

M1 Junction 19 Improvement

Environmental Statement Volume 2

Chapter 2 Cultural Heritage

Final

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2.1 INTRODUCTION

- 2.1.1 This chapter provides an environmental assessment of the potential effect on cultural heritage of the M1 Junction 19 Improvement as set out in the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 2 HA208/07¹.
- 2.1.2 In common with other Chapters the Cultural Heritage assessment recognises that the Catthorpe Viaduct, which carries the M6 to M1 Southbound link over the M1, is being replaced as a maintenance project. The scope of this work includes the replacement of the bridge on a new alignment immediately to the south west of the existing. It also requires the creation of new approach embankments either side of the M1. The work is programmed to begin in June 2010, for completion in November 2011.
- 2.1.3 The bridge and earthworks either side of the M1 would be retained in the proposed layout for the M1 Junction 19 Improvement, as would the alignment of the M6 to M1 Southbound link east of the M1. To the west of M1 this link would have to be amended to accommodate the proposed M6 to A14 link.
- 2.1.4 A separate environmental assessment has been carried out for the bridge replacement as a standalone maintenance project.
- 2.1.5 This EIA for the M1 Junction 19 Improvement takes into account the new bridge both:-
- As part of the existing junction assuming the M1 Junction 19 Improvement is not built, the 'do-minimum' scenario
 - As part of the completed M1 Junction 19 Improvement, the 'do-something' scenario
- 2.1.6 In terms of cultural heritage, one implication for the assessment is that part of the site compound area proposed for the junction improvement would be set up in advance. Archaeological mitigation works for this site, also identified for the M1 Junction 19 Improvement, will be brought forward. These issues are discussed at Section 2.6 Mitigation and Section 2.7 Environmental Impacts.

Objective

- 2.1.7 The objective of the assessment for cultural heritage is:-
- To minimise adverse impacts on archaeological remains, historic buildings and historic landscapes.

Study Area

- 2.1.8 The study area centres on M1 Junction 19 in Leicestershire and Northamptonshire and comprises an area of approximately 16 km² covering the Motorway Junction and the Local Road Network included on Figure 2.1. It has been drawn sufficiently wide to give an idea of the context and general character of the cultural heritage. The site comprises a rolling landscape of mainly arable and pasture fields. It includes the villages of Shawell, Swinford and Catthorpe, Leicestershire which all contain Conservation Areas and Listed Buildings, and Lilbourne, Northamptonshire also containing Listed Buildings. There are also Scheduled Monuments at Shawell and Lilbourne. Stanford Park, a Registered Park and Garden lies just outside the eastern edge of the study area. The improvements include changes to the existing road junction and to the Local Road Network (LRN).

The Project

2.1.9 The project is illustrated by a series of plans bound into a separate Appendix 1 to Volume 1 of the ES as follows:-

- Figure A : Location Plan
- Figure B : Environmental Master Plan
- Figure C : Environmental Resources Plan
- Figure G : Areas Required During Construction
- Figure H : Cross Sections

Interactions

2.1.10 There are interactions between this Chapter and:-

- Chapter 4 : Landscape, which also addresses landscape character and the setting of Listed Buildings and Conservation Areas
- Chapter 6 : Noise and Vibration for potential impacts on historic buildings

2.1.11 Care has been taken to avoid significant overlap or double counting of adverse impacts or benefits resulting from the proposals.

Assumptions

2.1.12 The assessment has been completed only for known archaeological remains and historical buildings affected by the Preferred Route. The archaeological resource is by its nature an incomplete record. Where there are significant alluvial/colluvial deposits, made ground or lack of archaeological fieldwork, archaeological remains can remain undetected. Local knowledge has been utilised to assess the resources within the study area and to identify and assess areas of potential archaeological remains (e.g. alluvial deposits close to known archaeological remains).

2.2 METHODOLOGY

- 2.2.1 A detailed assessment is defined as being required where there is the potential for the scheme to cause significant effects on environmental resources and receptors. Its objective is to gain an in-depth appreciation of the beneficial and adverse consequences of the project and to inform project decisions. It is likely to include consultation with relevant bodies, fieldwork to inform the need for mitigation, assessment of the archaeological resource and details of mitigation strategies.
- 2.2.2 Assessment of the area has already been undertaken, including a desk-based assessment of the study area around M1 Junction 19 (Score 2005)² combined with additional archaeological fieldwork and a walkover survey. This information has been used to assess the impact of the Preferred Route on the known archaeological deposits within the area.
- 2.2.3 This assessment has been divided into nine parts:-
- 1) an introduction to the project
 - 2) a description of the methodology used
 - 3) an outline of the relevant legislation
 - 4) a description of baseline conditions and the assessment of the value of archaeological remains, historic buildings and historic landscapes
 - 5) mitigation measures taken into account in the assessment
 - 6) the assessment of the environmental impact on archaeological remains, historic buildings and historic landscapes
 - 7) significance of effects
 - 8) an indication of any difficulties encountered
 - 9) summary and conclusions
- 2.2.4 The sources consulted and references are listed at the end of the report in Section 2.11, References.
- 2.2.5 Archaeological sites are identified by numbers (e.g. Site 1). All of the cultural heritage sites identified are listed in Tables 2.5 to 2.7 and are shown on Figures 2.1 to 2.3.

Data Sources

- 2.2.6 The following data sources have been consulted in order to establish the baseline archaeological and historic conditions in the area and to enable an assessment of the proposed scheme:-
- Historic Environment Record (HER) previously Sites and Monuments Record (SMR) for Leicestershire and Northamptonshire
 - Historic Landscape Characterisations carried out by Leicestershire and Northamptonshire
 - statutory list of Scheduled Monuments
 - lists of buildings of special architecture and historic interest
 - designated Conservation Areas
 - English Heritage Register of Historic Parks and Gardens
 - English Heritage Register of Battlefields
 - Defence of Britain database
 - World Heritage Sites
 - cartographic sources (Ordnance Survey historic maps, enclosure and tithe awards, geological maps)

- photographic sources including aerial photographs held in the National Monuments Record.
- previous fieldwork
- historic background material
- walkover Survey

2.2.7 All work follows the Institute for Archaeologist's Code of Conduct (2008)³ and adheres to their Standard and Guidance for Archaeological Desk-based Assessments (2008).⁴

2.2.8 The HER, for Leicestershire and Northamptonshire were checked for any updates to the records in June/July 2009 including Listed Buildings, Conservation Areas and finds from the Portable Antiquities Scheme (a voluntary scheme to record archaeological objects found by members of the public in England and Wales). All sources and reports used are listed in Section 2.11 References at the end of the assessment.

Assessment Methodology

2.2.9 This assessment has followed guidelines on the environmental assessment of highway projects set out in the DMRB Volume 11, Sections 1, 2 and 3, Part 2 HA208/07 Cultural Heritage¹. Supplementary guidance from the Highways Agency / Department for Transport / English Heritage entitled *Assessing the Effect of Road Schemes on Historic Landscape Character* (March 2007)⁵ was also used for assessing Historic Landscape Character.

2.2.10 The DMRB¹ describes cultural heritage as including three subtopics:-

- Archaeological Remains, these can include artefacts, field monuments, structures, landscape features and can be visible or buried
- Historic Buildings, these are architectural or designed structures with a significant historic value and can be of any date
- Historic Landscapes, these can include countryside, townscapes, industrial landscapes and designed landscapes such as parks and gardens

2.2.11 To evaluate the overall significance of effects on cultural heritage features, the criteria outlined in Tables 2.1- 2.4 have been used as set out in the DMRB¹.

Evaluating the Cultural Heritage Resource

2.2.12 Planning Policy Guidance Note (PPG)16⁶ and PPG 15⁷, draw a distinction between designated important remains and those of a lesser significance:-

- International – World Heritage Sites designated under the UNESCO Convention for the Protection of the World Cultural and National Heritage (1972)⁸
- National – Scheduled Monuments that are scheduled and protected under the Ancient Monuments and Archaeological Areas Act (1976)⁹ or those suitable for scheduling or considered to be of national importance but not covered by the Secretary of State's criteria for scheduling; Areas of Archaeological Importance that are listed under Part II of the Ancient Monuments and Archaeological Areas Act (1976); Listed Buildings under section 1 of the Planning (Listed Buildings and Conservation Areas) Act (1990)¹¹ and those under Building Preservation Notices; National Trust properties; Parks and Gardens of Special Historic Interest; Historic Battlefields
- Regional – Sites listed in the HER, or other sources which are of a reasonably well defined extent, nature and date and that are significant examples in the regional context

- Local – Sites listed in the HER or other sources, which are of low potential or minor importance. Conservation Areas and non-designated buildings or landscapes of historic interest

2.2.13 The value of an archaeological or historic resource can be assessed using a scale of criteria from *Negligible* to *Very High* as set out in Table 2.1. As historic and archaeological remains can be difficult to determine and assess without intrusive fieldwork there is also the option for them to be categorised as *Unknown*. The value of cultural heritage sites within the study area is set out in Section 2.5.

Assessing the Magnitude of Impact

2.2.14 An impact is defined as a change resulting from the scheme that affects the cultural heritage. Impacts can be either adverse (e.g. removal of a resource) or beneficial (e.g. improvement of public access or setting). Most of the impact will be physical as a direct consequence of the construction works and mainly confined to the area of land take. This may also include pre-construction works such as boreholes, trial pits, auguring and the setting up of compounds, haul roads and borrow pits as well as construction works such as demolition, piling and excavation. Impacts may also be indirect such as those caused by changes in drainage and from long term effects such as compaction of remains beneath embankments. The assessment will deal with impacts during both the construction and the operation of the scheme. In some cases work at a distance from the site may also have an impact on the context (the perception and understanding of the site in relation to its landscape) or setting (the surroundings in which a place is experienced (DMRB HA208/07, 4.19))¹.

2.2.15 The magnitude of impact is first assessed without taking into account any agreed mitigation and enhancement measures. The residual impacts, taking into account the measures proposed are then assessed. These are set out in Section 2.6. The magnitude of impact does not take into account the value of the resource (e.g. the destruction of a *Low Value* site is the same magnitude of impact as that of a *High Value* site). Impacts on the cultural heritage can be positive (*Beneficial*) or negative (*Adverse*) and can be assessed on a scale from *Major Beneficial* to *Major Adverse* as set out in Table 2.2.

Evaluation of Environmental Effects

2.2.16 Significance is considered as the product of the sensitivity/value of the environmental resource likely to be affected and the magnitude of the impact, whether positive or negative upon it. The assessment of significance takes into account any agreed mitigation and enhancement.

2.2.17 Table 2.1 defines the sensitivity of the resource and Table 2.2 sets out criteria for defining the magnitude of potential impacts. The significance is assessed using judgements regarding value, magnitude of impact and significance of effect that are reasonable and balanced. The matrix set out in Table 2.4 is used as a check to ensure that these judgements are reasonable and balanced. Significance descriptors are listed in Table 2.3.

Table 2.1 - Environmental Value (Sensitivity) and Typical Descriptors (from DMRB HA208/07, Annexes 5 – 7, based on Tables 5.1, 6.1, 7.1)¹

Value (sensitivity)	Typical descriptors		
	Archaeological Remains	Historic Buildings	Historic Landscapes
Very High	<ul style="list-style-type: none"> World Heritage Sites Assets of acknowledged international importance Assets that can contribute Significantly to acknowledged international research objectives 	<ul style="list-style-type: none"> Structures inscribed as of universal importance as World Heritage Sites Other buildings of recognised international importance 	<ul style="list-style-type: none"> World Heritage Sites inscribed for their historic landscape qualities Historic landscapes of international value, whether designated or not Extremely well preserved historic landscapes with exceptional coherence, time-depth or other critical factor(s)
High	<ul style="list-style-type: none"> Scheduled Monuments Undesignated assets of schedulable quality and importance Assets that can contribute Significantly to acknowledged national research objectives 	<ul style="list-style-type: none"> Scheduled Monuments with standing remains Grade I and Grade II* Listed Buildings Other Listed Buildings that can be shown to have exceptional qualities in their fabric or historic association not adequately reflected in the listed grade Conservation Areas containing very important buildings Undesignated structures of clear national importance 	<ul style="list-style-type: none"> Designated historic landscapes of outstanding interest Undesignated landscapes of outstanding interest Undesignated landscapes of high quality and importance, and of demonstrable national sensitivity. Well preserved historic landscapes with considerable coherence, time-depth or other critical factor(s)
Medium	<ul style="list-style-type: none"> Designated or undesignated assets that contribute to regional research objectives 	<ul style="list-style-type: none"> Grade II Listed Buildings Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historic association. Conservation Areas containing very important buildings Historic Townscape or built-up areas with historic integrity in their buildings, or built settings (e.g. including street furniture and other structures) 	<ul style="list-style-type: none"> Designated special historic landscapes Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional sensitivity Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s)

Value (sensitivity)	Typical descriptors		
	Archaeological Remains	Historic Buildings	Historic Landscapes
Low	<ul style="list-style-type: none"> • Designated and undesignated assets of local importance • Assets compromised by poor preservation and/or poor survival of contextual associations • Assets of limited value but with potential to contribute to local research objectives 	<ul style="list-style-type: none"> • 'Locally listed' buildings • Historic (unlisted) buildings of modest quality in their fabric or historic association • Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures) 	<ul style="list-style-type: none"> • Robust undesignated historic landscapes. • Historic landscapes with importance to local interest groups • Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations
Negligible	<ul style="list-style-type: none"> • Assets with very little or no surviving archaeological interest 	<ul style="list-style-type: none"> • Buildings of no archaeological or historic note; buildings of an intrusive character 	<ul style="list-style-type: none"> • Landscapes with little or no significant historic interest
Unknown	<ul style="list-style-type: none"> • The importance of the resource has not been ascertained 	<ul style="list-style-type: none"> • Buildings with some hidden (i.e. inaccessible) potential for historic significance 	

Table 2.2 - Magnitude of Impact and Typical Descriptors (from DMRB HA208/07, Annexes 5 – 7, based on Tables 5.3, 6.3, 7.3)¹

Magnitude	Typical descriptors		
	Archaeological Remains	Historic Buildings	Historic Landscapes
Major	<ul style="list-style-type: none"> • Change to most or all key archaeological materials, such that the resource is totally altered • Comprehensive changes to setting 	<ul style="list-style-type: none"> • Change to key historic building elements, such that the resource is totally altered • Comprehensive change to the setting. 	<ul style="list-style-type: none"> • Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit
Moderate	<ul style="list-style-type: none"> • Changes to many key archaeological materials, such that the resource is clearly modified • Considerable changes to setting that affect the character of the asset 	<ul style="list-style-type: none"> • Change to many key historic building elements, such that the resource is Significantly modified • Changes to the setting of an historic building, such that it is Significantly modified 	<ul style="list-style-type: none"> • Change to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; <i>Noticeable</i> differences in noise or sound quality; considerable changes to use or access; resulting in moderate change to historic landscape character
Minor	<ul style="list-style-type: none"> • Change to key archaeological materials, such that the asset is slightly altered • Slight change to setting 	<ul style="list-style-type: none"> • Change to key historic building elements, such that the asset is slightly different • Change to the setting of an historic building, such that it is noticeably changed 	<ul style="list-style-type: none"> • Changes to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited changes to historic landscape character
Negligible	<ul style="list-style-type: none"> • Very minor changes to archaeological materials or setting 	<ul style="list-style-type: none"> • Slight changes to historic building elements or setting that hardly affect it 	<ul style="list-style-type: none"> • Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character
No change	<ul style="list-style-type: none"> • No change 	<ul style="list-style-type: none"> • No change to fabric or setting 	<ul style="list-style-type: none"> • No change to elements, parcels or components; no visual or audible changes; no changes arising from amenity or community factors

Table 2.3 - Descriptors of Significance of Effects (DMRB HA 205/08)¹

Significance category	Typical descriptors of effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a serious change in a site or feature of district importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such issues may become a decision-making issue if leading to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local issues. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 2.4 - Arriving at Significance (from DMRB HA208/07, Annexes 5 – 7, Tables 5.4, 6.4, 7.4)¹

ENVIRONMENTAL VALUE (SENSITIVITY)	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight
		No change	Negligible	Minor	Moderate	Major
MAGNITUDE OF IMPACT (DEGREE OF CHANGE)						

Mitigation Methodology

2.2.18 Mitigation avoids or reduces the potential adverse effects of the scheme. Where uncertainties remain over the value of the resource or the impact, mitigation strategies may

be used to establish objectives and measures. Mitigation should be identified on a case-by case basis and can include strategies such as avoidance, burial, excavation, strip, plan and sample (where topsoil and subsoil is removed under the control of an experienced archaeologist), relocation, photographic/measured surveys, information panels or landscaping.

