demolition. The effect on its setting would remain significant.

5.27.2.3 **Chilston Park Grade II Registered Park: Significant Negative Effect (Unavoidable).** The northern remnant and boundary of a once fine 17th-century formal park which still retains some significant features will be affected by further severance, including the central axial vista walk and northern boundary, permanent landtake and loss of 450 m of its northern boundary and alteration of a further 250 m of its northern boundary as a result of road realignments and landscaping. The historical form and character of the original boundary formed by the Lenham Heath road will not be readily recognisable. The residual value of the severed northern area of the park will be diminished though not destroyed; there will also be visual intrusion of the top of the overhead line equipment seen from the main body of the park and Grade I Chilston House over the top of the M20 bunding.
Incorporated Mitigation: The alignment avoids the Ice House and pond; there will be some planting alongside the CTRL and round the realigned Lenham Heath road.
Options for Further Mitigation: The following measures would help to offset or reduce the effect:

- Refurbish pine plantation along north east boundary of park;
- refine detailed design of landscaping to maintain parkland character;
- create tree clumps to screen overhead line equipment in main views towards the CTRL from south;
- if possible refine design of landscaping, balancing ponds and road realignments to retain more of northern boundary of park and character of Lenham Heath Road.

5.27.2.4 **Chapel Farm Cottages unlisted historic buildings:** Non-significant Negative Effect
Two pairs of good late 19th-century cottages will be enclosed by the proximity of the route, the new false cutting, and planting.
Incorporated Mitigation: False cutting and planting
Options for Further Mitigation: None identified

5.27.2.5 **Chapel Mill Grade II Listed Building:** Non-significant Negative Effect
Grade II listed early 17th-century house with 19th-century water mill will be affected by slight intrusion on its setting from the realigned Lenham Heath Road.
Incorporated Mitigation: Landscape planting.
Options for Further Mitigation: None identified

5.27.2.6 **The Bull Public House Grade II Listed Building**: Non-significant Negative Effect
Late 18th/early 19th-century listed building with original sash windows will be affected by slight intrusion on its setting.
Incorporated Mitigation: Landscape planting, noise barrier.
Options for Further Mitigation: None identified

5.27.2.7 **Marshall Farm Alder beds - historic woodland**: Non-significant potential negative effect.
Historic woodland will be subject to moderate landtake from its southern edge for the CTRL and the Lenham Heath passing loops. This could affect any buried peat deposits.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological/ palaeo-environmental monitoring and recording during site clearance.

5.28 ROUTE WINDOW 28: ASHFORD/MAIDSTONE BOUNDARY TO PLUCKLEY ROAD (502700)

5.28.1 BASELINE CONDITIONS

5.28.1.1 Overall Historic Environment

This section of the route crosses a series of small tributary streams of the upper reaches of the western branch of the River Stour. These streams have created a series of small valleys cut into the Sandgate and Hythe Beds with intervening ridges, some of which are capped with brickearth and small areas of river gravels.

On the higher ground at the west end of this route window was the former Charing Heath, while that at the eastern end, south of the CTRL, was occupied by the former Calehill Park. The intervening lower lying areas on the Sandgate beds support some areas of historic woodland, the relatively substantial Hurst Wood (OAU No. 2057) and a small piece of woodland to the southeast (OAU Nos. 2003) which are both shown on a 1678 Estate Map of Calehill.

Archaeological finds suggest that the area was exploited from early times. At Newlands Road Mesolithic, Neolithic, late Iron Age and Roman finds have been recovered from the nearby sand quarry, while either side of the ridge, on the lower ground west of Hurst Wood and east of Newlands, surface collection has revealed further scatters of prehistoric worked flint (OAU Nos. 1815 and 1816). These finds suggest that the ridges and areas either side have some archaeological potential, and that possibly, like the medieval pattern, the later prehistoric and Roman farmers favoured the higher ground for their settlements.

The distribution of historic buildings is similar to the previous section: the outline of the former Charing Heath (OAU No. 2056) is clearly reflected in six clusters of historic buildings round its perimeter, including medieval Brockton Manor and the much later

Brockton Cottages. The Newlands Stud complex was, despite its name, a medieval manorial centre belonging to one of the Knight's Fees of the Archbishop's manor of Charing. The complex is situated on a long sandy ridge, and in the small valley immediately to the east is the site of a water mill (OAU No. 1167), which includes impressive earthworks of the mill pond, leats, channels and the probable mill site itself. Foxen Farm (OAU No. 175) is another old farm with a surviving medieval wealden house including some original timber features and a large inserted brick stack.

Some areas of old fields survive (e.g. east of Newlands) but much of this section reflects late enclosure. Some of the woodland was much more extensive, notably that to the north of the Hunger Hatch Lane (OAU No. 2003) which was once part of a much larger piece of woodland called Violet Wood. As in the previous sections the M20 has cut across this area, and there has been extensive mineral working west of Newlands. The overall integrity and coherence of the historic landscape is fair.

5.28.1.2 Historic Landscape Features

West of Newlands Lane, immediately north of the motorway, the CTRL will cross the southern end of Hurst Wood (OAU No. 2057) on an embankment up to 7 m high. The 1678 Calehill estate map clearly shows Hurst (*Herst*) Wood as a well-defined wood, surrounded by enclosed fields. The internal ride is not consistently shown on 19th-century or earlier maps, whereas the area of pasture south of Hurst Lane existed by about 1800, having been cleared from the 17th-century wood. The woodland affected by the CTRL falls into three discrete areas, with the motorway to the south.

The western part of the wood is rather overgrown and contains mixed deciduous standards and coppice. A ditch forming the western boundary is probably of recent origin but is certainly on the line of the original wood boundary. A bank c. 2.5 m wide and 0.5 m high with an external ditch delineates the present boundary between the south-east side of the wood and the pasture field to the east. A number of much older gnarled coppiced stools of ash, oak and hazel growing on top of the bank suggest that the earthwork is of some antiquity, and is probably an internal wood boundary shown on the 1678 estate map.

To the south of Hurst Lane and to the east of the pasture a triangular area contains sparse mature oaks with immature coppiced hazel and more mature coppiced sweet chestnut. A small depression approximately 8-10 m across and 1.5 m deep, may be an exploratory sand pit.

The area immediately north of Hurst Lane east of the ride is a recent pine plantation on an old sand quarry.

5.28.1.3 Historic Buildings

West of Egerton Road the CTRL together with its passing loops will pass in an 8 m deep cutting 60 m south of the unlisted Brockton Cottages (OAU No. 169), which are of local interest as a pair of 18th- to 19th-century cottages encroaching on the former Charing Heath.

Immediately east of Egerton Road the CTRL and passing loops will pass through Brockton Farm, a complex of farm buildings of the 17th century and later. Brockton Farm (OAU No. 170), listed Grade II, is of 17th-century origin with a timber-framed two-room plan round a massive central chimney stack set in a hipped tiled roof.

Extensive rebuilding took place when the house was extended and received a brick facing in the early 19th century. It is possible that this farm replaced an earlier building, but the manorial centre was perhaps further east at the undoubtedly medieval house called Brockton Cottage (OAU No. 174).

The most important of the farm buildings is a 17th-century aisled barn (OAU No. 171), probably built at the same time as the house and similarly listed Grade II. It is weatherboarded and has a thatched roof, which is very unusual in Kent, and projecting side wings or uncertain age. Also within the curtilage are a 17th-century brick and timber stable with tiled roof (OAU No. 172), which recently collapsed and has consent for demolition, and a 19th-century brick cow house (OAU No. 385).

The CTRL will pass 50 m south of the last of this group of associated farm buildings and Brockton Oast (OAU No. 173), in an 8 m deep cutting. This is a 19th-century oast with two circular hop kilns which has been converted.

The CTRL and associated passing loops will pass 220 m south of Brockton Cottage (OAU No. 174), in a false cutting. This Grade II* listed building (which is not to be confused with unlisted Brockton Cottages) lies east of Brockton Farm on the edge of the former heath. It is an important medieval hall house of wealden type, dating to about 1500 with an unusual double jetty and richly decorated carpentry. It lies in the attractive shallow valley east of Charing Heath and is fairly well screened by vegetation to the south.

East of Newlands Lane the CTRL will pass about 100-150 m south of Newlands, a group of historic buildings (OAU Nos. 176-9 & 386-7) of some significance representing the remains of an important medieval manor. The Grade II* farmhouse (OAU No. 176) contains a medieval hall house which was added to and refronted with red and grey brick in the 18th century. This L-shaped timber framed building possibly dates from as early as the Norman period.

The nearby Grade II* Romanesque Newlands Chapel (OAU No. 178) is an unusual survival (compared for example with Royton Chapel in route window 27). It originally consisted of a chancel, a nave, and a south aisle, but the aisle has since disappeared. The chancel and nave, without a chancel arch between them, remain. In the north wall is a good round headed doorway. It is built of stone rubble with good quality ashlar quoins and mouldings. It has a later (17th or 18th-century) hipped tile queen post roof, which has recently been repaired.

The associated unlisted farm buildings include a converted aisled barn (OAU No. 179) of 17th or 18th-century date, which still retains evidence of the two large threshing doors, and the 19th-century converted oasthouse (OAU No. 177). Newlands Stud Cottage (OAU No. 387) is a red brick double depth plan cottage of circa 1900 with an unusual survival in the detached kitchen and washhouse at its rear. The Coach House and stables (OAU No. 386) are built in the Arts and Crafts style of a similar date. These buildings contribute to the overall interest of the group, particularly given the status and long history of the manor.

The group is set on the side of the ridge with the earthworks of the mill pond to the east, and much of the interest of the setting of the buildings lies in their variety and close grouping. Within the complex and seen from the south, the conversion of the barn (OAU No. 179) has somewhat detracted from the historic character of the group. Their wider

setting is marred by the M20 to the south, and to a much lesser extent by the reasonably well screened quarry to the west.

5.28.1.4 **Archaeological Remains**

West of Hurst Wood the CTRL and associated passing loops will cross on slight embankment a small, compact scatter of prehistoric flintwork consisting of nine struck flints and a slightly more extensive scatter of 25 unworked burnt flints (OAU No. 1815). Although a small scatter of limited extent, this is a clear concentration of material albeit of uncertain significance.

At Newlands Road the CTRL will pass south of a sand quarry west of Newlands Stud which has produced Mesolithic flints (OAU No. 1078), a Neolithic polished stone axe, late Iron Age pottery and one or more cremation burials (OAU No. 1140), and Roman pottery and a quernstone (OAU Nos. 1080, 1140). This material suggests that the Newlands ridge is an area of some archaeological potential.

East of Newlands, over much of the area up to Pluckley Road, the CTRL will cross on embankment and cutting a diffuse scatter 40 worked flints and 50 burnt unworked flints (OAU No. 1816). The majority of this material is of Mesolithic date.

5.28.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.28.2.1 **Brockton Farm and Barn Grade II listed buildings and outbuildings: Significant Negative Effects (Unavoidable)**
The Grade II listed 17th-century farmhouse and associated Grade II barn at Brockton Farm will unavoidably have to be demolished, together with any remains of the 17th-century stable and later cowshed.
Incorporated Mitigation: Building recording and consideration of feasibility for reconstruction; salvage of historic features.
Options for Further Mitigation:

- Full archaeological investigation and recording of both listed buildings (including attached outbuildings) to create records capable of use to reconstruct them;
- General recording of other outbuildings as appropriate;
- Evaluation and if appropriate investigation and reporting of subsoil archaeology prior to and during demolition;
- Relocate barn to suitable alternative site, either for future commercial use as a barn or as museum piece;
- Consider relocating house if substantially complete 17th-century timber frame survives internally, or if stripping reveals substantial remains of pre 17th-century phases;
- Salvage and re-use of period features such as windows, doors and fireplaces, and salvage for museum use of timber or construction details.

This mitigation would reduce the effect but it would remain significant.

5.28.2.2 **Brockton Oast Unlisted Building:** Non-significant Negative Effect
During construction there will be short term temporary intrusion on the setting of the converted oast from the adjacent Egerton Road Bridge secondary construction site (Ch.500200-500400). There will be permanent landtake from the curtilage of the unlisted 19th-century oast which is part of the Brockton Farm complex (the rest of which will be demolished). There will be severe intrusion on its setting from the CTRL and passing loops including fencing, overhead line equipment, and from the access road to the east

on the other side of this building. The effect of intrusion will diminish to a limited extent as proposed planting matures.
Incorporated Mitigation: Planting
Options for Further Mitigation: None identified

5.28.2.3 **Brockton Cottages Unlisted Building:** Non-significant Negative Effect
During construction there will be short term temporary intrusion on the setting of the cottages from the adjacent Egerton Road Bridge secondary construction site (Ch.500200-500400). There will be permanent landtake from the curtilage of the unlisted 18th 19th-century cottages, and severe intrusion on their setting from the CTRL and passing loops, including fencing and overhead line equipment. The effect of intrusion will diminish as the proposed planting matures.
Incorporated Mitigation: Planting
Options for Further Mitigation: Minimise landtake from top of cutting; detailed design of planting to minimise additional landtake but provide effective screen.

5.28.2.4 **Hurst Wood Archaeological Finds: Potentially Significant Negative Effect (Mitigable)**
Severe landtake for the CTRL line, passing loops and associated landscaping will affect a small well-defined scatter of prehistoric flintwork west of Hurst Wood
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.28.2.5 **Area of Archaeological Potential Newlands Road and East of Newlands: Potentially Significant Negative Effect (Mitigable)**
Landtake for the CTRL and associated landscape bunding and planting will affect an area of archaeological potential indicated by a variety of finds and, in particular, a scatter of Mesolithic flintwork, and possibly associated alluvial deposits.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.28.2.6 **Brockton Cottage Grade II* Listed Building:** Non-significant Negative Effect
There will be slight intrusion on the wider landscape setting of Grade II* Brockton Cottage, from the false cutting and top of overhead line equipment and lighting.
Incorporated Mitigation: False cutting, planting
Options for Further Mitigation: None identified

5.28.2.7 **Newlands Group of Listed and Unlisted Buildings:** Non-significant Negative Effect
There will be short term temporary intrusion on the setting of this group of historic buildings from the nearby Newlands Road Bridge secondary construction site (Ch.501700). There will be slight permanent landtake from the ends of the long paddocks associated with the converted barn, and moderate intrusion on the Newlands group of listed and non-listed buildings as a whole from the overhead line equipment and fencing and trains. The M20 motorway has already intruded into the setting of this group and will be partly screened by bunding between it and the CTRL. The setting of the most important buildings relies mainly on the grouping of buildings rather than the wider landscape setting to the south.
Incorporated Mitigation: False cutting, planting, screening of M20.
Options for Further Mitigation: None identified.

5.28.2.8 **Hurst Wood:** Non-significant Negative Effect
There will be slight landtake from Hurst Wood
Incorporated Mitigation: Planting to retain character of wood with central ride
Options for Further Mitigation: Consideration of detailed design of planting on north side to fully screen noise fencing and building at east end of passing loops.

5.28.2.9 **Charing Conservation Area:** Non-significant Negative Effect
At Charing Conservation Area there will be intrusion from an increase in HGV traffic and general traffic along the A20/Ashford Road.
Incorporated Mitigation: None
Options for further mitigation: Limit HGV and other construction traffic through the conservation area to a minimum.

5.29 Route Window 29: Pluckley Road to M20

5.29.1 Baseline Conditions

5.29.1.1 Overall Historic Environment

Most of the principal features which historically characterised this route window have all but disappeared from the landscape. Only remnants of Calehill Park (OAU No. 2062) south of the M20 survive, its present perimeter reflecting a 19th-century extension. Calehill Heath (OAU No. 2061), which is now commercial coppice, and Westwell Leacon Heath (OAU No. 2064), have largely lost their outline through later modification and enclosure. The former outline of Westwell Heath is discernible from the position of a number of historic buildings that were built round its fringes, those to the north lying outside the corridor. Working anti-clockwise these include Broad Mead (OAU No. 544), a single-storey brick cottage; Rose Cottage (OAU No. 183) a very attractive 17th-century cottage; Leacon Farmhouse (OAU No. 184), a medieval hall house; West Leacon Farm (OAU No. 545) a small symmetrical brick house of 19th-century date; and Ivy and Forge Cottages (OAU No. 185) a pair of modest 18th to 19th-century brick cottages.

The main features of the landscape which do reflect some degree of historic coherence are the string of historic gault clay woodlands north of the CTRL route, marked by Ray Wood, Honeywood Rough, Newcourt Wood, Leacon Wood and Grove Wood.

There has been extensive field boundary loss, and overall the historic integrity and coherence of the landscape in this route window is rather poor.

5.29.1.2 Historic Landscape

East of Westwell Leacon the CTRL will cross a former osier bed (OAU No. 2184) west of the A20.

5.29.1.3 Historic Buildings

West of Westwell Leacon the CTRL will pass at ground level about 50 m north of Grade II Rose Cottage (OAU No. 183), in the transition from embankment to the west into cutting to the east. Rose Cottage is a very attractive 17th-century cottage, renovated in the 19th century as a *cottage orné* with distinctive Dering Estate windows. Similar fenestration has been added to the medieval hall house at Leacon Farmhouse (OAU No.

184), which lies 220 m to the south and is well screened by trees. The setting of Rose Cottage is a fairly extensive garden surrounding the house sloping down to the west, and a large pond to the east. There are extensive views to the west and north west, over rolling agricultural land. The M20 is at some distance and reasonably well screened so it does not detract from the setting of the building.

North of Rose Cottage, 100 m from the CTRL where it will be in cutting, is the unlisted Broad Mead (OAU No. 544), a single-storey brick cottage with a central stack, perhaps originating in the 17th century, though possibly enlarged and extended in the 20th century from a non-domestic building. If it is as old as it looks, then it is of some interest as having only one storey.

At Westwell Leacon the CTRL will pass 100 m south of the unlisted West Leacon Farm (OAU No. 545) in a shallow sloped cutting with extensive mounding. This building is a small symmetrical brick house of 19th-century date with replaced windows, of no more than local interest. Also at Westwell Leacon the CTRL will pass in a similar cutting 180 m south of the Grade II listed Ivy and Forge Cottages (OAU No. 185), a pair of modest 19th-century brick cottages.

On the Maidstone Road, immediately east of the present A20 is the 16th- to 17th-century Walnut Tree Farmhouse (OAU No. 186), a timber-framed house of lobby entrance plan that may have medieval origins.

5.29.1.4 Archaeological Remains

East of Pluckley Road and the Pincushion the CTRL will cross a diffuse scatter of 45 struck flints and 3 burnt unworked flints (OAU No. 1817). The scatter is of uncertain significance.

South-east of Newlands Stud on the east facing slope overlooking the adjacent stream, the CTRL will cross a good, compact scatter of 25 struck flints including a scraper, and 55 burnt unworked flint (OAU No. 1818). It suggests an area of definite archaeological potential. This scatter lies within an area of cropmarks, indicating a group of paddocks or enclosures (OAU No. 1318). These are of uncertain origin, but coincide with a dense and well-defined scatter (also OAU No. 1818) of 73 sherds of medieval pottery in which the early medieval sandy ware is the predominant type. Several cooking pot rims of 11th/12th-century and mid-late 13th-century date are present as well as thumbed bases and rod handles from jugs. Taken together this suggests the site of a medieval farm.

The combined interest of the prehistoric and medieval material south east of Newlands Stud suggests an area of significant archaeological potential, of county or possibly regional importance, and of a similar general character to the Newlands complex.

East of Westwell Leacon the CTRL will pass south of an area between the A20 and the NSE railway which is a potential spoil disposal site (M20 Tutt Hill) where a light scatter of prehistoric flintwork has been found in the surface collection survey. This is probably background scatter rather than an area of particular potential, and has not been shown on the EFM mapping or included in the gazetteer.

5.29.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.29.2.1 **Rose Cottage Grade II Listed Building: Significant Negative Effect (Unavoidable)**
There will be moderate to severe landtake from the garden of Rose Cottage and severe intrusion on its setting from the CTRL embankment, track, overhead line equipment, fencing and trains west of Rose Cottage and to a lesser extent from the wide cutting into the hillslope to the north east. These effects will be worst during construction and after opening, and will reduce as planting matures, but will remain significant.
Incorporated Mitigation: Bunding on top of south side of embankment to west and absorbent noise barrier adjacent to garden and at top of cutting to the east. Planting to reinforce existing pattern to west and in cutting to east.
Options for Further Mitigation: None identified.

5.29.2.2 **Finds Scatter East of Pluckley Road: Potentially Significant Negative Effect (Mitigable)**
The graded out CTRL embankment north of Leacon Lane, and associated permanent road diversions and landscape planting will result in landtake from a scatter of prehistoric flintwork of uncertain significance and extent which may indicate more significant subsoil remains.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting, and/or preservation beneath earthworks.

5.29.2.3 **Finds Scatter Newlands Stud: Potentially Significant Negative Effect (Mitigable)**
The graded out CTRL embankment north of Leacon Lane and south of Oakover Nurseries will result in landtake from an area of cropmarks associated with a significant concentration of prehistoric flintwork and medieval pottery which is likely to indicate more significant subsoil remains of uncertain character.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting, and/or preservation beneath earthworks.

5.29.2.4 **Broadmead unlisted Building:** Non-significant Negative Effect.
There will be slight landtake from Broadmead and slight intrusion on its setting from the rearranged access and distant views of the CTRL to the west.
Incorporated Mitigation: Planting; provision of new access
Options for Further Mitigation: None identified

5.29.2.5 **Ivy and Forge Cottages Grade II listed buildings and Unlisted West Leacon Farm:** Non-significant Negative Effect
There will be slight to moderate intrusion on the setting of these buildings from the relandscaping of the area north of the CTRL.
Incorporated Mitigation: Planting
Options for Further Mitigation: Detailed design of planting to recreate more of historic character of fields next to properties and woodland down slope.

5.29.2.6 **Walnut Tree Farm Grade II Listed Building: Potential Positive Effect.**
During construction there will be some short term intrusion on the setting of this listed building from the reconstruction of the A20 and possibly from part of the M20 Tutt Hill spoil disposal to the east. There will be slight permanent landtake from the edge of the curtilage of Walnut Tree, but there will also be a positive effect from moving the A20 trunk road further away from the property.

Incorporated Mitigation: Realignment of A20 away from listed building; planting of new road embankment.
Options for Further Mitigation: Detailed design of access road to avoid landtake within the curtilage of the listed building.

The suggested mitigation would make the overall effect positive.

5.30 ROUTE WINDOW 30: M20 TO A20 (YONSEA FARM)

5.30.1 BASELINE CONDITIONS

5.30.1.1 Overall Historic Environment

In this route window the CTRL crosses a gently undulating area of Folkestone Beds. A few cropmarks and a finds scatter indicate possibly greater archaeological potential than is evident from existing information.

