

M20 J10A ACCESS TO SOUTH ASHFORD

**DMRB STAGE 2 ENVIRONMENTAL
ASSESSMENT REPORT –
CULTURAL HERITAGE**

May 2007

Report No: GR022

Revision C

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CONTENTS

	Page	
1	INTRODUCTION	1
1.1	General	1
1.2	Primary Scheme Objectives	1
1.3	Scheme Background	1
2	PURPOSE OF THE ASSESSMENT	2
2.1	Purpose of the Report	2
3	ASSESSMENT OF CULTURAL HERITAGE	3
3.1	Objectives	3
3.2	Study Area	3
4	LEGISLATIVE CONTEXT	4
4.1	Summary	4
4.2	Statutory Protection	4
4.3	National Planning Guidance	4
4.4	Local planning Policy	5
4.5	Environmental Assessment Guidelines	7
5	METHODOLOGY	7
5.1	Desktop Survey	7
5.2	Walkover Survey	8
5.3	Assessment of Impacts	8
5.4	Type of Impacts	8
5.5	Indirect Impacts	9
5.6	Significance criteria	9
5.7	Criteria for appraisal of magnitude of impacts	11
5.8	Assessing the Significance of Effects for the Cultural Heritage	12
5.9	Mitigation of Effects	13
6	EXISTING CONDITIONS	13
6.1	Topography and Geology	13
6.2	Scheduled Monuments	14
6.3	Listed Buildings	14
6.4	Conservation Areas	14
6.5	Registered and Historic Parks and Gardens	14
6.6	Archaeological Areas of Interest (AAI)	15

6.7	Ancient Woodland	15
6.8	Known Archaeological Sites	15
7	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	16
7.1	Palaeolithic Period (500,000 BP - 10,000 BP)	16
7.2	Mesolithic (10,000 BP - 4,000 BC)	16
7.3	Neolithic (4,000 BC - 2,300 BC)	17
7.4	Bronze Age (2,300 BC - 700 BC)	18
7.5	Iron Age (700 BC - AD 43)	19
7.6	Roman (AD 43 - AD 410)	21
7.7	Early Medieval (AD 410 - AD 1066)	21
7.8	Late Medieval (AD 1066 - 1550)	23
7.9	Post Medieval (AD 1550 +)	24
7.10	Cartographic Background (Figs 3 -4)	24
7.11	Aerial Photographs (Plates 1 - 2)	24
7.12	Walkover Survey (Plates 3 - 5)	25
8	LIMITATIONS OF ARCHAEOLOGICAL AND HISTORICAL METHODOLOGIES	25
8.1	Archaeological Limitations	25
9	DESIGN AND MITIGATION	26
9.1	The Scheme	26
9.2	Mitigation	26
10	ASSESSMENT OF IMPACTS	27
10.1	Outline	27
10.2	Construction and Operational Phases Impacts on known Archaeological/Cultural Sites	28
10.3	Direct Construction Impacts on Unknown Archaeological/Cultural sites	29
11	SUMMARY	29
12	REFERENCES	30
12.1	Bibliography and Sources Consulted:	30
12.2	List of Historic Maps Consulted	35
12.3	Other Sources	35

LIST OF FIGURES

- Figure 1: Study Area
- Figure 2: J10 and J10A Improvements with the Proposed Land Development Areas
- Figure 3: Features Mapping
- Figure 4: Extract of O/S 1st Edition 6" of 1876
- Figure 5: Extract of O/S 3rd Edition 6" of 1908

APPENDICES

- Plate 1: Aerial photograph showing possible ring ditch near Highfield Lane
- Plate 2: Aerial photograph showing possible enclosure near Highfield Lane and cropmark features south-east of Sevington
- Plate 3: View North from St Mary's Churchyard, Sevington, to proposed route of new link road
- Plate 4: View South from proposed route of new link road to St Mary's Church
- Plate 5: View from the approximate location of proposed new J10A, West towards proposed route of new link road

1 INTRODUCTION

1.1 General

1.1.1 Parsons Brinckerhoff Ltd (PB) have been appointed by the Highways Agency (HA), under their Consultancy Framework Agreement for Design Services (CFADS) in the South East, to develop proposals for a new Junction 10A of the M20 up to a Preferred Route Announcement by the Secretary of State for Transport.

1.1.2 The provision of a Junction 10A on the M20 has been promoted under various initiatives all relating to the recognition of Ashford as a Potential Growth Area for the South East. The South Ashford Transport Study (SATS) and the Ashford Futures Study have identified the potential constraint on development in the region due to deficiencies in the transport system. Additionally the HA's recently completed M26/M20/A20 Route Management Strategy (RMS) has highlighted congestion and safety issues at the existing M20 Junction 10, Willesborough Interchange.

1.1.3 The proposal is to create an interchange east of Junction 10 that would incorporate a new dual carriageway link road to the existing A2070 South Orbital Road; it would include provision for an access to the area identified for the future South Ashford Development. The study area is located in Kent on the south-eastern edge of the Ashford urban area where a number of rural settlements remain scattered around the existing M20 motorway and the Channel Tunnel Rail Link.

1.1.4 The Study Area for the project is shown as Figure 1.

1.2 Primary Scheme Objectives

1.2.1 The Secretary of State's objectives for the scheme are:

- a) To deliver one of the trunk road improvements required as part of the strategy for improving transport
- b) To improve journey time reliability and safety on the M20 and A2070 at J10 by reducing congestion
- c) To minimise the impact on the environment and where possible allow improvements to be made.

1.3 Scheme Background

1.3.1 M20 Junction 10A entered the Government's Targeted Programme of Improvements (TPI) in November 2003 with the specific aims of:

- Providing a new route for traffic into Ashford by way of the new junction and dual carriageway link road
- Increasing the capacity of the road network to support the proposed development areas in Ashford
- Providing Junction 10A to alleviate congestion around the existing Junction 10 and improve safety whilst creating the opportunity to enhance local transport facilities with specific provision for buses, cyclists and pedestrians

1.3.2 Since entering the TPI the Greater Ashford Development Framework (GADF) study has defined a spatial strategy for growth in Ashford, the Ashford Area Transport Study (AATS). The AATS has developed a multi-modal transport strategy and the

Ashford Highway and Traffic Study (AHTS) has assessed highway needs in Ashford with a more detailed appraisal necessary for Junction 10A.

- 1.3.3 Following a design review necessitated by the new development and transport strategy, the Highways Agency have decided to proceed to Public Consultation and Preferred Route announcement on an amended TPI scheme, Option S2E.
- 1.3.4 Junction 10A would not open before 2012 and improvements would be made to Junction 10 in the interim to allow development in South Ashford to go ahead. The Junction 10 Interim Scheme is about to be re-tendered, followed by an anticipated Award of Contract in mid-July for a likely start of work on site in mid August 2006 and completion in 2007.
- 1.3.5 The Junction 10A scheme provides for a new interchange roundabout approximately 700m to the east of the existing Junction 10. The elevated interchange would include a new dual carriageway link road to the existing A2070 South Orbital Road to the west of the M20 carriageway. This link would form the A2070 trunk road.
- 1.3.6 Junction 10A would have east and west facing on and off slip roads with the M20. The east facing slip roads at Junction 10 would be removed.
- 1.3.7 The A20 would be integrated with Junction 10A so that A20 traffic in both directions would be routed via the roundabout.
- 1.3.8 The Junction 10 and A2070 SOR are currently lit and will remain so; the proposed J10A, the A2070 Link Road and the approaches to J10A from the A20 will be lit as part of the proposed scheme. The M20 carriageways are currently unlit and will remain as such.
- 1.3.9 This assessment is based on the current option proposed by PB as illustrated by drawing HHG43556/02/GD001 Revision A.

2 PURPOSE OF THE ASSESSMENT

2.1 Purpose of the Report

- 2.1.1 This report is the culmination of the Stage 2 Environmental Assessment work carried out in accordance with the guidelines in the Design Manual for Roads and Bridges Volume 11 (DMRB) 1993/2001. The subject area for this report is Cultural Heritage as covered by Volume 11, Section 3, Part 2
- 2.1.2 To ensure that each of the Stage 2 Environmental Assessment reports are assessed against the same baseline conditions, as well as Ashford's future development proposals, several assumptions for the Study Area have been made; whilst acknowledging that there remains a possibility that the development areas may remain as a 'greenfield site'. The development phases of the GADF are set out in table 2.1 and illustrated in Figure 2.

Table 2.1 Development Phases of the GADF

PHASES OF EXISTING AND PROPOSED DEVELOPMENT FOR GREATER ASHFORD DEVELOPMENT FRAMEWORK (GADF)		
Development Phase	GADF Timescale	M20J10A Scheme Condition
1	2001 - 2011	Baseline (existing land use)
2	2011 - 2021	Opening Year (2012)
3	2021 - 2031	Design Year (2027)

2.1.3 The proposed Phase 2 & 3 Development Areas shall comprise only business and commercial units as indicated in the GADF

2.1.4 The drainage design for the scheme shall take account of the need for drainage from the proposed development areas but it shall not form an integral part of the design

2.1.5 For the purposes of this DMRB Environmental Assessment the 'Do-minimum' and 'Do-something' schemes are defined by assuming that the Junction 10 Interim improvements and the full development proposals of the LDF are implemented and completed.

3 ASSESSMENT OF CULTURAL HERITAGE

3.1 Objectives

3.1.1 In 2002 Oxford Archaeology (OA) undertook a DMRB Stage 1 baseline assessment of Cultural Heritage. This assessment addressed the implications to the Cultural Heritage of the proposed construction of a new junction and link road on the southern outskirts of Ashford.

3.1.2 This report has been prepared according to the guidelines laid down by the Department of the Environment, Transport and Regions (DETR) publications *A New Deal for Trunk Roads in England: Guidance on the New Approach to Appraisal* (DETR 1998), and *A New Deal for Trunk Roads in England: Understanding the new approach to appraisal* (DETR 1998). The current report forms a Stage 2 of the assessment, and has been prepared in line with the Stage 2 Methodology, as laid down in the guidelines contained within the *Design Manual for Roads and Bridges* (Volume 11, 1994) compiled by the Department of Transport.

3.2 Study Area

3.2.1 This report forms part of the Stage 2 Environmental Assessment of the proposals for the construction of a new Junction 10A on the M20 south of the present Junction 10 and a link road from the new Junction 10A to the Ashford South Orbital Road. The study area comprises a 1km wide buffer zone around the footprint of the proposed works to characterise the potential Cultural Heritage resource of the area. The works would entail the installation of temporary works locations and the excavation of drainage ponds. The location of temporary works compounds, easements and storage bunds is unknown at the time of writing.

4 LEGISLATIVE CONTEXT

4.1 Summary

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

- Planning: Listed Buildings and Conservation Areas Act 1990
- Ancient Monuments and Archaeological Areas Act 1979
- Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999
- DoE Planning Policy Guidance Note 16, Archaeology and Planning 1990
- DoE/DNH Planning Policy Guidance Note 15, Planning and the Historic Environment 1994
- DoE The Hedgerows Regulations 1997 (and new guidance 2002)
- Ashford Borough Local Plan (June 2000)
- Department of Media Culture and Sport, Policy Guidance for the South East (RPG 9 March 2001)

4.2 Statutory Protection

4.2.1 A number of options for the statutory protection of archaeological or historic sites exist.

Planning: Listed Buildings and Conservation Areas Act 1990

4.2.2 Regulations by which historic buildings are accorded protection from changes brought about by development. This takes the form of listing, either as Grade I, Grade II* or Grade II. The Act also outlines protection of the historic character of areas through their designation as Conservation Areas. In general the regulations are administered by the local planning authority in consultation with English Heritage.

Ancient Monuments and Archaeological Areas Act 1979

4.2.3 The relevant sections of the Act allow for the protection of archaeological and historic monuments of national importance (other than buildings as defined above) through scheduling. Consent for works within scheduled areas and administration of the Act is undertaken by the Department of Culture Media and Sport in consultation with English Heritage.

4.3 National Planning Guidance

4.3.1 The Town and County Planning system provides a framework for the protection of archaeological or historic remains threatened by development, principally through the application of the relevant Planning Policy Guidance Notes.

4.3.2 At a national level, Planning Policy Guidance Note 16: Archaeology and Planning (PPG 16) was issued by the Department of the Environment in November 1990. Planning Policy Guidance Note 15: Planning and the Historic Environment was issued by the Department of the Environment/Department of National Heritage in 1994.

Planning Policy Guidance Note 16 (PPG 16)

4.3.3 The importance of archaeology in the planning process is detailed in the Government's Planning Policy Guidance Note 16 (PPG 16) on Archaeology and Planning (DoE 1990). The underlying principle of this guidance is that archaeological resources represent a non-renewable resource and that the conservation of the archaeological resource should be the primary goal of archaeological resource management.

4.3.4 PPG 16 acknowledges the potentially fragile and finite or irreplaceable nature of archaeological remains (paragraph. 6), and states that the desirability of preservation of archaeological remains and their setting is a material consideration within the planning process (paragraph. 18). PPG 16 provides that there is a presumption in favour of the physical preservation of nationally important archaeological remains (paragraph. 8), and that where preservation in situ is not justified it is reasonable for planning authorities to require the developer to make appropriate and satisfactory provision for excavation and recording of remains (paragraph. 25).

4.3.5 Paragraph 19 of PPG 16 suggests that it is in developers' own interests to include an initial assessment of whether the site is known or likely to contain archaeological remains as part of their research into the development potential of a site. Paragraph 22 adds:

Local planning authorities can expect developers to provide the results of such assessments ... as part of their application for sites where there is good reason to believe there are remains of archaeological importance'.

4.3.6 PPG 16 also notes that in spite of the best pre-planning application research, there may be occasions when the presence of archaeological remains only becomes apparent once development has commenced (paragraph. 31).

Planning Policy Guidance Note 15 (PPG 15)

4.3.7 Planning Policy Guidance: Planning and the Historic Environment (PPG 15) states that 'It is fundamental to the Government's policies for environmental stewardship that there should be effective protection for all aspects of the historic environment' paragraph. 1.1). In respect of Development Control, PPG15 says of local planning authorities (paragraph. 2.11):

4.3.8 They should expect developers to assess the likely impact of their proposals on the site or structure in question, and to provide such written information or drawings as may be required to understand the significance of a site or structure before an application is determined.