2.2.19 Current guidance is that cultural heritage assets are non-renewable resources and that the primary goal of cultural resource management should be their physical preservation. In addition there should be a presumption in favour of the preservation *in situ* of nationally important remains. Where preservation *in situ* is not possible, preservation by record through systematic investigations is acceptable (DMRB HA208/07¹)

Objectives

2.2.20 The specific objective of the mitigation is to reduce the effect upon the archaeological resource by providing a robust and suitable mitigation strategy. It is hoped that the mitigation measures proposed for the scheme, will contribute to the value, understanding and dissemination of the cultural heritage. All mitigation work will be considered in light of the East Midlands Research Framework (Cooper ed. 2006).¹⁰ Specific research aims will be considered for all archaeological field work and as new information comes to light.

Consultation

2.2.21 The DMRB, HA208/07,¹ states that national heritage agencies should be consulted about nationally designated assets and research priorities and strategies as well as the relevant planning authorities' cultural heritage advisors for regional information and advice.

2.2.22 The relevant cultural heritage representatives of the following institutions have been consulted on the scheme:-

- English Heritage
- Leicestershire County Council
- Northamptonshire County Council
- Warwickshire County Council
- Harborough District Council
- Daventry District Council
- Rugby Borough Council

Blue Junction

2.2.23 A meeting was held on 7th November 2005 with the Planning Archaeologists for Leicestershire County Council and Northamptonshire County Council at which mitigation measures for the archaeological sites were discussed and agreed. At that time the Blue Junction was being assessed as the Secretary of State's Preferred Improvement Scheme. The mitigation measures proposed were further discussed and agreed with the Planning Archaeologist for Leicestershire County Council. These were also forwarded to English Heritage who were content with the mitigation proposals on condition that the County Archaeologists have been satisfied. A similar mitigation strategy in principle has been carried forward to the current scheme.

Comparative Environmental Assessment

- 2.2.24 English Heritage was asked to comment on new proposals for the Red Junction in May 2007. They commented that this option had a lesser impact on the Scheduled Monument than the Blue Junction and also on adjacent areas of archaeological interest.
- 2.2.25 From 2007 to 2008 a Comparative Environmental Assessment (CEA)³⁹ was carried out for five junction options including Blue, Red and Brown and alternative Local Road Network Options, Green, Purple and Orange. These were taken to Public Consultation in July 2008. The options are described in Volume 1 of this ES in Section 3, Alternatives Considered. A consultation was held on 12th August 2008 for representatives of the Local Authorities. The five options were outlined along with the cultural heritage assessment and proposed mitigation measures for the CEA. It was noted that the Blue Junction would have the highest impact on Cultural Heritage with the Red Junction having the least impact and that the Green LRN was the least favourable. The Orange LRN was the most likely to minimise the archaeological implications of the improvements. Views expressed at the meeting endorsed the findings of the assessment. English Heritage were also consulted and confirmed that options which do not include widening of the motorway south of the River Avon were preferable in terms of the setting of Lilbourne Motte and Bailey castle.

Preferred Route and Scoping

- 2.2.26 The Preferred Route was announced in February 2009 and further consultation regarding the cultural heritage was undertaken on 13th March 2009 following the issue of an Environmental Impact Assessment Scoping Report⁵¹ to all the Local Authorities and English Heritage. A meeting was held for representatives of the key stakeholders where the Preferred Route and scope of the proposed assessment was outlined. The proposed mitigation strategies developed from those agreed for the previous Preferred Improvement Scheme were also discussed. All parties were content with the scope and mitigation strategies as presented. Formal responses to the scoping report have been received from English Heritage, who had no further comment to make, and Leicestershire County Council. The County confirm their acceptance of proposed further investigation of the archaeological resource (prior to construction) and the associated mitigation strategy. The agreed strategy is set out in Section 2.6. They also suggested that the assessment of Historic Landscape Character should be revisited following further work by the County. This has been taken into account in the assessment reported in Section 2.7.

Page Not Used

2.3 LEGISLATION

National Planning Policies

- 2.3.1 The Ancient Monuments and Archaeological Areas Act 1979,⁹ provides statutory protection for monuments of national importance (Scheduled Monuments or SMs). PPG16⁶ sets out the Secretary of State's policy on archaeological remains on land and how they should be preserved and recorded. It provides planning authorities with a staged approach to the consideration of archaeological remains that may survive on a proposed development site, and states that where there are 'nationally important archaeological remains... that are affected by a proposed development there should be a presumption in favour of their physical preservation'.
- 2.3.2 The principal legislation affecting historic buildings is the Planning (Listed Buildings and Conservation Areas) Act 1990,¹¹ which provides statutory protection for buildings on a list compiled by the Secretary of State. Conservation Areas are identified by the Local Planning Authority as areas of special architectural or historic interest, where it is important to preserve or enhance their character or appearance. Designating a Conservation Area provides a focus for Council and private efforts to improve the environment with the following main objectives:-
- to control demolition of any building, whether it is listed or not
 - to protect trees
 - to strengthen control over new development, so that it must positively preserve or enhance the character or appearance of the area
- 2.3.3 PPG15⁷ sets out the Secretary of State's policy for the identification and protection of historic buildings, conservation areas, and other elements of the historic environment and how they should be preserved and recorded. It provides planning authorities with a staged approach to the consideration of such remains.
- 2.3.4 Other guidance relevant to and used for this assessment includes:-
- Codes of Conduct (Institute for Archaeologists 2006)³
 - Standard and Guidance for Archaeological Desk-Based Assessments (Institute for Archaeologists 2008)⁴
 - Standard and Guidance for Archaeological Field Evaluations (Institute for Archaeologists 2008)¹²
 - Standard and Guidance for Archaeological Watching Briefs (Institute for Archaeologists 2008)¹³
 - Standard and Guidance for Archaeological Excavation (Institute for Archaeologists 2008)¹⁴
 - Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures (Institute for Archaeologists 2008)¹⁵
 - Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (Institute for Archaeologists 2008)¹⁶
 - Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (Institute for Archaeologists, Draft 2008)¹⁷
 - Management of Archaeological Projects (MAP2 English Heritage 1991)¹⁸
 - Management of Research Projects in the Historic Environment (MoRPHE, English Heritage 2006)¹⁹

Regional Policies

West Midlands Regional Spatial Strategy (2008)

2.3.5 The Regional Spatial Strategy for the West Midlands²⁰ was adopted in 2008 and includes provisions for the protection and enhancement of the Historic Environment. This provision is in the form of policies QE1: Conserving and Enhancing the Environment, QE3: Creating a High Quality Built Environment for All and QE5: Protection and Enhancement of the Historic Environment which seek to protect and enhance historic buildings, historic landscapes and archaeological deposits.

East Midlands Regional Plan (2009)

2.3.6 The East Midlands Regional Plan²¹ was adopted in 2009 and includes the provision of up to date policies which seek to protect and enhance the Historic Environment. In particular policies 26: Protecting and Enhancing the Region's Natural and Cultural Heritage and 27: Regional Priorities for the Historic Environment aim to ensure that Region's Cultural Heritage is protected from damage or loss due to development.

Local Policies

Daventry District Council Local Plan 1997

2.3.7 The Daventry District Council Local Plan²² was adopted in 1997. In September 2007 any policies not "saved" expired, these expired policies included the Daventry Local Plan policies relating to Cultural Heritage. These policies are to be replaced with emerging policies under the Local Development Framework (LDF). Daventry are producing a joint Core Strategy as part of the LDF which is the West Northamptonshire Joint Core Strategy (2007)²³, currently at the issues and options stage. This means that any policies are currently only in draft form, but the strategy does set out Strategic Objectives which will inform the basis of future policies. Strategic Objective 8 of the Core Strategy aims to ensure that development is sensitive to its environment.

Harborough District Council Local Plan 2001

2.3.8 The Harborough District Local Plan²⁴ was adopted in 2001 and as mentioned above all policies that were not formally saved expired in September 2007. There are no policies relevant to cultural heritage saved in the Harborough Local Plan. Harborough are in the process of producing their Core Strategy²⁵ which is currently at alternative options stage. Within this document Core Spatial Policies 3: Promoting Sustainable Development and 17: Develop and Protect the Natural and Historic Environment have relevance to Cultural Heritage. In particular Policy 17 will focus on the need to protect, enhance and restore Harborough's natural resources and character.

Rugby Borough Council Local Plan 2006

2.3.9 The Rugby Borough Local Plan²⁶ was adopted in 2006 and contains a number of saved policies. Policies E14: Development Affecting the Setting of a Listed Building and E17: Development Affecting Parks and Gardens and Other Elements of the Historic Environment are of particular relevance to Cultural Heritage. Policy R14 aims to protect the setting of Rugby's Listed Buildings. The policy seeks to prevent development that would adversely affect the setting and views to and from a Listed Building unless the need for the development can be shown to outweigh these concerns.

2.3.10 Policy E17 covers the protection of the character and appearance of historical parks and gardens.

2.3.11 In addition to the saved policies in the Local Plan, Rugby are also in the process of writing their Core Strategy²⁷ which is currently at the preferred options stage. Within the Core Strategy, Spatial Objective 11 aims to protect and enhance the special natural and historic environment of the Borough.

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2.4 BASELINE CONDITIONS

Previous Archaeological Investigations and Fieldwork

Pre-2004 Background

- 2.4.1 A number of sources were consulted in order to gain a broad archaeological and historical assessment of the area and to evaluate the impact of the proposed work on these sites. This assessment has built on previous work carried out between 1992 - 1994.
- 2.4.2 In 1992 Arup Environmental commissioned Leicestershire County Council Museums, Arts and Records Service, Archaeological Survey Team to carry out an archaeological assessment of the land around Junction 19 of the M1 in Leicestershire, on behalf of the Department of Transport's Motorway Widening Unit. This assessment comprised an archaeological desk study and a preliminary field evaluation. The desk study was undertaken in August/September 1992 (Knox 1992)²⁸ to collect pre-existing data from the study area (500m either side of the central reservation of the motorways). The field evaluation took the form of a walkover and fieldwalking survey of a smaller study area and aimed to determine the extent of further work required (Knox and Liddle, 1992).²⁹
- 2.4.3 The desk study was the first step in defining and substantiating areas of archaeological potential within the study area. Using a number of documentary sources (SMR/HER, historical maps and documents and aerial photographs) as well as walkover and fieldwalking surveys, it identified fifteen potential areas of significant but unclear archaeological deposits, including six cropmark sites and nine areas of alluvial deposits that might have hidden and preserved any archaeological remains. In addition the study identified two areas where any archaeological deposits would already have been destroyed by the extraction of borrow pits (Knox 1992)²⁸. The information from the desk study and fieldwork was combined in an archaeological evaluation report (LAU 1993).³⁰

Recent Work

- 2.4.4 In 2004 all the previous work was combined and updated with a walkover survey for the Preferred Improvement Scheme announced in 2003 now referred to as the Blue Junction. A desk-based assessment was produced (Priest 2004)³¹ Further fieldwork was also undertaken in 2003-4 to evaluate the cropmark at *Site 20*. The results from the geophysical survey suggested disturbance from the building of the motorway and agricultural marks with little to suggest archaeological features (Elks 2003).³² This was followed by trial trenching which failed to find any evidence for the cropmark (Coward 2004).³³
- 2.4.5 An assessment of the scheme for the Local Road Network was also undertaken in 2004 (Priest 2004)³⁴ and a Stage 3 Assessment of the Preferred Improvement Scheme was produced (Priest 2004).³⁵ Further evaluation work was done on *Site 19* in 2005. This included trial trenching over the cropmarks and a Romano-British pottery scatter. The excavations produced very little material or features and suggested that the cropmarks did not extend as far as the potential area of the new roadline (Coward 2005).³⁶ This information was included in a new updated assessment (Score 2005).²
- 2.4.6 In 2006 geophysical survey was undertaken on several sites covering the Green LRN, ponds and construction areas. This found evidence for ridge and furrow but relatively few anomalies of possible archaeological origin (Elks 2006).³⁷
- 2.4.7 A new junction option (Red), was added in 2007 and a comparative assessment was undertaken of the two main options (Red and Blue Junction) (Speed 2007).³⁸ In August

2007 a third junction was added (Brown) and two more LRN proposals (Orange and Purple). A Comparative Environmental Assessment of all five sites was undertaken in November 2007 (Score 2007)³⁹.

Geology

2.4.8 The underlying geology for this area is dominated by the Triassic Mercian Mudstone Group which underlies much of western Leicestershire and typically gives rise to a moderately undulating landscape. The predominant drift geology consists of glacial till with sand and gravel river terrace deposits and alluvium along most water courses.

Palaeochannels and Flood Deposits

2.4.9 The study area lies mainly north of the River Avon. There are numerous areas of alluvium on either side of the river (Figure 2.1; *Sites 7, 8, 9 and 16*). There is also a potentially large area of alluvium between the junction and the village of Swinford (Figure 2.1; *Site 4*), and a further four potential alluvial areas to the north-east (Figure 2.1; *Sites 2, 11, 12, 13*).