The area is characterised by scattered historic farms, houses and cottages of varying ages. The village conservation areas of Westwell and Hothfield lie well north and south of the CTRL route respectively, but a secondary dispersed settlement occurs strung out along historic lanes at the north west and north east corners of Hothfield. In the case of Tutt Hill there has been considerable modern expansion. The Woolpack Inn (OAU No. 187) is a Grade II listed building, 16th-century in origin with a good 18th-century front. Tutt Hill Farm (OAU No. 189), also Grade II is an 18th-century brick farmhouse, and there is a row of weatherboarded cottages in Tutt Hill Lane (OAU No. 188) of uncertain date, perhaps as late as the 19th century, also Grade II listed. Off Station Road is Grade II Ripple Court (OAU No. 191), an historic farmhouse probably medieval in origin, while Parsonage Farm (OAU No. 190), immediately north of the CTRL, is a 16th-century building.

Historic woodland survives at Ripple Wood (OAU No. 2093) which was smaller at the beginning of the 19th century, and Beechbrook Wood (OAU No. 2094) which was substantially larger. The most substantial surviving historic feature of the landscape is Hothfield Common, a major area of extant heath and woodland which is a registered common.

While the broad historic structure of the landscape survives moderately well the detailed pattern of fields has been substantially changed. In the Westwell Leacon/ Tutt Hill area and further east north of the NSE line there has been a significant degree of modern development, in the form of small modern housing developments, agricultural and light industrial works, mineral plants and the M20. The area east of Tutt Hill south of the NSE is the northern edge of an area west of Ashford, dominated by Godinton Park Hothfield Common and the woods north of Godinton, which retains considerable historic integrity.

5.30.1.2 Historic Landscape Features

West of Station Road the CTRL will pass on embankment clipping the northern tip of Ripple Wood (OAU No. 2093). East of Station Road, just south of Beechbrook Farm

the CTRL will cross the middle of Beechbrook Wood (OAU No. 2094), an old coppice wood with a wood bank on the north side.

5.30.1.3 **Historic Buildings**

East of the M20, either side of Tutt Hill Lane immediately south of the NSE railway, two Second World War pillboxes of standard Type 24 construction lie on the line of the CTRL. Although WWII defensive structures are of increasing historic interest as tangible remains of an under-documented aspect of a major phase of the nation's history, these standard pattern examples are not particularly rare and are of local rather than greater interest.

At Station Road the CTRL will pass on an 8 m high bridge 40 m south of 16th-century Grade II listed Parsonage Farm (OAU No. 190), and on a full height retained embankment 20 m from its associated 16th-century framed barn. Parsonage Farm is an important fragment of a high-status 16th-century house, the surviving framing representing the parlour wing at one end of the house and part of the main return. It is unusual in having been restored with the utmost care and restraint, and has a fine example of a sliding casement amongst several features of interest. The small adjacent barn (OAU No. 388), whose roof has recently collapsed, was a complete example of a 16th-century framed barn, only listed by virtue of being within the curtilage of Parsonage Farm but of regional importance in its own right. The more recent barn to the north east has the date 1850 on a beam. In the immediate vicinity east of the farm are two more pillboxes guarding the present railway, also of Type 24 construction (OAU Nos. 548, 549). The present setting of the group is only slightly marred by modern buildings to the north and by the present railway embankment to the north.

5.30.1.4 **Archaeological Remains**

Immediately west of Station Road the CTRL will pass immediately south of a surface scatter of prehistoric flint (OAU No. 1352). In the same field, aerial photographs show the cropmarks of enclosures and a penannular ditch (OAU No. 1320). Any prehistoric settlement remains here could be of regional importance, depending on the quality of subsoil survival.

South of Beechbrook Wood the CTRL will pass in shallow cutting through an area where two cropmarks, one a small rectangular enclosure the other an amorphous circular feature (OAU No. 1168) lie on or very close to the route.

5.30.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.30.2.1 **Parsonage Farm, Station Road Grade II Listed Building: Significant Negative Effect (Unavoidable)**

Parsonage Farm and its associated curtilage listed barn will be affected by short-term temporary intrusion from the adjacent Station Road Bridge secondary construction site (Ch.507000-507300) needed for construction of the bridge over Station Road and associated retaining wall. There will be minor permanent landtake for a new access road to Beechbrook Farm, and severe permanent intrusion on the setting of the listed house and associated barn. The buildings will be dominated by the CTRL bridge and retaining wall, overhead line equipment and trains. Parsonage Farm will be to some extent be 'islanded' between the CTRL and the NSE embankments, isolating the group from its present extensive agricultural setting to the south and west.

Incorporated Mitigation: False cutting on approach embankments; retaining wall with noise screen to reduce landtake; planting of embankments
Options for Further Mitigation: None identified.

5.30.2.2 **Cropmarks and Finds Scatter West of Station Road: Potentially Significant Negative Effect (Mitigable)**
An area of potential for prehistoric archaeology opposite Parsonage Farm suggested by cropmarks and a finds scatter north east of the CTRL will be subject to severe landtake for spoil disposal site (Ch.506600-507200) at Station Road Hothfield and for the graded out CTRL embankment.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by detailed design to avoid any significant archaeology, or preservation of remains undisturbed beneath spoil, or further investigation and reporting.

5.30.2.3 **Cropmark Enclosure South of Beechbrook Wood: Potentially Significant Negative Effect (Mitigable)**
A small area of potential for prehistoric archaeology indicated by the cropmark of a small rectangular enclosure and circular feature will be subject to landtake for the CTRL graded out embankment, though one or both of the visible features may be avoided.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.30.2.4 **Second World War pill boxes, Tutt Hill:** Non-significant Negative Effect
Two standard design pill boxes will be demolished at Tutt Hill.
Incorporated Mitigation: None
Options for Further Mitigation: Photographic recording

5.31 Route Window 31: A20 (Yonsea Farm) to Maidstone - Ashford Railway

5.31.1 Baseline Conditions

5.31.1.1 Overall Historic Environment

In this section of the route the CTRL continues to cross the Folkestone Beds. The only archaeological records for the area come from Potters Corner where the name is substantiated by finds of 13th-century medieval pottery wasters and black soil near Fairacres Nursery. Mesolithic flints came from the same area and a Roman cremation with pottery was found to the west during road widening.

With respect to the overall historic integrity of the landscape, this route window can be divided into two sharply contrasting zones. At the north-west end it covers part of a substantial area of considerable historic interest west of Ashford, whereas to the south-east there has been considerable modern development on the western fringes of Ashford, and very little of visible historic interest survives.

The major features characterising the very extensive broad area of interest at the north western end are Hothfield Common, Hothfield village and Park, Godinton Park and the fields and woods north and west of Godinton Park. The CTRL passes through this last

part of the area, north of Godinton Park, which is characterised by extensive sweet chestnut coppices, and an interesting variety of historic buildings: roadside cottages and an inn at Potters Corner; a good 19th-century water mill at Hothfield Mill; a game keeper's cottage in the woods at The Pheasantry; and a very fine early 19th-century model farm at Yonsea, on the site of a medieval farm.

5.31.1.2 **Historic Landscape Features**

Two areas of historic woodland together with secondary woodland infill lie south of the A20 at Potters Corner. Balls Wood (OAU No. 2068) has a hollow way on the south-west side and a bank and ditch on the east side with ancient coppice stools. Lodge Wood (OAU No. 2069) also has traces of a wood bank with ancient coppice stools on it on the south, east and west sides. These woods adjoin the very extensive Grade I registered Godinton Park (OAU No. 2070) which is possibly of medieval origin. Adjoining Godinton Park but now destroyed by industrial development was Chart Leacon Common (OAU No. 2071).

5.31.1.3 **Historic Buildings**

Immediately south of the A20 at the beginning of this section the CTRL will pass through Yonsea Farm. This is an unusually complete and unspoiled farm complex of c.1830, containing six Grade II listed buildings and four other associated unlisted historic buildings or structures. The present farm buildings are not shown on the estate map of 1812, though there was then a large L-shaped pond by the farmstead which still survives, and may be the remains of a medieval moat (OAU No. 2108). The symmetrically planned Farmhouse (OAU No. 193, Grade II) is of brick and rendered, is largely unspoiled and has a remarkably well-preserved service room with oven, range and copper. The brick oasthouses (OAU No. 194, Grade II) to the south of the farm are unaltered and have a walled garden to their south. To the west is a square 19th-century brick Bungalow (OAU No. 196, Grade II), reputedly a former toll-house and next to it the granary and cartshed (OAU No. 195, Grade II) on the brick boundary wall. In the centre of the farmyard are byres and cowsheds (OAU No. 198, Grade II), and a large barn to the north (OAU No. 197, Grade II), with other unlisted beast sheds to the north-east (OAU No. 283, unlisted) These are all brick or part framed, with weatherboarded walls and standard king-post roofs; there are even gas lamp standards. An older origin is suggested by the place-name being recorded in the early 13th century.

South of Yonsea Farm the CTRL will pass on a 10 m high embankment 150 m south west of the unlisted Pheasantry (OAU No. 202), an unspoilt gamekeeper's cottage of 1830. The North Lodge of Godinton Park (OAU No. 550) is 19th-century red brick with Dutch gables, and still has a park gate and walls (OAU No. 1004); by contrast the East Lodge of Godinton Park (OAU Nos. 552) on Chart Road, Ashford, is benighted amongst modern buildings, and is similar to the North Lodge.

5.31.1.4 **Archaeological Remains**

The CTRL will not cross any currently known archaeological remains in this section, though there is potential for buried remains of a medieval moated farmstead at Yonsea (OAU No. 1862).

5.31.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.31.2.1 **Yonsea Farm Grade II Listed and other Historic Buildings: Significant Negative Effect (Unavoidable)**

The listed and unlisted early 19th-century farm complex at Yonsea will be entirely demolished for the CTRL and its associated landscaping. The effect is comprised of the following impacts:

- The engineering earthworks require the demolition of the farmhouse (Grade II, OAU No. 193), the barn attached to the oasthouses (Grade II, OAU No. 194), the L-shaped range of barns (Grade II, OAU No. 198) and one of the gas lamp standards.
- The landscaping will involve the demolition of the oasthouses themselves (Grade II, OAU No. 194), the old toll house bungalow (Grade II, OAU No. 196), the granary and cartshed (Grade II, OAU No. 195), the barn fronting Maidstone Road (Grade II, OAU No. 197), beast shed (unlisted, OAU No. 283) and the other gas lamp standard.
- The ground disturbance associated with the landtake could potentially result in disturbance of archaeological remains associated with the medieval farm believed to have existed at Yonsea.

Incorporated Mitigation: Building recording and consideration of feasibility for reconstruction; salvage of historic features.

Options for Further Mitigation:

- Reduce landtake for landscaping and adjust access tracks to crossover points to create a high (eg 3-4m) walled yard to retain the Grade II listed barn and unlisted beast shed not directly required for engineering landtake, for renovation or conversion to commercial use as workshops, etc. Access would be from the A20 along the track to the crossover points.
- West of CTRL retain the Grade II oast (less its attatched barn), Grade II bungalow and Grade II granary and cart shed, providing a similar arrangement of a high walled yard enclosing the buildings and shared new access both to the buildings and to the crossover points.
- Undertake detailed design of landscape regrading and planting to blend the CTRL, realligned A20 and walled building complexes into the surroundings.
- Detailed investigation and recording of the buildings to be demolished and if they cannot be saved, consideration of relocating the more interesting agricultural buildings, such as the cart shed and granary, L-shaped byre, large barn and beast shed.
- Evaluation and if appropriate further investigation and reporting of any medieval archaeological remains, or if feasible preservation *in situ*.

These mitigation options could reduce the effect, but it would remain significant. Two listed buildings and part of another would still be lost; the complex would be severed, greatly diminishing its group value which was a significant part of the reason for the listing; and there would be severe intrusion on the setting of the remaining buildings.

5.31.2.2 **Historic Landscape North East of Godinton Park: Significant Negative Effect (Unavoidable).**

North east of Godinton Park the CTRL will cut across an area of good historic landscape integrity, involving a series of landtake, severance and intrusion impacts. Notwithstanding the possible extension of new housing to the north east (Ashford Draft Proposals Plan 1991 - see Planning Specialist Report (Arup Economics and Planning)),

these impacts cumulatively represent a significant effect on the physical integrity of the historic environment in this area combined with visual and noise intrusion, thereby intruding on the landscape setting of Grade I registered Godinton Park.

During construction there will be medium to long term temporary landtake for the Godinton Lane Underpass secondary construction site (Ch.509000) in Butler's Wood for the Godinton Lane crossing, which will result in moderate short term temporary intrusion on the historic character of the area and the setting of the north side of Godinton Park.

The Permanent landtake and operational impacts, working from north west to south east, would be as follows:

- Intrusion on setting of The Pheasantry unlisted building from the CTRL embankment and planting of open land to west
- realignment of 350 m of Godinton Lane on its approach to, and as far as, the north lodge of Godinton Park
- Severance and slight landtake from south end of Balls Wood 70 m north of Godinton Park
- Slight intrusion on the setting of Godinton Park from the cutting and bunding across open the open field at the north east corner of the Park
- Severance and moderate landtake from the south end of Lodge Wood

Incorporated Mitigation: Woodland planting of embankment and cutting slopes, together with infill planting of open areas.
Options for Further Mitigation: Reduce area of planting in front of the Pheasantry to retain some open aspect; minimise length of Godinton Road diversion to about 90 m north east of the CTRL to retain more of its historic alignment and character, and/or retain former lengths as permissive path.

These mitigation options would slightly reduce the impacts of the CTRL but the effect would remain significant because of the primary severance and intrusion effects of the route through an area retaining much of its historic character.

5.32 Route Window 32: Maidstone - Asiiford Railway to Boys Hall Road

5.32.1 Baseline Conditions

5.32.1.1 Overall Historic Environment

The coming of the South East Railway in 1842 and later the London Chatham and Dover Railway to the small market town of Ashford led to the modern growth of the town and the obliteration of most earlier historic landscape features. This part of Ashford is principally of interest as an historic industrial complex, which, although depleted by modern developments, nevertheless retains a considerable degree of group value. Apart from the station and engineering complexes, Ashford retains many buildings which reflect the social and domestic history and economic development of an important railway town.

The terminus of the London, Chatham and Dover Railway, dating from the later 19th century was a fairly small complex, of which three buildings of some local interest survive (OAU Nos. 494, 567-8) on the line of the CTRL.

The Ashford Conservation Area (OAU No. 2072), north of the CTRL route, includes the old centre of the town and the area of development that grew towards the SER in the

second half of the 19th century. South of the existing railway are some unlisted buildings of local interest in Victoria Road: an Edwardian school (OAU No. 353) adjacent to a late 19th-century paintworks (OAU No. 555); on Beaver Road corner is a 19th-century public house (OAU No. 358). The 1930s cinema which stood opposite has been demolished for the station development. An Edwardian industrial building and former station master's house in New Town Road have also been demolished in recent years.

The SER works (OAU Nos. 204, 361, 363, 496, 557-561) south of the CTRL grew to be one of the largest of its kind in Britain and was of major importance for the manufacture of locomotives. The works complex was extensive and many very large and imposing buildings and several smaller ones survive as features of considerable interest in the development of railway transport. Many of the old houses of New Town, built south of the main SER works to accommodate the growing population employed there, have gone, but the central open space remains, with the imposing bath house for the railway workers (OAU No. 364) and a listed school.

East of the SER railway works, the village of Willesborough had a dispersed plan of settlement, with its southern end spreading down from the Church and Court Lodge, along Boys Hall Road, round Crowbridge Road and Bentley Road back to the church. This plan was severed by the building of the SER railway, leaving the Grade II medieval and later Albion Inn (OAU No. 207) on the south side of the line, and other buildings, including two medieval houses at the Willesborough Labour Club close to the north side.

5.32.1.2 Historic Buildings

Immediately east of the Maidstone to Ashford railway the CTRL will pass through the former terminus of the London, Chatham and Dover Railway. Three buildings of the terminus, all unlisted, survive. The old station (OAU No. 494), of polychrome brickwork with pointed windows, was only used between 1884 and 1899, when amalgamation made it redundant. Until relatively recently it was used as flats and is currently boarded up. Behind it are the contemporary carriage and goods sheds (OAU Nos. 567-8) and remains of the LCDR station platforms. The Goods Shed (OAU No. 567) is a curved building which retains several original features including some cast iron windows, its internal smoke hood, original timber roof with extra framing for the loading derricks and, now filled in, the bay for the track. The Carriage Shed (OAU No. 568) is less interesting and retains fewer internal features.

At Gasworks Lane the realigned Ashford to Maidstone tracks will pass on a new bridge immediately north of the present low, stone-built road bridge (OAU No. 495) carrying the existing railway, which will cease to be used. East of Gasworks Lane, the CTRL will pass 100 m south of the row of late 19th-century town houses on Elwick Road (OAU Nos. 292-9, 351-2), which are all unlisted but within the Ashford Conservation Area. The area immediately south of these buildings will be a main construction site.

East of Beaver Road/Station Road the CTRL will pass 25 to 40 m south of a group of historic buildings outside the conservation area directly or indirectly associated with the railway. Behind the unlisted Kent Arms (OAU No. 355) is a Grade II listed warehouse of the mid 19th century (OAU No. 203) and two further unlisted warehouses in Dover Place (OAU Nos 356-7) which are 19th-century and of some interest. On the north side of the station yard is an unlisted iron-framed store building (OAU No. 553) in front of the extensive series of sheds and stores of the railway timber yard (OAU No. 554); these

are of various dates but most are of the 19th century and, although unlisted, are of some local interest as part of the railway complex. The buildings of the commercial timber yard to the east are modern and of no historic interest.

The CTRL will pass north of the very extensive SER works north of the existing NSE tracks. The works were established in 1847 and the railway New Town was laid out in 1851. This complex became one of the major railway engineering works in Britain, and has recently been studied by RCHME (RCHME 1990). Buildings surviving from the original works include the central part of the main locomotive workshop (OAU No. 363), part of the wagon and machine shop to its south (OAU No. 557) and the listed lodge and gate tower (OAU No. 204). Later buildings of the 19th century are mostly unlisted (OAU Nos. 361, 558, 560) except for the Grade II listed acetylene store (OAU No. 496) which originated as a kiln for making locomotive firebricks. Extensions and additions after 1909 were of the same character as the earlier buildings (OAU Nos. 559-61). The crossing keeper's box at Aylesford Place level crossing (OAU No. 365) is a good example of a minor railway structure and will be demolished.

East of the railway works and north of the present railway, the CTRL pass through the garden of the recently listed Grade II Labour Club in Bentley Road (OAU No. 206), within about 20 m of the building on a 4 m high viaduct. Externally the building has no particular historic features, but when surveyed by RCHME it was found to contain two medieval wings. Just west of the crossing of Aylesford Stream, the CTRL will pass on slight embankment 40 m north of an unlisted 19th-century house of some local value at 17a Gladstone Road (OAU No. 208).

Immediately west of Boys Hall Road the CTRL will demolish two Grade II listed cottages. Number 4 Boys Hall Road (OAU No. 209) is a single-storey brick cottage of about 1800, raised in about 1890 with tile-hung framing, and with internal features mainly of that date. Number 2 Boys Hall Road (OAU No. 210) is a framed house of c.1600, partly underbuilt in stone and with a jetty now covered by a catslide roof. It has a two-room plan round a large central chimney stack, and although possibly the surviving part of a larger building, it is more likely a relatively unusual small house of the period.

5.32.1.3 Archaeological Remains

Several Bronze Age axes have been found in the Ashford area but there is as yet no clear evidence of settlement or other activity. A Saxon burial ground is thought to lie in the southern part of Ashford Conservation Area, indicated by the discovery before 1856 of a burial with weapons and a fine olive green glass claw beaker (OAU No. 1083). The cemetery is of unknown extent. The line of the Benenden-Ashford-Canterbury Roman road (OAU No. 1105) coincides with the modern Station Road and Beaver Road, and it is unlikely that significant remains survive, though there is some possibility of Roman settlement at the road junction.

5.32.2 Construction, Permanent Landtake and Operational Effects

5.32.2.1 2 Boys Hall Road Grade II Listed Building: Significant Negative Effect (Unavoidable)

This listed 16th-century building will unavoidably be demolished for the main CTRL alignment.

Incorporated Mitigation: Building recording and consideration of feasibility for reconstruction; salvage of historic features.

Options for Further Mitigation: Investigate and record building and its site archaeologically, including subsurface levels to establish its origins, and create detailed record to allow dismantling and reconstruction on another site. Appropriate site to be identified and necessary consents obtained in advance.

This mitigation would reduce the effect but it would remain significant.

5.32.2.2 **4 Boys Hall Road Grade II Listed Building: Significant Negative Effect (Unavoidable)**
This listed 18th/19th-century building will unavoidably be demolished for the main CTRL alignment.
Incorporated Mitigation: Building recording; salvage of historic features.
Options for Further Mitigation: Investigation, recording and reporting of the building as a permanent record; unlikely to be worth relocating.

This mitigation would reduce the effect but it would remain significant.

5.32.2.3 **Labour Club, Bentley Road Grade II Listed Building: Significant Negative Effect (Unavoidable).**
The Labour Club will be subject to severe landtake from its curtilage for the CTRL main line, the down loop from the station, a siding adjacent to this loop and the southernmost access road for the Hunter's Yard Sidings, which will extend to within about 5 m of the listed building. There will also be severe visual intrusion from a 4m noise barrier immediately south of the building, though this will result in a reduction of noise levels. Although the historic interest of the building does not rely on its external appearance or modern surroundings, the landtake coupled with the degree of intrusion raises the possibility of indirect physical effects on the building arising from alterations or reduced maintenance if there were a change of use or if it were to become empty for significant periods. Such effects could however be positive if the opportunity were taken to restore the external appearance and expose the internal historic fabric in a sympathetic way.
Incorporated Mitigation: None
Options for Further Mitigation: If possible reduce landtake for ancillary works connected with sidings.

5.32.2.4 **LCDR Terminus Unlisted Buildings and Willesborough Level Crossing Keeper's Box: Significant Negative Effect (Unavoidable)**
The three main extant buildings of the London Chatham and Dover Railway terminus and the level crossing keeper's box at Willesborough would be unavoidably demolished. The loss of the LCDR buildings represents the removal of the only visible remains of a significant element of Ashford's history as a railway town, while the level crossing keeper's box is a familiar local example of an increasingly rare type of railway feature.
Incorporated Mitigation: None
Options for Further Mitigation: General recording of the buildings prior to demolition and monitoring for additional information during site clearance, and salvage of items of historic interest. The crossing keeper's box is a small structure which could readily be moved, and would be appropriate to offer to a railway museum.

5.32.2.5 **Industrial and commercial buildings east of Beaver Road:** Non-significant Negative Effect.
There will be intrusion on the setting of a group of historic buildings east of Beaver road (which includes one Grade II listed warehouse), from the retained embankment of the CTRL overhead line equipment and trains where the route rises eastwards up to 7 m high

to cross the Great Stour. These buildings are already adjacent to railway and commercial developments and the quality of setting on the south is already poor. The high level of intrusion would therefore not be significant.
Incorporated Mitigation: None
Options for Further Mitigation: Detailed design of retaining wall for the CTRL.