The Hedgerow Regulations 1997

4.3.9 The Hedgerows Regulations 1997 (and further guidance 2002) make provision for the protection of hedgerows considered to be of landscape and/or historical and natural history importance. The Regulations state that a hedgerow can be considered to be 'important' if it meets certain criteria, including if it is recorded in a document held at a Record Office as an integral part of a field system pre-dating the Enclosure Act (Schedule 1 Part II, 5).

4.4 Local planning Policy

4.4.1 The Ashford Borough Local Plan (2000) was consulted to identify relevant local policies pertaining to the Cultural Heritage Resource within the study area surrounding the proposed new road and junction. The Local Plan identified three Conservation Areas, one registered Historic Park and Garden and one Scheduled Ancient Monument. The policies relevant to the proposed development towards these cultural heritage features are listed below:

Conservation Areas

- 4.4.2 (EN15) The council will pay special attention to the desirability of preserving or enhancing the character or appearance of Conservation Areas shown on the Proposals Map through the implementation of Local Plan policies: it will also seek to protect the setting of Conservation Areas from developments that do not comply with Local Plan policies. Planning proposals in Conservation Areas will be considered in the light of the conclusions of the Council's Conservation Area studies.

Listed Buildings

- 4.4.3 (EN21) Applications for planning permission for development which affects a Listed Building or its setting will be considered in the light of a number of factors including the building's scale, architectural features and materials, structure, historic character and setting. In the interests of protecting the character and appearance of Listed Buildings the Council, in granting Listed Building Consent (and planning permission where applicable), will seek to ensure that the loss or damage of historic fabric in the execution of the work is minimised.

Archaeology and Ancient Monuments

- 4.4.4 (EN22) Development which would adversely affect a Scheduled Ancient Monument, its setting or other nationally important archaeological remains will not be permitted.
- 4.4.5 (EN23) In exceptional circumstances, permission may be given for development affecting important archaeological sites of regional or local importance, if the applicant has demonstrated that the site will be satisfactorily preserved either in situ or by record. Any archaeological recording should be by an approved archaeological body and take place in advance of development in accordance with a specification and programme of work to be submitted to and approved by the Borough Council.
- 4.4.6 (EN24) The Council will need to be satisfied that the archaeological implications of development proposals have been properly considered before permission is granted.
- 4.4.7 (EN25) Should an important archaeological find be made on a site which already has the benefit of planning permission the Council will seek to secure access for a recognised archaeological body to evaluate and record the archaeological remains before any development takes place, or if the find is made during development, before the development continues.

Historic Parks and Gardens

- 4.4.8 (EN28) Proposals which would harm the character or setting of a historic park or garden will not be permitted.

Areas of Archaeological Importance and Ancient Woodland

- 4.4.9 Kent County Council have designated areas that are regarded as having a high archaeological potential due to findings from archaeological work and or other research. These areas are indicated within the Kent Historic Conservation Record and have been utilised within the Ashford Local Plan.
- 4.4.10 In addition Kent County Council have designated areas of woodland that can demonstrably be shown to be historic as Ancient Woodland. These areas are again indicated by the Kent HCR and are utilised by the Ashford Local Plan.

4.4.11 These Areas of Archaeological Importance and Ancient Woodland are periodically updated and cannot be assumed to be the only areas that could be so designated.

4.5 Environmental Assessment Guidelines

4.5.1 There is little detailed guidance in England on the consideration of cultural heritage issues within the environmental assessment process. This assessment has been compiled in the light of *Appendix 10: Cultural Heritage/Material Assets of Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment: a good practice guide* (DETR n.d.) and the Institute of Field Archaeologists *Standard and Guidance for Archaeological Desk based Assessment* (IFA. 1999).

5 METHODOLOGY

5.1 Desktop Survey

5.1.1 This Stage 2 Environmental Assessment has entailed examining a number of sources that were omitted from the previous Stage 1 assessment (OA 2002). The current Stage 2 assessment also involved reviewing and updating, as necessary, all the findings of the preliminary Stage 1 Baseline Assessment. A significant part of the potential impact would be in areas of temporary land take for construction and storage compounds. The location of these has at this time not been decided but full Stage 2 Assessment should be applied to these areas once they are known.

5.1.2 Primary Sources consulted for this Stage 2 assessment comprised:

- Kent County Council Sites and Monuments Record/Historic Environment Record (SMR/HER)
- The National Monuments Record (NMR) as held by English Heritage
- Listed Building Records as held by Kent County Council HER, and the National Monuments Record (NMR)
- Records of Scheduled Monuments as held by English Heritage (EH).
- Aerial Photographs held by the NMR repository at Swindon
- Records of Registered Parks and Gardens as held by English Heritage (EH)
- Ashford Borough Local plan (2000). This was used to plot the locations of Conservation Areas and areas of Archaeological Notification
- A survey of any readily available historical documents (including maps) held in local libraries, local record offices and the Bodleian/Sackler Libraries in Oxford
- Examination of all relevant and available geological and topographical maps of the study area. A study of the physical topography and underlying geology of a region, with its influence on soils, drainage and communications can be used to predict past settlement patterns

5.2 Walkover Survey

5.2.1 A site walkover and inspection of the area to be affected by the construction of the proposed new junction and link road was also undertaken. The site inspection was conducted on 2nd March 2006 and was undertaken entirely from points of public access only. All of the potential impacts identified within the proposed scheme footprint could be surveyed adequately from a range of viewpoints. The walkover was also used to assess setting issues on listed buildings and inter-visibility, where applicable.

5.3 Assessment of Impacts

5.3.1 The appraisal methodology presented here is based on that outlined in the Design Manual for Roads and Bridges (DMRB, 1993) produced by the Highways Agency, and the updated methodology contained in Highways Agency Interim Advice Notes (IAN) 76/06 - 82/06 and 92/07.

5.3.2 The overall methodology has been to make a series of assumptions on the importance of each individual cultural heritage receptor. These have been based on the criteria outlined in tables 5.8 - 5.10 taken from the DRMB and updates referred to above. The magnitude of impact caused on the receptors has then been appraised, based on the criteria set out in tables 5.8 - 5.10. This has allowed the appraisal of the overall significance of effect on each identified cultural heritage receptor, based on the criteria set out in table 5.1

5.3.3 Without fieldwork the presence and importance of, and effects on, the buried unknown archaeological resource cannot be accurately quantified. However, based on archaeological work undertaken in the vicinity of the proposed road improvement and the topography and geology of the area some quantification of the potential effects on the unknown, buried archaeological resource can be made.

5.4 Type of Impacts

5.4.1 Impacts are defined as the physical changes to the environment attributable to the operation of each of the Options. Direct impacts referred to below have been defined following the advice given in PPG 15 and EU Guidance (Hyder 1999, *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*), which consider impacts on setting as direct. This is contrary to the guidelines issued by the Highways Agency in DMRB (1993 and updates)) which considers impacts on setting as indirect.

5.4.2 Impacts to the cultural heritage resource may be of a number of kinds:

- Direct primary impacts resulting in destruction of monuments, buildings or buried remains
- Direct secondary impacts resulting in destruction e.g. by compression of buried deposits, vibration or by drying out of waterlogged remains
- Direct impacts upon setting reducing the appreciation of the resource, e.g. by noise, visual intrusion, dust. These impacts may be attributable to construction and later operation of the proposed road improvement

5.4.3 Construction impacts include all those impacts, which will result in permanent impacts from construction.

5.4.4 Construction works may involve direct primary impacts, including:

- Demolition and clearance works

- Excavation e.g. for structures/services, cuttings, footings, planting and drainage works
- Disruption of buried archaeological deposits from piling

5.4.5 There may also be secondary direct impacts, for instance:

- Vibration damage to historic buildings and other structures from piling
- De-watering of environmentally sensitive deposits through drainage alterations

5.4.6 De-watering may also occur through cumulative minor impacts to drainage.

5.5 Indirect Impacts

5.5.1 Indirect impacts are defined in EC guidance (Hyder 1999, *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*) and PPG 15 (Paragraph 5.2) as those that arise from complex pathways (one effect leading to another) or from how the proposals may facilitate, encourage or inhibit other developments or changes to the environment not within the control of the developer. Indirect effects can include:

- Indirect impacts through severance by removing a monument, building or site from its context
- Indirect impacts through the loss of amenity, especially where for example historic houses or a Scheduled Monument is open to the public
- Installation of double glazing to mitigate against noise intrusion

5.5.2 Potential non-viability of Listed Buildings (and their consequential dereliction or removal) due to noise and visual intrusion.

5.6 Significance criteria

Table 5.1 Criteria for evaluating importance of archaeological sites and monuments (i.e. the importance of the receptor) Source Highways Agency IAN 81/06

Importance of Receptor	Equivalent to:
High	Sites of National Importance, Scheduled Monuments, Grade I and II* Listed Buildings, World Heritage Sites
Medium	English Heritage Registered Parks and Gardens, Conservation Areas, Sites of Regional or County Importance, Grade II Listed Buildings.
Low	Locally Important Sites, Sites with a local value for education or cultural appreciation, Sites which are so badly damaged that too little remains to justify inclusion into a higher grade.
Negligible	Sites or features with no significant value or interest; sites which are so badly damaged that too little remains to justify inclusion into a higher grade.

5.6.1 Protection for archaeological sites and monuments can be *statutory* (Scheduled Monuments) or *non-statutory* (local authority designated sites and sites protected

under PPG15/ PPG16). The significance of all archaeological sites and monuments has therefore been considered using the criteria that have been developed for assessing the importance of monuments and landscapes, with reference to their:

- Documentation
- Rarity
- Diversity
- Amenity Value
- Fragility
- Group Value
- Survival
- Typicality
- Potential

5.6.2 Given that no archaeological fieldwork has yet been undertaken as part of the present proposed road improvement, the character and importance of known, non-designated archaeological sites has been classified in the appraisal as being of uncertain importance. Lack of fieldwork also means that the potential for discovering unknown archaeological remains is difficult to quantify.

5.6.3 The appraisal of buildings can most usefully follow the Listed Building grades, regarding Grades I and II* as High Importance, and Grade II buildings as 'Medium importance'. Locally Listed Buildings and other identified historic buildings and structures would be of Medium or Low importance.

5.6.4 The main criteria used by the Secretary of State in deciding which buildings to include on the list are as follows [PPG 15, 6.10]:

- Architectural interest: the lists are meant to include all buildings which are of importance to the nation for the interest of their architectural design, decoration, and craftsmanship; also important examples of particular building types and techniques (e.g. buildings displaying technological innovation or virtuosity) and significant plan forms
- Historic interest: this includes buildings which illustrate important aspects of the nation's social, economic, cultural, or military history
- Close historical association: with nationally important people or events
- Group value: especially where buildings comprise an important architectural or historic unity or a fine example of planning (e.g. squares, terraces or model villages). This could also be applicable to areas of historic settlement containing both historic and Listed Buildings

5.6.5 Age and rarity are relevant factors [PPG 15 6.11], and in general (where surviving in anything like their original condition) all buildings built before 1700 are listed, most from between 1700 to 1840, selectively from 1840 to 1914, and more selectively thereafter. Special criteria have been developed for 20th-century buildings.

- 5.6.6 The term historic integrity refers to the survival of contiguous historic features in the landscape - for example an area containing historic field patterns, ridge-and-furrow, boundary hedges and ancient woodland, or an area of consistent Historic Landscape Character. To be outstanding these might be of great age or rarity, or associated with very important sites or monuments.
- 5.6.7 The term Historic Landscape Character refers to the different forms of landscape, e.g. water meadows, post-enclosure fields, and irregular fields with thick hedges. Character is itself a neutral term, but where detailed research can indicate the age of localised character areas an appraisal may be made of their significance.
- 5.6.8 The significance of historic landscapes and features can usefully be considered using the criteria that have been developed for assessing the importance of monuments and landscapes, with reference to their:
- Documentation
 - Rarity
 - Diversity
 - Amenity Value
 - Fragility
 - Group Value
 - Survival
 - Typicality
 - Potential
- 5.6.9 Historic landscapes may have associations with other cultural heritage receptors (e.g. landscape setting of historic buildings), while the visible historic landscape may reflect the archaeology buried beneath it. Historic landscape features may have ecological interest (e.g. historic woodlands) in addition to contributing to wider landscape and visual setting issues.
- 5.7 Criteria for appraisal of magnitude of impacts**
- 5.7.1 The appraisal of the magnitude of impacts will derive from the extent or proximity of the proposed works to the receptor, but will not take into account the importance or sensitivity of the receptor, which is taken into account in assessing the overall significance of effect (see below).

Table 5.2: Magnitude of Impact. (Source Highways Agency IAN 81/06)

Magnitude of Impact	Description of Change
Large	Complete destruction or change to the site or feature resulting in a fundamental change in our ability to understand and appreciate the resource and its historical context and setting
Medium	Change to the site or feature resulting in an appreciable change in our ability to understand and appreciate the resource and its historical context and setting
Small	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its historical context and setting
Negligible	Negligible or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its historical context and setting

5.7.2 Until investigative fieldwork can be undertaken uncertainty about the magnitude of impact on potential buried remains whose extent and character is unknown is inevitable.

5.7.3 Historic buildings may have impacts from vibration, noise and visual intrusion on their setting. The setting may include both views of the building (and especially views enjoyed by the public), and views from the building of its landscape or townscape environs. The appraisal of vibration and noise impacts will derive from specialist studies in those areas (requiring consultation and data exchange with other consultants), but even where these are calculated to be of low effect it may be necessary to consider the indirect impacts of measures potentially being taken in mitigation (e.g. use of double glazing).

5.7.4 Historic landscape features may be affected by loss through land-take, and may have impacts from noise and visual intrusion on their setting. The appraisal of vibration and noise impacts will derive from specialist studies in those areas, (requiring consultation and data exchange with other consultants).

5.8 Assessing the Significance of Effects for the Cultural Heritage

5.8.1 The severity of effect is dependent on:

- The importance of the cultural heritage receptors affected
- The magnitude of the impacts

5.8.2 The appraisal will be guided by the following matrix, which demonstrates how the effects will be defined. It is important that professional judgement is applied, so that the appraisal is flexible and realistic rather than being applied mechanically. For example: a medium adverse impact on an important designated building may be upon a part of the building which is of greater or lesser significance for the building as a whole, and so could be a moderate or slight effect.. The resultant significance of environmental effects shown in table 5.3 below are the scorings indicated in Highways Agency IAN 81/06 and utilised for the overall Appraisal Summary Table (AST).