Archaeological Remains

2.4.10 All the sites numbered below are shown on Figure 2.1.

Prehistoric 500,000BC – 700BC (Palaeolithic, Mesolithic, Neolithic, and Bronze Age)

2.4.11 Early prehistoric activity in the study area is mainly suggested by finds, scatters of flint and cropmark enclosures. The earliest find is a possible Palaeolithic flake from Catthorpe Hill (*Site 14*); the majority of flints however are Mesolithic and Neolithic scatters suggesting prehistoric activity in this area. At *Site 14* fieldwalking has produced evidence around the hilltop for prehistoric material including over 600 Mesolithic and later flints, indicating that this area was the focus of prehistoric activity and possibly occupation. Flint was also found at *Site 6* (associated with a rectilinear enclosure), *Site 1* (possibly associated with a cropmark site), *Site 11*, in a small area of alluvium, *Site 10*, *Site 20* and at *Site 21*. A burnt flint was recovered from *Site 3* that could be evidence for a prehistoric cremation.

2.4.12 There are also numerous cropmarks, which could be of earlier prehistoric date. A circular enclosure south of Shawell Grange could be prehistoric, along with a second rectilinear enclosure close by (*Site 22*). A large ditch was also recorded close to a road at Catthorpe and a small circular mound, possibly a prehistoric round barrow was recorded south-west of the smaller Motte and Bailey castle at Lilbourne. Some of the other cropmarks identified by typology as Iron Age -Roman in date could also be earlier prehistoric.

Iron-Age - Roman 800BC – c.AD410

2.4.13 There are a number of archaeological features dating from the Iron Age to the Roman period. A major Roman road (Watling Street) lies to the east of the development (now the A5) with a second possible road running north-east to Shawell. Although unexcavated, the form and typology of many of the cropmarks in the area is suggestive of an Iron Age – Roman date including the sub-rectangular enclosures at *Site 1* and *Site 3* (which also produced Iron Age and Roman pottery), *Site 6* and *Site 14* which has several intersecting enclosures (and a find of an Iron Age/Roman quern and Roman pottery). The sub-rectangular enclosure at *Site 19* may well be related to the cropmarks in *Site 14*. Fieldwalking close by also suggested a prehistoric/Roman settlement site. The HER locates the enclosure very close (approx four metres) from the edge of the road line. However trial trench evaluation in June 2005 found no evidence for features suggesting that the

enclosure may lie further out (Coward 2005).³² Another enclosure at *Site 20* was evaluated by geophysical survey (Elks 2003)²⁸ and by trial trenching (Coward 2004)²⁹ which failed to find any archaeological features suggesting that the cropmarks could be natural and that there is little potential for significant archaeological deposits in the area. *Site 22* contains a circular enclosure and a rectangular enclosure probably of Iron Age date. Geophysical survey in 2006 revealed a few anomalies which may be cut linear features that are possibly associated with the rectilinear enclosure at *Site 6* (Elks 2006).³⁵ Iron Age and Roman pottery was also found by fieldwalking at *Site 21*.

Medieval AD450 – 1540

- 2.4.14 There is extensive archaeological evidence from the medieval period within the area of development, consisting mainly of medieval villages and field systems, and three Scheduled Monuments.
- 2.4.15 The villages in the study area (Swinford, Catthorpe, Shawell (Leicestershire) and Lilbourne (Northamptonshire) are all of early Medieval origin and are mentioned in the Domesday Book. Only a small number of Anglo-Saxon pottery sherds have been recorded (*Sites 4, 10, 21*), however, given the difficulties in identifying such material and the presence of pre-conquest villages in the area there is still some likelihood for Anglo-Saxon settlement evidence.
- 2.4.16 Anglo-Saxon pottery was also recovered at *Site 10*, although the site appears to have been destroyed by a borrow pit.
- 2.4.17 Both Catthorpe and Swinford parishes had 3-field open field systems of the standard Midlands type. Catthorpe was enclosed in 1655. Its Great Fields in 1606 were called Mill Field (south-east of the village), Tomley (north-east – Tomley Hall Farm still exists) and Street (called Biggin in 1625), to the north-west. Swinford was enclosed in 1783. In 1674 its fields were East Field, West Field, and North field (renamed Towards Stanford, Towards Lilbourne and Towards Shawell in 1674) (Score 2005).³
- 2.4.18 There is substantial evidence for the remnants of ridge and furrow identified both from aerial photographs and as earthworks. Figure 2.2 shows that almost all of the fields around the junction contained ridge and furrow. Much is now ploughed out, but some exists, mainly to the south-east and north-west of the Junction. The area around Tomley Hall Farm is mostly pasture and slopes southwards down towards the road. The fields here contain numerous examples of well-preserved ridge and furrow earthworks (*Sites 23 and 24*). Ridge and furrow is also very evident to the east (*Site 4*).
- 2.4.19 To the south, the area around Lilbourne contains the largest remaining area of ridge and furrow in Northamptonshire stretching from Lilbourne to Clay Coton and Stanford on Avon. Around 40 sherds of early medieval pottery and over 60 sherds of later medieval pottery were recovered during a fieldwalking survey. The sherds are well scattered and probably represent manuring scatters. The enclosure of the open field system divided up the ridge and furrow landscape and much of the land in this area was turned over to pasture until the early 20th century (Knox 1992, 12).²⁴
- 2.4.20 There is a row of faint conjoined enclosures close to Lilbourne's second Motte and Bailey castle (SM 13557) stretching south-west from the castle although these are undated and may be geological in origin.
- 2.4.21 The fields around *Site 4* are bounded to the east by a small stream marked by a hawthorn hedge and trees and to the west by the A14. A meandering boundary through the centre

was also once a stream and the area is alluvial floodplain. Nearly all of these fields are currently under pasture and are mainly flat with a slight slope from the road down towards the stream. There is quite extensive evidence for ridge and furrow earthworks and a findspot of several sherds of Anglo Saxon pottery may indicate a possible early medieval settlement close by.

Post-Medieval - Modern AD1540 – present

2.4.22 A cropmark identified east of Catthorpe (*Site 5*) is now thought to be a post-medieval pond. At *Site 15*, three possible ring ditches were recorded east of Catthorpe. The preliminary field evaluation suggested that these may actually be the remains of formal gardens and a World War II searchlight battery. There are a number of military sites around Lilbourne including a documentary reference to a searchlight battery, and a series of light anti aircraft gun sites designed to protect the Rugby Radio and VP site.

2.4.23 A defining feature of the 20th century was the growth and improvement of the road network with the area becoming the junction for three major roads; the M6, A14 and the M1. The remnants of the dismantled railway track runs south of Catthorpe.

Scheduled Monuments

2.4.24 There are three Scheduled Monuments within the study area including a Norman Motte and Bailey castle (SM 17047) within Shawell village and two at Lilbourne. A small patch of road may once have linked the castles at Shawell and Lilbourne.

2.4.25 The Motte and Bailey castle at Lilbourne (SM 13658) (*Site 25*) lies close to the river, east of the church with a second smaller Bailey to the north-east of the Motte and is presumed to have been built to control the river crossing here. It lies on the edge of the area identified as the largest remaining area of ridge and furrow in Northamptonshire stretching from Lilbourne to Clay Coton and Stanford on Avon. Also close to the castle are two undated fishponds. East of the castle at Lilbourne are earthworks of the remains of the shrunken medieval village, with further remains north of the village. A number of medieval pottery sherds were recovered from fieldwalking in this area. A medieval hollow way lies to the west, with a second hollow way further west of this. To the south of the village are medieval earthworks belonging to the manor (Score 2005).²

2.4.26 A second Motte and Bailey castle (SM 13657) lies to the west. This has no surviving bailey and may have controlled the road link of Watling Street to the south-west.

Ancient Woodlands

2.4.27 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database (<http://www.magic.gov.uk/>)⁴⁰ shows no areas of National or ancient forest within the study area. The first edition OS maps also show very few wooded areas within the study area.

Archaeologically Significant Hedgerows

2.4.28 The 2002 and 2003 walkover survey showed that the majority of the fields within the study area are surrounded by mature hedgerows of some form. Given that the shape and structure of the fields are unchanged since the 19th century and probably earlier, many of the hedgerows may have been in place for several hundred years. There are also a number of drainage ditches that probably echo ancient boundaries and stream lines. Hedges along Shawell Lane between Catthorpe and the M6 have been identified as important.

Historic Buildings

2.4.29 The location of historic buildings and Conservation Areas is shown on Figure 2.3 and are listed in Appendices A and B.

Medieval AD450 – 1600

2.4.30 The Domesday Book for Leicestershire, mentions Shawell, Swinford and Catthorpe in the Guthlaxton Wapentake (Morris 1979).⁴¹ All three villages contain mills at this time. Lilbourne is mentioned as Lilleburne\Lineburne in the Gravesend and Alboldstowe Hundred. The village place names are predominantly early medieval in origin. Catthorpe is from the Scandinavian thorp 'outlying farmstead or hamlet', with a manorial addition from a family called le Cat(t). Swinford (Pig Ford) and Shawell (Boundary spring or stream) are from the Old English as is Lilbourne meaning 'stream of a man called Lilla' (Mills 1998).⁴²

2.4.31 The parish churches of Swinford (Church of All Saints), Shawell (Church of All Saints), and Catthorpe (St. Thomas) all have 13th century features (Pevsner 1960,⁴³ 1961⁴⁴). In addition there are Norman Motte and Bailey castles at Shawell and Lilbourne.

2.4.32 The Church of St. Thomas at Catthorpe is also medieval in date with a 13th century font and a medieval Saxo-Norman watermill is mentioned in the Domesday Book (Morris 1979).⁴¹ There are also suggestions of rectilinear shadow marks west of the village that could be interpreted as old closes from a shrunken medieval village. A section of road recorded to the north-west of the village is thought to be medieval – possibly linking with the Norman castles at Lilbourne and Shawell.

2.4.33 Shawell has an identified medieval village core and contains numerous medieval buildings and features including a Norman Motte and Bailey castle, a watermill mentioned in Domesday, the earthworks of the Shrunken Medieval Village (SMV), a medieval fishpond and the church of All Saints. In addition sherds of medieval pottery have been found around Shawell Hall.

Post-Medieval - Modern 1600 – present

2.4.34 West of Swinford is the 17th – 18th century Park around Stanford Hall although this is well clear of the scheme. At Swinford itself there are references to a school and almshouse possibly beneath the existing school. There is a possible old bridge suggested by blocks of dressed masonry along Shawell Brook. There are the remains of an old railway station at Lilbourne; however this is not on the Northamptonshire HER.

Conservation Areas

2.4.35 Catthorpe, Shawell and Swinford all contain Conservation Areas (Figure 2.3) which contain the majority of the Listed Buildings. None of these areas would be directly physically affected by either of the proposed works. Details of the Conservation Areas provided by Harborough District Council can be found in Appendix A.

Listed Buildings

2.4.36 A full inventory of all buildings on the statutory list within the search area was obtained from the Leicestershire County Council Historic Listed Buildings records, the Northamptonshire HER and the NMR online database. Details of the Listed Buildings are in Appendix B. There are 20 monuments recorded as Listed Buildings in Swinford, mostly within the Conservation Area, all of Grade II status except the 13th century Church of All Saints which is II*.

- 2.4.37 There are 16 monuments recorded as Listed Buildings in Shawell comprising one grade II* (the 15th century church of All Saints on Main Street) and 15 of Grade II, mostly within the Conservation Area. There are three Listed Buildings in Catthorpe, all within the Conservation Area, comprising the Grade II* 14th century Church of St Thomas, a pair of 18th century gate piers and an 18th century dovecote (Grade II).
- 2.4.38 Twelve structures in Lilbourne have Listed status. The Church of All Saints is Grade I and has 12th century origins; the remainder are all Grade II and include six tombstones at the church and four buildings within the village. The village lies some distance to the south of the church, and earthworks by the church suggest that the village has shrunk and been subject to settlement shift since medieval times.

Other Buildings

- 2.4.39 There are several unlisted buildings in the area that appear on the 1st edition OS map (1:10560, Leicestershire, 1890). These include Catthorpe Towers (set in a garden area, but outside the conservation area) and Catthorpe Hall which was added into the Conservation Area after a revision in 2006. A model farm also lies within the conservation area. There is also, Old Barn Farm and Stonebank close to the existing junction, Westfield Lodge (the barns here are listed) and Tomley Hall Farm north of the M6.

Historic Landscapes

- 2.4.40 The definition of historic landscape used in this guidance is derived from the European Landscape Convention (2000):⁴⁵

‘Landscape is an area as perceived by people, whose character is the result of the action and interaction of natural and / or human factors. Historic Landscape is defined by perceptions that emphasise the evidence of past human activities in the present landscape.’

- 2.4.41 The term landscape can include urban areas as well as the countryside. It is about the relationship between people and place and is influenced by both natural (e.g. geology, climate, soils, flora and fauna) and cultural (e.g. historic and current land use, enclosure) elements.

Landscape Character Assessments

- 2.4.42 Landscape Character Assessment can be used to develop a comprehensive understanding of what gives the countryside of England its character (Natural England website).⁴⁶ The study area falls within ‘Area 94 The Leicestershire Vale’ characterised by valleys with little woodland, but strong enclosure patterns, river valleys and flat floodplains, frequent villages, prominent parks and country houses, imposing spired churches, and landscape and settlement diversity. The southern part of the study area is covered by ‘Area 95 The Northamptonshire Uplands’ characterised by rounded hills, abundant ridge and furrow with frequent deserted and shrunken settlements, mixed farming, good hedgerow enclosure with roads following ridges, the use of ironstone and limestone for older buildings and a variety of landform with nationally important historic parks.
- 2.4.43 The Leicestershire Character Areas arose from the Leicester, Leicestershire and Rutland Landscape and Woodland Strategy (2001).⁴⁷ The study area lies within the Civil Parishes of Catthorpe and Swinford, which form the southern tip of the ‘Loughton Hills Character Area’.

2.4.44 The Strategy notes that although Junction 19 does cause visual disruption and noise on a local scale its impact is not widespread.

2.4.45 Northamptonshire Character areas are outlined in the Combined Character Assessment and Key Issues (Northamptonshire County Council 2005).⁴⁸ The study area falls within the 'Vale of Rugby', a broad sweeping landscape on the boundaries with Leicestershire and Warwickshire with several rivers and tributaries including the Avon.

2.4.46 A more detailed description of landscape character is contained in Chapter 4, Landscape.

Rural Settlement

2.4.47 Rural settlement patterns have been mapped by English Heritage (Roberts and Wrathmell 2000).⁴⁹ The study area falls within the 'Central Province' which is characterised by large concentrations of nucleated settlements, villages and hamlets (Roberts and Wrathmell 2000, 45).⁴⁹ The area falls mainly within the East Midlands sub-province. This is dominated by the East Midlands sub province which generally comprises scarp and vale features, areas of ancient woodland and dominated by villages and hamlets (Roberts and Wrathmell 2000, 49).⁴⁹

Historic Landscape Characterisation (HLC)

2.4.48 Northamptonshire has completed their historic landscape characterisation (Historic Landscape Character Assessment, Northamptonshire County Council 2007),⁵⁰ while Leicestershire is close to completion at the time of writing with the latest update reviewed in July 2009. The characterisation for both counties is shown on Figure 2.4 and the titles of the character units identified are shown in italics in the descriptions below. Both councils supplied information in Geographical Information System (GIS) format with accompanying notes. The desk-based assessment also looked at national databases of historic parks and gardens, registered battlefields, conservation areas and World Heritage sites (Score 2005).³

Leicestershire

2.4.49 The following information was provided by John Robinson at Leicestershire County Council, 2007, with an update in July 2009 providing additional mapping for settlements, but no other changes.