5.32.2.6 **Ashford Conservation Area, Elwick Road:** Non-significant Negative Effect, Mitigable to Potentially Significant Positive Effect
The Elwick Road main construction site (Ch.511000-512000) will result in medium term slight to moderate intrusion on the setting of the southern edge of Ashford Conservation Area in Elwick Road, where currently the area on the opposite side of the busy road is occupied by modern commercial and industrial units.
Incorporated Mitigation: None
Options for Further Mitigation: Location of most intrusive elements away from conservation area; Provision of landscaped screening of site to become part of long term landscaping to improve south side of Elwick Road opposite conservation area houses.

5.33 ROUTE WINDOW 33: BOYS HALL ROAD TO CHURCH ROAD

5.33.1 BASELINE CONDITIONS

5.33.1.1 Overall Historic Environment

Prehistoric flints have been found some distance from the CTRL line in south Willesborough (OAU No. 1084) and near Willesborough Church. More recently, extensive late Iron Age and Roman settlement activity has been revealed by air photography and archaeological work carried out south of the present railway in connection with the construction of business developments, a new rail loop, and the Ashford freight depot, together with survey of one of the CTRL options north of the railway.

Boys Hall Moat, a scheduled ancient monument just south of the present railway represents a medieval manorial complex which survived into the early post-medieval period when it was replaced by the still standing Boys Hall. Sevington is another village like Willesborough, spread out along a lane, its landscape being severed on the west and south by modern developments. Further to the north are 17th-century Ashdown (OAU No. 215), the medieval church (OAU No. 366) and Court Lodge (OAU No. 213) (with aisled barn OAU No. 214) at the edge of the corridor.

These dispersed concentrations of settlement of different periods seem to be concentrated on the slopes of relatively fertile well drained soils overlooking the heavier clays to the south. The overall historic pattern of the landscape is now difficult to discern at the western end of the route window, but east of the Ashford Orbital road it remains relatively clear, although there has been much detailed change in patterns of field boundaries.

5.33.1.2 Historic Landscape

The CTRL will not cross any particular features of historic landscape interest in this section, although a number of lengths of historic lanes will be realigned.

5.33.1.3 Historic Buildings

East of Boys Hall Road the CTRL will pass 190 m south of Grade II Boys Hall (OAU No. 211) in a 5 m deep cutting. Boys Hall is a substantial stone-built residence constructed in 1616 when the Boys Hall moated site was abandoned. It is set within an area of pasture, with a substantial pond and a plantation of trees to the south, with a further belt of trees alongside the present railway cutting on the other side of a pasture field. The large commercial warehousing and industrial complex constructed a few years ago to the east is screened by substantial landscaped mounding.

At Sevington the CTRL will pass close to a group of cottages situated along Church Lane. The CTRL will pass at grade or on slight retained embankment within 8 m of Grade II Orchard Cottage (OAU No. 216), a 17th-century brick and timber-framed building of lobby-entrance plan. A little further east the CTRL will similarly pass about 18 m south of Grade II Maytree Cottages (OAU No. 217), a pair of small cottages, tile-hung over the framing and altered at various times, with the rear catslide roof sloping down almost to the ground towards the railway.

Further east again, close to bridge carrying Church Lane over the present railway, the CTRL will pass in a 2-3 m deep cutting 45 m south of Grade II Bridge Cottage (OAU No. 218), a late medieval building which has been investigated by RCHME and found to have an unusual plan with a hall and only one cross-wing, and no trace of any heating arrangements. It stands at the junction of Church Lane and Highfield Lane some way short of the beginning of the approach embankment to the bridge over the existing railway, with open agricultural land to the west, north and east. Just east of Church Bridge the CTRL will pass in very slight cutting 70 m north of Grade II Imber (OAU No. 219), a brick and weatherboarded house of lobby-entrance plan, possibly of medieval origin. It has an orchard next to the railway and looks out west towards the Ashford freight depot, now beginning to be screened by developing planting.

Immediately west of Blind Lane the CTRL will pass on a 4 m embankment 80 m north of Conscience Farm (OAU No. 220), a good quality unlisted early 19th-century farmhouse. East of Blind Lane the CTRL will pass on a 4 m embankment 120 m north of Grade II Little Swanton (OAU No. 221), a much altered 17th-century house. Further east again the CTRL will pass still on a c.4 m embankment 80 m south of Grade II Loud House (OAU No. 222), a tile-hung timber frame on a galleted ragstone base, listed as possibly 16th-century, but more likely entirely 18th-century and later with modern windows.

Immediately west of the Church Road Bridge at Mersham the CTRL will pass in a 5 m retained cutting about 8 m south of Grade II Bridge House (OAU No. 234), a partly framed house of the 17th century or earlier, a complex structure which has been rebuilt and extended on several occasions, and with an 18th-century brick front.

In this route window the CTRL will affect three historic SER overbridges, Crow Bridge on Boys Hall Road (OAU No. 571), Church Road railway bridge (OAU No. 572), attractive for its curving approaches, and Church Road Bridge (OAU No. 574) at Mersham with a modern footbridge next to it on the east. All of these have recently been rebuilt for Channel Tunnel traffic losing much of their original fabric though retaining their character. Blind Lane passes through a SER underbridge (OAU No. 573) which has not been altered recently.

5.33.1.4 Archaeological Remains

Boys Hall Moat is a scheduled ancient monument and is of national importance. It is a well preserved site with the water filled moat surrounded by further substantial earthworks of a garden involving complete water features. It is thought to be the original site of Boys Hall, probably abandoned in 1616 when the present Boys Hall was built. It is still used by local residents for informal recreation. There is access from both sides of the railway. There is no indication that the site extends under the railway, but cropmarks of a trackway leading towards Boys Hall are recorded to the north-east, now under the industrial development north of the present railway. The setting of the monument is further affected by industrial development to the south.

Field evaluation by the Kent Archaeological Rescue Unit in areas to the west and south east of the scheduled monument, and by the Oxford Archaeological Unit along the north eastern edge of the moated site revealed a series of ditches, gullies, pits and other deposits containing Iron Age and Roman pottery and finds suggesting an extensive area of occupation and fields, the layout and character of which has not been clearly established. Some areas also contained similar deposits producing medieval pottery (OAU Nos. 1377 to 1381, 1848).

Immediately north-east of the moated site, on the other side of the railway, the CTRL will cross two field name sites, Dog Pit Field (OAU No. 1209) probably referring to a visible quarry or clay pit, and Pound Field (OAU No. 1210), possibly referring to a sheepfold shown on the first edition 6" OS Map, and no longer present. It is possible that the area between Boys Hall Road and the industrial estate may contain further Iron Age and Roman remains of the kind discovered south of the railway.

Further east at Sevington the CTRL route will pass north of a late Iron Age settlement (OAU Nos. 1234, 1382) found immediately south of the present railway, at the Bad Munstereifel Road bridge and Sevington Rail Head, which likewise might conceivably have stretched to the north side and still partly survive there.

The scheduled monument of Boys Hall Moat is of national importance and the wide area of cropmarks, Iron Age settlement and surface finds is at least of regional importance. In general the recent discoveries in this area as a result of various studies have revealed unexpectedly high archaeological potential for the area.

East of Church Lane, Sevington the CTRL will cross an area of archaeological potential indicated by a scatter of prehistoric worked flints, Iron Age pottery and some Roman and Medieval pottery (OAU No. 1353). This finds scatter lies immediately adjacent to a separately identified dense scatter of Iron Age and Roman pottery immediately to the northeast; this includes another concentration of prehistoric flintwork to the north (OAU No. 1820), while further northeast is an extensive cropmark complex of ring ditches, enclosures and field boundaries (OAU No. 1321).

The Blind Lane spoil disposal site (Ch.515900-516200) lies immediately south and east of these areas in a location not yet surveyed, but potentially also of archaeological significance.

5.33.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.33.2.1 **Orchard Cottage, Sevington, Grade II Listed Building: Significant Negative Effect (Unavoidable)**
During construction the haul road (Ch.515000-515300) along the northern side of the CTRL will result in medium term temporary landtake from the curtilage of Orchard Cottage, with a risk of damage to the building. Orchard Cottage will be subject to severe permanent landtake from its curtilage, and severe intrusion from the CTRL passing within about 8 m of the building. The house will be dominated by the CTRL, which will be at grade merging to a 2 m retaining wall, with 3m noise screening extending along the route in either direction. There will be severe intrusion, and there is a strong possibility of the building being unviable for residential use. It is therefore likely that indirect effects could arise as a result of change of use or condition.

Incorporated Mitigation: 3m noise barrier, Retaining wall to limit landtake.
Options for Further Mitigation:
- Re-route haul road through field to north except for access to construction immediately adjacent to cottages.
- Reduce landtake if possible adjacent to building
- The noise screening might be incorporated into a high brick wall round the garden leaving it open to the north east. This could be a successful means of keeping the property viable for residential use or conversion to offices.

This mitigation could substantially reduce the likelihood of this listed building being unviable and at risk of physical alteration. The effect on its setting would remain significant.

5.33.2.2 **Maytree Cottages, Sevington, Grade II Listed Building: Significant Negative Effect (Unavoidable)**
The haul road (Ch.515000-515300) along the northern side of the CTRL will result in medium term temporary landtake from the curtilages of these two listed buildings, with the risk of damage to Orchard Cottage and possible difficulties with restoration of land if buildings continue in use.

Maytree Cottage will be subject to slight permanent landtake from its small curtilage, and severe intrusion from the CTRL passing within about 18 m of the building. The house will be dominated by the CTRL, which will be at grade just east of a 2 m retaining wall, and a 3m noise barrier extending along the line in either direction. There will be severe intrusion on the setting of the building, and there is a possibility of the building being unviable for residential use. There could well be indirect effects resulting from change of use or condition.

Incorporated Mitigation: 3m noise barrier, retaining wall to limit landtake
Options for Further Mitigation:
- Re-route haul road through field to north except for access to construction immediately adjacent to cottages
- Reduce landtake if possible adjacent to building;
- The noise screening might be incorporated into a high brick wall round the garden leaving it open to the north east. This could be a successful means of keeping the property viable for residential use or conversion to offices. The side towards the CTRL has a very low roof, and the loss of light from the south would not be a serious problem.

This mitigation could substantially reduce the likelihood of this listed building being unviable and at risk of physical alteration or demolition. The effect on its setting would remain significant.

5.33.2.3 **Bridge Cottage, Sevington, Grade II Listed Building: Significant Negative Effect (Unavoidable).**
There will be severe intrusion on the setting of Bridge Cottage as a result of the realigned Highfield Lane passing on a high embankment immediately behind the cottage replacing the outlook over open fields, and also because of the proximity of the CTRL passing in a shallow 2-3 m deep cutting about 20 m to the south, with a 3m noise barrier along the top of the cutting. The open character of the setting of the house will be further altered by the planting of the cutting slope and road embankment, though one of the effects of the realigned Highfield lane will be to screen the property from the CTRL route to the east.
Incorporated Mitigation: 3m noise barrier, planting
Options for Further Mitigation: The planting of the embankment behind the house might better be replaced with seeding or low shrubs to reduce shading; detailed design of noise barrier.

5.33.2.4 **Bridge House, Mersham, Grade II Listed Building: Significant Negative Effect (Unavoidable)**
Bridge House Mersham will be subject to severe landtake from its curtilage, losing much of its long garden. It will also be subject to severe intrusion from the CTRL tracks, overhead line equipment and trains passing in a 5 m deep retained cutting within about 6 m of the house. The area to the north will be planted with trees. There is a strong possibility of the building being unviable for residential use, in which case indirect effects could arise as a result of change of use or condition, or possibly demolition if no alternative use were found. This property will qualify for noise insulation.
Incorporated Mitigation: Retaining wall to limit landtake; planting to help screen views west along the CTRL route .
Options for Further Mitigation: Screening with a well designed, fairly high brick wall along the top of the retaining wall and western side of the garden; reduce planting to north to retain thick belt of trees but provide slightly more open ground for garden.

This could be a successful means of helping to keep the property viable for residential use, and would reduce the effect but it would remain significant.

5.33.2.5 **Boys Hall Grade II listed building; Imber, Sevington, Grade II listed building; Loud House, Mersham, Grade II listed building; Little Swanton, Grade II listed building; Conscience Farm unlisted building: Cumulative Significant Negative Effect (Mitigable)**
There will be slight to moderate intrusion and in the case of Imber slight permanent landtake for these listed and unlisted buildings close to the CTRL line. The character and degree of intrusion will vary, and in none of the cases, except possibly Imber, will the effect be significant in itself. Cumulatively, however these effects add to the intrusion on listed buildings within this route window.
Incorporated Mitigation: Planting at Boys Hall; planting, realignment of road away from Imber; false cutting and planting at Loud House.
Options for Further Mitigation: Detailed design of overbridge abutment to reduce or avoid landtake and reduced planting of new road embankment at Imber; reduced planting on graded out embankment at Loud House to retain more of existing character of attractive hedged fields.

5.33.2.6 **Boys Hall Moat Scheduled Ancient Monument and Area of Archaeological Potential: Significant Negative Effect (Unavoidable)**
The c.50 x 60 m balancing pond with access road immediately east of Boys Hall Moat will cause moderate intrusion on the setting of the scheduled ancient monument and slight to moderate landtake in the area of Iron Age and Roman archaeological potential in the vicinity.
Incorporated Mitigation: None
Options for Further Mitigation: Detailed design of balancing pond to minimise intrusion; archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.33.2.7 **Area of Archaeological Potential North West of Boys Hall Moat (South of Boys Hall) to North of Sevington Rail Head: Potentially Significant Negative Effect (Mitigable)**
The permanent landtake for the cutting south of Boys Hall could affect any Iron Age and Roman archaeology which might survive in the undisturbed area south of Boys Hall. Temporary landtake for the Bad Munstereifel Road secondary construction site (Ch.515000-515200) could also result in permanent loss of archaeological deposits extending north from the area of Iron Age settlement found at the Sevington Rail Head.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting for permanent landtake, and for construction site, detailed design to avoid any significant archaeology, preservation of remains undisturbed beneath geotextile and spoil to protect deposits, or further investigation and reporting.

5.33.2.8 **Prehistoric, Roman and Medieval Finds Scatter East of Church Lane Sevington and west of Blind Lane: Potentially Significant Negative Effect (Mitigable)**
Landtake for the Blind Lane spoil disposal site (Ch.515900-516200) could result in significant disturbance of any prehistoric and Roman archaeology extending south east and south from the areas surveyed in the surface collection survey. Moderate to severe permanent landtake for the CTRL route itself will affect a surface scatter of worked prehistoric flints, burnt flint and prehistoric and medieval pottery probably indicative of further prehistoric and possibly medieval remains in the vicinity.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation of spoil disposal site followed, if appropriate, by detailed design to avoid any significant archaeology, preservation of remains undisturbed beneath spoil, or further investigation and reporting. Archaeological evaluation of permanent landtake for route followed, if appropriate, by further investigation and reporting.

5.34 ROUTE WINDOW 34: CHURCH ROAD TO CHURCH LANE

5.34.1 BASELINE CONDITIONS

5.34.1.1 Overall Historic Environment

Mersham is a Domesday settlement set on the top of a slight but distinct spur on the edge of the Hythe beds, which drop away onto low-lying Atherfield and Wealden Clays. The topographical position of Mersham Church suggests an area generally of archaeological potential, which is reinforced by the record of the Saxon cemetery. The area between the railway and the church has particular potential for early settlement.

Part of the medieval village east of the church along Bower Lane (OAU No. 1090) was bulldozed in 1967. A Saxon cemetery said to have been found in stone quarrying is not securely located. The older buildings in Mersham other than the church and manor are strung out along the lanes to the north-east and south-east, effectively forming three main groups of historic buildings.

The conservation area of Mersham (OAU No. 2073) lies about 500 m north of the CTRL line. The very important group of the Grade I listed medieval church and Grade I and II* Court Lodge (listed as Mersham Manor) and Barn are 150 m to the north, while extending south from the CTRL in the Forstal is an extensive group of eleven buildings of historic interest (OAU Nos. 223-30; 368-70): seven Grade II, and four of more local interest. They date to between the 16th and 19th centuries.

There are slight spurs or lobes of the Hythe beds which the CTRL will cross between Mersham and Park Wood Cottage, where a south-facing spring line adjacent to calcareous soils might be expected to be favoured for settlement. Surface scatters of pottery suggest that this may be the case.

East of Mersham in the small parish of Smeeth the long range of Hythe Beds ends to the east of Grade II* Evegate Manor, and the CTRL line will follow a band of Atherfield Clay on the edge of the East Stour valley, which is of Weald clay and alluvium. Few historic landscape features have survived modern agricultural practice, though Park and Backhouse Woods mark the clay land, and damp low lying grassland characterise the alluvium. The river was important for milling.

The village of Smeeth is distant from the CTRL on the far side of the motorway. Outlying buildings occur at Little Stock Farm (OAU No. 562), a small unlisted house of 16th to 17th-century date with a nearby group of converted farm-buildings. The group of 18th to 19th-century buildings at Evegate Mill (OAU Nos. 239-40) includes the mill of 1862, with an earlier mill house.

Areas of ancient woodland lie either side of the line at Park Wood (OAU No.2074) and Backhouse Wood (OAU No. 2075).

Overall the area is of interest for its archaeological potential and for the exceptional concentration of historic buildings at Mersham; there are also areas such as the small valleys east of Mersham and at little Stock Farm which retain a significant degree of historic character. Much of the higher ground and the Stour floodplain however has been subject to intensive modern agriculture with consequent loss of boundaries and traditional landuse.

5.34.1.2 Historic Buildings

At the beginning of the window, the CTRL will pass in cut and cover tunnel and then cutting 150 m south of the medieval St Mary's Church, listed Grade I (OAU No. 231), with fine monuments in an attractive graveyard and an exceptional west window. Immediately to the west is the Grade I Manor (OAU No. 233), a court lodge of the monks of Christ Church, Canterbury, and an outstanding 14th-century house. The adjacent Grade II* barn (OAU No. 235) next to Church Road is contemporary with the house, and is one of the major Kent barns; less exalted is the modern one next to it.

This exceptional group of fine medieval buildings have more recent, discreetly placed houses to the north, but to the south, next to the present railway there is an open pasture

field sloping gently away towards the edge of the Weald. This area is to be used as a secondary construction site (Ch.517200-517400) to build the cut and cover tunnel. A footpath leads from the churchyard to the Forstal and mill complex.

The CTRL will pass in cut and cover tunnel about 80 m north of the unlisted school (OAU No. 369) and Schoolmaster's House (OAU No. 370) of 1876. This is still the village school and its buildings are unusually unspoiled externally. The foot of the embankment for the realigned Church Road will pass across the edge of the garden of the Schoolmaster's house and across the corner of the grounds of Bell House (OAU No. 230), a fine Grade II Georgian house set in a large garden.

Along the present railway followed by the CTRL there are three standard, now partly rebuilt, SER railway bridges (OAU No. 575-7) and a good, largely unaltered example of a skew bridge taking the line over Church Lane (OAU No. 578).

5.34.1.3 **Archaeological Remains**

There is an area of ridge and furrow, with field boundary lynchets surviving as earthworks in the field south of Little Stock Farm on the east side of the valley (OAU No. 1264). Fieldwalking to the east identified scatters of prehistoric worked flint, including a barbed and tanged arrowhead, and medieval pottery (OAU No. No 1355). To the north is a fish pond (OAU No. 2193) first shown on the 1846 Tithe Map.

Between Station Road and Church Lane the CTRL will cross the East Stour floodplain, in an area of high archaeological potential, where the CTRL will require an electricity feeder station, a possible flood storage compensation area, and the Sellindge main construction site (Ch.520300-520600). The alluvium stretches from Park Wood Cottage to the Sellindge Converter Station. The potential of the area is indicated by a number of factors:

- A mound (OAU No. 1091) just south of Park Wood, 300 m north of the CTRL, turned out on excavation some years ago to be a windmill mound. Considerable quantities of material of all periods were found, including Palaeolithic, Mesolithic and Neolithic flints and Bronze Age, Iron Age, Roman and medieval pottery (OAU No. 1148).
- A short way down the hill, 100 m north of the CTRL was a further dense scatter of mesolithic material, including many flint flakes and tools and an axe (OAU No. 1092). This site is situated on the boundary of the Atherfield clay and the alluvium of the East Stour floodplain.
- Surface collection survey has revealed further scatters of prehistoric worked flint (OAU No. 1822 and 1823). These are rather diffuse scatters, but this is not surprising if material is partly sealed beneath alluvium.
- On the higher ground west of Sellindge Converter Station, surface collection survey has located Iron Age pottery and worked flints (OAU No. 1356). Within this scatter was found a fragment of polished flint axe (OAU No. 1357), low concentrations of Roman pottery and tile and medieval pottery which may be peripheral to a Roman and Medieval site south of the Converter Station. This scatter lies mainly north of the electricity feeder station and south of the Sellindge main construction site (Ch.520300-520600), however the latter area was not surveyed.

The significance of these remains is uncertain, but if there are undisturbed mesolithic and later prehistoric remains beneath the alluvium and significant later settlement on the

surrounding drier ground, and there is contemporary waterlogged material, then the area is likely to be of at least regional and possibly of national importance.

5.34.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.34.2.1 **Mersham Historic Settlement (Manorial Complex and Church Grade I and II* listed buildings, unlisted Schoolmaster's House and School, and Bell House Grade II listed building): Cumulative Significant Negative Effect (Mitigable to Potentially Significant Positive Effect).**

This effect is composed of the following impacts each of which would in itself be non-significant:

- During construction landtake for the Church Road Bridge secondary construction site (Ch.517200-517400) will affect an area of archaeological potential in the vicinity of the medieval manorial complex and church.
- During construction there will be medium term temporary intrusion on the setting of Grade I St Mary's Church, Court Lodge and Court Barn from the secondary construction site for the Mersham cut and cover tunnel.
- There will be moderate intrusion on the setting of the Grade I Church and its churchyard from the wide cutting east of the cut and cover tunnel, though this will eventually be screened by planting.
- The cut and cover tunnel will initially allow uninterrupted views from the school to the church and manor over the slight mounding on top of the tunnel, but this will soon be blocked by planting on the south side of the tunnel.
- There will be slight permanent landtake for the realignment of Church Road from the curtilages of Grade II* Mersham Court Barn, Grade II Bell House and the unlisted Schoolmaster's House.

Incorporated Mitigation: The impact of the CTRL at Mersham has already been substantially mitigated by provision of a cut and cover tunnel intended to reunite the historic village north and south of the railway. It is the details of how this mitigation is developed that give rise to the negative impacts described.

Options for Further Mitigation:
- Detailed design of construction site; archaeological evaluation, followed if appropriate by further investigation and reporting.

Further detailed design is needed to maximise the possible positive effect at Mersham. The following refinements of design would substantially achieve this:

- Detailed design of mounding and planting of cut and cover tunnel to enhance the physical reunion of village, by keeping soil cover on top of tunnel to a minimum, grading out of slope down to track past the school, planting of boundary along track to be a low hedge below school window height to maintain views to Church and Manor.
- Detailed design of cutting edge and planting south of church to screen portal and recreate rectilinear pattern of fields in top of graded out cutting slope by replanting on line of old footpath at the top of the cutting and providing belt of planting parallel to the CTRL at top of steeper cutting slope.