Table 5.3: Significance of Environmental Effect. (Source Highways Agency IAN 81/06)

Magnitude of Change	Importance of Receptor			
	High	Medium	Low	Negligible
Large	Large	Moderate	Slight	None
Medium	Large/Moderate	Moderate/Slight	Slight/Neutral	None
Small	Moderate/Slight	Slight/Neutral	Neutral	None
Negligible	Neutral	Neutral	Neutral	Neutral

5.9 Mitigation of Effects

5.9.1 The resultant Environmental Effects outlined in table 9.1 will be the effect with any archaeological or design mitigation in place.

5.9.2 Any programme of mitigation would in the first instance seek to preserve buried archaeology in situ (and thus negate any impact) through design within the scheme. If this were not possible then a scheme of archaeological work would be implemented to preserve the resource by record, this would serve to lessen the Impact.

5.9.3 Mitigation of Setting Effects on the above ground resource (such as Listed Buildings) can only be addressed through design within the scheme to reduce any Impact, (e.g. by screening measures).

6 EXISTING CONDITIONS

6.1 Topography and Geology

6.1.1 The Proposed new Junction 10A and Link Road are located on the northern flank of a narrow and low ridge that slopes gently into the valley of the Aylesford Stream to the north and valley of the Stour to the south. The area is currently mainly open, regular fields on the outskirts of Willesborough and Sevington with a Garden Centre and Nursery in the proposed location of Junction 10A.

6.1.2 The geology underlying the proposed new junction and link road comprises in the main the Hythe Beds of the Lower Greensand formation. Alluvium overlies the Hythe Beds in the valley of the Aylesford Stream. The Sandgate and Folkestone Beds outcrop on the northern valley side of the Aylesford stream in the locality of the existing Junction 10. The Sandgate Beds are also indicated in the vicinity of Smeeth immediately to the southeast of the proposed new Junction 10A. The Lower Atherfield Clay of the Lower Greensand formation outcrops on the southern slope of the ridge to the southeast of Sevington. The base of the valley of the Stour lies on Wealden Clay overlain in part by alluvium.

6.1.3 Quaternary drift deposits of 4th Terrace Gravel are recorded capping the Sandgate Beds in the vicinities of Smeeth and to a more localised extent Willesborough.

6.1.4 The Proposed new Junction 10A and Link Road lies within an area defined in the Kent Historic Landscape Character Assessment (**OU 2001**) as part of HLCA 31, The Central Valley.

6.2 Scheduled Monuments

6.2.1 A Scheduled Ancient Monument (SAM) is an archaeological monument that is included in the Schedule required to be maintained by the Secretary of State under Section 1 of the Ancient Monuments and Archaeological Areas Act 1979. There is one Scheduled Ancient Monument, Boys Hall Moat (**OA 7**) within the study area.

6.3 Listed Buildings

6.3.1 The buildings are classified in grades to show their relative importance as follows:

- Grade I (Grade One): These are buildings of exceptional interest (only about 2 per cent of listed buildings so far are in this grade). Some Churches still retain their earlier grading of A and B
- Grade II* (Grade Two Star): These are particularly important buildings of more than special interest (some 4 per cent of listed buildings)
- Grade II (Grade Two): These are buildings of special interest, which warrant every effort being made to preserve them

6.3.2 There are two Grade I listed buildings within the study area and one church retaining its earlier designation as Grade B. These comprise:

- (**OA 5**) St Mary's Church in Sevington (Grade I)
- (**OA 57**) St Mary's Church, Sevington Road, Willesborough (Grade B)
- (**OA 73**) Mersham le Hatch Country House (Grade I)

6.3.3 One building is listed as II*, this is (**OA 71**) Newhouse, The Street, Mersham

6.3.4 A further forty-eight buildings or structures are listed as Grade II. (**OA 23 - 56, 58 - 70 and 72**)

6.3.5 A full listing and description of the Listed Buildings within the study area is given in the gazetteer of sites (Appendix 1).

6.4 Conservation Areas

6.4.1 Section 69 of the Civic Amenities Act 1969 gives local councils the power to designate as Conservation Areas, "areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance". Designation gives control over the demolition of buildings and provides the basis for policies designed to preserve or enhance all the aspects of character or appearance that define an area's special interest. They are designated usually because of their buildings, but they can also be designated because of their history, architecture, layout or private spaces, such as gardens, parks and greens, trees or street furniture. Conservation areas give broader protection than listing individual buildings and all features within the area, listed or otherwise, are recognised as part of its character.

6.4.2 Two conservation areas on the fringes of Willesborough and the Mersham Conservation Area lie within the study area.

6.5 Registered and Historic Parks and Gardens

6.5.1 The English Heritage register of Parks and Gardens was compiled and published

between 1984 and 1988 and is now subject to augmentation and updating. At present the inclusion of a park or garden on the register has no implication within the planning process, unlike the Planning and Policy Guidance notes, PPG 15 and 16 that are used to cater for archaeology and the built Heritage.

6.5.2 One Registered Park and Garden, Hatch Park, lies within the study area.

6.6 Archaeological Areas of Interest (AAI)

6.6.1 Kent County Council have utilised the Sites and Monuments record (SMR/HER) and areas of known archaeological significance to define areas of archaeological interest. Usually, development within these areas is restricted and in most cases an appropriately qualified individual or organisation would archaeologically assess the area, before a planning proposal is determined or granted. Defined areas of archaeological interest do not represent the only areas in which important archaeological remains may be present. The five areas that Kent County Council has designated areas of archaeological interest are shown on the features mapping (Fig. 3).

6.7 Ancient Woodland

6.7.1 Kent County Council have designated some areas of woodland that can be demonstrated to be historic as Ancient Woodland. Defined areas of Ancient Woodland do not represent the only areas of woodland that could be so designated.

6.7.2 Only two areas of Ancient Woodland intrude into the Study Area. These include the historic coppicing of Hornbeams in Bockhanger Wood in the western edge of Hatch Park and Ouseley Wood, the southern extent of which just intrudes into the northern part of the Study Area.

6.7.3 The areas of Historic Woodland are marked on the features mapping (Fig. 3). Bockhanger Wood is included as part of the Historic Park of Hatch Park.

6.8 Known Archaeological Sites

6.8.1 The study area contains twenty-one recognised sites of archaeological or historic landscape significance representing evidence of activity from the later prehistoric period onwards. Many of the recognised sites within the study corridor have been recognised from formal archaeological interventions in advance of urban or infrastructure development, notably in advance of construction of the Channel Tunnel Rail Link (CTRL). The excavated evidence includes one site (**OA 1**) where Neolithic features were identified, three sites where Bronze Age features were identified (**OA 1, 12 and 16**), nine sites demonstrating Iron Age activity (**OA 1, 4, 7 - 9, 12 and 16 -18**), four sites with Roman activity (**OA 4, 7, 9 and 18**) and six sites with Medieval activity (**OA 1, 7, 9, 12, 13 and 18**). An important consideration is the high incidence of multiple periods of occupation on a number of these sites (**OA 1, 4, 7, 9, 12, 16 and 18**), indicating that any hitherto unidentified archaeological sites within the study area are likely to demonstrate multiple periods of occupation.

6.8.2 Three sites are represented by cropmarks (**OA 2, 6 and 14**), these sites can not be dated without further investigation in the field and could represent activity of later Prehistoric date onwards.

6.8.3 Three findspots of Neolithic stone tools are recorded (**OA 19 - 21**) and one of these (**OA 19**) also included a Mesolithic flint.

6.8.4 One Medieval site (**OA 15**) is postulated from documentary sources and slight earthworks of enclosures.

6.8.5 The study area also contains the former sites of a 19th century workhouse (**OA 22**) and a 1960's Royal Observer Corps atomic weapon survey bunker (**OA 10**). Both these features are no longer extant.

7 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

7.1 Palaeolithic Period (500,000 BP - 10,000 BP)

7.1.1 Palaeolithic populations were hunter-gatherers and few in number who periodically exploited the periphery of the Ice sheets. The countryside that they exploited was sometimes open grassland but often semi - tundra with dwarf birch and willow scrub (Evans 1975). Very little remains to indicate their presence and what there is has often been disturbed from its original depositional sequence by later re working through glacial, riverine and human activity. Remains of the periods are therefore highly ephemeral and consist mainly of stone tools and remains of the animals with which Palaeolithic population's co existed and hunted. Palaeolithic hunter-gatherers may potentially have been periodically exploiting the resources of the region, utilising river valleys to access hunting territories within the peripheries of the Thames watershed. (Lewis *et al* 1992).

7.1.2 Lower Palaeolithic sites seem to concentrate close to rivers and other bodies of water with occupations present by c. 250,000 bp (Roe 1981). Later glacial advances such as the Devensian (c. 110,000 - 13,000 Bp) will have affected the survival of the ephemeral remains of the Lower Palaeolithic period and will have resulted in negligible human activity during the Early Upper Palaeolithic period in the region (Jacobi 1980). Episodic utilisation of the area may have returned by the end of the Later Upper Palaeolithic (c. 13,000 bp) as the ice sheets retreated once more, but little evidence for this period has been recognised in Kent.

7.1.3 No Palaeolithic material has so far been recognised within the study area.

7.2 Mesolithic (10,000 BP - 4,000 BC)

7.2.1 Following the final retreat of the ice sheets at the beginning of the present Flandrian period (c. 13,000 Bp), the climate became warmer and wetter with an associated and gradual expansion across southern Britain of a succession of dense forest types culminating in Oak/Alder and Lime dominated forest by c. 8,500 Bp. (Evans 1975).

7.2.2 By the early Mesolithic period the area had become established birch and pine dominated woodland. Human activity of this period appears to be concentrated on the coastal belt and around major valleys (Jacobi 1996). By the later Mesolithic period, the valleys may potentially have been the focus for seasonal camps and small-scale clearances of woodland during spring to summer with winter hunting on higher ground.

7.2.3 Mesolithic societies consisted of small and scattered bands of hunter-gatherers whose cultural remains are ephemeral and generally consist of their stone tools and evidence from the animals that they exploited. Mesolithic remains are seldom recognised during formal excavation but can be detected during large scale and systematic fieldwalking exercises. Much evidence of Mesolithic date will have been disturbed by later erosion activity by rivers and agriculture and/or masked by build ups of alluvium and colluvium within river valleys.

7.2.4 A single find (**OA 19**) of a Mesolithic flint blade is recorded from within the study area.

7.3 Neolithic (4,000 BC - 2,300 BC)

- 7.3.1 Evidence for earlier Neolithic activity has mostly resulted from investigations of later sites. Few domestic sites for the early Neolithic period have yet been identified but evidence for this date appears to be concentrated on upper slopes of river valleys (Holgate 1988b). Kent is, however, one of the earliest areas of Britain in which Neolithic and Early Bronze Age settlement sites have been recognised (Holgate 1996). Fieldwalking surveys remain the primary source of evidence for earlier Neolithic activity (Brooks and Bedwin 1989, Wilkinson and Murphy 1986 - 1988).
- 7.3.2 Pollen studies have suggested that woodland clearances for animal husbandry and, to a limited extent, horticulture began in the early Neolithic period. These clearances coincide with a change from lime with oak and pine woodland to beech dominated woodland by c 2,000 BC. These clearances are also associated with the first appearance of cereal grains in the archaeological record (Girling and Grieg 1977/1985). Studies of snail assemblages appear to confirm that woodland clearances occurred in the South of Britain with an increase in grassland suggesting a use of the cleared areas for grazing (Allen 1991). The Neolithic clearances initially appear to have consisted of relatively temporary assarts within woodland. Evidence is available to indicate that a degree of secondary woodland regeneration of Elm, Lime and Ash occurred on many previously cleared areas. (Whittle 1978).
- 7.3.3 Later Neolithic sites include sites that can be classified as agricultural with a shift in preference to lower valley slope locations. The earliest divisions of land can be attributed to the end of the Neolithic and beginning of the Bronze Age with elements of field systems being recognised under later Neolithic and Bronze Age monuments at Abingdon, Fengate and West Heslerton (Holgate 1996). This may indicate the shift from a relatively mobile pastoral society utilising coastal and riverine resources in spring and autumn with hunting in upland woodland during the winter to a more settled husbandry based society, with clearer territorial definition, by the later Neolithic. The heavier claylands such as the Weald appear to have been largely unused for settlement but may have continued to have been utilised for hunting.
- 7.3.4 Settlement evidence for the Neolithic period can be more easily recognised than from the Palaeolithic and Mesolithic periods as structures and earthworks with a wider selection of find types including pottery enter the archaeological record. Monument types represented during the period include Longbarrows, Mortuary Enclosures, Cursus Monuments, Causewayed enclosures, Henges and the first instances of Ring Ditches. No Henges have yet been recognised in Kent and until recently no Causewayed Enclosures and very few Ring Ditches had been recognised. Archaeological surveys in advance of development and infrastructure have now added considerably to the available evidence with Causewayed Enclosures now identified outside Ramsgate, Folkestone, Burham, Tilmanstone and on the Isle of Sheppey (Ashbee 2005). Two concentrations of longbarrows have so far been identified in Kent, a grouping of megalithic long barrows in the Medway Valley and more pertinently a grouping of earthen long mounds in the valley of the Great Stour, immediately to the north of the study Area. Archaeological investigations for CTRL at White Horse Stone, just to the north of Maidstone, have also identified an example of a Neolithic long house, which, unlike examples elsewhere in Britain, parallels finds from the continent. The evidence for Neolithic activity, now becoming apparent in Kent, suggests that the area was distinctive from the rest of mainland Britain at this time (Ashbee 2005) and hints at continental contact.
- 7.3.5