'Junction 19 of the M1 lies in the extreme south-east of the modern county of Leicestershire. Junction 19, unsurprisingly, has a significant visual impact and has had a fragmentary effect upon the immediate surrounding landscape. The Junction itself is the interchange between the M1 and the beginning of the M6 heading west and the A14 heading east. To the east of Junction 19 the landscape is one predominantly made up of *Planned Enclosure* and *Planned Enclosure Containing Ridge and Furrow*, evidence for an open field agricultural regime being in place during the medieval period. Between the A14 and the village of Swinford there is a well preserved block of extant ridge and furrow.

Further south between the lines of the M1 and the A14, aside from a narrow strip of plantation woodland, put in place as a landscaping measure to mitigate against noise and the visual impact of the motorway, the land has an HLC Character Type of *Very Large Post-War Fields* and has a previous character of *Planned Enclosure*.

Within the study area along the south western edge of the M1 there is a strip of *Coniferous Plantation* woodland. This again is a landscaping measure on account of the motorway.

At the very southern edge of the study area, to the west of the M1 and bordering with Northamptonshire there is a block of *Miscellaneous Floodplain Fields* along the banks of the River Avon. Immediately to the north of this is a block of *Planned Enclosure*. Again moving north is the village of Catthorpe which comprises a *Historic Settlement Core*, a *Farm Complex* marked on the 1st Edition OS map (1890) as Model Farm and a very small amount of 20th Century residential development. Two small block of fields to the north and east of the village have been identified a being *Piecemeal Enclosure*, that is they are defined as fields created out of the medieval open fields by means of informal verbal agreements between farmers. *Piecemeal Enclosure* will typically comprise of small irregular or rectilinear fields with at least two boundaries having an 's-curve' or 'dog leg' morphology, suggesting that they follow the boundaries of former medieval field strips.

Between Catthorpe Village and the M1 is Catthorpe Manor, marked on the 1st edition OS Map (1890) as Catthorpe Towers, with an associated garden given the HLC Character Type of *Parks and Gardens*. North of Catthorpe Manor and west of the line of the M1 a block of fields has been defined as *Very Large Post War Fields*. This appears to have previously been an area of *Planned Enclosure* which through the course of the 20th century and probably as a result of the proximity of the motorway junction has undergone significant boundary loss. The other dominant HLC polygon to the north of Catthorpe Village is one of *Re-organised Piecemeal Enclosure*. This is an area of what formerly could have been defined as *Piecemeal Enclosure*, as described above, but which (in this case during the 20th Century) has experienced *Significant* loss and straightening of field boundaries, although some elements of the former field pattern remain.

Within the area bounded by the M1 to the east and M6 to the south there is a block of *Very Large Post War Fields* with a previous character of *Planned Enclosure* and to the West of this a large block of *Planned Enclosure Containing Ridge and Furrow*, the quality of which is difficult to determine from the evidence of aerial photography alone.

Finally to the north of the area defining Junction 19 the area has been defined as *Re-organised Piecemeal Enclosure*.'

Northamptonshire

2.4.50 The area of Lilbourne falls within Avon River Valley: Lilbourne (Northamptonshire HLCA 1c) on the northern border of the county. This area is mainly pre 19th century non-parliamentary enclosure. The origin of the enclosure of the fields in this area was in the 17th century with the layout of the fields being, in places, regular and perhaps demonstrating additions and changes in the 18th century. The vast majority of the fields around Lilbourne are either *Semi-Regular Enclosure* or *Regular Enclosure with Ridge and Furrow*, mostly deriving from ancient enclosure or open field systems.

2.4.51 The area contains two Motte earthworks as well as well preserved ridge and furrow field systems over which the post-medieval enclosed landscape sits. The ridge and furrow earthworks are extensive and relatively well preserved. Along with these cultivation remains are earthworks representing shifted and deserted medieval settlements. At Lilbourne the village appears to have shifted from close to the river to its present position.

2.4.52 The M1 motorway and A14 Trunk Road sever the area whilst its western boundary, is formed by the line of the more ancient transport link of Watling Street Roman road, now the A5 Trunk Road.

Historic Parks and Gardens

2.4.53 At Stanford on Avon the site of the medieval village is completely deserted, a process that may have started in late medieval times and was possibly related to the enclosure process. Settlement is now centred around the 18th century Stanford Hall, a major house with an attendant historic walled garden and parkland, listed in the Parks and Gardens Register as a 'Garden and Other Land of Historic Interest' which also lies away from the scheme. The listed area is also indicated on Figure 2.3. The park and garden area around Cattthorpe Towers is not registered.

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2.5 BASELINE VALUE (SENSITIVITY) OF THE CULTURAL HERITAGE

- 2.5.1 This section lists the known archaeological remains, buildings and landscapes, grouped into sites and assesses their value following the methodology outlined in Section 2.2. The results are shown in Tables 2.5 – 2.7.
- 2.5.2 Only known archaeological and historical sites have been assessed. It is possible that other unidentified sites exist in the study area. In particular, the presence of alluvium means that archaeological remains may be buried and not visible on the surface.

Archaeological Remains

- 2.5.3 A total of 27 sites of an archaeological nature which could be impacted by the development have been identified. These are described below along with an assessment of their value and outlined in Table 2.5 and shown on Figure 2.1.

Site 1. Cropmark complex north-west of Junction 19

Value: Medium

- 2.5.4 This comprises a rectilinear enclosure with a possible second enclosure and circle (MLE2500). Fieldwalking produced flints (MLE7548) and Roman and medieval pottery suggesting a Romano-British settlement site possibly with earlier prehistoric origins. The site lies on gently sloping land on well drained sandy soils which are often suitable sites for early settlement. Flints were also found to the north (MLE7546), although these may be from imported soil.
- 2.5.5 Although the cropmarks lie on the higher areas to the north, the alluvium noted at the base of these fields may preserve archaeological deposits currently unknown. Extensive ridge and furrow (now ploughed out) is visible from aerial photographs across much of this site.
- 2.5.6 The cropmarks and artefact scatter suggest a possible settlement site of Romano-British date, which would be of *Medium* value and local and regional importance. Cropmark sites of this type are fairly common within this region. The presence of ridge and furrow and the hill top location may suggest some truncation; however if the site continues to the east there is potential for well-preserved archaeology beneath the alluvium. It is also possible that the site extends down-slope to the roadline, especially as there is further evidence of prehistoric activity south of the road (*Site 14*) and eastwards to *Site 3*.

Site 2. Alluvium between Site 1 and Site 3

Value: Low

- 2.5.7 *Site 2* lies just north of Junction 19 within a band of alluvium laid down by one of the numerous tributaries of the River Avon. Although there are no known archaeological deposits it lies between two areas containing cropmarks and finds indicating prehistoric settlement, and may preserve further undisturbed archaeological deposits. Traces of ploughed out ridge and furrow have been identified from aerial photographs at the southern and western edge of this site.
- 2.5.8 There are no known archaeological remains here and although the presence of cropmarks to the east and west suggests the potential for buried archaeological deposits in this area, it is of *Low* value. Prehistoric and Roman sites are fairly common within the region and such deposits are likely to be peripheral to the main site. However they would be well preserved and would enhance the value of neighbouring sites particularly *Site 3*, which lies adjacent to it.

Site 3. Cropmarks north-east of Junction 19
Value: Medium

- 2.5.9 *Site 3* lies just north of Junction 19 and comprises two and possibly three undated trapezoidal enclosures (MLE2496). Finds of Roman pottery and a sherd of Iron Age pottery (MLE8368) indicate possible prehistoric/Romano British settlement of *Medium* value. A single burnt broken point was recovered that might suggest a Neolithic/early Bronze Age cremation (MLE2508). This site may well be part of a larger prehistoric landscape extending to the south and west with *Site 1* and *Site 14*. Ploughed out ridge and furrow has been identified running east-west across this site.
- 2.5.10 Geophysical survey (MLE15812) across this area south of the cropmarks produced a number of linear anomalies (regular positive lines on the plot). Some of these may well be agricultural in origin; however there are some that could represent archaeological features cut into the natural subsoil (such as ditches or gullies).
- 2.5.11 The cropmarks and artefact scatter suggest a possible settlement site of Romano-British date. Cropmark sites of this type are fairly common within this region and the presence of ridge and furrow and the hill top location may suggest some truncation. The site may be part of a larger group of archaeological deposits extend westwards to *Site 3*. The presence of a prehistoric cremation would enhance the complexity and value of the site; however this evidence is based on a single find.

Site 4. Alluvium spread east of Junction 19 and early medieval remains
Value: Low

- 2.5.12 *Site 4* occupies a large area of alluvium running north-west to south-east. A stream marking several field boundaries still exists in the area. Virtually none of this area was fieldwalked so its archaeological potential remains unknown and of *Low* value. There is also extensive ridge and furrow, much of it still surviving as earthworks (Score 2005)² indicating a simple field system, although its survival varies. In addition a possible platform and hollow were noted during previous work in the area (Marsden 1998,⁴⁰ Meek, 1998⁴¹, MLE8369). Several sherds of Anglo-Saxon pottery were recovered close to Junction 19 and it is possible that further archaeological deposits lie beneath the alluvium. Documentary evidence from the Domesday Book suggests the presence of a watermill close to the river (MLE2498).
- 2.5.13 Geophysical survey across the northern part (as part of *Site 3*) located a number of linear anomalies. Some of these may well be agricultural in origin; however there are some that could represent archaeological features cut into the underlying subsoil.
- 2.5.14 The presence of Anglo-Saxon pottery and ridge and furrow earthworks may be indicative of early medieval remains in this area and may be partially preserved by the alluvial deposits. However the site lies some distance away from known villages and is likely to represent peripheral activity. The ridge and furrow is part of an extensive system identified from aerial photographs and potentially related to local villages within the area.

Site 5. Cropmark site west of the A14
Value: Low

- 2.5.15 The oval feature was originally recorded on the HER (no longer recorded at the time of writing) as an uncertain ring ditch; however the original walkover survey suggested that this was most likely to be a modern pond feature and of *Low* value. Ploughed out ridge and furrow is visible on aerial photographs of the area.

2.5.16 This may be a post-medieval pond feature of little significance. Geophysical survey around this area located a number of linear anomalies, some of which could represent archaeological features.

Site 6. Cropmarks east of Catthorpe Manor
Value: Medium

2.5.17 *Site 6* east of Catthorpe Manor contains a cropmark – MLE2501 an undated rectilinear enclosure. Fieldwalking in this area also produced a good scatter of Mesolithic and later prehistoric flint (MLE7050) around the cropmark itself and may be indicative of prehistoric settlement. To the south, down towards the river, are sherds of early - late medieval pottery – probably the result of manuring. Ploughed out ridge and furrow is visible on aerial photographs of the area.

2.5.18 The flint scatter would suggest prehistoric activity at this site. The cropmarks are undated but are also likely to represent later prehistoric activity of *Medium* value.

2.5.19 Geophysical survey (MLE 15812) around this area produced a number of linear anomalies, some of which could represent archaeological features cut into the underlying subsoil.

Site 7. Alluvium north of the River Avon
Value: Low

2.5.20 *Site 7* lies along the River Avon. The land is under pasture and no field work was carried out here. Fieldwalking carried out to the north produced very little artefactual material. A watching brief here recorded no archaeological deposits (NN32725 – NN3998).

2.5.21 There is no indication that archaeological deposits lie buried beneath the alluvium indicating a *Low* value

Site 8. Alluvium north of the River Avon
Value: Medium

2.5.22 *Site 8* lies along the River Avon. Fieldwalking was carried out on two large fields comprising *Site 8* to the north of the river producing flints, and medieval/post-medieval pottery. The flint scatter is associated with a cropmark site and lies just to the north. It is possible that further archaeological deposits may well lie buried beneath this alluvium.

2.5.23 Geophysical survey around this area produced a number of linear features, some of which could represent archaeological features.

2.5.24 If there is a continuation of the archaeological deposits from *Site 6* into this area beneath the alluvium this site could be of *Medium* value.

Site 9. Alluvium north of the River Avon
Value: Low

2.5.25 This is the continuation of alluvium recorded at *Site 8*. There are cropmarks to the north and fieldwalking produced some artefacts but none close to alluvium itself.

2.5.26 There is no indication that archaeological deposits lie buried beneath the alluvium indicating a *Low* value.

Site 10. Artefact scatter/Borrow pits

Value: Low

2.5.27 This field contains borrow pits dug in the 1990's destroying potential archaeological deposits. Prior to the pits being dug Anglo-Saxon pottery (MLE6172) and Mesolithic flints (MLE7049) were recorded here and aerial photographs provide evidence for the existence of ridge and furrow in the area. It is not known how much was destroyed by the borrow pit and whether any archaeological remains may have survived. Hedgerows and trees in this area would be affected.

2.5.28 Any archaeological remains here are likely to have been at least partially destroyed by the borrow pits and is therefore of *Low* value.

2.5.29 Geophysical survey on this site produced no evidence for archaeological features cut into the underlying subsoil in this area.

Site 11. Alluvium/find scatter

Value: Low

2.5.30 *Site 11* is a small area of alluvium located just north of the M6. To the west is MLE2330 and MLE2331 circular and rectangular enclosures. Fieldwalking produced a number of flints (MLE7018). Although a small scatter, it is possible that further material extends beneath the alluvium in this area. There are also traces of ridge and furrow visible from the aerial photographs.

2.5.31 Although the flint scatter may represent prehistoric activity there are too few artefacts for this to be considered a *Significant* site and it is of *Low* value. The flints may have been moved downslope by ploughing.

Site 12. Alluvium

Value: Low

2.5.32 *Site 12* is an area of alluvium east of *Site 11*. Although little was recovered from fieldwalking to the east, the fields to the west were unable to be assessed as they were under pasture.

2.5.33 There is no indication that archaeological deposits lie buried beneath the alluvium indicating a *Low* value.

Site 13 Alluvium

Value: Low

2.5.34 This is an area of alluvium south of the M6, partly disturbed by *Site 18*. There is a dense scatter of flint to the south, but surveys in other nearby fields suggest little potential. There is evidence of ploughed out ridge and furrow on the site from aerial photographs.