The following measures would further reduce the effect and maximise the positive effects:

- Detailed design of Church Road to minimise land take from Mersham Court Barn and provision of well designed boundary fencing or wall.
- Replace planting along east side of Church Road realignment with low hedge to retain views of Church and Manor across the field.
- Remove ugly modern barn from intruding on setting of the Barn and Manor.
- Retain land south of Church and Manor for public use.

5.34.2.2 **Prehistoric and Medieval Finds Scatter West of Station Road, Smeeth: Potentially Significant Negative Effect (Mitigable)**
Moderate to severe landtake will affect a surface scatter of worked prehistoric flints, burnt flint and prehistoric and medieval pottery probably indicative of further prehistoric and possibly medieval remains in the vicinity.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.34.2.3 **Area of Archaeological Potential Station Road to Church Lane: Potentially Significant Negative Effect (Mitigable)**
This effect is comprised of a series of landtake impacts or potential impacts, as follows:
- Temporary landtake for the Sellindge Converter Station main construction site (Ch.520300-520600) could result in significant disturbance to any prehistoric archaeology within, or extending north from, the area surveyed in the surface collection survey west of the electricity Station.
- Permanent landtake for the excavation of a substantial compensatory flood storage area could have a severe impact on well preserved archaeological remains in the East Stour floodplain.
- Permanent landtake for the CTRL embankment along the north side of the existing NSE railway between Station Road and Church Lane will potentially result in disturbance of well preserved prehistoric deposits sealed beneath alluvium or on dry ground adjacent to the East Stour floodplain, though the extent of disturbance would be relatively limited.
- Permanent landtake for the electricity feeder station could also result in significant remains being disturbed over a relatively limited area. Although the main scatter is further north, this could reflect greater disturbance of sub-surface archaeology rather than a real difference in distribution.

Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation of areas subject to disturbance followed, if appropriate, by further investigation and reporting, including appropriate palaeo-environmental investigations; in the case of the flood storage area, consider alternative locations, preferably in areas already disturbed.

5.34.2.4 **Earthworks of Former Field System South of Little Stock Farm:** Non-significant Negative Effect
Field lynchets and ridge and furrow earthworks would be affected by slight landtake for the CTRL line and the Little Stock Farm Access Bridge secondary construction site (Ch.518400)
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.34.2.5 **Railway Bridges Mersham to Sellindge Converter Station:** Non-significant Negative Effect

Five Victorian railway bridges of the 1840's will be subject to demolition or alteration. The over bridges have recently been reconstructed, leaving only the skew under-bridge for Church Road in anything like its original form. This will be extended on its northern side leaving the main structure and southern side undisturbed.
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.35 ROUTE WINDOW 35: CHURCH LANE TO ASHFORD ROAD

5.35.1 BASELINE CONDITIONS

5.35.1.1 Overall Historic Environment

In this route window the CTRL will continue to follow the edge of the Hythe Beds and the East Stour floodplain.

The original centre of Sellindge lies north of the M20, with the Grade I medieval Sellindge Church and Court Lodge in a small discrete centre (OAU No. 2076) at the western end of the parish. At the east end, on the opposite side of the M20 from the CTRL route and the present railway, there was a large rectangular common, 'The Lees' (OAU No. 2077), marked now mainly by the occurrence of historic buildings round its edge, with further buildings extending along the Ashford Road.

Intensive modern agriculture together with intrusion of the M20 and Sellindge Electricity Converter Station has detracted from the overall historic character and coherence of the landscape, though the historic lanes and more distant groups of historic buildings record some of the basic structure of the historic pattern.

5.35.1.2 Historic Landscape Features

The CTRL will closely follow the existing railway and will not affect any features of particular historic landscape interest in this section.

5.35.1.3 Historic Buildings

Harringe Lane will be carried over the CTRL and the NSE line on a new bridge replacing the partly altered original red brick 1843 railway bridge.

West of Ashford Road the CTRL will pass on a 3 m embankment, at much the same level as the existing railway and motorway, about 50 m south of Somerfield Court (OAU No. 243), which stands on the other side of the M20. This is a large Grade II listed 17th-century gentry house of striking symmetrical appearance in chequered brick with decorative plat bands and quoins, tiled hipped roof and fine sash-glazing (slightly marred by secondary glazing towards the M20). The east range is later and Gothic. Its adjacent Grade II barn, built of coursed stone with brick dressings (OAU No. 244), is dated circa 1834 and has had much of its historic interest removed by conversion.

At Ashford Road the CTRL will pass on a 5 m embankment, at much the same level as the existing railway, 80 m north of Stream Cottage and Grove Bridge Cottage (OAU No. 248), a Grade II listed medieval wealden house, now sub-divided, which stands on the far side of the existing railway embankment. The main house contains its original

medieval roof and has a 17th-century addition to the south. Although the external appearance has been altered, it is has recently been restored.

5.35.1.4 **Archaeological Remains**

East of Church Lane, the CTRL will pass on retained embankment 50 m north of an area of significant archaeological potential. Surface collection survey immediately south of the existing railway at the Sellindge Converter Station revealed a concentration of Roman finds including pottery, tile and a brooch (OAU No. 1359), almost certainly indicating a settlement, potentially of regional importance. Closer to Church Lane in the same field, a significant concentration of medieval pottery was also found (OAU No. 1358), possibly indicating later occupation of the same area.

Further east, the CTRL and the haul road south of the existing railway will cross a further area of significant, multi-period archaeological potential (OAU No. 1361), possibly of regional importance, revealed by surface collection survey south of the railway on either side of Harringe Lane. The area is covered by a general scatter of burnt flint and worked flints, including a Neolithic leaf-shaped arrowhead and flint scrapers (OAU No. 1360 and 1363). Within this area west of Harringe Lane there was also a significant cluster of five Iron Age flint-tempered pottery sherds, overlapping with a rather less distinctive Roman scatter, and a concentration of Medieval pottery. The area north of the present railway east of the Converter station was not suitable for survey and it is quite likely that the area of interest indicated by these finds extends into the long triangular field here.

5.35.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.35.2.1 **Area of Archaeological Potential East of Sellindge Converter Station: Potentially Significant Negative Effect (Mitigable)**
During construction, an area of significant potential east of Sellindge Converter Station indicated by surface scatters of prehistoric struck flint, burnt flint and Iron Age, Roman and Medieval pottery may be subject to slight to moderate landtake for the Harringe Lane secondary construction site (Ch.521700-521900), and will be subject to slight landtake for the haul road and temporary diversion of Harringe Lane on the south side of the existing railway. Slight to moderate permanent landtake for the embankments of the realigned Harringe Lane, and for the CTRL embankment and cutting may affect similar remains.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting, or by preservation *in situ* beneath the embankments and by avoiding soil stripping and damaging land restoration for haul road and/or construction site.

5.35.2.2 **Somerfield Court and Barn Grade II Listed Building:** Non-significant Negative Effect.
The fine Grade II listed 17th-century house with later alterations and converted 19th-century Barns will be subject to slight additional visual intrusion on their setting. The existing motorway and railway passing immediately south of the buildings already detract significantly from their setting. The CTRL will add the further intrusion of overhead line equipment, fencing and more trains, but will also result in better noise screening on both

sides of the motorway and planting between the motorway and the CTRL and existing railway.
Incorporated Mitigation: Noise barriers, planting
Options for Further Mitigation: None identified.

5.35.2.3 **Stream and Grove Bridge Cottages Grade II Listed Building:** Non-significant Negative Effect.
This medieval Wealden house with later additions, now two properties, will be subject to additional visual intrusion from the slightly higher CTRL alignment and addition of overhead line equipment and noise barriers.
Incorporated Mitigation: Noise barrier
Options for Further Mitigation: None identified

5.36 ROUTE WINDOW 36: ASHFORD ROAD TO STONE STREET

5.36.1 BASELINE CONDITIONS

5.36.1.1 Overall Historic Environment

In this section of route from Sellindge to Westenhanger, the CTRL will cross a further narrow section of the Stour floodplain with areas of drier brickearth either side. As in the previous window, the area has already been crossed by the railway and motorway, though here they diverge again to be separated by about 200 m. There are few archaeological records in this section of the route, though again surface scatters of prehistoric and medieval finds suggest occupation of the brickearth deposits adjacent to the floodplain. The field name 'Mount Field' (OAU No. 1216) just south of the railway may refer to one of two round barrows after which Barrowhill is named (OAU Nos. 1093, 1095). Prehistoric worked flint and Roman pottery has been found at Folkestone racecourse.

The small parish of Stanford is situated where the Roman Road from Canterbury to Lympne crosses the East Stour river. Formerly the area would have been dominated by Westenhanger Castle (OAU No. 250), just south of the railway, and much of the southern end of the parish was probably occupied by its medieval park (OAU No. 2079). Traces of the park pale survive, though its bounds are not known with certainty.

The combination of intensive farming, the severance resulting from the existing railway and motorway, the substantial area occupied by Folkestone race course and sporadic modern residential development has reduced the historic integrity of the landscape and of former field patterns. Westenhanger Park has long since been obliterated as a significant landscape feature. Further away from the CTRL route, outside the study corridor, the historic character of the landscape survives to a greater degree.

5.36.1.2 Historic Landscape Features

The CTRL will closely follow the existing railway and will not affect any features of particular historic landscape interest in this section.

5.36.1.3 Historic Buildings

East of Ashford Road the CTRL will pass through the narrow strip of land between the M20 motorway and existing railway, which is occupied at present by Talbot House (OAU No. 247), listed Grade II. Formerly called 'Railway Cottages', it is actually a 15th-century timber-framed Wealden house which was carefully restored by its former owners. The building has been investigated by RCHME, demonstrating the conversion of the house in the 16th century by the insertion of a chimney-stack and floors. The broadly spaced timber studding is exposed on the first floor with rendered infilling but is clad in brick on the lower floor. It is of four bays with the central two probably being the open hall. Although not of such outstanding quality as some such houses in Kent, it has some fine internal features (eg the hall screen) that would make it of greater importance elsewhere in the country. The timber frame is substantial and partly underbuilt in brick.

At Westenhanger the CTRL will pass on slight embankment 170 m north of Westenhanger Castle (OAU No. 250), a Grade I listed building and scheduled ancient monument (OAU No. 1970) standing on the northern edge of Folkestone Racecourse. In origin it was a 14th-century castle or fortified house, and retains substantial remains from the 16th to 18th centuries. The front elevation of the house has been clad in red brick and forms one side of a rectangular courtyard which has circular and rectangular bastions and towers. Not all the sides of the courtyard still have upstanding buildings; the house in the north east corner was built in the 16th century probably for Sir Edward Poynings before 1521. Part of this house was rebuilt and refronted in brick in the 18th century, and the front elevation now appears symmetrical. The rear elevation is less altered and still displays some of the 16th-century features such as the round headed chamfered brick lights, stone mullions, a single cinquefoil-headed light with a squared hood mould and evidence for a garderobe chute on the north rear elevation. Inside the buildings there are also many fine details surviving from different periods. The north east bastion has been converted into a dove cote, probably in the 16th century. Other remains include the castle ruins, largely 14th-century in date with a curtain wall and various contemporary window and door openings, herringbone brick fireplaces, towers and bastions.

Two 16th-century barns associated with the castle (OAU No. 251) are both scheduled and also listed Grade I on account of their exceptional carpentry. They have been built of galleted ragstone and each contain a variety of round, pointed and four centred chamfered arched windows. The two barns join in an L-shape. There are two projecting stone porches to the west and two to the east, all with hipped gabled canopies jettied on brackets from pendant posts. Inside some of the roof has been replaced in the 18th and 19th centuries, but the original hammer beam roof over the north-south range is unusual and very impressive. It spans eleven bays and the hammer posts terminate in collars which carry queen struts to higher collars.

The whole of this complex is a nationally important site both for its standing buildings and for the ruins of the earlier mansion. The setting of the complex, however is unimpressive, situated between Folkestone Race Course to the south and the existing railway and motorway to the north, and generally otherwise surrounded by big open fields. Apart from the immediate grounds of the Castle, there is a small area with more historic character between it and the railway where there are traces of the park pale and earthworks of paddocks. A footpath runs past Westenhanger through this area adjacent to the present railway.

East of Westenhanger castle is the unlisted, empty, SER Westenhanger Station (OAU No. 252), a symmetrical three bay Italianate-style station built in 1850, standing directly adjacent to the railway line. An original SER railway bridge at Stone Street (OAU No. 580) has recently been partly altered.

5.36.1.4 **Archaeological Remains**

East of Ashford Road the CTRL will cross the East Stour River twice and the river will be diverted instead to run south of the railway. There will be extensive excavations to create wetland areas and a more extensive floodplain. Close to the second crossing, where a tributary will still join the river from the north, the CTRL will pass north of a field named 'Mill Meadow' (OAU No. 1217). It is conceivable that a mill lay near the confluence of the East Stour and its tributary stream on or near the CTRL line.

Immediately east of this the CTRL, with extensive landscape mounding to the north, will cross a field with the name 'Lodge Field' (OAU No. 1300), which occurs just west of a scatter of 18 sherds of 12th to late 13th-century medieval pottery (OAU No. 1365) just south of the motorway. It is possible that this might reflect the existence of a medieval lodge nearby, but the scatter is not very well defined.

Westenhanger Castle supposedly has the deserted medieval village of Westenhanger or Eastenhanger (OAU No. 1096) adjacent to it, but there is no evidence that this site really constituted a village rather than an important manorial centre with a free-standing church. There are earthworks of field and paddock boundaries (OAU No. 1171) next to the railway and north of the buildings which might possibly reflect further activity but no concentration of medieval pottery was found here during the surface collection survey.

In this area, however the CTRL and its extensive landscape mounding will cross an area containing a diffuse scatter of 58 prehistoric worked flints and 28 unworked burnt flints possibly reflecting two concentrations, one including a fragmentary arrowhead (OAU No. 1366), the other a sherd of prehistoric pottery (OAU No. 1367).

5.36.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.36.2.1 **Talbot House Grade II Listed Building: Significant Negative Effect (Unavoidable)**
Talbot House, a well restored Grade II listed medieval hall-house, will unavoidably be demolished for permanent landtake.
Incorporated Mitigation: Building recording and consideration of feasibility for reconstruction; salvage of historic features.
Options for Further Mitigation: Full archaeological investigation and recording of the listed building, and evaluation and if appropriate investigation and reporting of subsoil archaeology prior to and during demolition. Investigation of listed building to create records capable of use to reconstruct it. Relocate building to suitable alternative site, previously identified with necessary consents, either for future residential use as a house or as a museum piece.

5.36.2.2 **Finds North of Westenhanger Castle: Potentially Significant Negative Effect (Mitigable)**
Slight landtake for the CTRL formation and moderate to severe landtake for the associated landscape mounding will affect an area of archaeological potential indicated by three scatters, one of medieval pottery and the others of prehistoric flintwork and burnt flint.

Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by detailed design of landscape mounding to avoid archaeologically sensitive areas, or further investigation and reporting, or preservation *in situ* beneath landscape mounding.

5.36.2.3 **Westenhanger Castle Scheduled Ancient Monument and Grade I Listed Buildings:** Non-significant Negative Effect
There will be some intrusion on the setting of the scheduled and Grade I listed medieval fortified manor house and Grade I listed 16th-century barn from the overhead line equipment, noise barrier and trains. The noise barrier will reduce noise intrusion but will result in some visual intrusion, especially where not screened by existing vegetation. The effect of the CTRL is not considered significant because the setting of the Castle and its associated buildings has already been affected by the Folkestone Racecourse to the south and the existing railway to the north. The CTRL will be noticeable but will not substantially detract from the already degraded character of the existing setting since it will be north of the existing railway and both railways will be screened by a noise barrier.
Incorporated Mitigation: Noise barrier
Options for Further Mitigation: Planting to screen noise barrier

5.37 ROUTE WINDOW 37: STONE STREET TO STONE FARM

5.37.1 BASELINE CONDITIONS

5.37.1.1 Overall Historic Environment

The CTRL route crosses the Folkestone Beds again at Hillhurst and Sandling in Saltwood parish, where the centre of the village with its castle lies to the south on a further outcrop of Hythe Beds. Known archaeological material is represented mainly by chance finds and some multi-period scatters found in the surface collection survey of the route, together with a few observations of Neolithic, Iron Age, Roman and medieval occupation made when the M20 was built. Within Sandling Park near to House Wood, a scatter of worked flints were found including a neolithic chert axe and bronze Age arrowheads (OAU No. 1261). The field contains some undated earthworks (OAU No. 1247). To the east a late Bronze Age founder's hoard (OAU No. 1102) was discovered south of the CTRL during the construction of the Hythe-Sandgate railway. These finds point to the high archaeological potential of areas on the Folkestone Beds.

This section of the route has no listed buildings within the study corridor. The historic centres of settlement were either some way to the north, at Stanford, or well to the south, represented by the fine Saltwood Castle and Saltwood Conservation Area. In between these centres there are several unlisted, mainly 19th-century historic buildings representing a variety of domestic houses, farmhouses, buildings associated with Sandling Park and some interesting railway features.

To the north of the motorway and the CTRL, on the historic Stone Street, is the early 19th-century unlisted Stanford House (OAU No. 254), while to the south, east of Stone Street is the unlisted 19th-century Hillhurst Farm with an imposing Georgian red brick farmhouse (OAU No. 253). Sandling Park has lost the main house but retains an attractive lodge and various remains of outbuildings and garden walls. Sandling

Farmhouse and Sandling Station are further 19th-century buildings of some character, while further east, well south of the CTRL route is the Garden House (OAU No. 372), an outstanding vernacular revival house built in 1903 by W.H. Rhodes.

The eastern half of this route window, particularly the area south east of the A20 is a landscape retaining a significant degree of historic character, including the Grade II registered 19th-century Sandling Park (OAU No. 2080). The main feature detracting from the overall historic interest of the area is the M20.

5.37.1.2 **Historic Landscape Features**

East of the A20 Ashford Road the CTRL will cross the northern side of Sandling Park, listed Grade II in the English Heritage register of parks and gardens, and also listed in the Kent County Council Register. English Heritage map the 'extent of garden and other land of historic interest' as shown on the EFM in Volume 2, whereas KCC map the 'extent of present [1988] main ownership retaining important features' which corresponds to the main area of gardens south of the present railway and the entrance drive to the north.

The areas listed by English Heritage and KCC both include a number of unlisted historic buildings and railway structures which contribute to the historic character and interest of the historic landscape associated with Sandling Park, and these are therefore included in this section of description.

Despite recent storm damage, Sandling Park retains good 19th-century woodland gardens south of the railway which have continued to be developed this century. There is limited public access to the gardens. The original house of 1797 was bombed in WWII, but remains of the terrace (OAU No. 256) including the gate piers and balustrades, late 18th-century walls of the kitchen garden (OAU No. 257), and the converted stable block (OAU No. 258) survive 50-150 m south of the CTRL route on high ground overlooking the present railway.

West of the entrance drive to the park the CTRL will cross a relatively featureless pasture field, with a balancing pond immediately next to the A20. The CTRL will cross the main entrance drive in a cut and cover tunnel immediately alongside the existing, original SER Sandling Tunnel (OAU No. 583). At this point the route will pass 70 m south of the entrance lodge on Ashford Road (OAU No. 255), a yellow brick, single storey building retaining its original 19th-century windows. East of the cut and cover tunnel, the CTRL will pass in cutting through the southern end of a tree belt on the east of the entrance drive, and then at grade with an adjacent balancing pond, removing part of the former carriage drive, and then in cutting across more open parkland to Sandling Road, where it will pass under a new bridge 70 m north of the wide existing SER overbridge. At this point the route passes 120 m north of unlisted Sandling Farmhouse (OAU No. 498), a house built in a free late Gothic style with some polychrome detail, presumably as part of the 19th-century Sandling estate.

5.37.1.3 **Historic Buildings**

At Stone Street, Hillhurst Farm and the A20 the CTRL will pass immediately adjacent to the existing railway through the northern abutments of three original SER overbridges which have already been substantially rebuilt (OAU Nos. 580-2).

Immediately east of Sandling Road the CTRL will pass in a wide cutting and then on embankment in false cutting 70 m north of Sandling Junction Station (OAU No. 497). This is an attractive 1880s building in Vernacular Revival style lying immediately adjacent to the former railway junction with the branch line to Hythe. It has an attractive canopy on turned posts which was reduced in length in 1888.

East of Sandling Station at the Saltwood Tunnel (OAU No. 585) the CTRL tracks will diverge to pass either side of the Dollands Moor freight yard in the next window east. The down line will pass in cutting north of the tunnel, while the up line will cross over the tunnel in a cutting through the overlying earthworks of the spoil originally excavated from the tunnel. The Saltwood Tunnel was built by the SER in 1842-3 by F.W. Simms, who published an account of its construction the following year (Simms 1844). The tunnel is 954 yards (872 m) in length, brick-lined and with brick portals. The method of working was to sink several 9 foot working shafts to excavate the tunnel from a series of points along its length. An adit was driven the full length of the tunnel to drain ground water which was causing problems with running sand in the shafts. The shafts were brick lined to within 8ft of the soffit of the main tunnel arch. The excavated material was dumped over the top of the tunnel line in a massive irregular mound of upcast spoil. There is no visible trace of the shafts. Various hollows and ramps visible in the mound of upcast spoil may be contemporary or could indicate later quarrying of the spoil.

5.37.1.4 Archaeological Remains

At the beginning of this route window the CTRL will cross Stone Street, the line the Roman Road running from Canterbury to Lympne (OAU No. 1100). The parish boundary between Stanford and Saltwood follows the line of this road here. It is not known whether any Roman levels have survived the very long history of use of this road over the last 1600 years.

North of Sandling Park, the Sandling main construction site (Ch.526300-526800) will occupy a substantial area between the A20 and the M20 adjacent to which the site of a possible Iron Age and Roman settlement was discovered during construction of the M20 (OAU No. 1101). This consisted of finds in a buried soil rather than subsoil features or buildings, and it may relate to a settlement further up the slope. Nevertheless this site strongly suggests the possibility of further well preserved remains under colluvial deposits at the proposed construction site between the M20 and the A20. The motorway discoveries are of uncertain importance.

Near the eastern edge of Sandling Park the CTRL cutting will cross slight earthwork remains of a small area of possibly first World War army practice trenches (OAU No. 1169). This feature is of local interest, rather more extensive examples surviving nearby at the Dibgate army camp.

North of the Saltwood Tunnel the CTRL cutting will cross a diffuse scatter of finds consisting of prehistoric worked flints including a scraper (OAU No. 1369) and small quantities of pottery of several periods (OAU No. 1368). These occur immediately south of features containing daub and charcoal (OAU No. 1103) discovered under colluvium in a watching brief on the M20 construction by the Kent Archaeological Rescue Unit. A Roman coin was found nearby in 1926 (OAU No. 1138). The area is potentially of regional significance.