- 7.3.6 Once again material of Neolithic and Early Bronze Age date may have been disturbed by later agricultural practice and/or been masked by later alluvial, estuarine and colluvial deposition.
- 7.3.7 Evidence for Neolithic activity within the study area includes features containing Neolithic material identified from Boys Hall road (**OA 1**). This evidence may include elements of enclosures or paddocks suggestive of near by occupation. Three findspots of Neolithic stone tools have also been identified within the study area (**OA 19 - 21**). Fieldwalking in advance of CTRL recognised concentrations of flint west of Blind Lane (**OA 16**) and in the vicinity of the cropmarks near Highfield Lane (**OA 6 and 14**).
- 7.4 Bronze Age (2,300 BC - 700 BC)**
- 7.4.1 During the Bronze Age an intensification of land use may be associated with a change in agricultural practices in response to increasing population and associated greater social complexity (Cunliffe 1991). Natural divisions of land such as river lines and ridges would also probably have become more important as boundaries (Bradley *et al* 1994). These natural boundaries may have been affirmed by the placement of round barrows, which are usually sited on crest lines overlooking valleys (Welch 1985), one such may be represented by a cropmark of at least one possible Ring Ditch (**OA 14**) on the ridge crest north west of Mersham. Fieldwalking ahead of development of CTRL (OAU 1995) recovered a concentration of flint and a small amount of Prehistoric pottery from an area near this feature. Rivers would also have become important communication routes and by the Bronze Age cross channel trade with mainland Europe and beyond can be seen to have been established (O'Connor 1980, Wilkinson and Murphy 1995).
- 7.4.2 From the Middle Bronze Age onwards In Kent, there is evidence for the formation of an economy that included significant elements of trade or gift exchange controlled by social elite (Yates 2005). This is evidenced by the regulation of land that is now becoming evident and the deposition of luxury goods, including swords, bronzes and goldwork (Jessup 1930) into rivers. This deposition is especially marked in the valleys of the Medway and more pertinently the Stour. The study area lies adjacent to Ashford, which stands on the southern end of the Great Stour river corridor, which would probably have been an important routeway (Yates 2005). By the end of the Bronze Age it is probable that Kent and the Thames estuary had eclipsed Wessex as a focus for continental exchange (Champion 1982).
- 7.4.3 Bronze Age settlement evidence appears to be concentrated mainly on the lighter free draining soils over chalk, gravels and brickearths (Bryant 1997). There may be some bias in the recognition of settlement activity from the Bronze Age on these areas due to the greater availability of aerial photographic data, which works well on the lighter soils compared to the heavier claylands. The greater degree of modern development on gravels has also led to a broader recognition of sites in these areas. Evidence now exists, however, indicating that settlement was not only limited to areas with lighter soils but was encroaching on areas of Clay (Brown 1988 and Bryant 1997).
- 7.4.4 A greater number of monument types such as round barrows, field systems, open and enclosed settlements can be identified during the Bronze Age. Both enclosed settlement and open settlements are increasingly being recognised from southern Britain. Open settlements seldom show up as cropmarks, but significant examples have now been recognised from excavations adjacent to the M3, surveys on Salisbury Plain (Bradley *et al* 1994) and from investigations on the Berkshire Downs (OA 2004/2005). Extensive extra mural open settlement of Bronze Age date has also been recognised in Essex at Mucking (Jones and Bond 1980 and Bond 1988). Extensive field systems of Bronze Age and later date have now been

recognised in southern Britain during systematic surveys of the Dartmoor Reaves (Fleming 1988) and Malborough Downs (Gingell 1992). Further evidence for delineation and diversification of land utility during the Bronze Age has been demonstrated within the Kennet Valley (Moore and Jennings 1992). Similar evidence is to be found within Essex at Lofts Farm (Brown 1988) and Mucking (Jones and Bond 1980 and Bond 1988).

- 7.4.5 The earliest recognisable fields were in all probability laid out to facilitate the management of livestock. Systems of paddocks and droveways will have been formed, often on parallel alignments comparable with a ladder, to facilitate the movement of herds between upland and lowland pasture. The probable concentration on livestock is further reinforced by the quantity of finds associated with spinning and textiles that are identified from Middle Bronze Age sites compared with later periods. Arable fields were, therefore, probably only a small part of any system until the late Bronze Age/Early Iron Age (Hunter 2003).
- 7.4.6 Until recently there was very little evidence in Kent for similar land partitioning. Recent archaeological work, mostly in the form of evaluations ahead of development and evidence from works associated with CTRL has added considerably to this understanding. Field boundaries, droveways and rectilinear fields/paddocks of middle Bronze Age date and later have now been extensively recognised. Such partitioning appears to be concentrated in Northern Kent and more pertinently within the Greensand Vale, in which the study area lies. Examples of such systems dating from the Middle Bronze Age have been identified within the study area near Boys Hall Road (**OA 1**), near Blind Lane (**OA 16**) (Glass 1999) and just south of the study area at Westhawk Farm (Booth and Lawrence 2000).
- 7.4.7 Further widespread and more permanent clearances of woodland have been recognised towards the end of the Bronze Age demonstrating a severe decline in Elm (Scaife 1988) and evidence for extensive clearance from the later Bronze Age has now been recognised from the Isle of Thanet (Scaife and Hearne 1995). These clearances correspond to a widespread increase in arable uptake with open grassland for grazing and managed woodland (Holgate 1996). The beginnings of extensive colluviation and silting into watercourses, resulting from deforestation and arable uptake, can be attributed to the latter Bronze Age and later.
- 7.4.8 The settlement near Blind Lane (**OA 16**) has produced evidence for further settlement during the Later Bronze Age and may even represent a continuity of settlement on the site (Glass 1999). Late Bronze Age activity, probably peripheral to settlement, has been recognised near Boys Hall (**OA 1**) and a Late Bronze Age dispersed and unenclosed settlement site with traces of a field system and farmstead has been identified at Waterbrook Farm (**OA 12**).

7.5 Iron Age (700 BC - AD 43)

- 7.5.1 The Iron Age settlement pattern appears to conform to that established during the later Neolithic and Bronze Age periods. Again there is likely to be a bias in recognition of sites on lighter soils due to the greater degree of recent development and the improved chances of recognition of sites by aerial photography on the lighter soils. Sites of later Bronze Age and Iron Age date are often found on lower slopes overlooking valleys.
- 7.5.2 Present evidence seems to indicate that field systems were generally falling out of use in the Early Iron Age and through the Middle Iron Age across much of the Thames Estuary region, perhaps indicating a population decline (Yates 2001). Unlike much of southern Britain the construction of Hill Forts in Kent appears to have been a Middle Iron Age phenomenon and then they are few, not intensively occupied (Hamilton and Manley 2000) and generally restricted to west of the Medway (Cunliffe 1982). The distribution of hill forts suggests that they may have

been built on the verges of the Greensand Vale, in which the study area lies, to control passages into the Weald, which was becoming a producer of iron. (Hamilton and Manley 2000).

- 7.5.3 The Later Iron Age was, however, a period of burgeoning population with an increasingly complex social hierarchy becoming established. The population of Britain, by the onset of Roman rule in the 1st century AD, was probably not equalled again until the 13th century and a similar extent of land may have been under the plough as during the height of the Middle Ages (Hunter 2003). The development of centralised tribal hierarchies in southern Britain are attested to by classical writers such as Caesar and can be demonstrated by the development of local coinages, the first of which were available in Kent by c. 90 BC (Northover 1992). Coinage was a convenient method of gift exchange to maintain economic and military bonds (Kent 1981). Kent is recognised as the seat of the *Cantiani*, who after Caesar's expeditions to Britain held treaty obligations to Rome. Economic, and by association diplomatic links, with mainland Europe and the Roman Empire are clearly represented in Kent, during the 1st centuries BC and AD, by the presence of pottery, glassware and coinage from across the Roman empire. The Greensand Vale and Great Stour Valley leading northwards would probably have remained important communication and trade routes from the relatively populous northern and coastal parts of Kent to the Iron producing Weald. Certainly by the later Iron Age the North Downs Trackway, paralleling the Greensand Vale appears to have become established (Parfitt 2005). Important market centres or *Oppida*, such as that recognised at Bigbury on the Stour (Cunliffe 1982) controlled this trade. The establishment of a large Late Iron Age settlement at Westhawk Farm, just outside the southern limit of the study area, may represent the foundation of a local market centre (Booth and Lawrence 2000).
- 7.5.4 A further intensification of arable agriculture can be recognised during the later Iron Age with extensive build-ups of colluvium and alluvium in valleys and on the periphery of upland areas as plough soils were eroded. The accumulation of colluvial and alluvial material due to the intensification of arable practices will have masked earlier sites in lower lying areas and on lower slopes. Sites buried beneath such deposits can be expected to survive in a relatively good state of preservation due to the protection offered from later agricultural damage.
- 7.5.5 A diverse number of site types can be recognised in Kent from the Late Iron Age. These include both enclosed and open settlements, isolated farmsteads, farmstead groupings and open settlements. The excavated evidence appears to be corroborated by Caesar, writing about his expeditions to southern Britain in 55 and 54 BC, referring to a populous land of scattered farmsteads and numerous herds, thickets and woods.
- 7.5.6 A number of excavated Late Iron Age sites lie within the study area. These comprise an apparent concentration of field boundaries and probable occupation in the vicinity of Boys Hall Road (**OA 1**) and Boys Hall Moat Scheduled Monument (**OA 4 and 7 - 8**). This evidence includes ditches attributed to field systems (**OA 1**) and a probable farmstead with associated field system (**OA 4 and 7 - 8**). Excavations in advance of construction of CTRL at Boys Hall Balancing pond (**OA 18**) identified part of a Late Iron Age cremation cemetery and possibly associated ditches. Further Late Iron Age activity was noted during work for CTRL at the Ashford Terminal (**OA 17**), west of Blind Lane (**OA 16**) and Waterbrook Farm (**OA 12**). It is notable that the sites at Boys Hall (**OA 1**), Waterbrook Farm (**OA 12**) and Blind Lane (**OA 16**) appear to be continuity of occupation on, or re occupations of sites formerly occupied during the Bronze Age.

7.6 Roman (AD 43 - AD 410)

7.6.1 The pattern of later Iron Age settlement continues into the Roman period with an apparent intensification of agriculture in river valley locations (Holgate 1995). It has been suggested that by the first century AD settlement was becoming increasingly nucleated as the emphasis shifted from agricultural production to a more trade orientated economy (Cunliffe 1991). This shift can be recognised more fully in the centuries after 43 AD with the establishment of a Romanised infrastructure of roads and towns supported by nearby settlements. The majority of major Roman towns had their origin as Iron Age tribal foci on important communication hubs such as river crossings or meetings of routeways. One such small town has been identified just outside the southern limit of the study area at Westhawk Farm (Booth and Lawrence 2000). The hinterland of these towns in Kent generally seem to comprise scattered farmsteads which, unlike elsewhere in Southern Britain, do not develop into villas, suggesting that the landowners were living in larger towns (Blagg 1982). All were served by a network of arterial roads, which interlinked with local roads, tracks and green lanes. The Major roads generally survive to a large degree today.

7.6.2 The major Roman route through Kent was the Watling Street, which runs through the north of the county, and it is along this route that settlement remained concentrated. Further roads became established to facilitate access to the Wealden iron industry. One of these roads running along the Greensand Vale and linking Folkestone to the Medway area lies c 500 m outside the southern limit of the study area. A second road follows the line of the Great Stour to link with the Watling Street in the north of the county. These routes probably represent routes established in the Late Prehistoric period and will have continued to attract nearby settlement. The small town at Westhawk Farm, just outside the southern limit of the study area, is located very close to the junction of these two routes (Booth and Lawrence 2000).

7.6.3 Kent appears to have been a relatively rich area of Britain and may have been the industrial heartland of the Roman province of Britannia (Andrews 2005). Certainly the Wealden Iron industry was of significant importance and seems to have been associated with the Roman fleet (*Classis Britannia*) based in Britain. Other industries represented in the county include kilns for pottery and tile and stone quarries. This industry and continued cross channel trade may explain the apparent wealth evident in Kent during the Roman period and represented by the proliferation of walled cemeteries, barrows and lead coffins recorded along the Watling Street in the north of the county (Blagg 1982).

7.6.4 Excavated evidence for Roman activity has been recorded at four sites within the study area. A concentration of activity has been recognised in the vicinity of the Scheduled Monument at Boys Hall Moat (**OA 4, 7, 9 and 18**). These sites all show a degree of continuity from the late Iron Age and include features that can be attributed to field systems (**OA 4 and 7**) a probable farmstead with at least one associated cremation burial (**OA 9**) and further cremation burials of Roman date associated with a pre existing Iron Age cemetery (**OA 18**). Fieldwalking in advance of CTRL (OAU 1995) also noted concentrations of Roman pottery, which may indicate further settlement activity, in an area near the possible Bronze Age Ring Ditch (**OA 14**) beside Highfield Lane.

7.7 Early Medieval (AD 410 - AD 1066)

7.7.1 There is a dearth of archaeological evidence for the period following the decline of Roman infrastructure in the 5th to 6th centuries AD. Many early Saxon sites could easily have not been recognised during the excavation of the later phases of Romano British sites or the earlier phases of later Medieval sites, due to the relative lack of cultural material (Williams 1989). At present the evidence for early Anglo Saxon activity in Kent is almost universally limited to burials (Riddler 2005)

and these are generally to be found near present day villages, suggesting any settlement evidence is to be found under present settlement (Hawkes 1982). During the later 5th century the burial evidence seems to indicate that settlement was focussed on the lower reaches of major rivers such as the Great Stour but by the mid 6th century cemetery evidence is becoming increasingly concentrated within the Greensand Vale, in which the study area lies (Andrews 2005), one such concentration of 7th century graves has been identified in the Great Stour valley at Wye a few kilometres north of the study area. The grave goods in the Early Saxon burials indicate that Kent was wealthy and retained links with the continent, specifically Scandinavia and Merovingian France (Hawkes 1982).

- 7.7.2 It has been suggested that there was a significant decrease in the population of Britain during the Early Medieval period (Higham 1992). The available evidence of cemeteries and place names in Kent suggest, however, that any such decline was not very pronounced in Kent. Even so the Roman small town at Westhawk Farm, just outside the southern limit of the study area, appears to have been abandoned by the Early Saxon period (Booth and Lawrence 2000) and no certain activity of Early Saxon date has been identified within the study area. If there was a significant decrease in population it is likely that areas of marginally workable soils would have been the first to be abandoned for agriculture. There is a possibility that these areas would still have been utilised for hunting and swine pasture in re-established woodland (Rackham 1986). The study of place names for the region suggest that the new settlers were moving onto an already cleared and managed landscape (Reaney 1961) To a certain extent the established road system of the area probably remained at least partially in use and further drovers routes and saltways may have become established or re-established.
- 7.7.3 By the 7th century AD England was stabilising with the foundation of independent Kingdoms with an ever-increasing social and hierarchical complexity. The Kentish Kingdom was one of the earliest to become established and one of the Royal Centres (*Vils*) of Kent is identified with Wye to the north of the study area. Kent remained independent until AD 725 when it fell under Mercian control. The independence of Kent before 725 may serve to explain how the area may have avoided the shire reorganisations of the midland counties of Wessex and Mercia, which resulted in the characteristic open, planned landscapes in these areas. This is clearly reflected today by the “ancient” character of the landscape with small irregular fields, frequent woodland/ thickets and plethora of twisting lanes linking small, dispersed settlements that survive in Kent.
- 7.7.4 The Weald remained an important centre for Iron manufacture and the study area lies close to the junction of the important routeway to the north, provided by the valley of the River Great Stour and the low ground of the Greensand Vale. Ashford, recorded as *Essetesford*, does not appear as a town in the Domesday Book of 1086 but even so probably had a market and local pottery industry by that date (Ridler 2005).
- 7.7.5 No Later Anglo Saxon have definitively been identified within the study area and settlement by the Norman conquest had probably become concentrated on present day habitations such as Sevington, Mersham and Willesborough. Mersham and Sevington are both mentioned in Domesday and Willesborough and Mersham may have an at least 9th century provenance (Ekwall 1960). The Grade I Listed Church of St Mary’s at Sevington (**OA 5**) includes Norman fabric in its nave and probably stands within an area that was populated by 1066. It is noteworthy that this church is now relatively isolated and it is not inconceivable that Late Saxon, or even earlier settlement could be present in its immediate vicinity.