2.5.35 There is no indication that archaeological deposits lie buried beneath the alluvium indicating a *Low* value.

Site 14. Cropmark complex and finds

Value: Medium

2.5.36 Lying just south-west of Junction 19, *Site 14* is a group of intersecting rectilinear enclosures thought to be Iron Age in date (MLE1359). Nearby a beehive quern (Iron Age/Roman in

date) was also recovered (MLE6566). Such artefacts are often indicative of settlements and combined with the cropmarks suggest a possible Romano-British settlement here.

2.5.37 Fieldwalking showed that the large area around the hilltop is covered with prehistoric material including over 600 Mesolithic and later flints and 29 sherds of Roman pottery (MLE2502, MLE2503), and it appears that this area was the focus of prehistoric and later activity and occupation. The enclosure is on the top of a rise and the Roman pottery lies mainly on the slope around it. Although some 200m from the roadline the finds spread towards it and it may be part of a larger complex. Aerial photographs show the area to have contained extensive ridge and furrow, now ploughed out. A Palaeolithic flint was also recovered from this area (MLE6054).

2.5.38 The cropmarks and artefacts suggest both extensive prehistoric activity (Mesolithic – Bronze Age) as well as a possible settlement site of Romano-British date. Cropmark sites of this type are fairly common within this region although this looks to be larger and more complex than most. The presence of ridge and furrow and the hill top location may suggest some truncation of the site (indicated by the larger number of artefacts). It is also possible that the site may be part of a much larger complex involving *Site 1* and *Site 19* and is therefore of *Medium* value.

Site 15. WWII searchlight battery/Formal Gardens

Value: Low

2.5.39 Three uncertain ring ditches are also noted as earthworks and are probably part of formal gardens along with a World War II searchlight battery (MLE1355). The presence of ridge and furrow was identified from aerial photographs.

2.5.40 These type of earthworks of formal gardens and WWII batteries are common in this area and of *Low* value.

Site 16. Alluvium

Value: Negligible

2.5.41 This is the continuation of alluvium recorded at *Site 7* north of the River Avon. A watching brief here recorded no archaeological deposits (NN32725 – NN2012).

2.5.42 There is no indication that archaeological deposits lie buried beneath the alluvium indicating a *Negligible* value.

Site 17. Borrow pit south of M6

Value: No archaeological value

2.5.43 Ridge and furrow was noted here but any archaeological remains are likely to have been destroyed by the borrow pits excavated in 1970.

2.5.44 There is no indication that archaeological deposits existed here and the borrow pit is likely to have destroyed any archaeological remains.

Site 18. Topsoil Dump

Value: No archaeological value

2.5.45 This is a topsoil dump south of the M6. There is no suggestion that archaeological deposits existed here and the area is likely to be disturbed.

Site 19. Romano-British settlement

Value: Medium

2.5.46 *Site 19* contains a faint rectilinear enclosure (MLE2507). In addition a large number of sherds of Roman pottery were found in this field (MLE2506). Fieldwalking also recovered a large number of flints to the south-east (*Site 6*). This area is likely to be the focus of prehistoric and later activity and occupation. There is also some ridge and furrow visible from aerial photographs. In June 2005 trial trench evaluation was carried out on *Site 19* in order to clarify the nature and extent of the archaeological remains (cropmark and artefact evidence) and potential impact from landscaping and haul road construction. No *significant* deposits were located and the cropmark may be further north and/or west. The evaluations suggest that there are few if any archaeological remains in proximity to the works (Coward 2005).²²

2.5.47 The cropmarks and artefacts suggest some prehistoric activity as well as a possible settlement site of Iron Age/Romano-British date. Cropmark sites of this type are fairly common in this area and the evidence suggests a small simple site. The presence of ridge and furrow and the hill top location may suggest some truncation. It is also possible that the site may be related to *Site 14* making it of *Medium* value.

Site 20. Cropmark

Value: Low

2.5.48 The cropmark (MLE2505) lies between the two main roads of the existing junction. It is a curvilinear enclosure thought to be Iron Age in date and is in a favourable location for early settlement on a flat hilltop overlooking the river valley to south and sloping to north. Fieldwalking produced a number of flints including several blades, a sherd of Roman pottery, a sherd of Iron Age pottery. The walkover identified that the southern area was covered in debris probably from previous road construction. Ridge and furrow running east-west was identified from aerial photographs. The trees and hedgerows within this area would be affected by the development.

2.5.49 In March 2004 evaluation was carried out on *Site 20* in order to elucidate the nature and extent of the archaeological remains (cropmark and artefact evidence). A geophysical survey was conducted and trial trench evaluations were undertaken (Coward 2004¹⁹, Elks 2004¹⁸). The only archaeological features found in the five trenches were a small pit and gully, both undated. No evidence was found to suggest that the cropmark was anything other than a natural phenomenon.

2.5.50 The evaluations suggest that there are limited archaeological remains in this area which is of *Low* value.

Site 21. Artefact scatter

Value: Medium

2.5.51 This is a scatter of flint, Iron Age, Roman and possibly Anglo-Saxon pottery (MLE8975-8977). The artefacts lie south of cropmarks and may represent a continuation of these sites. The presence of ridge and furrow was also noted in this area.

2.5.52 This is quite an extensive artefact scatter dating from prehistoric through to the Roman period. Its *Medium* value would be increased if the artefacts were related to the cropmarks of *Site 22* to the north.

Site 22. Cropmark enclosures

Value: Medium

2.5.53 A circular and rectangular cropmark (MLE2330, MLE2331) lie just north of the main roads of the existing junction. Ploughed out ridge and furrow was noted from aerial photographs at the southern edge of site.

2.5.54 The cropmarks are undated and the field was not fieldwalked as it was under pasture. However the form of the cropmarks suggest a possible Iron Age settlement site that may be linked with the artefacts found at Site 21 to the south. The site is of *Medium* value

Site 23. Ridge and furrow

Value: Medium

2.5.55 There are existing ridge and furrow earthworks around Tomley Hall Farm. In addition aerial photographs suggest that these formed part of a larger medieval landscape. Geophysical survey (MLE15810) along the line of the previously proposed LRN produced linear features, parallel to the boundaries, but on a different alignment to the ridge and furrow, which could represent archaeological features cut into the subsoil.

2.5.56 Where earthworks exist they are well-preserved and should be looked at in terms of the larger landscape rather than isolated features. They gain regional importance when considered in the light of the large agricultural landscape around Lilbourne to the south. It should also be noted that due to the fact that these fields have remained as pasture no archaeological work has been carried out in this area and that the paucity of archaeological remains may reflect a lack of work rather than a lack of features. This site is considered to be of *Medium* value.

Site 24. Ridge and furrow

Value: Medium

2.5.57 There are existing ridge and furrow earthworks to the east of Shawell and to the north of Swinford Road. There is a poorly preserved circular earthwork and relic field boundary to the south of Hill Farm, probably forming part of a part of a larger medieval landscape. Geophysical survey carried out along the line of an earlier proposal for the LRN produced linear features, parallel to the boundaries, but on a different alignment to the ridge and furrow, which may represent archaeological features cut into the subsoil.

2.5.58 The earthworks are of *Medium* value - although poorly preserved they should be looked at in terms of the larger landscape rather than as isolated features.

Site 25. Lilbourne Motte and Bailey Castle

Value: High

2.5.59 Lilbourne Motte and Bailey castle (SM 13658) lies to the west of the M1 south of Junction 19. It is close to the river and is presumed to have been built to control the river crossing here. It lies on the edge of the area identified as the largest remaining area of ridge and furrow in Northamptonshire stretching from Lilbourne to Clay Coton and Stanford on Avon. Also close to the castle are two undated fishponds. East of the castle at Lilbourne are earthworks of the remains of the shrunken medieval village, with further remains north of the village. A number of medieval pottery sherds were recovered from fieldwalking in this area. A medieval hollow way lies to the west, with a second hollow way further west of this. To the south of the village are medieval earthworks belonging to the manor.

2.5.60 Its Scheduled Monument status reflects its *High* value and National importance.

Shawell Motte and Bailey Castle and Motte and Bailey Castle west of Lilbourne
Value: *High*

2.5.61 The two remaining sites are further Scheduled Monuments which lie within the study area, although not affected by the scheme. These are SM 17047 within Shawell village and a second Motte and Bailey castle west of Lilbourne SM 13657. These both have a *High* value.

Historic Buildings

2.5.62 Catthorpe, Shawell and Swinford all contain Conservation Areas that are of *Local* interest and as designated areas have a *Medium* value (Figure 2.3). None of these areas would be directly affected by the proposed works.

2.5.63 The majority of Listed Buildings lie within the villages particularly within the Conservation Areas at Catthorpe, Swinford, and Shawell. The historic buildings have been grouped together and their location is shown on Figure 2.3 and value defined in Table 2.6.

Catthorpe Conservation Area, Listed Buildings and other buildings
Value: *High*

2.5.64 There are just three Listed Buildings within Catthorpe; the 14th century Church of St Thomas, a pair of 18th century Gate Piers and an 18th century dovecote, all in the centre of the village. The conservation area however, includes Catthorpe Hall, a Model Farm and the Rectory, all of which appear on the 1st edition OS map (1890), and identified by the Leicestershire Historic Landscape Characterisation as *Historic Settlement Core*. As a group with a Grade II* church at the centre, they have a *High* value.

Catthorpe Towers and Old Barn Farm
Value: *Low*

2.5.65 Just to the east of the village is Catthorpe Towers with buildings and associated gardens marked on the 1st edition OS map, but not listed. The buildings here are named on modern day plans as Catthorpe Manor (although the name does not appear on the 1st edition OS map, 1890). Old Barn Farm close to the junction is marked as Catthorpe Barn on the 1st edition OS. As unlisted structures their value is *Low*.

Swinford Conservation Area and Listed Buildings
Value: *High*

2.5.66 Swinford includes a number of 17th – 19th century buildings within the Conservation Area, and a Grade II* church. As a group these form a cohesive village cluster focussed on the High Street. Grade I and II* Listed Buildings are considered to be of national importance and the Grade II* church gives this group of buildings a *High* value.

Swinford: Other Listed Buildings
Value: *Medium*

2.5.67 Outside the conservation area lies Kilworth Road Farm (an 18th century house), a milepost, Swinford Lodge and Westfield Lodge (the barns are listed, the house is not although it does appear on the 1st edition OS (1890)). These are all mainly Grade II structures (except for Westfield Lodge) and are of *Medium* value.

Shawell Conservation Area and Listed Buildings
Value: High

2.5.68 The Listed Buildings at Shawell lie mainly within the Conservation Area. These include 17th – 19th century buildings, along the main street and a cluster of structures around the 15th century church to the south of the village. The Church is Grade II* and so this group of buildings is of *High* value.

Shawell: Other Listed Buildings
Value: Medium

2.5.69 There are two buildings outside the Conservation Area; Shawell Hill Farmhouse and Shawell Grange, both Grade II 18th century farmhouses of *Medium* value.

Tomley Hall Farm
Value: Low

2.5.70 Tomley Hall Farm lies north of the M6 and appears on the 1st edition OS (1890). As an unlisted farmhouse, it has a *Low* value.

Lilbourne Listed Buildings
Value: Medium

2.5.71 There are four 17th – 18th century Listed Buildings in the village, and documentary evidence for a manor. All of these are Grade II with a *Medium* value.

Lilbourne Church and tombstones
Value: High

2.5.72 There are seven listed structures to the north of Lilbourne; All Saint's Church (Grade I dating back to the 12th century), and associated tombstones. This is likely to have been the focus of the original village with the medieval Motte and Bailey close by and the earthworks suggesting that the village shrank and moved southwards to its present location at a later date. The Church is Grade I, and the associated group therefore has a *High* value.

Historic Landscapes

2.5.73 The historic landscape value is based on the units identified by the HLC for Leicestershire and Northamptonshire. The assessment of value has been based on the guidelines outlined in DMRB HA208/07¹ and *Assessing the Effect of Road Schemes on Historic Landscape Character* (Highways Agency 2007)⁵ and uses the mid-scale range of Historic Landscape Character Type for the assessment. The HLC units are shown on Figure 2.4.

20th Century Landscape
Value: Low

2.5.74 Much of the area around the junction has been modified by the road system. This includes the Junction 19 itself, the M1, M6 and A14. There is a strip of *Coniferous Plantation* along the western edge of the M1; a landscaping measure for the motorway. The fields around the junction are classed as *Very Large Post-War Fields* which are likely to have originally been *Planned Enclosure*. Due to the 20th century modifications, the value of these landscapes is *Low*.

Settlements

2.5.75 These include scattered farm complexes, and the village settlements. These are described and assessed under the Historic Buildings Section.

*Reorganised Piecemeal Enclosure and Piecemeal enclosure
Value: Medium*

2.5.76 *Piecemeal Enclosure* describes fields created from open field system by informal verbal agreements. The *Piecemeal Enclosure* lies mainly around Catthorpe and Shawell and would be unaffected. There are however large areas to the north and west of the junction of *Re-Organised Piecemeal Enclosure*, which includes areas of ridge and furrow. Although it may retain former field patterns these have been rationalised during the 20th century. However as some previous patterning exists its value is *Medium*.

*Planned enclosure and Planned Enclosure Containing Ridge and Furrow
Value: Medium*

2.5.77 The majority of the landscape around the junction comprises *Planned Enclosure* and *Planned Enclosure Containing Ridge and Furrow*. These are fields with straight lines, laid out by surveyors as a result of later enclosure during the 18th and 19th centuries, some with extant ridge and furrow. This includes the areas identified by field survey around Tomley Hall Farm (*Site 23* and *Site 24*) and also east of the M1 (*Site 4*). This landscape type comprises large area of coherent parliamentary enclosure landscape with much surviving ridge and furrow and has a *Medium* value.

*Miscellaneous Floodplain Fields
Value: Medium*

2.5.78 Along the banks of the River Avon is an area of *Miscellaneous Floodplain Fields*. These are areas of enclosure on river floodplain which have potential for evidence for water meadows and have a *Medium* value.

*Stanford Hall Gardens
Value: High*

2.5.79 The registered Parks and Gardens at Stanford Hall lie to the east outside the study area. As a registered Park and Garden (Grade II), Stanford Hall has a *High* value.

*Catthorpe Towers Park and Garden
Value: Medium*

2.5.80 The HLC for Leicestershire identifies an area of Parks and Garden at Catthorpe Towers, although this is not registered. It has a *Medium* value.

*Semi-Regular Enclosure and Semi-Regular Enclosure with Ridge and Furrow
Value: High*

2.5.81 This classification accounts for most of the fields south of the river. The Lilbourne valley field systems have enclosure origins in the 17th century although the regular patterns perhaps suggest later changes in the 18th century. The larger regional character encompasses the two Motte and Bailey castles as well as part of Stanford Hall and Parkland and the SM deserted medieval village and manor. There are also village earthwork remains at Lilbourne and Clay Cotton. Although Stanford on Avon and Clay

Cotton lie outside the study area, this demonstrates that the local landscape around Lilbourne forms part of a large well-preserved area of pre-19th century non-parliamentary enclosure with traces of earlier field patterns and settlements visible. As such the value of the landscape is considered to be of *High* value.