5.37.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.37.2.1 **Sandling Park Grade II Registered Park: Significant Negative Effect (Unavoidable)**
The Grade II Registered 19th-century park at Sandling will be affected by additional landtake and moderate intrusion exacerbating that already caused by the present railway. The CTRL will mainly affect the northern edge of the park severed from the main park and woodland garden by the existing railway. This part of the park is included in the English Heritage plan of the registered park, but not in Kent County Council's, and it retains few features of significance other than the entrance drive and lodge. The effect comprises several particular impacts:

- Slight medium term temporary landtake of 0.4 ha and medium term moderate intrusion on north side of park from the construction of the cut and cover tunnel, earthworks and secondary construction sites (Ch.526700; Ch.527100; Ch.527200; Ch.527400) for the new tunnel and the Sandling Road bridge.
- Permanent landtake of about 3.6 ha for the CTRL cuttings, two balancing ponds, A20 road diversion and planting, exacerbating severance of park by existing railway
- Permanent landtake and visual intrusion affecting northern side of 19th-century tunnel, including partial loss of eastern portal wing wall;
- Permanent landtake removing about a third of the tree belt on the east side of the entrance drive and loss of a small number of mature trees and line of carriage drive north of present railway;
- Permanent intrusion on setting and amenity of park as seen from Sandling Road, footpath through northern part of the park and on unlisted buildings comprising remains of the original layout on the south side of the railway, and the lodge on the north side.

Incorporated Mitigation: Cut and cover tunnel on north side of and same length as existing tunnel; noise barrier and bunding between the CTRL and existing railway; planting clumps on north side of the CTRL.
Options for Further Mitigation: Detailed design of cut and cover portals to blend in with originals; careful design and choice of species for planting; possible offsite planting to screen the CTRL from south.

5.37.2.2 **Sandling Main Construction Site: Potentially Significant Negative Effect (Mitigable)**
Temporary landtake for the Sandling main construction site (Ch.526300-526800) is likely to result in the permanent loss of any archaeological deposits associated with an Iron Age and Roman farmstead site indicated by finds from construction of M20 immediately adjacent.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by careful design of relevant part of construction site to avoid disturbance or further investigation and reporting.

5.37.2.3 **Saltwood Tunnel Historic Railway Structure and Earthwork: Significant Negative Effect (Unavoidable)**
The earthwork remains and possible remains of brick lined construction shafts for the unusually well documented Victorian railway tunnel will be lost to the permanent landtake. The structure of the tunnel will be left intact, with the eastern portal visible looking back from the down line of the CTRL.
Incorporated Mitigation: The tunnel structure and portals will be left undisturbed.
Options for Further Mitigation: Archaeological survey of earthwork before removal and monitoring and watching brief under controlled earthmoving operations to recover evidence of shafts and any details of construction methods.

This mitigation would reduce the effect but would not make up for the loss of a relatively unusual and striking earthwork reflecting 19th-century railway engineering methods.

5.37.2.4 **Area of Archaeological Potential North of Saltwood Tunnel: Potentially Significant Negative Effect (Mitigable)**
Severe landtake for the CTRL cutting north of the Saltwood Tunnel will affect a possible multi-period site indicated by a diffuse scatter of prehistoric flints, and Iron Age, Roman and later pottery adjacent to the site of multi period finds and deposits observed during construction of the M20.
Incorporated Mitigation: None
Options for Further Mitigation: Archaeological evaluation followed, if appropriate, by further investigation and reporting.

5.37.2.5 **Sandling Junction Station Historic Building:** Non-significant Negative Effect
There will be moderate intrusion on the setting of the attractive late 19th-century railway station, largely due to the changes of landform and vegetation to the east of the station.
Incorporated Mitigation: False cutting, landscaping
Options for Further Mitigation: None identified.

5.37.2.6 **Saltwood Conservation Area**: Non-significant Negative Effect
At Saltwood Conservation Area there will be intrusion from an increase in HGV traffic and general traffic along Sandling Road.
Incorporated Mitigation: None
Options for further mitigation: Limit HGV and other construction traffic through the conservation area to a minimum.

5.38 ROUTE WINDOW 38: STONE FARM TO M20

5.38.1 BASELINE CONDITIONS

5.38.1.1 Overall Historic Environment

In this route window the CTRL will follow a wide corridor of intrusive modern infrastructure represented by the M20 motorway and Dollands Moor Freight Yard. To the north of the M20 are the historic village centres of Frogholt and Newington, both conservation areas with attractive and historically relatively well preserved landscape to the north at the scarp foot of the North Downs. The historic village centre at Frogholt (OAU No. 2135) contains a few medieval and later buildings (OAU Nos. 260-3), in a surprisingly secluded hollow, much of it well screened from the M20 and the Channel Tunnel terminal development.

To the south there are two historic woodlands, Grange Alders and Bargrove Wood (OAU Nos. 2082-3) which represent the northern eastern extremity of an area of good historic landscape survival around Saltwood. Bargrove Farm (OAU No. 259), immediately next to the wood and 250 m south of the CTRL, is a Grade II listed brick-built gentry farmhouse of circa 1840, recently renovated. To the east, sand quarries and the motorway and Channel Tunnel terminal have left little of historic interest within the study corridor.

The archaeology of the Dollands Moor area (OAU No. 1392) was assessed, evaluated and partly excavated for Eurotunnel by the Canterbury Archaeological Trust (1989) prior to construction works. This work produced a multi-period site and slight evidence of a Roman/Iron Age farmstead (OAU No. 1104). The area east of the eastern portal of the Saltwood tunnel has already been disturbed in the Eurotunnel works, but further remains could exist further west in undisturbed areas south of the NSE railway.

5.38.1.2 Historic Landscape Features

East of the Saltwood Tunnel, south of Dollands Moor, the embankments for the up line of the CTRL will cross the northern edge of two areas of historic woodland, Grange Alders and Oak Banks (OAU No. 2082) and Bargrove Wood (OAU No. 2083).

Grange Alders is an L-shaped area of unmanaged and heavily overgrown hazel and ash, some of which was once coppiced. Several large mature oaks survive on its south and west boundaries. Much of the area to either side of a small tributary of the brook is very boggy. Oak Banks is the L-shaped woodland on the eastern side of the stream.

Oak Banks is also L-shaped and consists of more mixed broad-leaved woodland including mature oak, ash, sycamore and sweet chestnut. It is very heavily overgrown with little evidence of any coppicing. The northeast projection of Oak Banks, separated from the rest of the wood by a wire fence, is a much lower area, perhaps the remains of a quarry associated with the construction of the existing railway.

The OS first edition 1" map surveyed in 1801 only shows Oak Banks as woodland, with little change in shape up to the present day. Grange Alders is shown as heath or common. It is mentioned as a name on the Tithe map for Saltwood of 1842 (OAU No. 1311) and appears as woodland on the OS first edition 6" maps of the 1880's.

The shape of Bargrove Wood has changed little from that shown on the 1830's OS 1st edition 1" map and the 1880's 6" map, and place-name evidence indicates that the wood may have existed since the medieval period. The wood is well-managed, consisting mainly of coppiced hazel and hornbeam of varying ages, some of which is relatively mature, together with scattered standard mature and semi-mature oaks and some older coppiced stools.

5.38.1.3 Historic Buildings

The CTRL will not pass close to any historic buildings in this section of the route.

5.38.1.4 Archaeological Remains

The CTRL down line will cross the northern edge of the Dollands Moor area which has already been disturbed in the Channel Tunnel development. The up line will cross undisturbed areas at some distance from the site of the various discoveries made at Dollands Moor.

5.38.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

5.38.2.1 **Grange Alders and Bargrove Woods Historic Woodland:** Non-significant Negative Effect
There will be slight permanent landtake from the edges of Grange Alders (Oak Banks) and Bargrove Wood.
Incorporated Mitigation: None
Options for Further Mitigation: None identified

5.39 **ROUTE WINDOW 39: M20 TO CHANNEL TUNNEL PORTAL**

5.39.1 BASELINE CONDITIONS

5.39.1.1 **Overall Historic Environment**

The historic character of this final route section has been transformed by the combined effects of the suburban expansion of Folkestone and the M20 to the south, and the Channel Tunnel Terminal development along the CTRL route and to its north.

5.39.1.2 **Historic Landscape Features**

No historic landscape features have survived along this part of the CTRL route.

5.39.1.3 **Historic Buildings**

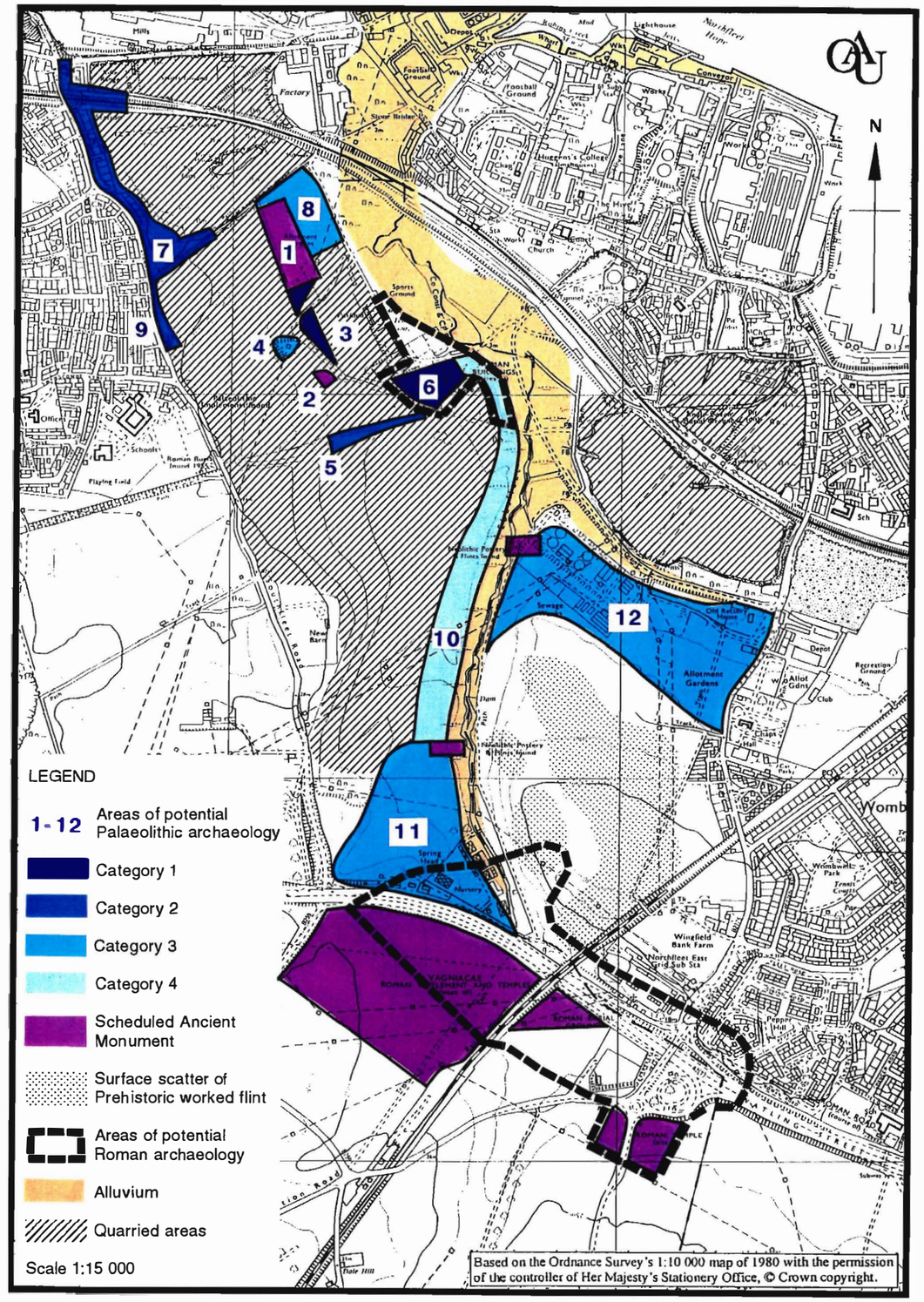
The two CTRL tracks will pass 50 m and 80 m south of the conservation area at Newington (OAU No. 2130) on either side of the existing Channel Tunnel approach tracks. Newington contains many medieval and later buildings (OAU Nos. 782-8), but the village has already undergone significant effects transforming its setting, together with some secondary and indirect effects on its fabric, from the impacts of the motorway and Channel Tunnel terminal development.

5.39.1.4 **Archaeological Remains**

A wide variety of remains were discovered by the Canterbury Archaeological Trust during construction of the Channel Tunnel terminal works. The area has been thoroughly disturbed, and these remains no longer exist and have not been mapped or gazetteered.

5.39.2 CONSTRUCTION, PERMANENT LANDTAKE AND OPERATIONAL EFFECTS

There will be no effects in this route window because the CTRL will not result in any significant change to the intrusion on the setting of the conservation area at Newington already caused by the Channel Tunnel terminal development. Similarly the landtake which has already occurred for the terminal works means that the CTRL will have no effect on historic or archaeological features.



Ebbsfleet Valley: Areas of archaeological potential

Figure 5.1

Channel Tunnel Rail Link

Historic and Cultural Effects
Final Report

Chapter 6

Scheme-wide and Remote Effects

6 SCHEME-WIDE EFFECTS AND MITIGATION MEASURES

6.1 SCHEME-WIDE EFFECTS

6.1.1 EFFECTS ON RESOURCES

Certain recurrent effects of the CTRL on the cultural heritage are worthy of particular comment either because cumulatively a series of significant effects of a similar kind is of particular importance, or where potentially significant effects are cumulatively highly likely to be significant.

6.1.1.1 Listed buildings and conservation area buildings to be demolished or at risk: Significant Scheme-wide Negative Effect of Particular Importance

The total number of listed buildings, curtilage buildings and conservation area buildings of historic interest that will be demolished for the CTRL is such that it is considered as being of particular importance. Some additional listed buildings have been noted as being so close to the alignment that, even though they will not be demolished, they may prove unviable. For this reason they have been described as being 'at risk'.

This effect is essentially unavoidable, but could be reduced by a variety of mitigation measures as described in Chapters 4 and 5 and summarised below (6.2.2). On present evidence, the more significant Grade II listed buildings to be demolished are likely to be capable of relocation. The overall number of listed buildings to be demolished would remain significant even with some or most being relocated, though this would be an important means of reducing the effect.

In the case of buildings 'at risk', options for further mitigation are suggested in Chapter 5 to reduce the possibility of the buildings being unviable. However, even if this risk were largely removed, these buildings would still be subject to a significant effect from the remaining intrusion on their setting.

The listed and conservation area buildings and structures to be demolished and listed buildings potentially at risk are as follows:

Terminus:
- St Pancras Station, Grade I (small part demolished)
- Kings Cross Station, Grade I (porte cochère demolished and re-erected)
- Water Point, Grade II (demolished)
- Gasholders, Grade II (3 gasholders demolished)
- Stanley Building, Grade II (part demolished)
- German Gymnasium, Grade II (part demolished)
- Wall to Fire Station, Euston Road, Grade II (removed and rebuilt)
- Unlisted gasholders, Camley St, CA (2 demolished)
- Unlisted gasholder, Battlebridge Rd, CA (demolished)
- Former LNER stables, Battlebridge Rd, CA (possibly demolished)
- Ventilation chimney, Gasworks Tunnel, CA (possibly demolished)
- Railway arches on Pancras Road, CA (demolished)
- Arched Wall on W side of Midland Road, CA (demolished)
- Offices and Wall, Cheney Rd, CA (demolished)
- Stanley Passage Warehouses, CA (demolished)
- Corner of Clarence Passage, CA (demolished)

Houses to front of German Gymnasium, CA (demolished)
Corner of Wellers Court, CA (demolished)
Former Club House N of Gt Northern Hotel, CA (demolished)
Numerous items of street furniture, cobbles etc., CA (demolished)

Window 1: No. 351 Caledonian Road, CA (demolished)
No. 400 Caledonian Road, CA (demolished)

Window 16: Shorne/Cobham Parish Boundary Stone Grade II (removed)

Window 27: Old and Water Street Cottages, Grade II (risk)
Yew Tree Cottage, Grade II (risk)

Window 28: Brockton Farmhouse, Grade II (demolished)
Brockton Barn, Grade II (demolished)
Brockton curtilage buildings (demolished)

Window 31: Yonsea Farmhouse, Grade II (demolished)
Yonsea Oast, Grade II (demolished)
Yonsea Bungalow, Grade II (demolished)
Yonsea Granary with Cart Shed, Grade II (demolished)
Yonsea L-shaped Barn, Grade II (demolished)
Yonsea Barn, Grade II (demolished)
Yonsea curtilage buildings (demolished)

Window 32 2 Boys Hall Road, Grade II (demolished)
4 Boys Hall Road, Grade II (demolished)

Window 33 Orchard Cottage, Grade II (risk)
Maytree Cottages, Grade II (risk)
Bridge House Mersham, Grade II (risk)

Window 36: Talbot House, Grade II (demolished)

6.1.1.2 **Landtake from and intrusion on the setting of scheduled ancient monuments and landtake from other areas of national archaeological interest or potential: Scheme-wide Effect of Particular Importance**

The following are areas of known archaeological significance or high potential where landtake and disturbance will result in significant effects. In most cases it would be possible to mitigate the effect by archaeological investigations, or in some cases by detailed design to facilitate preservation *in situ*. In two instances detailed design may reduce the intrusion on the setting of visible monuments, but the intrusion is likely to remain significant.

Window 10: Purfleet pleistocene deposits: The CTRL will be in a c. 9 m deep cutting through the eastern edge of these deposits, resulting in significant disturbance almost to the full projected depth of the deposits. The effect could be mitigated by archaeological investigations.

Window 13: Ebbsfleet valley SAMs: The CTRL route affects a series of archaeological sites of high potential, including an area of Palaeolithic potential adjacent to the scheduled 'Palaeolithic sites near Baker's Hole' (SAM affected by planting); areas adjacent to (and with a possible haul road crossing) scheduled 'Neolithic sites near Ebbsfleet', which include areas of Mesolithic, Neolithic and Bronze Age potential; a Roman villa or industrial centre at Northfleet; and the edge of the Springhead Roman Town adjacent to the scheduled 'Springhead Roman Site'. The effects could be substantially mitigated by a combination of detailed design and archaeological investigations.

Window 14: Springhead Roman Temple SAM: the realigned New Barn Road and possibly a haul road will involve slight landtake from the scheduled 'Roman enclosure SE of Vagniacae'. This may be avoided or mitigated through detailed design.

Window 20: White Horse Stone SAM: landtake and intrusion will affect the setting of this scheduled ancient monument, including an area of high archaeological potential adjacent to it and the line of a Roman road. The effect could be reduced by a combination of archaeological investigations and detailed design. The effect on the setting of the White Horse Stone would remain significant.

Window 22: Thurnham Roman Villa SAM: the CTRL will result in the complete removal of this scheduled ancient monument, but the effect could be substantially mitigated by excavation.

Window 33: Boys Hall Moat SAM: landtake and intrusion of a balancing pond will occur immediately adjacent to the scheduled 'Moated Site ... Boys Hall'. This effect might partly be mitigated by detailed design of the pond and archaeological investigations.

6.1.1.3 **Potential disturbance of well preserved archaeology in alluvium and peat deposits: Significant Scheme-wide Negative Effect (Mitigable)**

The potential for well-preserved archaeology in waterlogged conditions has been demonstrated by numerous important discoveries in recent years. The issue is very likely to be significant because the CTRL crosses an exceptional length of alluvial areas. While the overall cases where the potential is actually realised may not be very considerable, this is unpredictable in detail because very little is yet known about the pattern and density of remains beneath alluvium. Where remains do exist they can be very well preserved and of considerable significance as illustrated by the prehistoric trackways recently discovered in the Lower Thames alluvium.

Instances where the engineering and construction of the CTRL makes this most likely to be a significant issue are as follows:

Window 5: Barrington Road Vent Shaft
Window 7: former Barking marshes
Window 8: former Dagenham marshes
Window 9: Rainham and Wennington Marshes
Window 10: Aveley Marshes
Window 11: former Thurrock Marshes
Window 12: Swanscombe Marshes
Window 18: Medway Valley
Window 32: East Stour Floodplain

The effect is mitigable by adopting a suite of protective and investigative techniques. These are as follows:

- Control of hydrological draw-down during construction;
- Staged geo-archaeological and archaeological evaluations;
- Detailed design to allow *in situ* preservation of significant archaeological remains where possible;

- Further investigation with reporting of the results where preservation of significant remains is not feasible, or where it would be inadvisable because of potential effects of compression or hydrological change.

6.1.1.4 **Disturbance in areas of archaeological surface scatters and chance finds: Significant Scheme-wide Negative Effect (Mitigable)**

Areas of archaeological potential identified in the course of fieldwalking or noted from previously recorded discoveries, which are close to the alignment and are likely to be disturbed for landtake or construction, have been identified individually in Chapter 5 as *potentially* significant effects because there is no certainty as to their archaeological importance. However, at least some of these are likely to represent prehistoric, Roman or medieval settlements or other sites, and considered over the scheme as a whole, the cumulative effect on such areas will be significant.

As set out in Chapter 5 for the individual cases, the effect is mitigable by means of detailed field evaluation and, if the surface indications are shown to relate to significant remains, further investigation with reporting of the results, or if feasible preservation *in situ*.

Instances have been noted as follows:

Window 2:	Graham Road Vent Shaft
Window 11:	High House finds
Window 15:	Church Road, Singlewell
Window 18:	Nashenden Valley
Window 20:	West of Boarley Lane
Window 21:	East of Boarley Lane
	Boxley Road
Window 23:	South of Snarkhurst Wood
Window 25:	Harrietsham Mesolithic
Window 28:	Hurst Wood
	Newlands Road and east of Newlands
Window 29:	East of Pluckley Road
	Newland Stud
Window 30:	West of Station Road, Westwell
Window 34:	East of Church Road, Sevington
	West of Station Road, Smeeth
Window 35:	East of Sellindge Converter
Window 35:	North of Westenhanger Castle
Window 37:	North of Saltwood Tunnel

6.1.1.5 **Unknown archaeology: Potentially Significant Negative Effect (Mitigable)**

For reasons of access and crop cycles in relation to the timing of route decisions, not all areas of the route have yet been subject to surface collection survey, and further prospection survey work may reveal other places of similar potential (for areas that have been surveyed see Supplementary Archaeological Fieldwork Report available on request). There is also a strong likelihood on the basis of the areas surveyed by surface collection survey to date that further areas of archaeological interest exist along the route which have not yet been identified.

With no mitigation significant losses would probably occur, but this could be mitigated to a satisfactory degree by adoption of a staged programme of archaeological investigation, including further prospection surveys, evaluations, detailed investigations and reporting if warranted, or preservation *in situ*. This would be as for other archaeological effects and is explained in more detail below (section 6.2.2).

6.1.2 Effects on Receptors

6.1.2.1 Special interest groups: Potentially Significant Positive Effect

The loss of some sites and features will generally be balanced by the gains to knowledge for those concerned with the antiquities of London Essex and Kent.