7.8 Late Medieval (AD 1066 - 1550)

- 7.8.1 The Medieval period saw a general increase in population with the population virtually doubling between the 11th mid 14th centuries (Ward 1996). The increasing demands on land led to the uptake of marginal land and the creation of woodland closes through assarting on the periphery of established settlement. Moated sites have been associated with the clearance of assarts on the margins of established settlement.
- 7.8.2 During the 14th Century a deterioration in climate with associated crop failures, stock diseases and soil exhaustion coupled with the onset of plague in 1347 caused a severe population decline and consequent abandonment of more marginal land. The severe reduction in the agrarian workforce was in part responsible for the relaxation of the long established feudal system, with farmers tied to a particular estate. This workforce was now better able to sell their services and move to where this service was required. The growth of market towns and to a great extent London throughout the Medieval period also forced a re - organisation of the production and distribution of agricultural resources. The re - organisation and re - stratification of the regional economy of Kent was further boosted by the sale of land made available by the dissolution of the Monasteries that began in the 15th century and culminated with the final Henrician Axe of 1536 - 1542. (Aston and Bettey 1988). In Kent this upheaval in rural society may be reflected by the abandonment of many of the Moated sites such as that at Boys Hall (**OA 7**) and farmsteads on more marginal land and the development of an early system of privately sponsored land enclosure. The Kentish enclosures had, for the most part, already been realised by the latter 16th to 17th centuries.
- 7.8.3 A number of later Medieval buildings (**OA 5, 23 - 25, 29, 57, 61 and 69**) are present within the study area at Willesborough, Sevington and Mersham indicating that these settlements were extant by the Later Medieval period. It is noteworthy that the Church of St Mary at Sevington (**OA 5**) and the adjacent Court Lodge (**OA 29**) are now relatively isolated. The Church of St Mary (**OA 5**) and the plot of land on which Court Lodge lies (**OA 29**) may represent the original core of a now mainly abandoned settlement which may extend into the footprint of the proposed new link road.
- 7.8.4 Excavated evidence for Medieval settlement has been recorded in the vicinity of the Scheduled Moated Site of Boys Hall (**OA 7, 9 and 18**). Boys Hall Moat (**OA 7**) is a very good example of a moated site that became established in the 12th to 13th century with associated fishponds, secondary water features and the probable remains of a very early formal garden. The nearby excavations have identified further features (**OA 18**), including a cobbled yard, associated with the complex. In addition excavations off Boys Hall Road (**OA 1**) identified a small rectangular building with flanking ditches and hearth dating to 1175 - 1250 and investigations at Waterbrook Farm (**OA 12**) identified the remains of a Watermill on the River Stour dating to c 1150 - 1200. The Waterbrook Farm site lies adjacent to a series of enclosures (**OA 15**) that have also been tentatively identified as Medieval in date. Further Medieval buildings of probable 12th century and associated with evidence for field systems were identified on Church Road Sevington (**OA 13**). Fieldwalking in advance of CTRL (OAU 1995) between Highfield Lane and St Mary's Church (**OA 5**) recovered quantities of Medieval pottery, which became more concentrated towards Waterbrook Lane to the south. This material could indicate the presence of Medieval settlement activity and associated deposition of pottery in field manure.
- 7.8.5 The concentration of excavated evidence and material from fieldwalking of Medieval date in the Sevington area strongly supports the presence of a fairly extensive settlement that probably once included St Mary's Church (**OA 5**) and which was abandoned, possibly in the 14th century. Elements of this settlement are

likely to extend north of St Mary's church into the footprint of the proposed link road. Low earthworks (**OA 74**) that may represent evidence for this were noted in the paddocks north of the Church during the walkover.

7.9 Post Medieval (AD 1550 +)

7.9.1 Kent has a good coverage by historic maps. Distinct landscape characters can be seen from the study of these maps dating from the early 17th century onward. The map regression and the observations made during the March 2006 walkover suggest, that apart from the very limited effects of the 18th and 19th century enclosures on field boundaries, the character of the present landscape reflects that established by the end of the Medieval period. This itself may have developed from, and retains some semblance of a pattern of settlement and estate structure that may have been in place by the mid Saxon period (Rippon 1996). A significant exception to this pattern is the expansion of Ashford from the mid 19th century onwards.

7.9.2 The post Medieval evidence within the study area mainly comprises Listed Buildings of 18th and century and later date within Willesborough and the hamlets of Sevington (**OA 32 - 35**), Mersham (**OA 23 - 27**) and Swatfield (**OA 11 and 49 - 51**). An Observer Corps Nuclear observation bunker (**OA 10**) once stood beside Highfield Lane but is no longer extant.

7.10 Cartographic Background (Figs 3 -4)

7.10.1 The mapping exercise showed there to be a good coverage for Kent from the early 17th century onwards. The earlier maps, such as Saxton's of 1605 - 10 are of limited value, with scant detail. From the late 18th century the maps, give a good impression of the landscape character within the study area and serve to show that the present landscape is probably a well-preserved reflection of that in existence at the end of the Medieval period.

7.10.2 The 19th century and later mapping indicates that the area crossed by the proposed new Link Road remained open fields at the time of the 1st Edition 6" of 1876 (Fig. 4). A quarry (**OA 76**) was noted, on the line of the proposed new Link Road, on the 2nd edition 6" of 1899 but was not indicated on the 3rd Edition of 1908 (Fig. 5).

7.11 Aerial Photographs (Plates 1 - 2)

7.11.1 A study was made of aerial photographs covering the Study Area that are held by the NMR at Swindon. No potential archaeological features were noted within the footprint of the proposed new junction or road link. Features were, however, visible in close proximity to the proposed new route to the east of Highfield Lane (**OA 14**) and to the south west of Sevington (**OA 75**).

7.11.2 Plates 1 and 2 of this report show the features to the east of Highfield Lane (**OA 14**). These features are recorded on the Kent HCR as two possible Ring Ditches. The aerial photographs studied appear to show that the features here are more complicated. There does appear to be one certain Ring Ditch (Plate 1) of probable Bronze Age date, but there are also a series of rectilinear enclosures in the same area (Plate 2). Enclosures of this nature generally represent settlement activity of Bronze Age or later date

7.11.3 Plate 2 also shows what looks like a further area of curvilinear and linear enclosures in the field south and west of Sevington (**OA 75**). Once more, enclosures of this type generally represent activity of Bronze Age or later date.

7.12 Walkover Survey (Plates 3 - 5)

- 7.12.1 On 2nd March 2006 a Walkover Survey of the proposed route of the new Link Road was conducted. The survey noted that the proposed new link road crosses an area of open fields in normal agricultural use that lie just below the crest line of a valley slope into the flood plain of the Aylesford Stream (Plate 5). For the most part these fields were noted to have been in arable use and therefore ploughed. Any underlying archaeology may, therefore, have been damaged.
- 7.12.2 The area around St Mary's Church, Sevington, was noted to comprise smaller paddocks, presently given to pasture. The Orchard north of the Church, shown on Aerial Photographs from the 1940's is no longer present. Some slight earthworks were noted in this area but could not be properly defined due to their ephemeral appearance to the naked eye. These low features may represent ploughed out boundaries, platforms and associated features making up a deserted settlement at Sevington based around St Mary's Church (**OA 5**) and Court Lodge (**OA 29/30**).
- 7.12.3 No evidence for the cropmark features (**OA 6 and 14**), to the east of High Lane, was noted during the survey.
- 7.12.4 The survey demonstrated that in the main the presence of a ridgeline protects the listed buildings at Mersham (**OA 23 - 27**) and Sevington (**OA 32 - 35**) from any potential direct visual intrusion by the proposed new Link Road. Intervening slopes also serve to protect the Registered Hatch Park from any visual intrusion by the proposed new road scheme. The Grade II Listed milestone (**OA 28**) in the location of the proposed new Junction 10A could not be found during the Walkover and may have been moved or removed since its listing.
- 7.12.5 St Mary's Church, Sevington (**OA 5**) is a Grade I Listed Church that lies partly within a hedged enclosure. The Church, however, does have mainly unobstructed views into the valley of the Aylesford Stream and visual intrusion from the proposed new Road Scheme will be an issue (Plates 3 and 4). The Listed Buildings at Court Lodge (**OA 29 and 30**) are screened from the proposed Road Scheme by St Mary's Church and its hedged enclosure.

8 LIMITATIONS OF ARCHAEOLOGICAL AND HISTORICAL METHODOLOGIES

8.1 Archaeological Limitations

- 8.1.1 The methods of assessment used, and the sources of data available inevitably lead to a degree of uncertainty and bias in understanding past settlement activity within the study area.
- 8.1.2 Aerial photographic coverage held for Kent is good. Unfortunately, in addition to the bias towards open sites under cultivation, aerial photography is constrained by existing ground conditions and light at the time a photograph was taken. Differences in ground conditions may result in cropmarks appearing and disappearing over time. Aerial photography will generally only identify areas with fairly significant features such as ditches and buried walls. Clayland areas are notoriously unresponsive to aerial photography except in the most extreme of dry weather. Colluvial and alluvial deposits will also often mask earlier sites from aerial photographic interpretation. It has been demonstrated that even on sites identified by aerial photography perhaps only 10% of significant features will be represented (Miles 1982).
- 8.1.3 Fieldwalking can be a very important tool for recognising sites, especially otherwise ephemeral Prehistoric sites. Unfortunately there has been very limited, if any fieldwalking undertaken within the study area, except for very focussed work along the route of CTRL. It is notable that a number of flints were recovered from CTRL

fieldwalking in the area between St Mary's Church, Sevington (**OA 5**) and Highfield lane.

- 8.1.4 Similarly no significant geophysical survey work has been conducted within the study area, again with the exception of work in advance of CTRL. Again existing ground conditions at the time of survey or the existence of overlying colluvial or alluvial deposits can mask the identification of archaeological features. Many natural features such as palaeochannels may also be represented as potential archaeology.
- 8.1.5 Any assessment of archaeological data will have a bias due to the identification of sites by recent development. Until very recently the excavated evidence for Kent and specifically around Ashford was relatively sparse. The growth of Ashford and most notably investigations associated with the construction of CTRL have resulted in a very great number of new sites being recognised which has significantly altered the perception of past settlement in the area.
- 8.1.6 The evidence from the CTRL demonstrates that there is a very high potential for Late Prehistoric to Medieval activity being present in an undeveloped area that was otherwise apparently bare of archaeological material.
- 8.1.7 Sites on upper slopes in this area may potentially be damaged or destroyed by ploughing. Whereas sites in valley locations and on lower slopes may be masked and therefore protected by alluvial and colluvial deposits. Sites so protected are likely to produce better stratigraphic and palaeoenvironmental data.

9 DESIGN AND MITIGATION

9.1 The Scheme

- 9.1.1 Construction Impacts associated with the construction of the new junction and link road would involve the disturbance of topsoil and subsoil that may contain archaeology within the footprint of the new road build and any associated drainage, balancing ponds, service diversions and plantings. Construction work would be undertaken predominantly on new land take that has seen no past development. The construction would also require the placement of temporary construction compounds, soil bunds and access easements. The locations of these areas are unknown at the time of writing and an assessment of their potential impact should be made when details are known.
- 9.1.2 The impact of the original construction of the M20 has disturbed the original ground surface within the M20 Highway Boundary. Any archaeology within the existing Highway Boundary would, therefore have already been affected by the M20.
- 9.1.3 The construction impacts of the new Junction and link road would form direct primary impacts and would be permanent. Operational effects would be indirect setting effects.
- 9.1.4 Both construction and Operation impacts on the setting of statutory constraints (Scheduled Monuments, Listed Buildings, Historic Parks, and Conservation areas) have been assessed for the proposed new junction and link road scheme. Particular attention has been taken where the proposals would lead to a change in setting of these features.

9.2 Mitigation

- 9.2.1 Potential Direct Primary Impacts to the buried archaeological resource can be mitigated either through preservation in situ or by preservation by record. Preservation in situ would generally negate any Adverse Effect but can generally

only be accomplished through design within a scheme. Preservation in situ would be the favoured strategy, but is often impracticable. Preservation by record can be accomplished through a scheme of archaeological investigation and recording. This would generally lessen any Adverse Effect, but would not negate it, as the recording exercise and subsequent construction phase would, on the whole, remove the resource.

9.2.2 Potential Direct or Indirect Setting Effects on the above ground cultural resource (Listed Buildings, Historic Parks etc.) can, generally, only be mitigated against by design within a scheme.

9.2.3 Below is a suggested Mitigation strategy for the proposed M20 Junction 10A and new Link Road Scheme.

9.2.4 The archaeological response should first seek to better define the presence, extent, nature and quality of any potential archaeological deposits within the footprint of the proposed new Link Road. This could be accomplished through a scheme of fieldwalking, geophysical survey, topographic survey and archaeological trial trenching, followed if required by formal excavation or strip map and sample.

9.2.5 The first stage of the archaeological response could include:

- Fieldwalking of the open agricultural fields, across which the majority of the new Link Road crosses, should provide some indication of the presence of and location of any potential archaeological sites. Fieldwalking is best undertaken soon after ploughing.
- Geophysical and Topographic Survey of the paddock areas north of St Mary's Church, Sevington should provide some indication of the extent and nature of the probable deserted Medieval Settlement in this Area.

9.2.6 The results of any initial stage of non-invasive survey, as indicated above, could be used to inform on the requirement for and strategy of a scheme of archaeological trial trenching along the route of the proposed new Link Road. Archaeological trial trenching would serve to inform on the presence of, date and quality of any archaeological remains along the course of the proposed new Link Road. Archaeological trial trenching would also serve to inform on the requirement for a nature of any further archaeological scheme of work.