Table 2.5 – Summary of Archaeological Sites and Values

Arch Site	HER Ref.	Description	Fieldwork undertaken to assess potential	Archaeological value
1	MLE2500 MLE7548	Cropmark complex and artefact scatter	Fieldwalking (Knox and Liddle 1992)	<i>Medium/Regional</i>
2	-	Alluvial deposits	Part fieldwalked (Knox and Liddle 1992)	<i>Low/Local</i>
3	MLE2508 MLE2496 MLE8368 MLE15812	Cropmark complex and artefact scatter	Fieldwalking (Knox and Liddle 1992) Geophysical survey (Elks 2006)	<i>Medium/Regional</i>
4	MLE8369 MLE2498	Ridge & Furrow Alluvial deposits	With Site 3 - Part fieldwalked (Knox and Liddle 1992)	<i>Low/Local</i>
5	-	Cropmark –post medieval pond	Fieldwalking (Knox and Liddle 1992) Geophysical survey (Elks 2006)	<i>Low/Local</i>
6	MLE2501 MLE7050 MLE15812	Cropmarks and artefact scatter. Romano-British/prehistoric settlement?	Fieldwalking (Knox and Liddle 1992) Geophysical survey (Elks 2006)	<i>Medium/Regional</i>
7	NN32725 NN3998	Alluvial deposits	Negative Watching Brief on dredging 1988	<i>Low/Local</i>
8	-	Alluvial deposits	Part fieldwalked (Knox and Liddle 1992) Geophysical survey (Elks 2006)	<i>Medium/Regional</i>
9	-	Alluvial deposits	None	<i>Low/Local</i>
10	MLE7049 MLE6172	Anglo Saxon pottery and flint – possibly destroyed by Borrow pit	Geophysical survey (Elks 2006)	<i>Low/Local</i>
11	MLE7018	Alluvial deposits	Fieldwalking (Knox and Liddle 1992)	<i>Low/Local</i>
12	-	Alluvial deposits	Part fieldwalked (Knox and Liddle 1992)	<i>Low/Local</i>
13	-	Alluvial deposits	Fieldwalking (Knox and Liddle 1992)	<i>Low/Local</i>
14	MLE1359 MLE6566 MLE2502 MLE2503 MLE6054	Cropmark complex and prehistoric – Roman finds	Fieldwalking (Knox and Liddle 1992)	<i>Medium/Regional</i>
15	MLE1355	Formal gardens/WWII battery	Fieldwalking (Knox and Liddle 1992)	<i>Low/Local</i>
16	NN32725 NN2012	Alluvial deposits	Negative Watching Brief on dredging 1988	<i>Negligible</i>
17	-	Borrow pit	None	No archaeological value

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CHAPTER 2 CULTURAL HERITAGE**

Arch Site	HER Ref.	Description	Fieldwork undertaken to assess potential	Archaeological value
18	-	Topsoil dump	None	No archaeological value
19	MLE2506 MLE2507	Romano-British Settlement	Trial trenching (Coward 2005)	<i>Medium/Regional</i>
20	MLE2505	Evaluated site – single undated features	Geophysical survey (Elks 2004) Trial trenching Coward 2004)	<i>Low/Local</i>
21	MLE8975 MLE8976 MLE8977	Prehistoric/Roman artefacts	Part fieldwalked (Knox and Liddle 1992)	<i>Medium/Regional</i>
22	MLE2330 MLE2331	Iron Age ? Cropmarks	None	<i>Medium/Regional</i>
23	MLE15810	Ridge and furrow earthworks	Geophysical survey (Elks 2006)	<i>Medium/Regional</i>
24	-	Ridge and furrow earthworks	Geophysical survey (Elks 2006)	<i>Medium/Regional</i>
25	SM1365	Lilbourne Motte and Bailey Surrounding earthworks and landscape		<i>High/National</i> <i>Medium/Regional</i>
	SM17047	Shawell Motte and Bailey castle		<i>High/National</i>
	SM13697	Motte and Bailey castle west of Lilbourne		<i>High/National</i>

Table 2.6 - Summary of Historic Buildings and Values

Name	Description	Value
Catthorpe Conservation Area, Listed Buildings and other buildings.	2 x Grade II structures, 1 x Grade II* building. Unlisted 19th century buildings	<i>High/National</i>
Catthorpe Towers and Old Barn farm	19th century building and associated gardens and 19th century farmhouse (not listed)	<i>Low/Local</i>
Swinford Conservation Area and Listed Buildings	16 Grade II buildings, 1 Grade II* building	<i>High/National</i>
Swinford: Other Listed Buildings	2 x Grade II 18th century farmhouses and a Grade II milepost.	<i>Medium/Regional</i>
Shawell Conservation Area and Listed Buildings	13 Grade II buildings, 1 x Grade II*	<i>High/National</i>
Shawell: Other Listed Buildings	2 Grade II 18th century farmhouses	<i>Medium/Regional</i>
Lilbourne Listed Buildings	4 Grade II 18th – 19th century buildings	<i>Medium/Regional</i>
Lilbourne Church and tombstones	Grade I Church and 6 Grade II tombstones	<i>High/National</i>
Tomley Hall Farm	Unlisted farmhouse on the 1st ed. OS (1890)	<i>Low/Local</i>

Table 2.7 - Summary of Historic Landscapes and Values

Site Name	Description	Value
20th century Landscape	Includes the existing road junction and modified fields around the junction.	<i>Low/Local</i>
Reorganised piecemeal enclosure & Piecemeal enclosure	Fields that retain former field patterns but later rationalised during the 20th century	<i>Medium/Regional</i>
Planned Enclosure and Planned Enclosure Containing Ridge and Furrow	Fields with straight lines, laid out by surveyors as a result of later enclosure during the 18th and 19th centuries, some with extant ridge and furrow.	<i>Medium/Regional</i>
Miscellaneous Floodplain Fields	Areas of enclosure on river floodplain with the potential for evidence for water meadows.	<i>Medium/Regional</i>
Stanford Hall	Registered Park and Gardens (Grade II)	<i>High/National</i>
Catthorpe Towers	Unregistered park and garden	<i>Medium/Regional</i>
Semi-Regular Enclosure and Semi-Regular Enclosure with Ridge and Furrow	Large area of field systems with enclosure origins in the 17th century and extant ridge and furrow. Contain evidence for earlier settlements and fields systems.	<i>High/National</i>

2.6 MITIGATION

Archaeological Remains

2.6.1 Physical disturbance and destruction of the cultural heritage resource (including archaeological investigation) is irreversible. However sufficient evaluation has been undertaken to enable appropriate mitigation measures to be formulated and agreed. These can appropriately record the presence of any archaeological features and attempt to understand the nature of the archaeological record. The significance of environmental effects has been considered and mitigation measures suggested for each site in order to reduce the overall significance of adverse effects by means of appropriate recording and where necessary further fieldwork in order to aid interpretation. It should however be noted that the significance of effects is based only on the known archaeology of the local area and does not preclude further more *Significant* discoveries being made which may impact the residual significance. However the staged approach will enable areas to be examined and recorded within an agreed time frame.

2.6.2 Archaeological resources are non-renewable and the primary goal of cultural resource management is physical preservation. Current government planning guidance is that in the case of nationally important remains, regardless of any designation, the presumption should be towards preservation of the remains and their setting (DMRB HA208/07).¹ Where there are overriding factors or where preservation *in situ* is not feasible, an acceptable alternative may be preservation by record. Generally four forms of mitigation have been proposed:-

- watching brief– where the resource value is low or where there is only a slight potential that archaeological deposits would be encountered. An archaeologist would be present during groundworks to record any archaeological deposits. Upon discovery of unexpected archaeological remains that require further work additional resources and/or time would be provided
- survey and recording – where earthworks exist that require recording prior to destruction, written, photographic and topographical surveys would be carried out
- strip, plan and sample - this method is a flexible approach that involves topsoil over an area being stripped under archaeological control to expose archaeological remains. Based on these results, further recording or protection measures may be required and time periods for such recording exercises have been agreed
- further evaluation – where evaluation has not been undertaken prior to the ES due to the project restrictions, trial trenching can further help to determine the exact nature of the resource. Based on these results, further fieldwork, recording or protection measures would be undertaken

2.6.3 Archaeological surveys, strip, plan and sample and trial trenching need to be completed before groundworks start on the particular areas. The time required for these archaeological investigations has been agreed and County Archaeologists and English Heritage have been assured that this time would be allowed for within the Contractor's work programme and would be managed as part of the Construction Environmental Management Plan (CEMP). An Outline CEMP confirming this process is reported in Volume 1 of the ES.

2.6.4 A written scheme of investigation (WSI) would be provided for each phase of fieldwork required, and agreed by the relevant archaeological advisors before any fieldwork takes place. All work would adhere to the Institute for Archaeologist's Code of Conduct³ and their relevant Standards and Guidance.

- 2.6.5 A total of 27 sites within the study area was identified. Of these, Sites 17 and 18 are considered to have little archaeological potential due to *Significant* disturbance. There would be no potential impact for Sites 5, 7, 15 and 16, 19, 21, 23, 24 and the Motte and Bailey castles at Shawell and west of Lilbourne and no mitigation is suggested for these areas. The potential impact on Site 25 (the Lilbourne Motte and Bailey castle), would be on the setting and no cultural heritage mitigation is suggested beyond the landscaping strategy outlined in Chapter 4 Landscape.
- 2.6.6 There would therefore be 14 sites of archaeological potential within the study area that might be impacted by the development and which would then require archaeological mitigation. Impacts would result from the permanent layout of the scheme illustrated by Figure B in Appendix 1 to Volume 1 of the ES, and by the disturbance of areas required temporarily for construction, shown on Figure G in Appendix 1 to Volume 1 of the ES. These include eight areas with the potential for the presence of archaeological deposits (cropmark, earthwork and artefact evidence - Sites 1, 3, 4, 6, 10, 14, 20, 22) and six areas of alluvium where archaeological deposits might lie hidden (Sites 2, 8, 9, 11, 12 and 13).
- 2.6.7 The Catthorpe Viaduct Replacement would utilise part of Site 3 for its site compound area. This will be dealt with using a strip, plan and sample of the area under archaeological supervision, prior to construction as an advance work, with time allowed to record any archaeological features uncovered. A watching brief during construction will be undertaken on other areas where previously undisturbed land is affected.
- 2.6.8 Some areas allocated for storage, flood compensation areas, and ponds would need to be further mitigated by trial trenching prior to construction as an advance work at Sites 2 (Pond DP2a) and 10. Due to the proximity of the cropmarks and artefact scatter at Sites 6, 14 and 19, and the lack of prior fieldwork, Ponds DP3 and DP7 would also be evaluated.
- 2.6.9 Site 1 would be dealt with using the strip, plan and sample method prior to construction along with any extra areas of Site 3 not previously looked at during the archaeological work for the Catthorpe Viaduct Replacement.
- 2.6.10 The remaining sites (Sites 8, 9, 11, 12, 13, parts of 14, 20 and 22) would be adequately covered by a standard watching brief, with contingency provision for recording during the work. In addition construction areas around Sites 11, 21 and 22, the LRN west of Site 1, access tracks and upgrades to footpaths and bridleways should also be covered by a watching brief.
- 2.6.11 Site 4 also contains ridge and furrow, which would require recording (written, photographic and topographical survey) prior to any groundworks in this area. Although only small areas of the earthworks would be directly affected, a larger area should be recorded (e.g. entire fields containing earthworks) in order to place the earthworks within a landscape context. This would be followed by a watching brief.

Historic Buildings

- 2.6.12 Six groups of historic buildings would be affected by the scheme. Mitigation planting is proposed mainly to the north and the east of the junction, retaining the existing planting around Lilbourne, Catthorpe and Shawell to reduce the visual impacts of the scheme. It would also include measures to reduce noise including earth shaping, the use of low noise surfacing and the insulation of properties which may quality. Hedgerows are proposed along the line of the LRN and around the drainage ponds. The details are described in Chapter 4 Landscape and shown on the Environmental Master Plan, Figure B in Appendix 1 to Volume 1 of the ES.

Historic Landscapes

2.6.13 Only one group of historic landscape type would be affected by the scheme. The mitigation strategy includes planting around the junction and to the north to help blend the junction into the existing landscape and cut down on intrusive lighting and signage. The areas around the ponds are bounded on similar alignments to conserve the existing field pattern where possible and are also planted to screen the features. Hedgerows are to be used along the line of the LRN and small severed pockets planted to blend them in with the existing field system. The details are described in Chapter 4 Landscape and shown on the Environmental Master Plan, Figure B in Appendix 1 to Volume 1 of the ES.

Suggested Mitigation of Other Areas

2.6.14 This study has concentrated on areas of identified cultural heritage affected by the route. However, it should be noted that the proposed junction and LRN are set within an archaeological landscape. In particular the artefact scatters and cropmark evidence suggests that the whole of the study area was utilised during prehistoric, Roman and medieval periods. It is unlikely that the visible archaeology is all that remains of this ancient landscape and many of the 'blank' areas may well contain previously hidden archaeological deposits. A standard watching brief during groundworks for all previously undisturbed areas, not already mitigated for is suggested in order to record any archaeological deposits not specifically addressed by this assessment. These would include site haul areas, haul roads, construction of re-aligned side roads, slip roads and junctions and bridle way and any other groundworks that would result in the removal of topsoil in areas of unknown potential.

2.6.15 The next section 2.7 sets out the impacts in detail for each cultural heritage feature and confirms the mitigation strategy in response to each.

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2.7 ENVIRONMENTAL IMPACT

2.7.1 The impacts described below are considered in terms of:-

- the construction phase
- the operational phase, when the project has been completed and is in use

2.7.2 Although temporary in duration, most construction impacts are likely to be permanent in nature for archaeological remains due to the removal of features during ground breaking works.

2.7.3 The layout for the proposed development is illustrated by the Environmental Master Plan, Figure B at Appendix 1 to Volume 1 of the ES. Areas required for construction are shown on Figure G in Appendix 1 to Volume 1 of the ES. The implications for known archaeological sites, historic buildings and historic landscapes can therefore be accurately determined from these sources.

2.7.4 Temporary construction impacts on land outside the permanent land take are also referred to in the descriptions below and taken into account in the conclusions reached. Although again temporary in nature, activities such as site compounds and haul roads do have the potential to affect cultural heritage features, in particular buried archaeological remains.

2.7.5 There is unlikely to be any extra operational phase impacts on buried remains. However the most significant impacts on above ground features such as historic buildings and landscapes is more likely to arise from the longer term operational impacts of the project affecting their setting, for example by noise and visual intrusion.

2.7.6 This section lists the cultural heritage sites identified within the study area that may be impacted in some way by the proposals. Archaeological sites 17 and 18 have been designated as having negligible or no archaeological value and are therefore not included in this assessment.