Archaeologists and palaeo-environmentalists might be affected by the loss of access for research by the burying of some sites, but this would be outweighed by the considerable potential gains to knowledge from archaeological investigations of the transect of countryside crossed by the CTRL, particularly in Kent.

Buildings historians and Industrial Archaeologists may well regard the Terminus issues in a negative light, but elsewhere the loss of buildings where mitigated by removal and detailed investigation would be a more positive aspect.

6.2 Scheme-wide Mitigation

The site-specific mitigation measures incorporated into the CTRL scheme, or put forward as options for further mitigation, have been described individually in the detailed assessment (see Chapters 4 and 5). These fall within a wider framework of how the effects on the historic environment may be mitigated or reduced over the scheme as a whole. This part of the report dealing with mitigation on a scheme-wide basis has several purposes:

- It explains the framework of incorporated principles and policy;
- It shows how the more detailed options for further mitigation outlined in the detailed assessment fit within this wider framework of incorporated mitigation;
- It explains in greater detail what is envisaged in the recurrent types of detailed mitigation options, which (for sake of brevity) are only very briefly outlined in the detailed assessment of the specific localities concerned.

This is dealt with below in four broad categories: general principles and procedures, archaeology, historic buildings, and dissemination of the results of investigations.

6.2.1 General Principles and Procedures

6.2.1.1 Incorporated mitigation

Apart from the individual features of design incorporated into the scheme, there is a general commitment to the mitigation of historic and cultural effects through other appropriate means, as reflected in the following:

- Adherence to the principles of PPG16 for mitigation of archaeological effects;
- Adherence to a policy for dealing with listed buildings to be demolished by the route, or subject to severe intrusion;
- Adherence to the Planning and Heritage Minimum Requirements for the Terminus;
- The formulation of an Historic and Archaeological Plan under a Code of Practice for Construction, as outlined in *The Construction Assumptions for the Environmental Assessment* (Annex 1 of the Environmental Statement).

As stated in Annex 1, the Historic and Archaeological Plan is likely to contain the following:

- Protection measures to known sites and buildings of archaeological or historic interest within or adjacent to work areas;
- Programme and procedures for completion of any outstanding detailed excavations, surveys and architectural investigations;
- Programme and procedures for watching briefs and monitoring;
- Procedures to be adopted in the event of unanticipated discovery or disturbance of archaeological remains;
- Procedures to be adopted regarding artefacts, whether discovered by archaeological personnel or others;
- Procedures for the relocation of listed buildings and other structures, where this is appropriate and agreed in advance.

6.2.1.2 Options for further mitigation

The following represent options not directly specified in the incorporated mitigation as set out in *The Construction Assumptions for the Environmental Assessment*, but which reflect its approach and represent more specific ways through which in general terms the Historic and Archaeological Plan could be developed:

- Detailed site specifications for protection of historic and cultural features within or adjacent to work areas to be developed in consultation with local authorities and English Heritage;
- Detailed site specifications for investigative work to continue to be subject to consultation with English Heritage and the relevant Local Authorities;
- General standards of good practice regarding archaeological (and architectural) investigations to be promoted, including adherence to various professional archaeological codes of practice;
- Archaeological (and architectural) investigations generated by the CTRL to be commissioned with due regard for prompt dissemination of interim reports and popular accounts of discoveries, and full publication of results as soon as possible without hindering the execution of fieldwork;
- The more interesting results of archaeological and architectural investigations to be presented to the public;
- Arrangements to be made as appropriate for the conservation, storage and, if appropriate ultimate display, of finds and archives generated by investigations carried out for the project.

6.2.2 Archaeology: Incorporated Mitigation

In consultation English Heritage and the County Archaeologists have acknowledged that the engineering alignment standards and construction requirements of the CTRL are such that the principal means of mitigating its impact on significant archaeological remains will

be through prior investigation, recording and publication. The following section outlines the incorporated scheme-wide mitigation for archaeology; the scheme-wide options for mitigation outlined below represent options by which the principles of the incorporated mitigation could be developed.

6.2.2.1 PPG16 and the mitigation of archaeological effects

A strategy of staged field investigation will be developed to ensure that as many affected sites as possible are identified and, where necessary, investigated to an appropriate standard before construction begins in the relevant area (in some cases this will need to be carried out as advance works, where access allows, prior to Royal Assent). There will, however, be some work which would have to be programmed into the construction sequence, and more generally there will be a need for monitoring of the early stages of construction to allow for recording of any significant unexpected discoveries.

The incorporated mitigation comprises six basic elements:

- Completion of general prospection surveys to identify previously unknown sites or areas of potential;
- Detailed field evaluation of identified sites or areas of potential (detailed specifications partly already agreed);

Then either:

- Detailed design to avoid or limit disturbance;

Or:

- Appropriate levels of detailed investigation (if possible combined with design to limit disturbance);

Followed by:

- Watching briefs and monitoring;
- Dissemination of results.

In the implementation of this programme the work set out in the following sections has already been completed, is in progress as access and field conditions allow, or has been (or is being) agreed in detail with the relevant local authority archaeologists.

6.2.2.2 General prospection surveys

The objective of this stage is to identify areas of previously unrecognised archaeological interest or potential.

- A walkover survey for non-arable land and woodland where earthworks may be visible has been carried out (for principal areas surveyed see Supplementary Archaeological Fieldwork Report available on request).
- Surface collection survey of all accessible arable areas of landtake has been extensive (see Supplementary Archaeological Fieldwork Report available on request), and will be completed as access and cropping cycles permit. This technique uses a systematic linear transect sampling method to an agreed standard specification. In areas of colluvium and alluvium and areas of deep soils archaeological artefacts may have been buried or worm-sorted to below the modern plough horizon and therefore not brought to the surface. In such instances 'negative' areas can actually hide areas of enhanced preservation. The survey is generally restricted to land to be used, but where only a narrow strip of land is involved it is often necessary to survey beyond the limits of landtake.

- Monitoring of geotechnical boreholes and test pits is already underway (see Supplementary Archaeological Fieldwork Report available on request) and will continue. The methods adopted are presented in the Supplementary Archaeological Fieldwork Report.
- Archaeological aerial reconnaissance of rural parts of route has been undertaken in 1990 and 1993 and may be repeated if there are favourable conditions for cropmarks. The timing of the flights is designed to identify both soil-marks and seasonal stages of cropmark development, and is sufficiently flexible to respond to particularly favourable conditions by increasing flights.
- Proposals are being agreed for magnetometer and magnetic susceptibility scanning in areas of grassland, where aerial photography and surface collection surveys are of limited use or impracticable. This method is not applicable to alluvial areas where archaeological deposits are likely to be deeply buried. Where areas of potential are identified they will require more detailed geophysical survey to characterise them, normally using a full scale magnetometer survey.

6.2.2.3 Detailed field evaluation

The objective of this stage is to evaluate known sites and areas of archaeological potential in more detail so that firstly an evaluation of their importance can be made, checked or modified, and secondly that requirements for further investigation or, if feasible and appropriate, preservation *in situ* can be defined.

The use of machine trenching is a normal method of archaeological evaluation. Sampling rates of around 2% of land surface of areas of recognised archaeological potential are often applied. This figure is based on achieving a high statistical probability of locating sites of more than 40m diameter. Although it was originally developed for a specific sampling problem to locate Bronze Age ring ditches, it is frequently given as a reasonable basis for evaluating areas of archaeological potential by local authorities requesting further information from developers. However, a standard rate of sampling will not be appropriate to all situations. The use of other techniques instead of, or in addition to trenching may be appropriate for specific sites and circumstances. Similar techniques to those used for general prospection will also be built into individual proposals where these need to be used (eg the accurate plotting of features from air photography; measured earthwork surveys at 1:2,500 or larger; more intensive surface collection survey grids; full geophysical surveys; specialist borehole sampling).

Evaluation proposals have been agreed with English Heritage and relevant local authority officers for the following sites:

Terminus:	St Pancras terminus area
Window 3:	Stratford Box
Window 7:	Choats Manor Way
Window 8:	Rainham Wharf
Window 9:	Rainham Trackway
Window 10:	Purfleet Palaeolithic Site
Window 13:	Ebbsfleet Valley and Springhead
Window 15:	A2 South of Tollgate
Window 18:	Cuxton Saxon Burial
Window 20:	White Horse Stone
Window 22:	Thurnham Roman Villa

6.2.2.4 ARCHAEOLOGY: OPTIONS FOR FURTHER MITIGATION

These options represent more detailed explanations of how the basic provisions of the incorporated mitigation could be developed.

6.2.2.5 **Detailed field evaluation**

The following sites have been identified as likely to require field evaluation:

Window 2:	Area of Archaeological Potential around Graham Road Vent Shaft
Window 3-3A:	Lea Valley Area of Archaeological Potential
Window 11:	High House finds
Window 14:	Finds scatters and cropmarks at Northfleet
	Area of potential west of Tollgate
Window 15:	Find Scatters West of Church Road Singlewell
Window 16:	St Thomas's Well
	Line of Roman Watling Street at Scaler's Hill to Cobham Park
Window 18:	Nashenden Valley area of archaeological potential
Window 20:	Finds scatters west of Boarley Farm
Window 21:	Finds scatters east of Boarley Lane
	Area of probable prehistoric, Roman and medieval settlement west of Boxley Road
Window 23:	Area of Archaeological Potential south of Snarkhurst Wood
Window 25:	Harrietsham Mesolithic Finds
Window 28:	Brockton Farm
	Hurst Wood Archaeological Finds
	Area of Archaeological Potential Newlands Road and East of Newlands
Window 29:	Finds Scatter East of Pluckley Road
	Finds Scatter Newlands Stud
Window 30:	Cropmarks and Finds Scatter West of Station Road, Westwell
	Cropmark Enclosure South of Beechbrook Wood
Window 31:	Yonsea Farm, Possible Medieval Manor site
Window 33:	Area of Archaeological Potential adjacent to and north west of Boys Hall Moat and north of Sevington Railhead
	Prehistoric, Roman and Medieval Finds Scatter East of Church Lane Sevington
Window 34:	Area of Archaeological Potential, Mersham Construction Site
	Finds Scatter West of Station Road, Smeeth
	Area of Archaeological Potential Station Road to Church Lane
Window 35:	Area of Archaeological Potential East of Sellindge Converter Station
Window 36:	Finds North of Westenhanger Castle
Window 37:	Sandling Main Construction Site
	Area of Archaeological Potential North of Saltwood Tunnel

6.2.2.6 **Preservation *in situ* through detailed design and control of construction practices**

In the light of evaluations it is likely to be possible in some cases to develop detailed design proposals of various types to avoid disturbing archaeological remains. Various matters of principle and practice would require consideration to determine whether particular options are applicable. These include:

- The nature of what is being buried or avoided, based on the field evaluation;
- The relative public interest of preserving deposits *in situ* for research in the future using improved techniques (though in some cases rendering them inaccessible for the foreseeable future), balanced against the value of investigating them now and hence advancing knowledge;
- Whether deposits buried *in situ* could in practice be re-exposed without them being damaged;
- Whether waterlogged deposits preserved beneath structures or earthworks might become subject to decay from dewatering (potentially from unforseen unconnected agency), which would be physically impracticable to mitigate;
- The depth of archaeological deposits of interest and how this relates to overlying ground conditions (e.g. in rural areas archaeological remains often survive just beneath the topsoil and are defined by the depth of ploughing; in alluvial areas archaeology may be quite deeply buried but soft overburden may provide little protection against compression and distortion caused by heavy plant);
- The potential effects of compression and rutting caused by heavy plant and how this might be controlled;
- The need to define and mark on the ground any areas due to be protected from disturbance.

Specific options for detailed design potentially worth considering to avoid or reduce archaeological impacts in particular cases include the following:

- Fencing off areas adjacent to or within the working area to ensure that accidental damage is avoided;
- Building embankments, mounding or working surfaces on the present ground surface, avoiding topsoil/surface stripping;
- Stripping of areas to predefined levels above buried archaeological horizons, avoiding plant working on the exposed surface, installation of geotextile and formation of earthworks/working surface, with the plant always working from material already emplaced;
- Design of structures and building foundations to minimise ground disturbance (including consideration of piling techniques, reinforced earth construction etc.);
- Design of buildings, working areas etc. to build up surface areas for non-structural elements rather than digging down.

6.2.2.7 Appropriate levels of detailed archaeological investigation

The use of excavation and survey as a means of mitigating impacts on archaeological sites is well established by PPG16 as an alternative to preservation *in situ* where this is impracticable. It is assumed in the incorporated mitigation that this will be a standard means of mitigating unavoidable destructive impacts where deposits are shown by evaluation to be of importance. In developing options for how such investigations might be undertaken the following considerations would provide a framework for the development of a coherent body of work.

Excavation can be seen as an exercise in carefully controlled, destructive sampling of deposits to extract selectively such information as appears to be of value in helping to understand the past. Such sampling is selective: present techniques cannot recover information which may in future become available, and total excavation of every deposit is seldom justifiable. The inherent sampling activity involved in excavation must be structured and designed to ensure adequate recovery of important information while

avoiding the costly accumulation of knowledge of little use. As such it should be undertaken within research objectives of demonstrable value.

In many instances, the general prospection surveys and detailed evaluations will themselves provide an adequate record of areas affected by the CTRL. But where the archaeological potential of an area is confirmed and deserves more detailed investigation, it would be appropriate to draw up specifications within the following categories of investigation:

Limited sample excavations which examine a generally small proportion of a site. This is applicable in two types of case:

- When the site is of a character where there is relatively little variability over long distances (e.g. roads, field systems, colluvial and alluvial deposits) where only small areas are required to provide an adequate sample, though these may nevertheless be subject to highly intensive study, as in the case of colluvial deposits (Kerney *et al* 1980, Bell 1981)
- Where a site is of limited importance or only peripherally affected. In this case it may be sufficient to excavate only very small parts of it in detail (though a larger area may be stripped carefully to expose it). The recovery of a plan, key stratigraphic relationships, basic dating evidence and a general characterization of palaeo-environmental deposits may often be an appropriate level of response in these situations.

Full excavations in which the landtake areas affecting a site are stripped to archaeological specifications and all deposits are sampled archaeologically. This is likely to involve a full record of deposits and structures and their relationships, much fuller recovery of artefactual evidence, and detailed sampling of palaeo-environmental deposits. It is applicable to sites of national or county importance, particularly where moderate and severe landtake impacts will occur.

Total excavations where all or most deposits are totally excavated rather than being sampled. It is appropriate to two main categories of site:

- Where severe land-take impacts of limited extent affect especially rich complex deposits;
- Where by virtue of the character of the site anything less than total recovery of finds and stratigraphic information would be an inadequate record. This applies particularly to cemetery sites where all burials likely to be affected should be removed archaeologically (in accordance with Home Office Licence conditions). It might also apply to other types of site of regional or national importance where the maximum recovery of finds and other information is needed to interpret the evidence.

A similar approach may be taken to non-excavation survey work. For example many early prehistoric sites consist largely of artefact scatters within the ploughsoil and a detailed gridded surface collection survey can constitute the major record of such a site.

6.2.2.8 Watching briefs and monitoring

Observation during construction work can be a very unsatisfactory means of archaeological investigation since there is little control on the circumstances and standard of discovery and recording. Both archaeologists and contractors are potentially put in the position of interfering substantially with each other's legitimate concern of doing their job to a satisfactory standard within pre-set timetables.

Nevertheless, this stage is of importance because it is inevitable that not all sites will have been identified and investigated before construction starts, and it is therefore necessary to ensure that the opportunity to record remaining unidentified sites is available. The deliberate use of watching briefs to record sites identified prior to construction has some validity in the following circumstances:

- sites of local importance with low archaeological potential
- areas where construction logistics and safety preclude detailed investigation,
- sites or areas where basic documentary and map evidence is good and only easily observed additional information is needed.

The monitoring of preliminary construction work (e.g. topsoil stripping for the haul road, service diversions, excavation of drainage ditches, road diversions) could be very valuable for gaining early warning of any unexpected discoveries additional to those arising from the preceding stages, and thereby ensure reasonable time for further investigation.

As indicated in the *Construction Assumptions for the Environmental Assessment* the Historic and Archaeological Plan would be designed to avoid this problem as far as possible, by establishing a reasonable procedure for dealing with discoveries.

Areas where this has specifically been identified as a mitigation option are at the North Downs West Portal, Longham Wood, and The Chestnuts, Eyhorne Street.

6.2.3 Mitigation for Historic Buildings: General Considerations

Buildings likely to be demolished for the CTRL range from those of no historic or architectural interest to those statutorily listed as being of special historic or architectural interest, with features of many periods. The appropriate level of response varies accordingly, but in most cases some record of the building's appearance and a written assessment of its history will need to be made. In the case of the most important of the threatened historic buildings, dismantling and relocation may be a preferable option to losing them altogether, but this does not obviate the need for prior recording work.

Recording standards have frequently been discussed in recent years, and the RCHME has produced a specification for recording historic buildings (RCHME 1990). Four levels are identified, ranging from the merely visual (Level 1), through descriptive (Level 2) and analytical (Level 3) to the more detailed (Level 4), each involving an appropriate amount of photography and survey. However, a yet fuller structural investigation of an archaeological nature is required in cases of demolition of more complex buildings, especially where earlier features are obscured by plaster and later accretions and only intrusive analysis can determine their history of development. Timber-framed buildings will also require dating by dendrochronology, where this is possible, in accordance with normal principles for sampling timbers for dating by this method.

For older buildings excavation of the site is necessary to record any earlier phases and previous buildings on the site thus amplifying the history of the building as learnt from its surviving features above ground. This would especially be true for historic farm sites such as Brockton and Yonsea. The excavation is integral with the recording work and should take place before demolition, investigating the surrounding area as well as the site of the building itself. The level of detail of such investigations should be determined in a similar manner to other archaeological excavations. Detailed investigations, with varied levels of recording, have already been carried out by the Canterbury Archaeological Trust

on buildings demolished for the Channel Tunnel in Frogholt and Newington (Canterbury Archaeological Trust 1989).

It is important that recording is carried out by technically competent surveyors conversant with historic buildings, experienced both in interpreting the often complex structural development of historic buildings, and in the requirements of the rebuilding process. They should also be capable of recognising and recording historic decorative schemes such as wallpapers and wall paintings. Such work should include preparation of reports and records to be deposited in local archives and the National Buildings Record of the RCHME and with appropriate local bodies, and reports prepared for publication as appropriate.

6.2.4 Historic Buildings: Incorporated Mitigation

The project's policy on listed buildings provides for the following mitigation measures.

6.2.4.1 For listed buildings to be demolished

- Relocation of demolished listed buildings where their historic or architectural character is agreed to merit relocation, it is technically feasible and costs are considered acceptable.
- For buildings to be relocated detailed recording to RCHME level 4 standard will be undertaken to provide information for rebuilding.
- A survey of each building to be demolished but not relocated will be carried out to an appropriate level, depending on its quality and as agreed with the local authority and English Heritage.
- For listed buildings to be demolished but not relocated, architectural materials will be made available for sale or re-use, or offered to appropriate heritage organisations with an interest in acquiring the material.

6.2.4.2 For listed buildings not requiring demolition but at risk of being unviable for continued use

- Agreement on mitigation will be sought with the relevant local authority for listed buildings where mitigation is likely to safeguard the long term maintenance of the building and its historic interest.
- Listed buildings where the historic character and long term maintenance is at risk even with mitigation, will be considered for demolition and relocation, as above.

6.2.4.3 For listed buildings subject to landtake but not considered to be at risk of becoming unviable

- Agreement on the detailed design of mitigation will be sought with the relevant local authority and heritage organisations.

6.2.4.4 For unlisted historic buildings to be demolished

- External proposals for relocation to be undertaken by other parties will be considered.
- Access will be provided to others to record for *bona fide* research.

On present evidence, as stated in the detailed assessment (see Chapter 5) and suggested in the options for further mitigation listed below, the more significant of the Grade II listed buildings are likely to be capable of relocation elsewhere.

6.2.5 Historic Buildings: Options for Further Mitigation

Under the incorporated mitigation the standards of recording to be adopted for each building will need to be established in consultation with English Heritage, RCHME and the local authority Conservation Officers. These standards could be developed on the basis of the following principles.

6.2.5.1 Buildings requiring or worthy of general investigation and recording prior to demolition

A group of listed and unlisted buildings has been identified as being of more than minor interest. They should be photographed and planned, with any appropriate degree of structural investigation (RCHME Levels 3-4)

Stanley Building, St Pancras Road (Grade II, OAU No. 3037)
Part only to be lost, but worthy of general investigation for detailed aspects of this pioneer example of social housing.

German Gymnasium, St Pancras Road (Grade II, OAU No. 3040)
Part only to be lost, but worth recording as an integral part of the gymnasium building.

St Pancras Station (Grade I, OAU No. 3035)
Part only to be lost, and generally well recorded in contemporary drawings, but physical appearance and construction details of this Grade I structure will be worth recording.

Water Point, St Pancras Station (Grade II, OAU No. 3031)
Worth investigation to establish its function and origins, and traces of earlier building; also to survey for feasibility of rebuilding, and any level of survey necessary in the case of rebuilding.

Brockton Farm outbuildings, Charing (Unlisted, OAU Nos. 172, 385)
Curtilage buildings, one of which has already been demolished: minor parts of an historic farm group, unlikely to be worth rebuilding.

Yonsea Farm, Hothfield (Grade II, OAU No. 193-7)
Listed group of model farm buildings, of c.1830, including house, oasthouse, granary and cartshed, bungalow and two ranges of barns, with other sheds and structures. Unusual for Kent, this group might partially be saved though severed by the CTRL; if they cannot be saved *in situ* some buildings may be of interest to rural life museum but otherwise unlikely to be worth rebuilding.

Ashford LCDR Station buildings (Unlisted, OAU Nos. 494, 567, 568)
Unlisted late 19th-century railway station, goods shed and carriage shed, well-preserved examples of railway buildings with original features. Constructed after 1884 when the London Chatham and Dover Railway opened from Maidstone, the station was closed in 1899, but the sheds continued in railway use.

Willesborough Level Crossing Box (Unlisted, OAU No. 365)
Unlisted minor 19th-century railway structure, requires appropriate recording for it to be re-erected in a museum of railway history.

4 Boys Hall Road, Willesborough (Grade II, OAU No. 209)
Listed cottage, originating as single-storey cottage of c.1800, with top floor added in c.1895. Few features of interest, and unlikely to be worth rebuilding.

6.2.5.2 **Buildings requiring detailed investigation prior to demolition**

Five buildings due for demolition are of sufficient age and intrinsic importance to be subject to detailed archaeological investigation of the type described above including, where appropriate, below ground investigation. The incorporated mitigation requires that consideration will be given to these buildings being re-erected elsewhere if this is feasible.

Group of three Gasholders, St Pancras (Grade II, OAU No. 3024)
The structure of the Gasholders will require detailed investigation to establish the feasibility of rebuilding, and as a record of an intricate example of Victorian Gas engineering, and any further level of survey required for dismantling and rebuilding.