9.2.7 Further archaeological recording would be decided upon depending on the results of the survey techniques listed above. Recording strategies might include full-scale excavation of concentrated archaeological remains or a strip map and sample strategy along the route or a combination of these.

9.2.8 The Indirect setting Effects on St Mary's Church (**OA 6**) and Court Lodge (**OA 29/30**) could be offset, but not negated by provision of enhanced screening on the western part of the route.

9.2.9 A Mitigation strategy could be agreed, through consultation with the local curatorial body (Kent CC). Any consultation and mitigation should occur well in advance of any construction phase commencing.

10 ASSESSMENT OF IMPACTS

10.1 Outline

10.1.1 Table 9.1 summarises the direct and indirect archaeological impacts ensuing from the construction and operational phase of the M20 J10A Access to South Ashford.

The resultant Significance of Environmental effect utilises the terminology from WebTag 3.3.9.

- 10.1.2 The environmental effects given in the table and described below are those that would ensue should these impacts occur with appropriate mitigation.

Table 10.1 Summary of Impacts

OA No.	Description	Type of Impact	Importance of Receptor	Magnitude of Impact	Significance of Environmental Effect
5	St Mary's Church, Sevington. Grade I Listed	Direct Secondary and Indirect	High	Medium	Moderate Adverse
25	Redbur, Kingsford Street. Mersham Grade II Listed	Direct Secondary and Indirect	Medium	Negligible	Neutral
26	Barn/Garage 20 m W of Redbur Grade II Listed	Direct Secondary and Indirect	Medium	Negligible	Neutral
27	Ransley Cottage	Direct Secondary and Indirect	Medium	Small	Moderate Adverse
28	Milestone on Hythe Road	Direct Primary and Indirect	Medium	Negligible	Neutral
29	Court Lodge, Sevington. Grade II Listed	Direct Secondary and Indirect	Medium	Small	Slight Adverse
30	Barn at Court Lodge Grade II listed	Direct Secondary and Indirect	Medium	Negligible	Neutral
74	Potential Medieval settlement represented by low earthworks.	Direct Primary	Medium	Uncertain Potentially Medium	Uncertain Potentially Slight Adverse
76	Post Medieval Quarry shown on 19th Century mapping	Direct Primary	Negligible	Large	Neutral
Possible Archaeology	Potential for previously unrecorded archaeology within areas of impact.	Direct Primary	Uncertain Likely to be Medium	Uncertain Likely to be Medium	Uncertain Potentially Slight Adverse

10.2 Construction and Operational Phases Impacts on known Archaeological/Cultural Sites

Listed Buildings

- 10.2.1 No Listed Buildings would be affected by a Direct Primary Impact during the construction phase of the scheme. Seven Listed Buildings or structures may, however, potentially suffer Adverse Effects to their settings during the construction and operational phases. One of these buildings is a Grade I Listed Church (**OA 5**) and five are Grade II Listed houses or barns (**OA 35 - 27 and 29 - 30**). The remaining affected Listed structure is a Grade II Listed Milestone.

- 10.2.2 The construction of the proposed new link road would have a Moderate Adverse Impact on the setting of St Mary's Church, Sevington (**OA 5**) due to its close proximity to the proposed junction of the proposed new link road and the existing Ashford orbital Road. To a certain degree its setting has already been affected by the Ashford Orbital road but hedging serves to offset this. The Church at present has no significant hedging on its north side and has a clear view over the proposed route for the new Link Road (Plates 3 and 4). The existing plans to plant an avenue of trees along the southern side of the proposed new link road will serve to provide a limited degree of screening. Use of a thicker tree belt could serve to reduce the impact by Year 15.

10.2.3 The impact on the setting of two Grade II buildings, Ransley Cottage (**OA 27**) and Court Lodge (**OA 29**), would be moderate adverse. Ransley Cottage (OA 27) will be affected by a Moderate Adverse impact to its setting due to the proximity of the proposed new exit lane at the proposed new Junction 10. Court Lodge (OA 29) will be affected by a Slight Adverse Impact to its setting from the construction of the proposed new link road. This is a lesser effect as the impact will be offset by the building being screened by St Mary's Church and hedged enclosure.

10.2.4 The plotted location of the milestone on Hythe Road (**OA 28**) lies very close to the footprint of the proposed new junction but is, however, not a habitable structure. In addition the milestone was not traced on the ground during the Walkover, indicating that it may no longer be extant. The effect on the Milestone is, therefore, considered to be negligible or none at all. The potential impacts on the remaining three buildings (**OA 25, 26 and 30**) are also considered to be neutral effects due to intervening terrain or other screening, such as buildings or trees.

Known Archaeology

10.2.5 Two areas of archaeological potential were noted within or very close to the footprint of the proposed new Link Road. These comprise the low earthworks (**OA 74**), potentially representative of Deserted Medieval Settlement, north of St Mary's Church, Sevington and a Post Medieval Quarry (**OA 76**) depicted on 19th Century Ordnance Survey mapping. The full extent of the potential village earthworks was not apparent and the level of impact therefore remains uncertain. The earthworks may, however, represent a site of local to regional importance and the impact could be considered to be Uncertain but potentially Slight Adverse, with appropriate mitigation in place. The Post Medieval Quarry (**OA 76**) can be considered to be of negligible importance and despite lying within the Link roads footprint the impact is considered a None effect.

10.3 Direct Construction Impacts on Unknown Archaeological/Cultural sites

10.3.1 The above sections deal with the known archaeological resource. In addition to the known Archaeological Resource within the study area there is a very high potential for further hitherto undetected sites to be present. The proposed new link road scheme would be a completely new build across open land that has not been disturbed by recent development or investigated by systematic field archaeology techniques. No sites have yet been identified; therefore, within the footprint of the proposed new link road and uncertainty must remain without further investigative fieldwork. The new link road would, however, follow the side of a shallow valley on the flank of a ridgeline between watercourses, which would have been a favoured choice of settlement from Late Prehistory onwards. Settlement of Prehistoric date and later has been identified in a number of locations in proximity to the footprint of the proposed new link road and there is a very high probability that features associated with Medieval settlement beside St Mary's Church Sevington would extend into the footprint. It is therefore, possible that sites of at least local or regional significance could lie within the footprint of the new link road and the potential impact is, therefore, rated as Uncertain but Potentially Slight Adverse with appropriate mitigation in place.

11 SUMMARY

11.1.1 This report has identified that the proposed new Junction 10A and Link Road would have no appreciable Effects on any Scheduled Ancient Monuments, Conservation Areas or Historic Parks and Gardens.

11.1.2 Four Listed Buildings would be suffer Adverse Setting Effects from implementation of the proposed new Junction and Link Road. These comprise the Grade I Listed St Mary's Church at Sevington, two Grade II Listed buildings at Court Lodge,

Sevington and the Grade II Listed Ransley Cottage on the southern approach to the proposed new Junction 10 at Mersham.

- 11.1.3 Two sites have been identified within the footprint of the proposed new Link Road. These comprise a Post Medieval Quarry of negligible importance and the possibility of Medieval settlement, of possibly regional importance, extending to the north of St Mary's Church, Sevington. In addition to these known features the route of the proposed new Link Road crosses an area that has a high potential to contain, hitherto unknown, archaeology of Later Prehistoric to Medieval date. Significant sites of Bronze Age to Medieval date have been excavated in close proximity to the site and further sites are suggested from cropmarks on aerial photographs and find scatters from fieldwalking surveys. The proposed route lies on the upper slope of a shallow valley and, therefore, on land that would have possibly attracted early settlement.
- 11.1.4 It is expected that the Adverse Effects can be adequately reduced to an acceptable level by an agreed scheme of archaeological mitigation for the buried resource and improved screening for the Listed Buildings.
- 11.1.5 Any scheme of archaeological mitigation should be formulated after consultation with the local curatorial body (Kent CC), and well in advance of any construction phase for the scheme. Mitigation measures could include a scheme involving preliminary fieldwalking, geophysical survey and topographic survey followed by invasive trial trenching along the proposed new route. This preliminary survey would inform on the requirement for and nature of any further archaeological response, which might include formal excavation of identified sites, strip map and sample or watching briefs along the route of the proposed new Link Road.
- 11.1.6 The location of any associated work compounds, storage bunds or access easements is unknown at the time of writing this report and a stage DMRB 2/3 assessment should be made of these areas when they become known.

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12.2 List of Historic Maps Consulted

Hasted's Itinerary Map of Kent 1797

Mudd's Map of Kent 1805

Tithe Apportionment Map for Sevington

Ordnance Survey 1st Edition 6" Series 1876

Ordnance Survey 2nd Edition 6" Series 1899

Ordnance Survey 3rd Edition 6" Series 1908

12.3 Other Sources

Kent County Council Sites and Monuments Record

Kent Centre for Local Studies

Greater London Sites and Monuments Record

National Monuments Record, Swindon

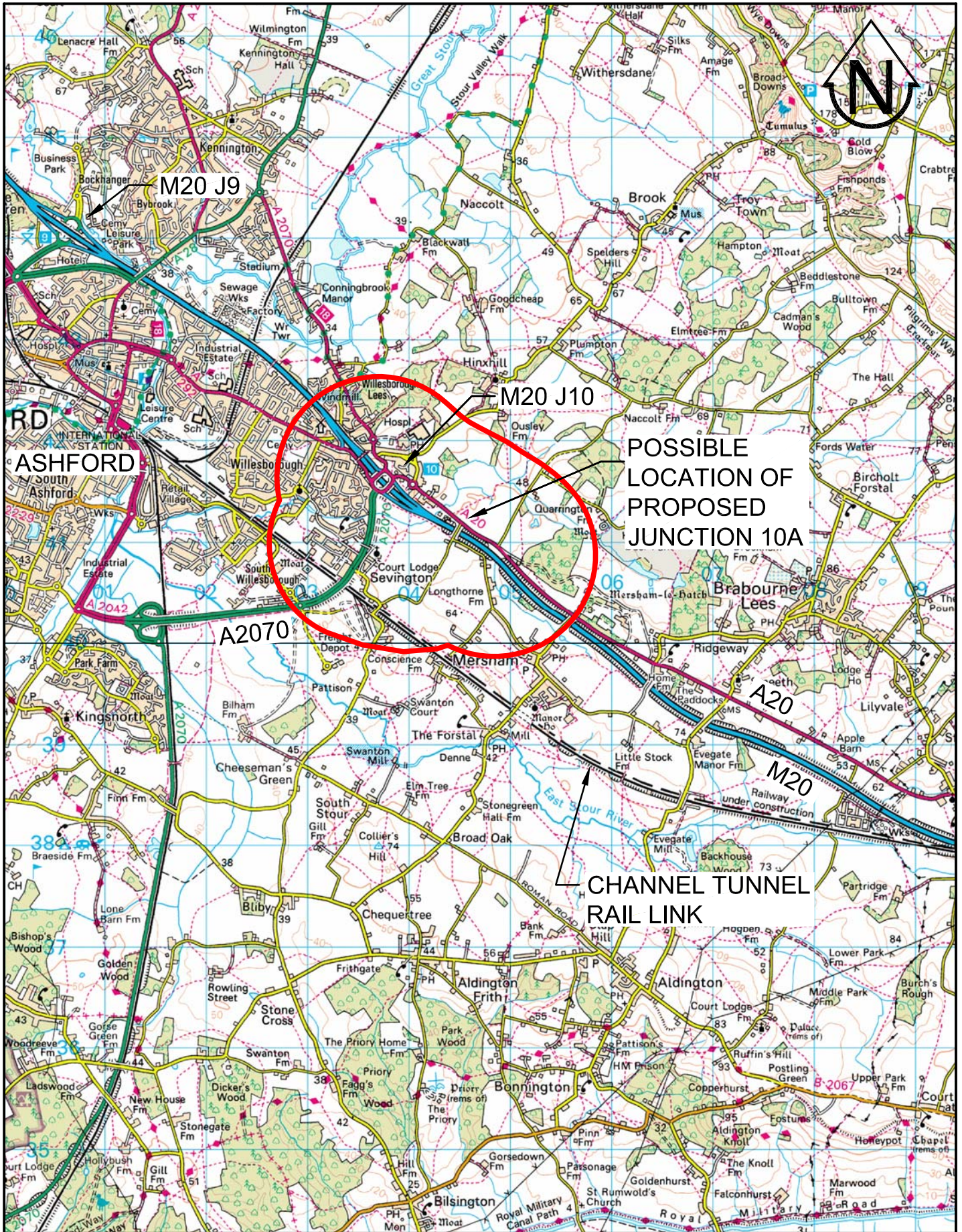
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Sackler Library, Oxford