2.7.7 The impact before mitigation is described for each cultural heritage asset along with the proposed mitigation strategy. As described in Section 2.6 four mitigation strategies are proposed for archaeological remains including watching brief with contingency, survey and recording, strip, plan and sample and further evaluation such as trial trenching. For historical buildings and landscapes, planting and landscaping mitigation is suggested. This assessment is then followed by a description of the residual impact taking into account the mitigation strategies. As a final step the significance of effect is identified for each asset, taking into account the impact identified with mitigation and the value or sensitivity of each site.

2.7.8 Methodologies and terminology are as described in Section 2.2 and Tables 2.1 to 2.4. Table 2.9 at the end of the descriptions summarises the assessment without and with mitigation.

2.7.9 Section 2.8 which follows then summarises the overall significance of effects for the project in cultural heritage terms. It also considers the implications for planning policies set out in Section 2.3.

Impacts - Catthorpe Viaduct Replacement

Archaeological Remains

2.7.10 During construction there will be impacts on one archaeological site (Site 3), with minor noise impacts on some historic buildings and landscapes as discussed below. During operations there will be no additional impacts.

Site 3. Cropmarks north-east of Junction 19
Value: Medium

2.7.11 The ground disturbance from the temporary construction area to the south of site 3 will destroy any archaeology associated with the artefact scatter (which would be partly overlain by the site compound) and the cropmarks as well as some of the features identified by the geophysical survey and would have a *Moderate Adverse* impact. Archaeological mitigation in the form of a strip, plan and sample of the area prior to construction as an advance work, with adequate time allowed to record any archaeological features uncovered will reduce the impact to *Minor Adverse*. There will be no extra impact on the site during the operational phase.

Other areas of unknown archaeology

2.7.12 Given the proximity of archaeology within the surrounding area there is some potential for previously unknown buried archaeological remains. Archaeological mitigation in the form of a watching brief during construction will be carried out where there are ground works on previously undisturbed areas. The impact after mitigation on unknown archaeology is likely to be *Minor Adverse*. There will be no extra impact on the sites during the operational phase. The significance of environmental effects will be *Slight Adverse*.

Historic Buildings

2.7.13 There may be some noise impact on Catthorpe Conservation area and historic buildings during construction. There would be *No Change* in terms of views towards the viaduct, as all the existing screening vegetation would remain intact.

2.7.14 During the operational phase there will be *No Change* on Catthorpe Conservation Area in terms of visual and noise impacts. The significance of environmental effects would be *Neutral*.

Historic Landscapes

2.7.16 There will be little change to the historic landscape character around the replacement viaduct. There will be some impact from the compound area but these effects will be temporary. There will be a *Minor Adverse* impact.

2.7.17 Provided the main boundary features are retained or restored the impact during the operational phase will be *Negligible*. The significance of environmental effects will be *Neutral*.

Impacts – M1 Junction 19 Improvement

Archaeological Remains

Construction Phase

2.7.18 There would be no impact on Sites 5, 7, 15, 16, 19, 21, 23, 24 and the Motte and Bailey castles west of Lilbourne and at Shawell.

Site 1. Cropmark complex north-west of Junction 19 *Value: Medium*

2.7.19 The embankments and LRN would affect the southern part of the site and the south-east corner would be slightly affected by Pond DP2a having a *Moderate Adverse* impact. There might also be an impact from the soil storage area and access link if site compound alternative 1 is selected. Mitigation measures involving a strip, plan and sample of the area affected prior to construction as an advance work with adequate time to record any features uncovered and a watching brief on adjacent areas required during construction, would reduce the impact to *Minor Adverse*. The significance of environmental effects would be *Slight Adverse*.

Site 2. Alluvium between Site 1 and Site 3 *Value: Low*

2.7.20 The impact from the construction of the LRN, Pond DP2a and areas required temporarily during construction would be *Moderate Adverse*. Suggested mitigation measures include evaluation prior to construction as an advance work through trial trenching, followed by further mitigation. This would reduce the impact to *Minor Adverse*. The significance of effects would be *Slight Adverse*.

Site 3. Cropmarks north-east of Junction 19 *Value: Medium*

2.7.21 Much of this site would be affected by the site compound area (most of which would be dealt with during the construction of the Catthorpe Viaduct Replacement as noted above). In addition to the construction of Pond DP2b to the south and haul roads to the west would affect the edges of the site. These construction activities would destroy any archaeology associated with the artefact scatter and the cropmarks as well as some of the features identified by the geophysical survey and would have a *Major Adverse* impact. Archaeological mitigation in the form of a strip, plan and sample of the area prior to construction as an advance work (most of which will have already been undertaken for the Catthorpe Viaduct Replacement), with adequate time allowed to record any archaeological features uncovered would reduce impact to *Moderate Adverse*. The significance of effects would therefore be *Moderate Adverse*.

Site 4. Alluvium spread east of Junction 19 and early medieval remains *Value: Low*

2.7.22 The western part of *Site 4* would be affected by the earthworks and haul roads and temporary road diversions along the eastern side of the A14 which would have a *Moderate Adverse* impact on the alluvium and the ridge and furrow earthworks, although the earthworks do tend to trail off towards the west. An earthwork survey would record the ridge and furrow that would be destroyed, and a watching brief during groundworks would record

any previously unknown archaeological deposits reducing the impact to *Minor Adverse*. The significance of effects would therefore be *Slight Adverse*.

Site 6. Cropmarks east of Catthorpe Manor
Value: Medium

2.7.23 There would be a *Minor Adverse* impact on the site from the access road. Although Ponds DP3 and DP7 lie outside of Site 6, the cropmarks could easily extend into these areas. Mitigation involving prior evaluation including trial trenching of the Ponds prior to construction as an advance work and a watching brief on the access road would reduce this impact. The significance of effects would therefore be *Slight Adverse*.

Site 8. Alluvium
Value: Medium

2.7.24 There would be a *Minor Adverse* impact on the site from the access road and construction areas associated with the creation of a new bridleway, regrading of the riverbanks and flood compensation. Mitigation involving a watching brief would reduce this impact to *Negligible*. The significance of effects would therefore be *Slight Adverse*.

Site 9. Alluvium
Value: Low

2.7.25 There would be a *Minor Adverse* impact on the site from proposed regrading of the riverbank. Mitigation involving a watching brief would reduce this impact to *Negligible*. The significance of effects would therefore be *Slight Adverse*.

Site 10. Artefact scatter/Borrow pits
Value: Low

2.7.26 All of this site would be destroyed by the junction and temporary construction area making the impact *Major Adverse*. Mitigation involving prior evaluation including trial trenching prior to construction as an advance work would clarify how much of the archaeological remains has already been disturbed by the borrow pit. Given the probable disturbance, further mitigation and recording would reduce the impact to *Moderate Adverse*. The significance of effects would therefore be *Slight Adverse*.

Site 11. Alluvium/find scatter
Value: Low

2.7.27 There would be a *Minor Adverse* effect on *Site 11* from the LRN. However, the artefact scatters from Site 21 and Site 11 could extend further and mitigation should be extended to cover the construction areas. A watching brief would provide adequate mitigation to record any archaeological deposits and would reduce the impact to *Negligible* with a *Slight Adverse* significance.

Site 12. Alluvium
Value: Low

2.7.28 There would be a *Minor Adverse* impact on the southern edge of the site from the LRN and haul roads. A watching brief would provide adequate mitigation to record any archaeological deposits and would reduce the impact to *Negligible* with a *Slight Adverse* significance.

Site 13. Alluvium

Value: Low

2.7.29 There would be a *Moderate Adverse* impact on the northern edge of the site from Pond DP6. However as this area lies well away from known archaeological remains a watching brief is felt to be appropriate to reduce the impact to *Minor Adverse*. The significance of effects would therefore be *Slight Adverse*.

Site 14. Cropmark complex and finds

Value: Medium

2.7.30 There would be a *Minor Adverse* impact along the north-east edge of the site from the haul and access roads and construction areas. A watching brief would be sufficient to reduce the impact and the significance of environmental effects would be *Slight Adverse*.

Site 20. Cropmark

Value: Low

2.7.31 The new work and construction areas would have a *Major Adverse* impact on the site. Given the lack of archaeological remains produced by the evaluation already carried out a watching brief would provide adequate mitigation to record any archaeological deposits missed by the evaluation and would reduce the impact to *Minor Adverse* making the significance *Slight Adverse*.

Site 22. Cropmark enclosures

Value: Medium

2.7.32 The proposed LRN running across the northern edge of site would have a *Minor Adverse* impact on archaeological remains in this area associated with the cropmarks or artefact scatter.

2.7.33 However only a small area would be affected and it is felt that a watching brief is adequate to reduce the impact making the significance *Slight Adverse*. The construction area to the north-west should also be covered by the watching brief in case the cropmarks extend further.

Site 25. Lilbourne Motte and Bailey castle and earthworks

Value: High

2.7.34 There would be no direct physical impact on the SM at Lilbourne. The only impact on setting is likely to be from work during construction which would be *Negligible*. The significance of environmental effects would be *Neutral*.

Operational Phase

2.7.35 There would be no extra impact on any of the sites mentioned above with the exception of Site 25. However, in view of the compromised setting that already exists and its distance from the proposed works, the impact of proposed changes would cause only a *Negligible* impact to the setting of Lilbourne Motte and Bailey castle resulting in a *Neutral* effect.

Historic Buildings

Construction Phase

2.7.36 As construction traffic would not pass through most of the villages, there would be no impact at this stage in terms of extra noise and vibration for the Listed Buildings and Conservation Areas described during construction, however, there may be some increase in general traffic through Shawell and some changes in Swinford. There may be some visual and noise impact from construction activities and these are described in Chapter 4 Landscape and Chapter 6, Noise and Vibration. Visual impacts during construction would most closely equate with those described for Year 0 in Table 2.8 below, ie. before planting has had time to take effect. However most of the impacts are likely to be on the setting of the buildings during operation.

Operational Phase

2.7.37 Impacts on the setting of Listed Buildings and conservation areas can be considered taking into account visual impacts, landscape effects and noise changes. Visual and noise impacts are shown in Table 2.8 below. Mitigation will be in the form of landscaping and screening. Details are set out in Chapters 4 Landscape and 6 Noise and Vibration. Overall the only noise increases are likely to be for Westfield Lodge and a few buildings in Swinford.

Table 2.8 - Visual and Noise Impacts on Listed Buildings and Conservation Areas

Area	Visual Impact Year 0	Visual Impact Year 15	Noise Change Year 15
Catthorpe Conservation Area and Listed Buildings	<i>Neutral</i> for Conservation Area and Catthorpe Manor	<i>Neutral</i>	<i>Major</i> reduction in noise levels for most of the village with <i>Moderate</i> decreases on the eastern edge of village. <i>No Change</i> for Catthorpe Manor.
Old Barn Farm	<i>Slight Adverse</i>	<i>Neutral</i>	<i>No Change</i>
Swinford Conservation Area and Listed Buildings	<i>Slight Adverse</i>	<i>Slight Adverse</i>	<i>Moderate – Major</i> decreases in the north-west of the village. <i>Minor</i> reduction along High Street. <i>Moderate</i> increases along Rugby Road.
Swinford Other Listed Buildings	<i>Slight Adverse</i> for Swinford Lodge <i>Substantial Adverse</i> for Westfield Lodge	<i>Neutral</i> for Swinford Lodge / <i>Moderate Adverse</i> for Westfield Lodge	Minor increases in Kilworth Road. <i>Moderate</i> increase for Westfield Lodge.
Shawell Conservation Area and Listed Buildings	<i>Neutral</i>	<i>Neutral</i>	<i>Moderate - Major</i> decreases e.g. in Main Street and Catthorpe Road.
Shawell Other Listed Buildings. Grange Farm	<i>Neutral</i>	<i>Neutral</i>	<i>Minor</i> decrease
Tomley Hall Farm	<i>Substantial Adverse</i>	<i>Moderate Adverse</i>	<i>Minor Increase.</i>
Lilbourne Listed Buildings	<i>Neutral</i>	<i>Neutral</i>	<i>No Change</i> with some <i>Minor</i> reductions.
Lilbourne Church and Tombstones	<i>Neutral</i>	<i>Neutral</i>	<i>No Change</i>

Catthorpe Conservation Area and Listed Buildings

Value: High

2.7.38 In terms of views, visual impacts on Catthorpe Conservation Area would be *Neutral*. In noise terms, traffic changes resulting from the LRN would result in *Major – Moderate* noise decreases for properties within the Conservation Area. Views from Catthorpe Manor east of the conservation area would remain screened by retained vegetation and there would be *No Change* in terms of noise. The anticipated reduction in traffic levels through the village would be beneficial to the Listed Buildings and their setting. The overall impact is likely to be *Moderate Beneficial* and have a *Moderate Beneficial effect*.

Old Barn Farm

Value: Low

2.7.39 The farm would remain visually screened given the retention of vegetation. There would be *No Change* in noise levels. The overall effect will be *Neutral*.

Swinford Conservation Area and Listed Buildings

Value: High

2.7.40 The main part of Swinford Conservation Area would be unaffected by visual impact. Views from Swinford Conservation Area would be limited to some properties on the edge, where the setting would be affected by views of the proposed A14 embankment, but lighting on the A14 would still result in *Minor Adverse* impact or *Slight Adverse* effect for years 0 and 15. In noise terms traffic changes due to the LRN result in contrasting effects in different parts of the village. There would be *Moderate – Major* decreases in the north-west of the village with *Minor* reductions along High Street and *Moderate* increases along Rugby Road. Given the mixed effects the overall impact would be *Minor Adverse* with a *Slight Adverse* effect.

Swinford : Other Listed Buildings

Value: Medium

2.7.41 Visual impacts for Swinford Lodge would be *Slight Adverse* reducing to *Neutral* in the longer term as planting establishes. For Westfield Lodge they would be *Substantial Adverse* reducing to *Moderate Adverse*. Westfield Lodge would also experience a *Moderate* noise increase. There would be *No Change* in noise for Swinford Lodge. The overall impact would be *Minor Adverse* with a *Slight Adverse* effect.

Shawell Conservation Area and Listed Buildings

Value: High

2.7.42 Shawell village is screened by rising topography and vegetation and there would be no visual impact on its setting. Parts of the Conservation Area would benefit from some *Major* decreases e.g. in Main Street and Catthorpe Road. The decrease in noise would result in a *Minor Beneficial* impact on the historic buildings with a *Slight Beneficial* effect.

Shawell : Other Listed Buildings

Value: Medium

2.7.43 There would be no visual impact on Grange Farm and a *Minor* decrease in noise. Overall there would be *No Change* with a *Neutral* effect.

Tomley Hall Farm

Value: Low

2.7.44 Initially there would be a *Substantial Adverse* visual impact reducing to *Moderate Adverse* as replanting along the M6 establishes. There would be a *Minor* increase in noise levels. The overall impact will be *Moderate Adverse* with a *Slight Adverse* effect.