Brockton Farmhouse, Charing Heath (Grade II, OAU No. 170)
A listed 17th-century timber-framed farm house, originally a two-room plan with a central chimney stack and a rear service wing, extended and encased in brick in the late 18th century. The framed part, although somewhat altered, and mostly obscured at present, may prove worthy of preservation, though this does not seem very likely.

Brockton Farm barn and attached outbuildings (Grade II, OAU No. 171)
Listed thatched timber barn of c.1700, which is relatively complete with remains of partitions and threshing floor, and is capable of preservation. Attached to the barn, partly enclosing a yard in front of the house are two later wings. One of these is a stable or byre which retains original flooring, feeding trough and partition. The good quality and state of preservation of the structure, together with its desirability as a usable period building make this worthy of rebuilding, preferably with the wings.

No. 2 Boys Hall Road, Willesborough (Grade II, OAU No. 210)
A timber-framed cottage, 16th or early 17th-century, probably part of a larger house and reusing medieval timbers, but possibly an unusual small two-cell house. The framing is largely complete, and its quality and age makes it worthy of rebuilding. Archaeological investigation here would resolve the question of the original extent of the building.

Talbot House, Sellindge (Grade II, OAU No. 247)
A 15th-century hall-house that has been surveyed in outline by the RCHME. Although not of such outstanding quality as some such houses in Kent, it has some fine internal features (e.g. the hall screen), and is a good example of conversion in the 16th century by the insertion of chimney-stack and floors in the open hall. The timber frame is substantial, and partly underbuild in brick. This is most certainly worthy of preservation, as a house as much as a museum exhibit. Archaeological investigation might reveal whether it had a predecessor on the site.

As indicated above, the Water Point at St Pancras and some of the buildings at Yonsea Farm, which warrant general investigation and recording, could prove worthy of relocation, in which case detailed investigation and recording prior to and during demolition would be required to enable them to be rebuilt elsewhere.

6.2.5.3 Relocation and reconstruction of buildings

In order to fulfil the statutory requirement of Section 16 (2) of the Planning (Listed Buildings and Conservation Areas) Act 1990 to seek to preserve listed buildings, those of sufficient historic or architectural interest and appropriate construction may be dismantled and reconstructed elsewhere. Storage of dismantled buildings is not a satisfactory solution, though preferable to the dispersal of building materials through piecemeal sale.

Attention has been drawn in the previous section to the individual merits of the buildings with regard to their possible rebuilding. Buildings can be worth preserving not only for their intrinsic architectural interest, but also for their educational and amenity value. Other considerations affecting their preservation include their structural suitability for rebuilding and their financial value. This is relevant in instances where there may be no other overriding reason for preservation, but where, by virtue of its resale value on a new site, relocation becomes a financially more viable option to preserve the building.

The process of making a detailed record prior to demolition can have the dual function of creating an historic archive and the blueprint for rebuilding, and should be carried out as an archaeological exercise. In the case of iron and timber-framed buildings, their method of construction easily lends itself to careful dismantling and re-construction, as the timber joints can be taken apart and put together again with relative ease. Buildings of brick or flint construction are somewhat harder to reconstruct with an accurate re-use of materials.

Options for reconstruction would include rebuilding in an existing or specially established building museum, rebuilding individually near existing sites or elsewhere for re-use; or even rebuilding as a group for resale on a new site away from the CTRL. In whichever case consideration should be given to whether the relocated buildings should be re-erected separately or be brought together as a group. The latter has much to recommend it for the majority of the cases as the buildings concerned happen to form a good range of Kentish vernacular buildings.

6.2.5.4 Buildings requiring detailed investigation if their demolition is unavoidable, or if they became derelict

A number of buildings which are of some age and intrinsic importance will be subject to severe intrusion and can be considered 'at risk' on account of their proximity to the CTRL. Those identified by the assessment as falling within this category are:

Old Cottage/Water Street Cottage, Lenham Heath (OAU No. 159)
Yew Tree Cottage, Lenham Heath (OAU No. 161)
Orchard Cottage, Sevington (OAU No. 216)
Maytree Cottages, Sevington (OAU No. 217)
Bridge House, Mersham (OAU No. 234)

Options are put forward in the detailed assessment for further mitigation to reduce the levels of intrusion in these cases, which could substantially reduce the possibility of the

buildings being unviable for continued use. This requires further detailed consideration on a case-by-case basis. It is important that these buildings are given the best chance reasonable to test whether they are viable for preservation *in situ* for some time after the CTRL comes into operation, and will be maintained with this in mind.

However, if further mitigation options were considered unlikely to ensure the survival of these buildings, and their demolition were unavoidable, they might require detailed investigation in accordance with the incorporated mitigation policy and the terms of any consents obtained under normal planning controls that might apply.

6.2.5.5 Buildings not requiring detailed investigation

The scheme-wide incorporated mitigation for effects on historic buildings excludes detailed survey of unlisted historic buildings due to be demolished (but allows for access for others to undertake such work).

There is a good case for making more basic records of unlisted buildings and structures in conservation areas, those within the curtilages of listed buildings and also those of specific interest for particular local history. This is generally implicit in the incorporated mitigation for the Terminus but is given as an option for further mitigation at individual localities on the rest of the route, most notably at Brockton and Yonsea Farms and the railway buildings due to be demolished at Ashford.

A photographic record of all historic buildings threatened with demolition would be of interest for local history rather than of significance for its architectural history. This also applies to other historic structures such as the unlisted pill boxes and railway structures that will be demolished. For all minor structures, this need be no more than external photography accompanied by a brief written description (RCHME Levels 1-2), and is not a large task given the numbers involved.

6.2.6 Dissemination of Results

Important potential benefits of the project are the gains to knowledge and insight it will provide about the density, distribution and pattern of settlement and landuse through time along a substantial transect across south east England. In particular it will be by far the largest systematic study of such a transect through Kent.

In order to maximise the general public benefit of the various investigations which will be undertaken to mitigate the effects of the CTRL on archaeological remains and historic buildings, and to mitigate the effects on groups with a special interest in the resources affected by CTRL, the results of all investigations undertaken for the project could be disseminated in a variety of formats, designed both for the general public, and professional and amateur specialist groups and individuals.

All the stages of work will contribute to this understanding, and would warrant incorporation into the overall analysis, as would significant results of investigations of previous routes no longer being developed.

Incorporated Mitigation:

In respect of archaeology, PPG 16 paragraph 25 provides in general terms for the dissemination of results of investigations carried out to mitigate the impact of development.

Options for Further Mitigation

The following options for means of dissemination for both archaeological and historic building investigations are all worth consideration:

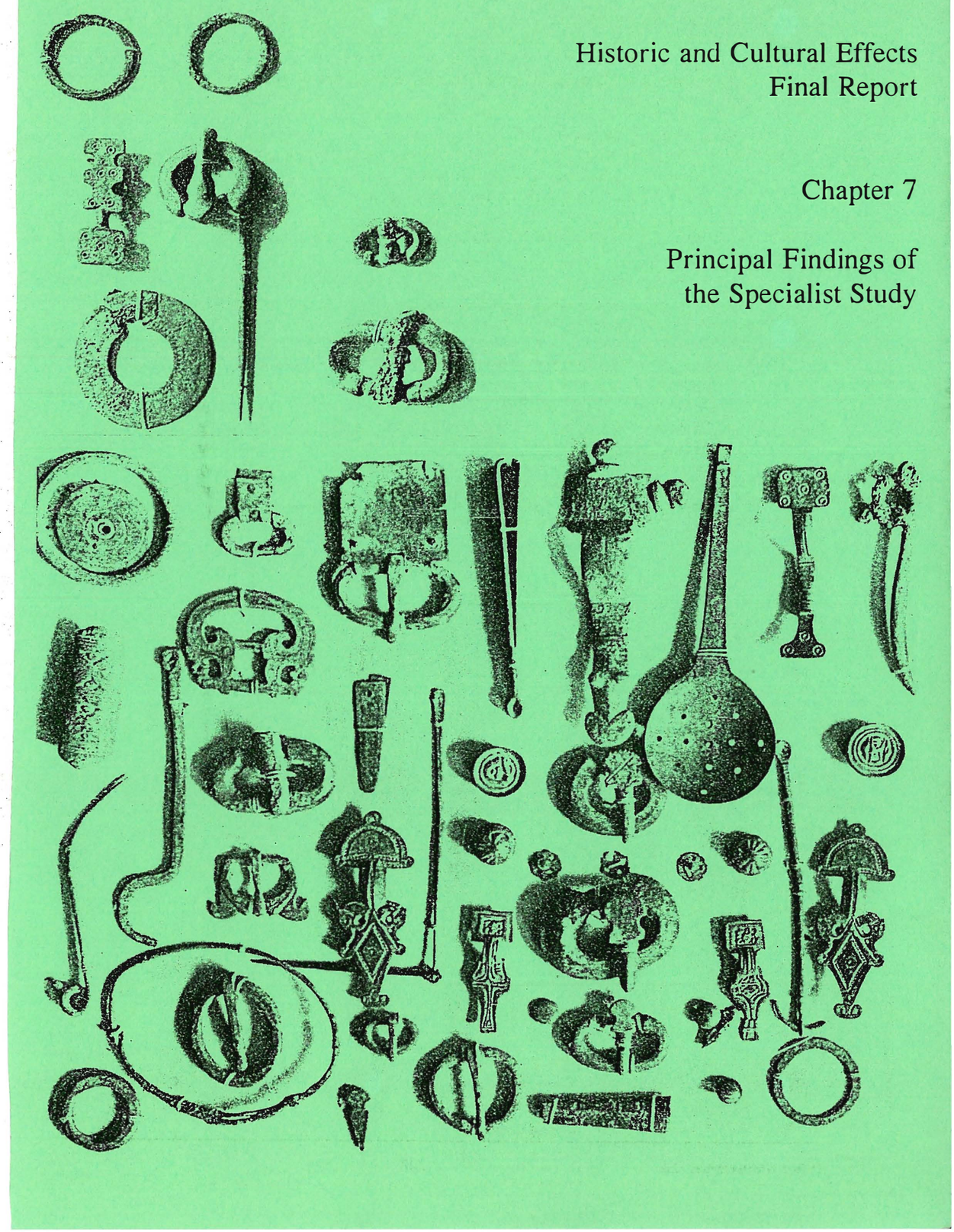
- Temporary displays and public open days to large area excavations;
- Video or other film media;
- Popular booklets;
- Interim reports of work for county journals or other regularly published medium, summarising work done in previous year;
- Academic Reports, either on individual sites or types of work, or more likely synthesising several strands of fieldwork and individual excavations on a thematic basis;
- Permanent display(s) potentially to be sited in the Terminus or intermediate station(s). This could incorporate finds and display panels but possibly also interactive computer displays using archaeological data, digitised mapping and reconstructions. Potentially part of general major exhibition about the project.
- Archiving and finds deposition, normally in museums, but in some cases owners may wish to retain material (or it may be required for permanent display).

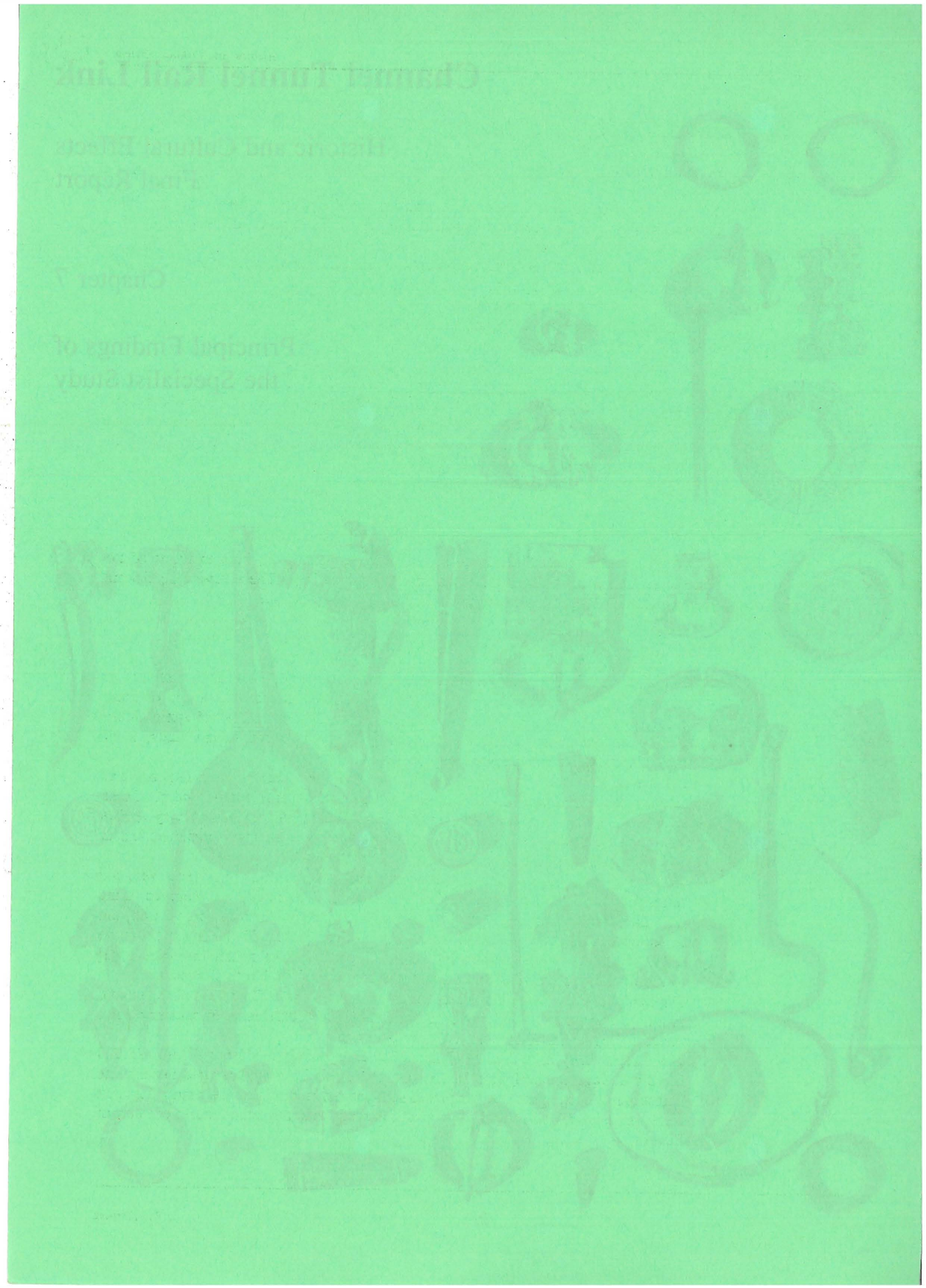
Channel Tunnel Rail Link

Historic and Cultural Effects
Final Report

Chapter 7

Principal Findings of
the Specialist Study





7 PRINCIPAL FINDINGS OF THE STUDY

7.1 INTRODUCTION

This chapter summarises the principal findings of the study in terms of the main categories of significant effects and general mitigation. The chapter deals in turn with:

- An overview giving the overall context of the historic environment and the CTRL and introducing the significant effects of particular importance;
- Terminus effects and mitigation;
- Alignment and scheme-wide effects and mitigation;
- Scheme-wide mitigation.

Within these sections the broad categories of historic buildings, landscape and archaeology are maintained. The summaries of the terminus and alignment effects are divided into recurring categories of significant effects based on the main kinds of resources and impacts, so as to provide an overview of the nature of the effects which the CTRL will have on the cultural heritage.

7.2 OVERVIEW

Viewed as a whole the CTRL route has several characteristics, both in terms of the historic environment which it traverses and its engineering. These have a significant influence on the nature of its effects on the historic environment.

Key Aspects of the Historic Environment of the CTRL Route are as follows:

- *The outstanding Victorian architecture and townscape of St Pancras Station and its surroundings at the Terminus.* St Pancras has been called 'the King, or more properly the Queen Empress of railway stations' (Richards and MacKenzie 1986). The varied Victorian townscape surrounding St Pancras and King's Cross is of exceptional extent, completeness and variety.
- *The pleistocene and holocene alluvial deposits of the Thames river terraces and alluvium across the Thames marshes, at Purfleet and in the Ebbsfleet Valley.* These areas are of outstanding importance for palaeolithic archaeology and of considerable significance for prehistoric and Roman remains which are often well preserved in peat deposit within and beneath alluvium.
- *The overall richness of Kent archaeology, and its long history of links with the continent from prehistoric times onwards.* Over 10,000 entries are recorded in the Kent Sites and Monuments Record. Many reflect finds made during destruction, but discoveries from survey work (such as that undertaken for CTRL) suggest that the SMR substantially under-represents the full picture, particularly in some areas including the fringe of the Weald and the scarp foot of the North Downs.
- *The early development of dispersed farms and settlement in Kent.* This has resulted in a high frequency of outlying farms and subsidiary settlements of ancient origin, including higher status manors and later parkland.
- *The exceptionally high density of listed buildings in Kent.* Kent's 20,000-25,000 listed buildings is the highest for any county outside London, scattered through the landscape, reflecting the early dispersed settlement pattern. It has been suggested that Kent has a greater diversity of medieval buildings than any other equivalent part of Europe.

There are a number of design considerations and constraints, concerning the requirements for the terminus, horizontal and vertical alignment standards, constraints imposed by the alignment of existing road and rail corridors and construction requirements, which influence the impact that the CTRL will have on the historic environment (see Annex 1 of the Environmental Statement for a description of the CTRL, and Chapters 4 and 5 of this report for how it relates to specific historic and cultural resources).

The combination of these historical and engineering design factors have an important influence on the nature of the historic and cultural effects of the CTRL. There are a number of other aspects of the CTRL design and incorporated mitigation which will help to redress its negative effects:

- Adapting St Pancras Station to form a key European terminus worthy of the grandeur of its architecture;
- The 15km London tunnel avoiding a surface route through conservation areas east of the Terminus;
- Provision of short cut and cover tunnels to protect key locations in Kent;
- Extensive screening and landscaping to reduce the intrusiveness of the alignment.

In the following sections the main effects of the CTRL and their mitigation are summarised. The significant effects of particular importance are as follows:

- Alterations to the fabric of St Pancras Station and intrusion on its setting (unavoidable);
- Effects on the Victorian townscape at the Terminus (unavoidable)
- The overall number of listed and conservation area buildings to be demolished or at risk of being unviable (unavoidable);
- The overall effect of landtake and intrusion on scheduled ancient monuments and other areas of national archaeological importance or potential (largely mitigable);
- Landtake and intrusion at Cobham Park (unavoidable).

7.3 St Pancras Terminus Effects

At the Terminus there will be significant alterations to the fabric of the Grade I St Pancras Station itself, and major changes to its setting and the surrounding townscape. In addition to the loss of historic buildings and structures, there will be significant visual intrusion on the setting of St Pancras Station both during construction and permanently as a result of the major additions to the station and the changes to its surroundings.

The detailed impacts are numerous, and several are in themselves significant effects. Cumulatively these can be grouped as two effects of particular importance relating to the station itself and to the historic townscape around it. St Pancras Station is one of the masterpieces of Victorian architecture, and its townscape setting is of unusual completeness and variety. These effects are therefore of particular importance.

A third non-significant effect relates to the archaeological impact of the scheme. It is considered non-significant on the basis that the Government's Planning and Heritage Minimum Requirements for works in connection with the new Terminus include archaeological evaluation and appropriate mitigation measures. These will be subject to detailed consultation with English Heritage beforehand, in accordance with the principles of PPG16.

7.3.1 ST PANCRAS STATION (Significant Negative Effect of Particular Importance)

7.3.1.1 Alterations to the fabric

The outline architectural scheme for the new terminus, which has been used as the assumption to be assessed, is sufficiently detailed to determine the more significant impacts. Losses to the fabric of St Pancras Station will include: the demolition of the arches and elevation to Pancras Road and Midland Road at the north end outside the roofed area of the station for construction of new platforms; loss of Midland Road frontage northwards from the north end of St Pancras Chambers (i.e. brick arcaded and fenestrated wall), and other gothic features and structures between the Midland Road wall and the main trainshed for new International Departures Lounge.

Internal alterations to the Grade I listed train shed at St Pancras will include a series of new structures on the west side of the station (and alterations to doors and windows to accommodate them), refurbishing of existing rooms and floor and concourse surfaces. New structures will include escalator wells, a substantial footbridge at the north end of the trainshed, a security screen down the platform and travelators in the undercroft.

7.3.1.2 Setting

There will also be substantial changes to the setting of the station.

- The extension of the station to the north with a new roof canopy, and the various demolitions, alterations and additions will affect key views of the listed station from the south, on both east and west sides, and from the north-west and north-east. The only major views not substantially affected will be those along Euston Road and Pentonville Road.
- The less significant views from around the Great Northern Hotel will be substantially changed, mainly by the new road layout, which will replace some of the more intrusive modern features in this area.
- The general townscape setting of the station will be severely affected, with the loss of several historic buildings walls and other detailed features of the surrounding area as described below.

Some mitigation is almost certainly possible at the detailed design stage by relocating some structures; otherwise the effects will be offset to some extent by the benefits of cleaning and refurbishing the station, and its being seen and appreciated by a much larger number of people than at present. A possible indirect benefit, potentially of major value, but not part of the CTRL proposals, would be if the CTRL terminus induced a suitable long term use and preservation of St Pancras Chambers.

7.3.2 ST PANCRAS TOWNSCAPE (Significant Negative Effect of Particular Importance)

This is a cumulative effect, of particular importance, comprising the loss of listed and unlisted buildings within the conservation areas, and the loss of a cohesive section of Victorian townscape, seen in association with the great railway termini. For ease of comprehension the effect in terms of the different elements of the townscape will be summarised, following which key component parts will be dealt with individually.

7.3.2.1 **Summary of impacts on character zones of historic townscape**

- Railway Yards and Specialised Freight Handling Facilities: *Impact slight.*
- St Pancras Church and Former Village: *Impact slight to moderate.*
- Regents Canal and Associated Basins etc: *Impact slight.*
- Gasworks: *Impact severe.*
- The Railway Passenger Terminus Buildings and Associated Hotels at St Pancras and Kings Cross: *Impact of alterations to St Pancras moderate, intrusion on setting severe; Impact of alterations to Kings Cross possible benefit.*
- Commercial and Domestic Buildings North East of St Pancras Station: *Impact severe.*
- Commercial and Domestic Buildings East and South of King's Cross: *Impact none.*

7.3.2.2 **Loss of townscape features**

The CTRL works will involve the demolition or partial demolition of eight other listed buildings, (three Gasholders, the railway Water Point, parts of the Stanley Buildings and German Gymnasium, together with the porte cochère of Kings Cross and a boundary wall on Euston Road both of which will be re-erected). Thirteen unlisted conservation area buildings of historic interest, together with numerous items of street furniture and cobbled surfaces, are likely to be lost. The unlisted items include three further Gasholders; 19th-century brick walls and arches on Pancras and Midlands Roads; bridge abutments, arches and street elevation further north on Pancras Road towards the old St Pancras Church for Thameslink Station; wall and other features in Cheney Road; and a group of buildings on Pancras Road at the front of the German Gymnasium. The former LNER stables and a tunnel vent shaft chimney, together with other railway buildings outside the conservation areas may be lost within the construction sites for the new Terminus.