English Heritage, London

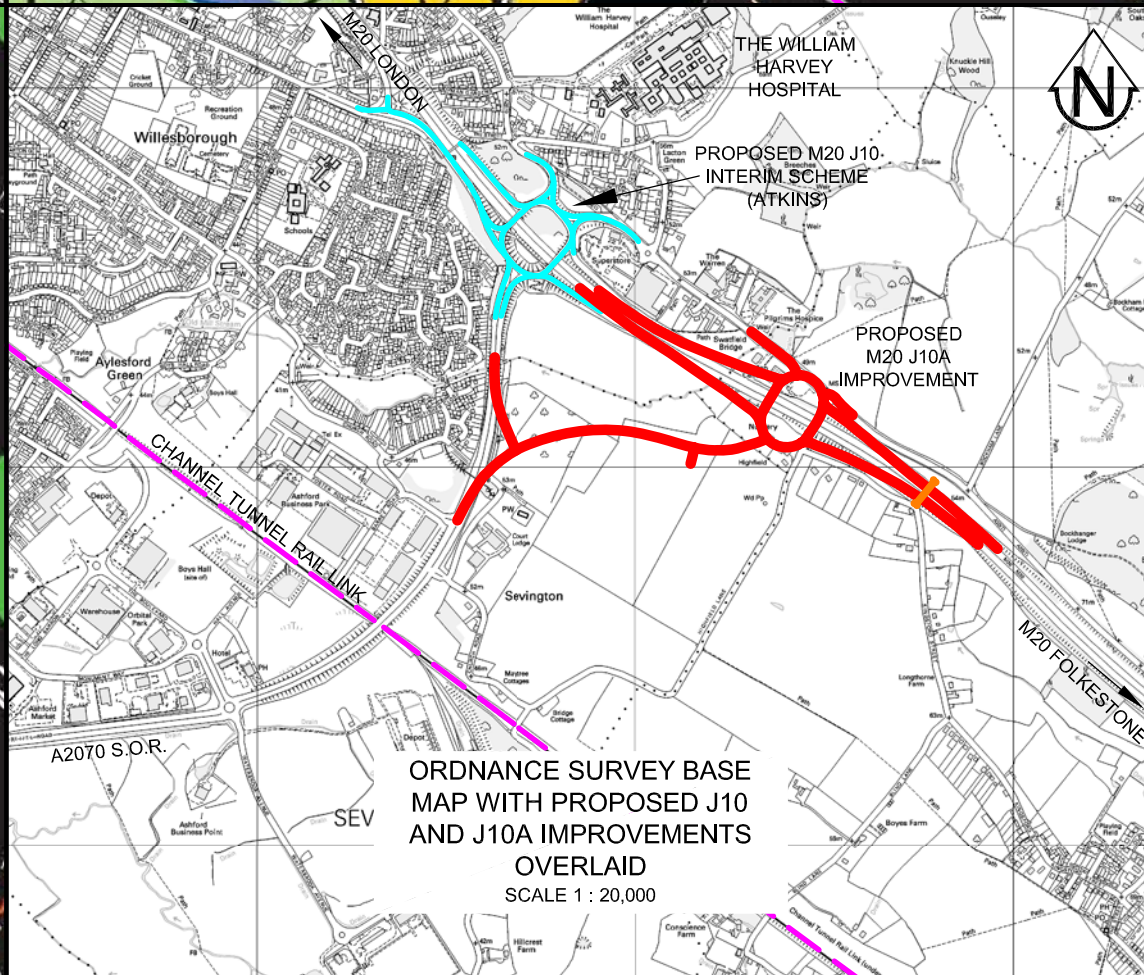
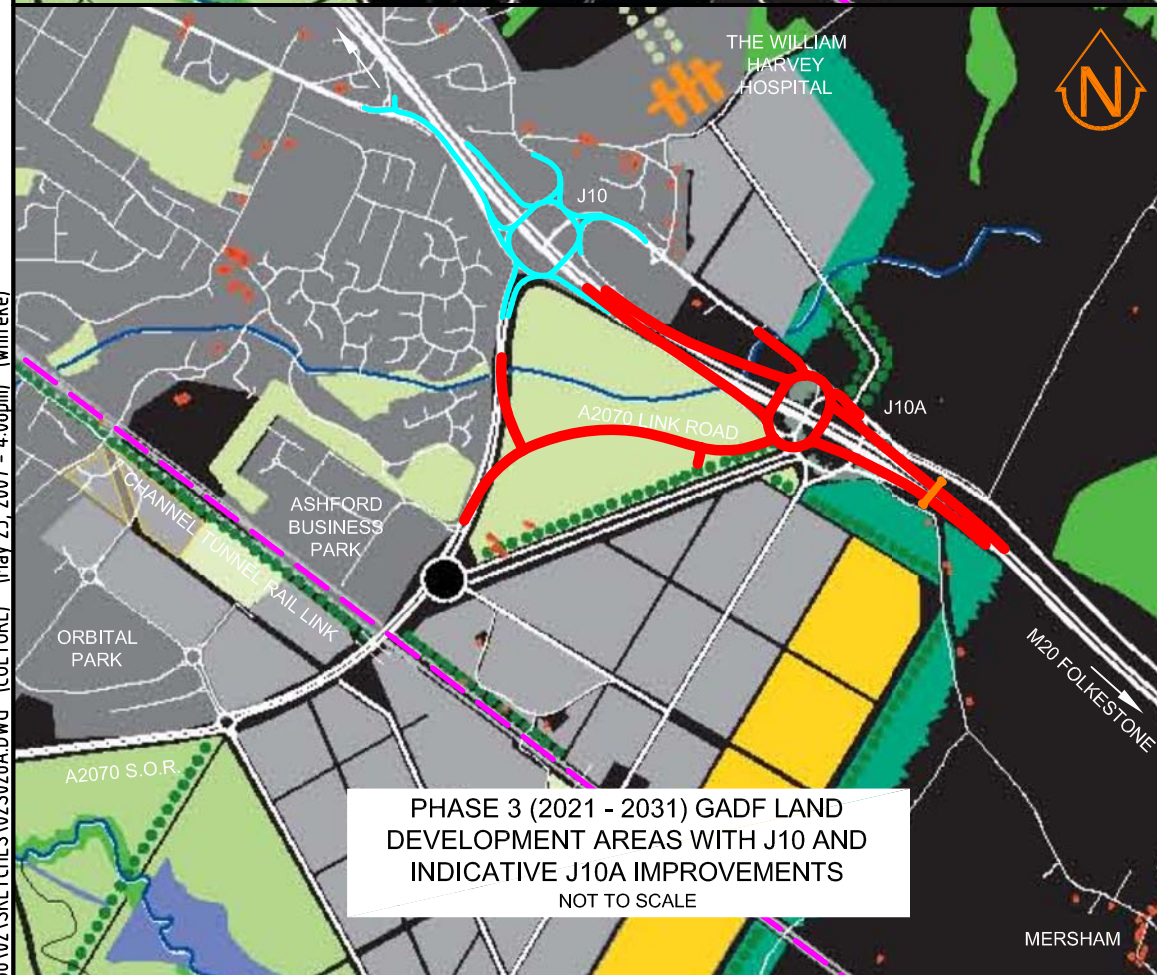
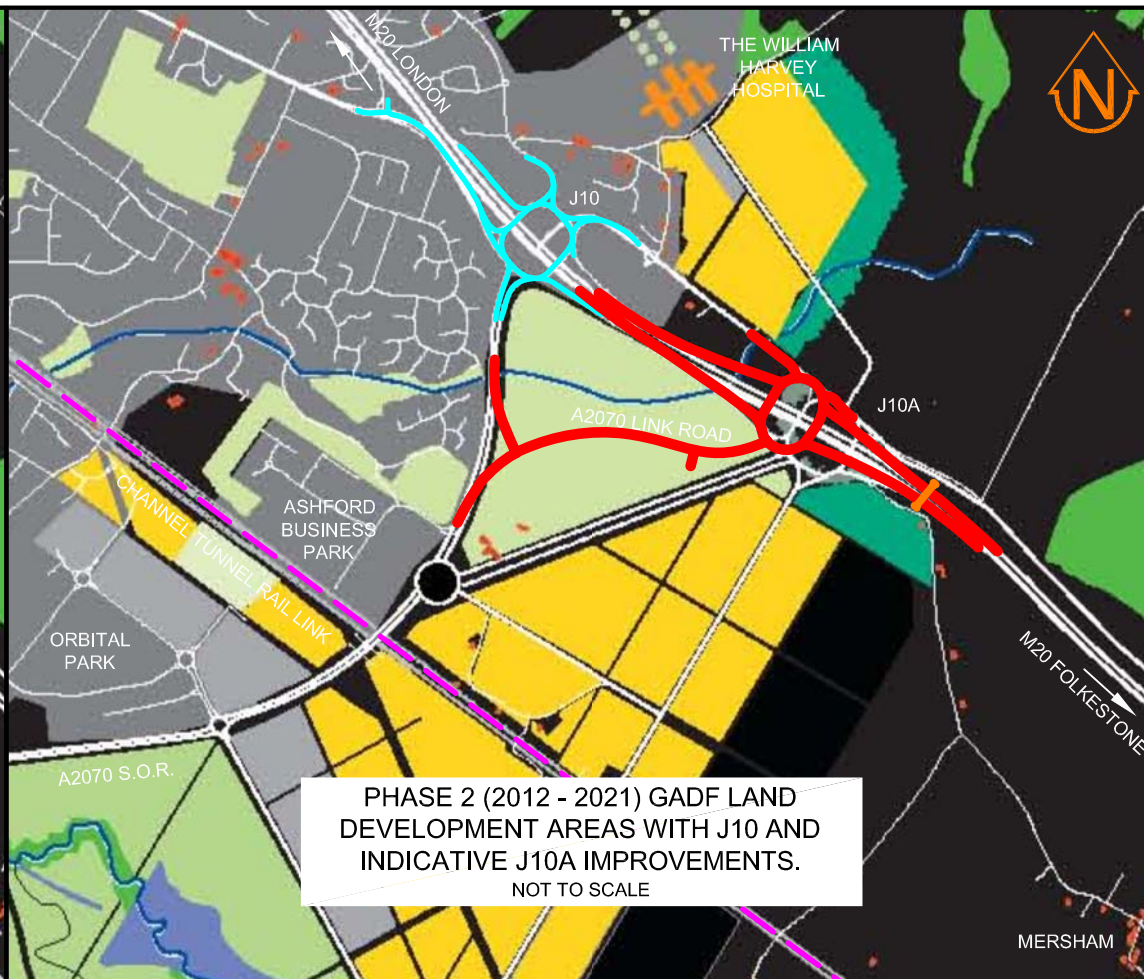
FIGURES

G:\CAD\HIGHWAYS\43556\02\SKETCHES\02S001A.DWG (CULTURAL) (May 25, 2007 - 4:09pm) (whiteke)



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<p>M20 JUNCTION 10A ACCESS TO SOUTH ASHFORD</p>		<p>Title STUDY AREA</p>	
<p>DMRB STAGE 2 ENVIRONMENTAL ASSESSMENT CULTURAL HERITAGE</p>		<p>Scale 1 : 50,000</p>	<p>Date MAY 2006</p>
		<p>Figure No. FIGURE 1</p>	



NOTES

1. JUNCTION 10A GYRATORY SHOWN IS BASED UPON ELEMENTS TAKEN FROM OPTION E3 AND OPTION E6 AS AGREED DURING HA PRESENTATION ON 06/12/05.
2. LAND DEVELOPMENT AREAS SHOWN TAKEN FROM THE GREATER ASHFORD DEVELOPMENT FRAMEWORK (GADF) FINAL MASTERPLAN REPORT PUBLISHED APRIL 2005.
3. ANTICIPATED CONSTRUCTION PERIOD FOR J10A IS 2010 TO 2012

LEGEND

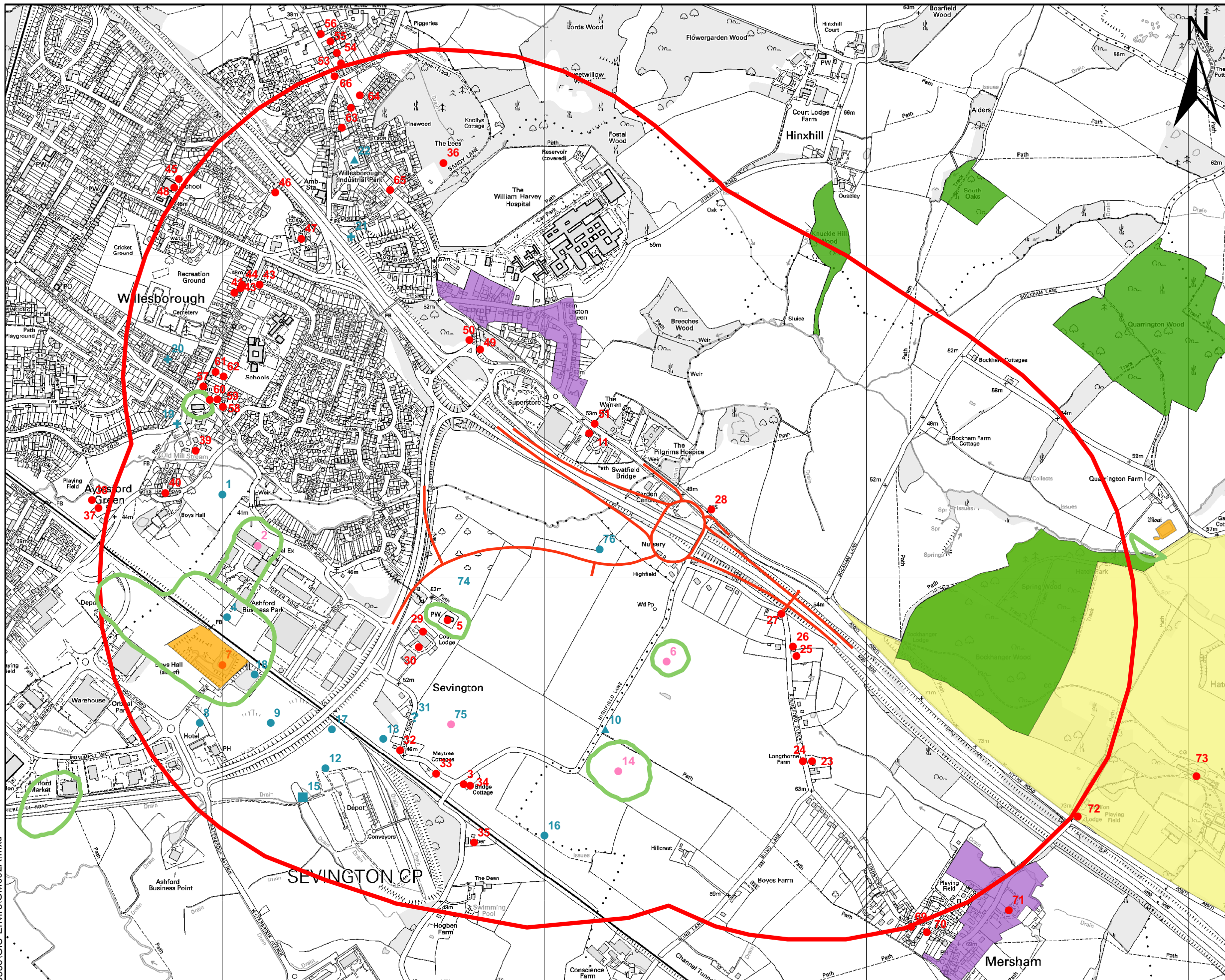
- DEVELOPMENT AREAS
- PROPOSED GREEN EDGES
- PROPOSED PRIMARY PARKS
- PROPOSED SECONDARY GREEN SPACES
- PROTECTED GREEN SPACES
- WATER BODIES
- UNDEVELOPED LAND
- PROPOSED PEDESTRIAN / CYCLE BRIDGE
- ROUTE OF THE CHANNEL TUNNEL RAIL LINK
- PROPOSED J10A IMPROVEMENTS (ANTICIPATED CONSTRUCTION 2010 - 2012)
- J10 INTERIM SCHEME (CONSTRUCTION 2006 - JUNE 2007)