Some of these buildings contribute directly to the setting of the two Victorian railway termini, as with the series of arches round St Pancras, or the group of buildings on Pancras Road round the German Gymnasium. Others are of interest in their own right, as in the case of the gasholders, which dominate or contribute to many views as seen in association with different buildings or structures, making this one of the most unusual pieces of surviving Victorian townscape in London. This will irrevocably disappear.

The loss of listed buildings is considered below on a scheme-wide basis. The most serious loss at the Terminus will be the three listed gasholders, though this could be mitigated by their being rebuilt nearby if feasible and thus retaining their association with St Pancras.

7.3.3 ST PANCRAS ARCHAEOLOGY (Non-significant Negative Effect)

There is much archaeological potential in the St Pancras area in relation to the significance of the history of the Fleet River for the environment and early settlement of the area, the largely unknown Roman and early Medieval settlement pattern, and the possibilities for post-medieval domestic and industrial remains, especially of the short-lived slums in Agar Town. The effect will be non-significant because of the incorporated mitigation to undertake suitable evaluation and further investigations, details of which will be formulated in consultation with English Heritage.

7.4 ALIGNMENT AND SCHEME-WIDE EFFECTS

7.4.1 OVERALL HISTORIC ENVIRONMENT AND HISTORIC LANDSCAPE

The main effects of the CTRL for historic landscape resources and areas of good historic landscape integrity will occur in areas where there are relatively complex survivals of interrelated features reflecting different landuse. Areas of parkland and woodland tend to preserve these characteristics well and these are the main features of the areas where the CTRL will have most effect. This will be significant in the following cases.

7.4.1.1 Parks and areas of good historic landscape value:

Significant Effects will occur at the following localities:

Window 16: **Effect of Particular Importance:** Cobham Park (Grade II* registered park): Landtake and loss of whole of remainder of northern boundary, loss of detailed features, severe intrusion on northern edge of park away from Cobham Hall but affecting some key views within the designed landscape.

Window 21: Boxley Valley: Landtake, severance and intrusion on area of woods, parkland and earthworks, ponds and other minor features which reflect landscape recorded on early maps; unusual survival for scarp foot of North Downs, and significant contribution to setting of Boxley Conservation Area.

Window 27: Chilston Park (Grade II registered park): Landtake and severance of area already severed from main park by M20, but much of original northern boundary along Lenham Heath Road will be lost or altered; some intrusion to main park and house over M20 bunding.

Window 31: Area North of Godinton Park (Grade I registered park): Severance and intrusion across an area of generally good historic landscape survival which contributes to the setting of Godinton Park.

Window 37: Sandling Park (Grade II registered park): Landtake from northern part of Park including tree belt and other scattered trees, intrusion on areas north and south.

7.4.1.2 Severance and landtake for historic woods:

Significant Effects will occur at the following localities:

Window 17: Cobham Woods (Temple Wood, Clay Pond Wood, Head Barn Wood, Merrals Shaw).

Window 22: Horish and Honeyhills Woods.

7.4.1.3 Historic lanes

Another series of impacts, not significant in themselves or for the scheme as a whole, but worthy of some comment as a recurrent aspect of other cumulative effects, is the impact of CTRL on historic lanes. The historic lanes of Kent, while not always a prominent feature of the landscape, do have a significant part in its landscape history, especially for a county traversed by long-distance routes to and from the Weald. Kent CC have a structure plan policy promoting the conservation of historic lanes and roads. The CTRL

would affect numerous old roads to a slight degree, but in a few cases more significant lengths would be affected and there would be significant modifications to local historic road or lane network. These are cases where the present alignment and character of these roads is of some particular local significance in the history or character of their area, because they are also significant boundaries, or give character to the approach to places of historic interest. These include examples at Cobham in Gravesham, Eyhorne Street, Sandway, and Chilston Park in Maidstone, and north of Godinton Park in Ashford.

7.4.2 Historic Buildings

7.4.2.1 Listed buildings and conservation area buildings to be demolished or at risk: Scheme-wide Effect of Particular Importance

The total number of listed buildings, curtilage buildings and conservation area buildings of historic interest that will be demolished for the CTRL is such that scheme-wide these individually significant effects are of particular importance.

Listed Building Demolitions

Over the scheme as a whole there will be 21 listed building demolitions or part demolitions, of which 9 occur at the Terminus in the London Borough of Camden, and the remainder in Kent.

Of the 12 demolitions in Kent one is the removal of a small listed boundary stone at Cobham in Gravesham, which could easily be repositioned nearby. The remaining 11 demolitions all affect Grade II houses and farms. Ten of these are in the Borough of Ashford and one in Shepway, occurring at four localities:

- Brockton Farm (17th-century house and barn and curtilage buildings);
- Yonsea Farm (early 19th-century house and five agricultural buildings with other curtilage buildings);
- Two cottages at Boys Hall Road Willesborough (one apparently of 16th-century origin, the other 18th and 19th-century).
- Talbot House, Sellindge (15th-century house).

These effects are unavoidable with the possible partial exception of Yonsea Farm, where some buildings might be saved. While the remaining buildings might possibly be viable if provided with adequate mitigation, the complex would be severed, losing much of its important group value.

The incorporated mitigation for listed buildings to be demolished provides for

- detailed surveys;
- relocation of those which merit it, if this is feasible and can be done at reasonable cost;
- salvage of materials from those not relocated.

On present evidence the three Gasholders at St Pancras, Brockton Barn, 2 Boys Hall Road Willesborough, and Talbot House Sellindge probably merit relocation, with further possibilities being the Water Point at St Pancras, Brockton Farmhouse, and some of the farm buildings at Yonsea.

Conservation Area Demolitions

In addition to the 13 demolitions of unlisted historic conservation area buildings or structures at the Terminus, two unlisted buildings, one of which is of some historic value, will be demolished in Barnsbury Conservation Area (Islington) for the Caledonian Road construction site.

Listed Buildings Subject to Severe Intrusion

Five Grade II listed buildings in Kent have been identified as potentially becoming unviable and therefore at risk of indirect effects of alteration for new uses, changes in condition or possibly, if no mitigation is effective, demolition. Two of these, Water Street and Yew Tree Cottages are at Lenham Heath in Maidstone Borough. The others, Orchard Cottage and Maytree Cottage Sevington, and Bridge House Mersham, are in Ashford.

The incorporated mitigation for listed buildings subject to severe intrusion and potentially at risk is to find ways to reduce the intrusion where there is a realistic chance of them having a viable long term future. If such listed buildings cannot be saved for a suitable use and have to be demolished, the same principles would apply as for those already needing to be demolished, subject to relevant consent procedures. In each of the cases identified in this assessment options for further mitigation have been suggested which might ensure their viability, but this would require further detailed consideration and consultation with the relevant local authorities. These measures could reduce the seriousness of the effect though the intrusion on the setting of these buildings would remain significant.

7.4.2.2 **Setting of conservation areas**

The intrusion of the CTRL and its construction would be a significant effect in the following cases:

Window 20: Boxley Abbey
Window 24: Eyhorne Street
Window 26: Sandway

In each case extensive mitigation measures have been incorporated into the design to reduce the effect as far as possible. At Sandway and Eyhorne Street this includes sections of cut and cover tunnel and extensive landscaping, while at Boxley Abbey there will be an extensive false cutting. These measures will very substantially reduce the intrusiveness of the CTRL. The residual effects, particularly at Eyhorne Street and Sandway concern the cumulative impact of a number of effects on local features and changes to the historic character of the area, combined with the overall degree of change and introduction of modern features and landforms. Much of this is an inevitable consequence of the need for such extensive mitigation measures.

7.4.2.3 **Setting of listed buildings**

The intrusion of the CTRL and its construction would be a significant effect in the following cases:

Window 11: High House

Window 14:	Hazells
Window 20:	Boarley Farm complex
Window 26:	Oxley House
Window 29:	Rose Cottage
Window 30:	Parsonage Farm
Window 32:	Labour Club Willesborough
Window 33:	Bridge Cottage Sevington
Window 33-4:	Other listed buildings from Willesborough to Mersham (individually non-significant)

In all these cases significant mitigation is incorporated into the design of the scheme. This variously takes the form of retaining walls or extended bridge abutments, false cuttings, bunding, noise screening and planting proposals. In most cases a combination of measures is provided. In most of these places the CTRL will be close to the buildings and the historic character of their immediate surroundings will therefore be significantly changed by the mitigation measures as well as the CTRL itself. The Boarley Farm listed buildings are further away than the others, but the effect is similar because of the particular circumstances of the quality of their existing setting and siting of the buildings in relation to the local topography and the CTRL alignment.

There are several localities where intrusion on the setting of listed buildings will not be significant because of the incorporated mitigation, though these often remain residual non-significant effects.

7.4.2.4 Railway structures

Several railway structures will be demolished. Apart from the St Pancras Terminus, two effects are considered significant: the loss of the London Chatham and Dover Railway Terminus and the Willesborough Level Crossing Box (which could be readily relocated) at Ashford, and the loss of a substantial part of the earthworks over the Saltwood Tunnel.

In general the principle of adhering to existing railway alignments has many benefits (especially as regards restricting the scale of landtake). The overall effect should also be seen in the context of the nature of the scheme: the CTRL will be a new phase of railway development of future historical significance.

7.4.2.5 Settlement

No significant effects are likely to arise as a result of settlement.

7.4.2.6 Secondary damage

No significant secondary effects are likely to arise as a result of settlement; only five historic buildings would qualify for noise insulation, none of which has especially sensitive fenestration (unlisted Upper Nashenden Farm, unlisted Musketstone, Old and Water Street Cottage, Yew Tree Cottage, and Bridge House Mersham). While other owners might be inclined to install double glazing, there are very few listed buildings with significant increase in predicted noise levels and alterations to listed buildings would be covered by normal controls.

7.4.2.7 **Positive and potentially positive effects for historic buildings**

Apart from the refurbishment of the St Pancras trainshed and the German Gym at the Terminus, the following positive or potentially positive effects have been identified:

Window 8: Rainham Conservation Area: there will be a slight reduction in traffic intrusion (potentially significant).

Window 29: Walnut Tree Farm, Westwell Leacon: the present A20 will be diverted away from the listed building (not significant).

Window 34: The positive benefits of the cut and cover tunnel at Mersham could be fully realised by careful detailed design of the landscaping proposals (potentially significant).

7.4.3 ARCHAEOLOGICAL REMAINS

7.4.3.1 **Landtake from and intrusion on the setting of scheduled ancient monuments and landtake from other areas of national archaeological interest or potential: Scheme-wide Effect of Particular Importance**

The following are areas of known archaeological significance or high potential where landtake and disturbance will result in significant effects. In most cases it would be possible to mitigate the effect by archaeological investigations, or in some cases by detailed design to facilitate preservation *in situ* or to reduce the intrusion on their setting.

Window 10: Purfleet pleistocene deposits: The CTRL will be in a c. 9 m deep cutting. The effect could be mitigated by archaeological investigations.

Window 13: Ebbsfleet valley: The CTRL will affect a series of archaeological sites of high potential, dating from the palaeolithic to the Roman period, including minor landtake from two SAMs. The effects could be substantially mitigated by detailed design and archaeological investigations.

Window 14: Springhead Roman Temple SAM: The realigned New Barn Road and possibly a haul road will involve slight landtake. This may be avoidable through detailed design.

Window 20: White Horse Stone SAM: Landtake and intrusion will affect setting of the monument and an area of high archaeological potential adjacent to it, including a Roman road line. The effect could be reduced by a combination of archaeological investigations and detailed design. The effect on the setting of the White Horse Stone would remain significant.

Window 22: Thurnham Roman Villa SAM: The CTRL will result in the complete removal of this scheduled ancient monument, but the effect could be substantially mitigated by excavation.

Window 33: Boys Hall Moat SAM: There will be landtake and intrusion of a balancing pond immediately adjacent to scheduled 'Moated Site ... Boys Hall'. This effect could possibly be reduced by detailed design and archaeological investigations.

7.4.3.2 **Landtake affecting other areas of known or potential archaeology**

Potentially significant effects, excluding those relating to archaeological deposits associated with listed buildings to be demolished (see 7.4.2.1 above) and those relating to finds scatters (see 7.4.3.4 below), are likely to occur at the following localities:

Window 3-3A:	Lea Valley area of archaeological potential
Window 7:	Area of prehistoric archaeological potential (including trackway site), Choats Manor Way
Window 8:	Rainham Wharf, 16th century or earlier wharf and prehistoric remains
Window 9:	Area of prehistoric archaeological potential (including trackway site), east of Rainham
Window 15:	Cropmarks south of the A2 at Tollgate: severe landtake will affect a possible neolithic long barrow or mortuary enclosure.
Window 16:	Roman Watling Street: landtake either for the CTRL or for a new access road is likely to disturb one of the few areas where Watling Street is not overlain by a modern road.
Window 16:	St Thomas's Well: possible dewatering and landtake.
Window 18:	Cuxton Saxon burial: landtake for a construction site could affect further burials
Window 30	Cropmark enclosures south of Beechbrook Wood: landtake.
Window 33:	Area of archaeological potential north west of Boys Hall Moat and north of Sevington Railhead: landtake close to known area of extensive Iron Age and Roman occupation.
Window 34:	Mersham: landtake for construction site adjacent to medieval church and manor house Station Road to Church Lane Smeeth: landtake in area of prehistoric and later finds and alluvium
Window 36:	Sandling: landtake for construction site adjacent to known site of prehistoric and later occupation.

7.4.3.3 **Disturbance of well preserved archaeology in alluvium and peat deposits: Scheme-wide Significant Negative Effect (Mitigable)**

The potential for well-preserved archaeology in waterlogged conditions has been demonstrated by numerous important discoveries in recent years. By their very nature, these sites can be hard to predict with certainty, and so their occurrence has been treated as one of general potential. Apart from the areas of known potential (see above), the issue is considered significant on a scheme wide basis because the CTRL crosses an exceptional length of alluvial areas. While the overall cases where the potential is actually realised may not be very considerable, this is highly unpredictable because very little is yet known about the pattern and density of remains beneath alluvium. Where remains do exist they can be very well preserved and of considerable significance as illustrated by the prehistoric trackways recently discovered in the Lower Thames alluvium.

This effect is likely to be significant in tributary valleys of the Thames of the Fleet at St Pancras, the Lea valley at Stratford, and across the Thames marshes from Barking to Swanscombe. In Kent the Ebbsfleet, Medway and East Stour valleys are other areas where significant effects could occur.

7.4.4 Effects on Receptors

7.4.4.1 Special interest groups

The effect of the CTRL proposals on the interests of archaeological special interest groups depends heavily on how effects will be mitigated. The loss of some sites and features which would be of substantial concern if left to be destroyed unrecorded will generally at least be balanced by the gains to knowledge for those concerned with the antiquities of London, Essex and Kent, and in some instances those interested in archaeological remains at a national and international level.

Archaeologists and palaeo-environmentalists might be affected by the loss of access for research by the burying of some sites, but this would be outweighed by the considerable potential gains to knowledge from archaeological investigations of the transect of countryside crossed by the CTRL, particularly in Kent.

Buildings historians and Industrial Archaeologists may well regard the Terminus issues in a negative light, but elsewhere the concerns of those interested in vernacular architecture could at least partly be mitigated by the survey and recording of buildings due to be demolished and, where appropriate, the relocation of the most interesting to other suitable locations where they might continue to be appreciated.

7.4.4.2 Visitors to historic and archaeological sites

At the Terminus, there will be a substantial increase in people using St Pancras, and it is assumed that the German Gymnasium will be restored and become publicly accessible for the first time. This will be a significant positive effect which will go some way to offsetting the negative impact of the scheme on St Pancras and its surroundings.

On the rest of the alignment, the only other location where visitors to sites are likely to be affected is the White Horse Stone. While the intrusion on the setting of this particular monument is significant, the overall effect on visitors to historic places close to the CTRL, apart from the Terminus, would be non-significant.

7.5 Scheme-Wide Mitigation

7.5.1 General Principles and Procedures

7.5.1.1 Incorporated mitigation

Apart from the individual features of design incorporated into the scheme, there is a general commitment to the mitigation of historic and cultural effects through other appropriate means, as reflected in the following:

- Adherence to the principles of PPG16 for mitigation of archaeological effects;
- Adherence to a policy for dealing with listed buildings to be demolished by the route, or subject to severe intrusion;
- Adherence to the Planning and Heritage Minimum Requirements for the Terminus;
- The formulation of an Historic and Archaeological Plan under a Code of Practice for Construction.

The effect is mitigable by adopting a suite of protective and investigative techniques, as indicated in Chapter 6.

7.4.3.4 **Finds scatters: Scheme-wide Significant Negative Effect (Mitigable)**

There are 21 locations identified so far from surface collection survey or noted from previously recorded discoveries, which are close to the alignment and are likely to be disturbed for landtake or construction. They occur throughout the CTRL route, though generally not in the same areas as areas of potential for alluvial archaeology. There is no certainty as to their archaeological importance, but some are likely to represent significant archaeological sites. Most are prehistoric flint scatters and concentrations of Iron Age and Roman pottery, the latter potentially indicating settlements or farms. There are a few possible medieval settlements or farms.

Individually these effects can only be classified as potentially significant until detailed evaluation has established whether they represent important archaeological sites. Considered across the scheme as a whole the disturbance of such areas will be significant because at least some of them are very likely to reflect important subsoil archaeology. The areas where evidence is most convincing in terms of the finds or scatters representing significant archaeological sites are as follows:

Window 20-1:	Boarley Farm.
Window 21:	Boxley Road.
Window 23:	South of Snarkhurst Wood.
Window 28:	West of Hurst Wood and east of Newlands.
Window 29:	Newlands Stud (Oakover Nurseries).
Window 30:	West of Station Road, Hothfield/Westwell.
Window 33:	West of Blind Lane: Landtake for spoil.
Window 37:	North of Saltwood Tunnel.

The effect is mitigable by means of detailed field evaluation and, if the surface indications are shown to relate to significant remains, further investigation with reporting of the results, or if feasible preservation *in situ*.

7.4.3.5 **Unknown archaeology: Potentially Significant Negative Effect (Mitigable)**

There is a strong likelihood on the basis of the areas surveyed by surface collection survey to date that further areas of archaeological interest exist along the route which have not yet been identified. Not all areas of the route have yet been surveyed due to the limitations of access, crop cycles and the timing of route decisions and reporting. Further prospection survey work is likely to reveal other places of similar potential. With no mitigation significant losses would probably occur, but this could be mitigated to a satisfactory degree by adoption of an archaeological programme for further prospection and evaluation work, detailed investigations and reporting if warranted, or preservation *in situ*, as described in Chapter 6.

The last of these is to be drawn up in consultation with English Heritage and the local authorities, as outlined in *The Construction Assumptions for the Environmental Assessment* (Annex 1 of the Environmental Statement), and it is assumed will reflect the requirements of the other three strands of the general incorporated mitigation.

7.5.2 ARCHAEOLOGY

Incorporated mitigation

The basis of all the mitigation of archaeological effects is that the principles of PPG16 will be followed. This requires a staged approach to be developed in consultation with relevant local and national authorities. This will be established in accordance with the provisions of *The Construction Assumptions for the Environmental Assessment* (see Annex 1 of the Environmental Statement) through an Archaeological and Historic Plan to be drawn up as part of a Construction Code of Practice to be drawn up in consultation with English Heritage and local authority archaeological officers.

It is envisaged that this programme will incorporate six basic elements:

- Completion of general prospection surveys to identify previously unknown sites or areas of potential;
- Detailed field evaluation of identified sites or areas of potential (detailed specifications partly already agreed);

Then either:
- Detailed design to avoid or limit disturbance;

Or:
- Appropriate levels of detailed investigation (if possible combined with design to limit disturbance);

Followed by:
- Watching briefs and monitoring;
- Dissemination of results.

So far detailed proposals for evaluation have been agreed for 11 localities.

Options for further mitigation

A further 30 locations have been identified where further evaluation and if appropriate more detailed excavations or preservation *in situ* would be warranted.

7.5.3 HISTORIC BUILDINGS

Incorporated mitigation

The project's policy on listed buildings provides principles to be adopted for mitigating the following effects:

- listed buildings to be demolished;
- listed buildings not requiring demolition but at risk of being unviable for continued use;

- listed buildings subject to landtake but not considered to be at risk of becoming unviable;
- unlisted historic buildings to be demolished.

On present evidence, as stated in the detailed assessment and suggested options for further mitigation listed below, the more significant of the Grade II listed buildings are likely to be capable of relocation elsewhere.

Options for further mitigation

Under the incorporated mitigation the standards of recording to be adopted for each building will need to be agreed in detail with English Heritage, RCHME and the local authority Conservation Officers, and could be developed on the basis of the following principles.

Buildings requiring or worthy of general investigation and recording prior to demolition
Nine listed and unlisted buildings or building groups have been identified as being of more than minor interest. They should be photographed and planned, with any appropriate degree of structural investigation (RCHME Levels 3-4).

Buildings requiring detailed investigation prior to demolition
Five buildings due for demolition are of sufficient age and intrinsic importance to be subject to detailed archaeological investigation including, where appropriate, below ground investigation. The incorporated mitigation requires that consideration will be given to these buildings being re-erected elsewhere if, as seems likely, sufficient original framing survives for this to be viable. These are:

Group of three Gasholders, St Pancras (Grade II, OAU No. 3024)
Brockton Farm, Charing Heath (Grade II, OAU No. 170)
Brockton Farm barn and attached outbuildings (Grade II, OAU No. 171)
No. 2 Boys Hall Road, Willesborough (Grade II, OAU No. 210)
Talbot House, Sellindge (Grade II, OAU No. 247)

The Grade II Water Point at St Pancras and some of the Grade II listed buildings at Yonsea Farm, which warrant general investigation and recording, could prove worthy of relocation, in which case detailed investigation and recording prior to and during demolition would be required to enable them to be rebuilt elsewhere.

Buildings affected by severe intrusion
Five listed buildings in Kent will be subject to severe intrusion and can be considered 'at risk' of being unviable on account of their proximity to the CTRL. Options are put forward in the detailed assessment for further mitigation to reduce the levels of intrusion in these cases, which could substantially reduce the possibility of the buildings being unviable for continued use. This requires further detailed consideration on a case-by-case basis.

Buildings not requiring detailed investigation
The scheme-wide incorporated mitigation for effects on historic buildings excludes detailed survey of unlisted historic buildings due to be demolished (but allows for access for others to undertake such work). However, there is a good case for making more basic records of unlisted buildings and structures in conservation areas, those within the curtilages of listed buildings and also those of specific interest for their areas's particular local history.

7.5.4 Dissemination of Results

In order to maximise the general public benefit of the various investigations which will be undertaken to mitigate the effects of the CTRL on archaeological remains and historic buildings, and to mitigate the effects on groups with a special interest in the resources affected by CTRL, the results of all investigations undertaken for the project could be disseminated in a variety of formats, designed both for the general public, and professional and amateur specialist groups and individuals.