G:\CAD\HWAYS\43556\02\SKETCHES\02S026A.DWG (CULTURE) (May 25, 2007 - 4:08pm) (whitefel)

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**M20 JUNCTION 10A
ACCESS TO SOUTH ASHFORD
DMRB STAGE 2 ENVIRONMENTAL ASSESSMENT
CULTURAL HERITAGE**

Title J10 AND J10A IMPROVEMENTS WITH THE PROPOSED LAND DEVELOPMENT AREAS		
Scale AS SHOWN	Date MAY 2007	Figure No. FIGURE 2



LEGEND

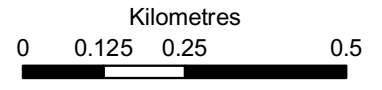
- Study area
- SCHEME

SITES

- ? Undefined
- + Archaeological Findspot
- Archaeological Site
- Cropmark
- Historic Area
- Listed Building
- ▲ Other
- Scheduled Monument

DESIGNATED AREAS

- Conservation Area
- Historic Park and Garden
- Scheduled Ancient Monument
- Ancient Woodland
- Area of Archeological Potential

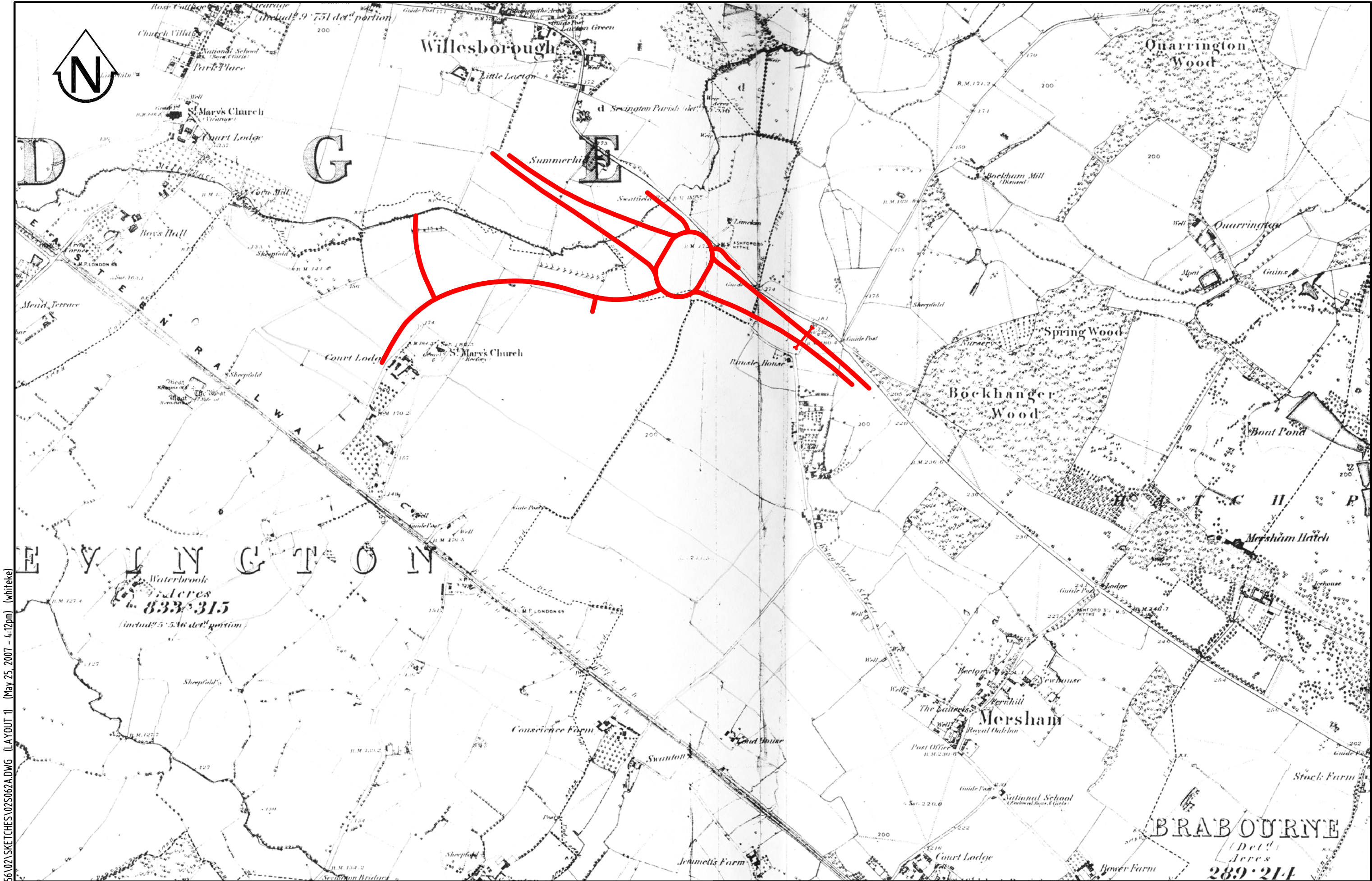


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M20 J10 A
ACCESS TO SOUTH ASHFORD
DMRB STAGE 2 ENVIRONMENTAL
ASSESSMENT
CULTURAL HERITAGE

Title		
FEATURES MAP		
Scale	Date	Figure No.
NTS	MAY 2007	FIGURE 3

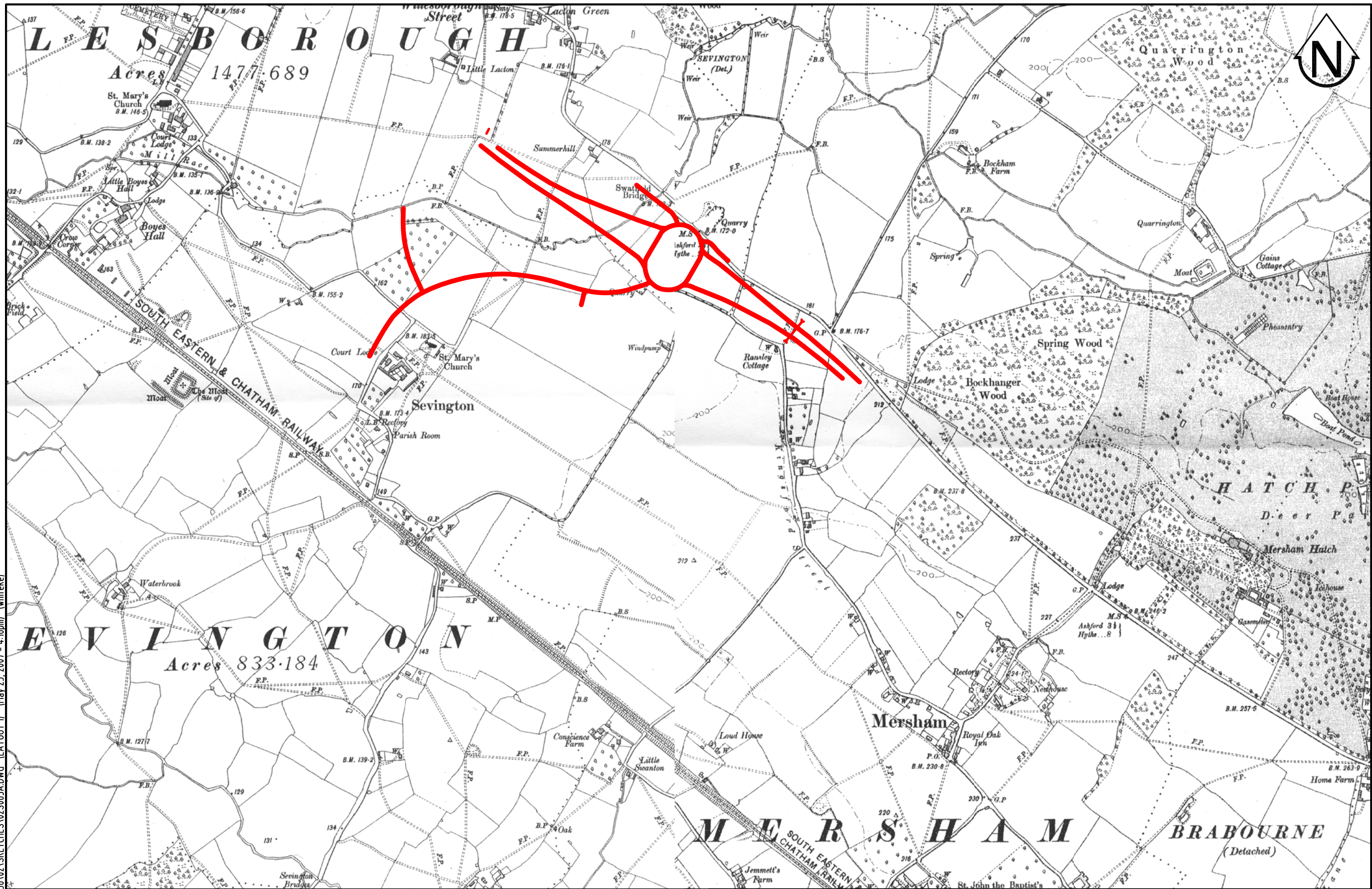


G:\CAD\HIGHWAYS\43556\02\SKETCHES\025062A.DWG (LAYOUT 1) (May 25, 2007 - 4:42pm) (whiteke)

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M20 J10 A
 ACCESS TO SOUTH ASHFORD
 DMRB STAGE 2 ENVIRONMENTAL ASSESSMENT
 CULTURAL HERITAGE

Title EXTRACT OF O/S 1st EDITION 6" OF 1876		
Scale NTS	Date MAY 2007	Figure No. FIGURE 4



G:\CAD\HWAYS\43556\02\SKETCHES\025063A.DWG (LAYOUT 1) (May 25, 2007 - 4:16pm) (whiteke)

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M20 J10 A
ACCESS TO SOUTH ASHFORD
DMRB STAGE 2 ENVIRONMENTAL ASSESSMENT
CULTURAL HERITAGE

Title EXTRACT OF O/S 3rd EDITION 6" OF 1908		
Scale NTS	Date MAY 2007	Figure No. FIGURE 5

APPENDICES

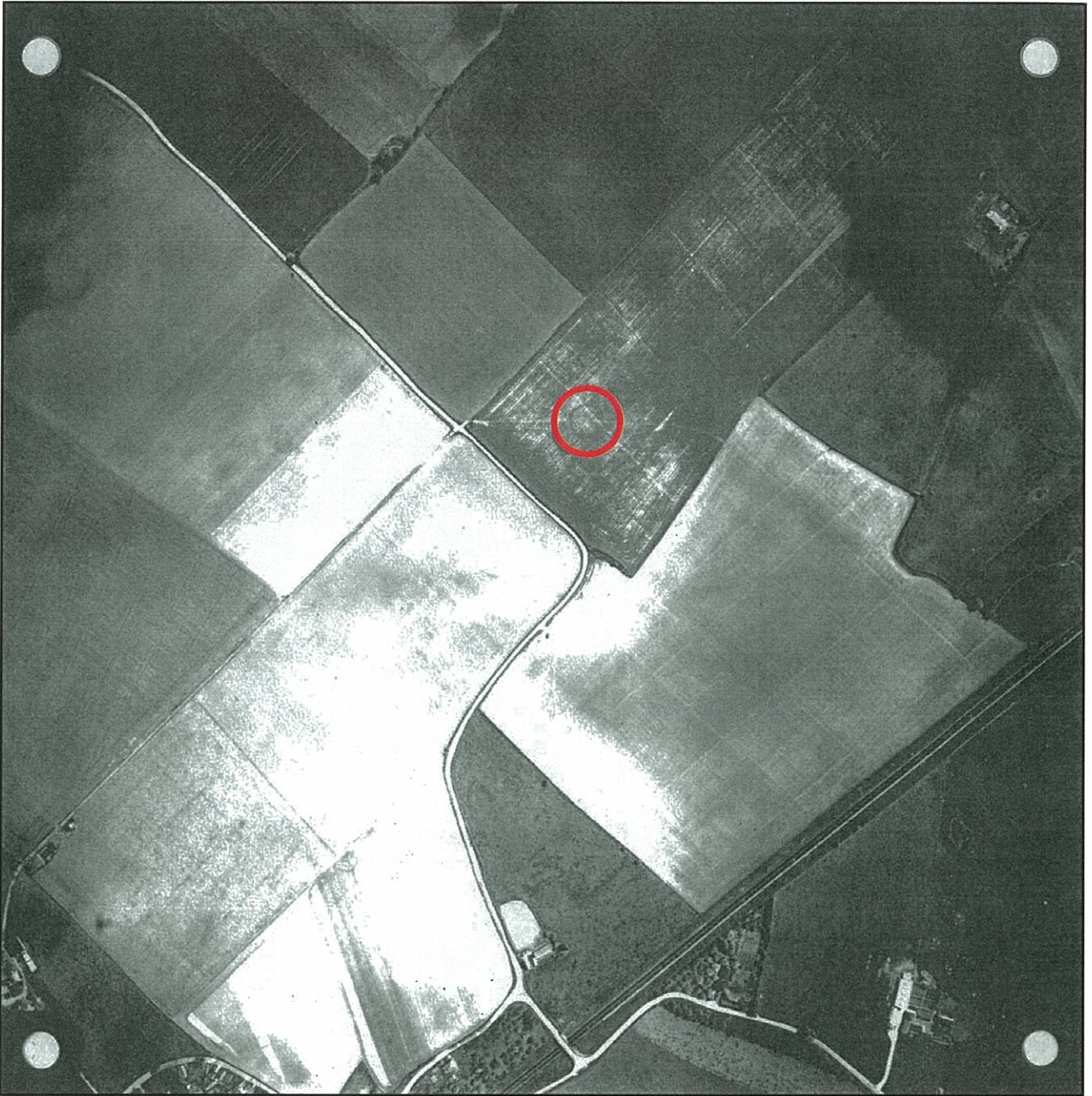
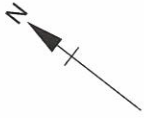


Plate 1 : Aerial photograph showing possible ring ditch near High Lane (OA14)



Plate 2 : Aerial photograph showing possible enclosure near High Lane (OA14) and cropmark features south-east of Sevington (OA75)



Plate 3 : View North from St Mary's Churchyard, Sevington (OA 6), to Route of Proposed New Link Road



Plate 4 : View South from Proposed Route of New Link Road to St Mary's Church, Sevington (OA 6)



Plate 5 : View West from near Proposed New Junction 10A over Proposed Route of New Link Road