Lilbourne Listed Buildings

Value: Medium

2.7.45 As no works are proposed south of the River Avon crossing there would be no visual impact on Listed Buildings within Lilbourne and *No Change* in noise levels. The overall impact would be *No Change* with a *Neutral* effect.

Lilbourne Church and Tombstones

Value: Medium

2.7.46 As above for Lilbourne village there would be no visual impact and no noise change. The overall impact would be *No Change* with a *Neutral* effect.

Historic Landscapes

Construction Phase

2.7.47 As the route would expand on an existing road junction, changes to the historic landscape character are unlikely. There may be some visual impact from construction traffic, noise and dust particularly on the temporary haul roads and construction areas but these mostly follow existing boundaries and the effects would be temporary.

Operational Phase

2.7.48 The impact of the operational phase on the historic landscape would be limited by the fact that the landscape already surrounds a large road junction. There may be some impact from lighting and signage of the junction and gantry sites, but as the area closest to the scheme is already part of a 20th century landscape, there would be little change. There may be a *Slight Adverse* effect on Stanford Park and Gardens due to additional street lighting to the south of Swinford otherwise the overall effect would be *Neutral*.

Table 2.9 - Summary of Impacts and Significance of Effects on Cultural Heritage

Site	Value	Impact from route	Suggested mitigation strategy	Residual Impact	Significance of Environmental Effects
ARCHAEOLOGICAL REMAINS					
1: Cropmark & artefact scatter	<i>Medium/Regional</i>	<i>Moderate Adverse</i>	Prior Evaluation (strip, plan and sample), appropriate mitigation	<i>Minor Adverse</i>	<i>Slight Adverse</i>
2: Alluvium associated with Site 1,	<i>Low/Local</i>	<i>Moderate Adverse</i>	Prior Evaluation (trial trenching of DP2a), appropriate mitigation	<i>Minor Adverse</i>	<i>Slight Adverse</i>
3: Cropmark and artefact scatter	<i>Medium/Regional</i>	<i>Major Adverse</i>	Prior Evaluation (strip, plan and sample of site compound and access roads), appropriate mitigation	<i>Moderate Adverse</i>	<i>Moderate Adverse</i>

Site	Value	Impact from route	Suggested mitigation strategy	Residual Impact	Significance of Environmental Effects
4: Ridge & furrow & alluvium	<i>Low/Local</i>	<i>Moderate Adverse</i>	Survey of earthworks followed by watching brief.	<i>Minor Adverse</i>	<i>Slight Adverse</i>
6: Cropmark & artefact scatter, Romano-British settlement	<i>Medium/Regional</i>	<i>Minor Adverse</i>	Prior Evaluation (trial trenching), appropriate mitigation for DP7 and DP3a	<i>Minor Adverse</i>	<i>Slight Adverse</i>
8: Alluvium	<i>Medium/Regional</i>	<i>Minor Adverse</i>	Watching Brief	<i>Negligible</i>	<i>Slight Adverse</i>
9: Alluvium	<i>Low/Local</i>	<i>Minor Adverse</i>	Watching Brief	<i>Negligible</i>	<i>Slight Adverse</i>
10: Anglo Saxon finds – destroyed by borrow pit?	<i>Low/Local</i>	<i>Major Adverse</i>	Prior Evaluation (trial trenching), appropriate mitigation	<i>Moderate Adverse</i>	<i>Slight Adverse</i>
11: Alluvium	<i>Low/Local</i>	<i>Minor Adverse</i>	Watching Brief	<i>Negligible</i>	<i>Slight Adverse</i>
12: Alluvium	<i>Low/Local</i>	<i>Minor Adverse</i>	Watching Brief	<i>Negligible</i>	<i>Slight Adverse</i>
13: Alluvium	<i>Low/Local</i>	<i>Moderate Adverse</i>	Watching Brief	<i>Minor Adverse</i>	<i>Slight Adverse</i>
14: Cropmark & artefact scatter	<i>Medium/Regional</i>	<i>Minor Adverse</i>	Watching Brief	<i>Minor Adverse</i>	<i>Slight Adverse</i>
20: Possible features	<i>Low/Local</i>	<i>Major Adverse</i>	Watching Brief	<i>Minor Adverse</i>	<i>Slight Adverse</i>
22: Cropmarks	<i>Medium/Regional</i>	<i>Minor Adverse</i>	Watching Brief	<i>Minor Adverse</i>	<i>Slight Adverse</i>
25: Lilbourne Motte and Bailey castle (SM) and earthworks.	<i>High/National</i>	<i>Negligible</i>	Screening /landscaping	<i>Negligible</i>	<i>Neutral</i>
HISTORIC BUILDINGS					
Catthorpe Conservation Area and Buildings	<i>High/National</i>	<i>Moderate Adverse</i>	Landscaping and Planting	<i>Moderate Beneficial</i>	<i>Moderate Beneficial</i>
Catthorpe Towers and Old Barn Farm	<i>Low/Local</i>	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Swinford Conservation Area & Listed Buildings	<i>High/National</i>	<i>Minor Adverse</i>	Landscaping and Planting	<i>Minor Adverse</i>	<i>Slight Adverse</i>
Swinford: Other Listed Buildings	<i>Medium/Regional</i>	<i>Minor Adverse</i>	Landscaping and Planting	<i>Minor Adverse</i>	<i>Slight Adverse</i>
Shawell Conservation Area and Listed Buildings	<i>High/National</i>	<i>No Change</i>	Landscaping and Planting	<i>Minor Beneficial</i>	<i>Slight Beneficial</i>
Shawell: Other Listed Buildings	<i>Medium/Regional</i>	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Tomley Hall Farm	<i>Low/Local</i>	<i>Moderate Adverse</i>	Landscaping and Planting	<i>Moderate Adverse</i>	<i>Slight Adverse</i>
Lilbourne Listed Buildings	<i>Medium/Regional</i>	<i>No Change</i>	None	<i>No Change</i>	<i>Neutral</i>
Lilbourne Church and Tombstones	<i>High/National</i>	<i>No Change</i>	None	<i>No Change</i>	<i>Neutral</i>
HISTORIC LANDSCAPES					
20th century Landscape	<i>Low/Local</i>	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>

Site	Value	Impact from route	Suggested mitigation strategy	Residual Impact	Significance of Environmental Effects
Reorganised piecemeal enclosure and Piecemeal enclosure	Medium/Regional	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Planned enclosure and Planned Enclosure Containing Ridge and Furrow	Medium/Regional	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Miscellaneous Floodplain Fields	Medium/Regional	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Stanford Hall gardens	High/National	<i>Negligible</i>	Landscaping and Planting	<i>Negligible</i>	<i>Slight Adverse</i>
Catthorpe Towers gardens	Medium/Regional	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>
Semi-Regular Enclosure and Semi-Regular Enclosure with Ridge and Furrow	High/National	<i>No Change</i>	Landscaping and Planting	<i>No Change</i>	<i>Neutral</i>

Summary of Impacts

2.7.49 Most of the Impacts described for archaeological remains arise from construction while impacts described for historic buildings and landscape arise mainly from operation. Most of the impact on Site 3 will already have been mitigated during work for the Catthorpe Viaduct Replacement. The residual impacts of the proposed development on cultural heritage resources taking into account the mitigation strategies outlined above are summarised in Table 2.10 below:-

Table 2.10 - Summary of the Impacts and Significance of Effects

	Impacts (No of sites)	Significance of Effects (No of sites)
Archaeological Sites	Moderate Adverse: 2 Minor Adverse: 8 Negligible: 5 No Change: 0	Moderate Adverse: 1 Slight Adverse: 13 Neutral: 1
Historic Buildings	Moderate Adverse: 1 Minor Adverse: 2 Negligible: 0 No Change: 4 Minor Beneficial: 1 Moderate Beneficial: 1	Moderate Adverse: 0 Slight Adverse: 3 Neutral: 4 Slight Beneficial: 1 Moderate Beneficial: 1
Historic Landscapes	Moderate Adverse: 0 Minor Adverse: 0 Negligible: 1 No Change: 6	Moderate Adverse: 0 Slight Adverse: 1 Neutral: 6

Cumulative Impacts

2.7.50 Cumulative Impacts can arise from several areas. This could include multiple impacts from several environmental topics in the same scheme on one or more assets and interaction with the effects from other developments (DMRB HA208/07).¹ . Section 7 of Volume 1 of the ES deals with the interaction between environmental topics.

Interaction with other topics

2.7.51 Interactions with cultural heritage may arise from activities related to other topics. Examples of such activities might include drainage and flood compensation schemes, landscaping and tree planting, ecological schemes, trial holes/bore pits, noise and lighting schemes. The best way to ensure that other activities do not have an adverse effect on the cultural heritage assets is by regular communication between team members. Key archaeological and historical assets have been mapped and design and mitigation issues discussed to aid other topics to avoid those areas that might affect the resource. Regular communication regarding any further design strategies particularly in relation to planting, drainage and flood compensation areas and landscaping will ensure that any possible impact will be minimised.

Interaction with other schemes

2.7.52 Section 7 of Volume 1 of the ES also deals with the interactions with other schemes.

Positive Impacts

2.7.53 Although there can be no positive impacts where there is a direct physical impact on archaeological features, discussion of the scheme has allowed for cultural heritage sites to be avoided or the impact reduced through design changes. The increase in knowledge and understanding that occurs through excavation, although not a benefit, can be set against the loss of information that would occur if a site was to be destroyed unrecorded.

Implications for Planning Policies

Regional Policies

2.7.54 Policies QE5 of the West Midlands Regional Spatial Strategy and 26 of the East Midlands Regional Plan aim to protect and enhance the region's cultural heritage through the protection of historic buildings, historic landscape and archaeological deposits. The proposed improvement to Junction 19 would disturb a number of archaeological deposits and features as a result of the construction process. There would therefore be a *moderate adverse* impact on policy objectives in year 0 which could be reduced through mitigation measures, such as trial trenching and strip, plan and sample, to *Minor Adverse* in year 15.

2.7.55 The proposals would affect a number of Listed Buildings and conservations areas as set out above. The predicted impacts range from *neutral* to *substantial adverse*, therefore it is considered that there would be a *moderate adverse* impact on policy objectives relating to the protection of Listed Buildings and conservation areas. Stanford Park is an historical landscape feature which would suffer adverse impacts from lighting and signage, it is considered that this would have a *Minor Adverse* impact on policy objectives relating to the protection of historic landscape.

2.7.56 Overall there would be a *Minor Adverse* impact on regional policy objectives.

Local Policies

2.7.57 Policy E14 of the Rugby Borough Local Plan seeks to protect Listed Buildings, their settings and views from any potential adverse impacts caused by development. The proposed improvement to Junction 19 would result in adverse impacts on the setting of Listed Buildings and a number of conservation areas. These impacts, as set out above, range from *Neutral* to *Significant Adverse* and therefore it is considered that there would be a *Moderate Adverse* impact on the policy objectives.

2.7.58 The proposed improvement to Junction 19 would introduce new lighting and signs which would have a minor adverse impact on Stanford Park which is an historical Park and Garden. Policy 17 of the Harborough District Council Draft Core Strategy and Objective 8 of the Daventry District Council Draft Core Strategy seek to protect the historic environment. The proposed development would have a *Minor Adverse* impact on this policy objectives.

2.7.59 Overall there would be a *Minor Adverse* impact on local policy objectives.

2.8 SUMMARY OF SIGNIFICANCE OF EFFECTS

2.8.1 The Significance of Effects is outlined below and summarised in Tables 2.9 and 2.10.

Large or Very Large Adverse Effects

2.8.2 No such effects have been identified.

Moderate Adverse Effects

2.8.3 After mitigation there would be *Moderate Adverse* effects on one archaeological site (Site 3). Some of these effects however would come from the creation of the compound area for the Catthorpe Viaduct Replacement and would be mitigated during these works.

Slight Adverse Effects

2.8.4 After mitigation there would be *Slight Adverse* effects on 13 archaeological sites (Sites 1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 14, 20, 22), three groups of historic buildings and one historic landscape (Stanford Hall).

Neutral Effects

2.8.5 There would be *Neutral* effects on one archaeological site (Site 25), four groups of historic buildings and six historic landscapes.

Beneficial Effects

2.8.6 The reduction of traffic through villages resulting from the new LRN and the reduction in noise would have a *Moderate Beneficial* effect on Catthorpe Conservation Area and Listed Buildings and a *Slight Beneficial* effect on Shawell Conservation Area and some Listed Buildings.

Significance of Effects on the Overall Cultural Heritage Resource

2.8.7 The significance of effects has been assessed combining the subtopics involved in the assessment. Where the effects on assets are all adverse, a judgement has been made on the likely overall effect, where simply taking the highest significance level might distort the assessment.

2.8.8 Overall the effect on the archaeological remains would be *Slight Adverse* with a *Moderate Adverse* effect on Site 3 (although this would mostly come from the Catthorpe Viaduct Replacement project. The Preferred Route would have an overall *Slight Adverse* effect on the historic buildings, but with a beneficial effect on two village conservation areas and Listed Buildings (some noise effects would be during construction of the Catthorpe Viaduct Replacement), and a *Neutral* effect on the Historic Landscape with a *Slight Adverse* effect on Stanford Hall Gardens.

2.8.9 The overall significance of environmental effect for the Preferred Route on the Cultural Heritage will be *Slight Adverse*.

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2.9 INDICATION OF ANY DIFFICULTIES ENCOUNTERED

- 2.9.1 Cultural Heritage and Archaeological Remains in particular present problems within assessments as there is always a risk that their presence, value and the degree of impact may remain uncertain even with appropriate methods of identification and evaluation (DMRB HA208/07, 5/7)¹.
- 2.9.2 Evaluation and interpretative techniques have been applied to provide the best available knowledge of the Cultural Heritage as appropriate to the requirements of the scheme. Sufficient evaluation has been carried out to identify the likely extent and value of the archaeological features and the impact of the scheme on them. The mitigation strategy devised takes into account the risk of encountering previously unknown archaeological sites and that existing archaeological sites might be more extensive or of greater significance than expected.

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2.10 SUMMARY

Archaeological Remains

- 2.10.1 This assessment has shown that there is considerable archaeological potential within the study area and that there are a number of known archaeological sites that would potentially be impacted on by the proposed junction improvement. The archaeological deposits are generally typical of river valley areas with cropmarks visible on the higher ground and little archaeological evidence within the lower areas where alluvium and colluvium may mask any archaeological deposits.
- 2.10.2 There is substantial evidence that the area immediately around the junction was utilised during the prehistoric periods with cropmarks and artefact scatters on the rising land to the north, south and west. In addition there appears to be a Roman settlement site to the south-west of the junction. Medieval and post-medieval remains are mainly restricted to the villages and towns away from Junction 19 although there are two areas containing good examples of earthworks east of Junction 19 and north of the M6.
- 2.10.3 Evaluation, including trial trenching and geophysical survey, was carried out on Sites 19 and 20 which had previously been identified as possible areas of archaeological potential. The results of the evaluations suggest that there is little potential for *significant* archaeological deposits in these areas.
- 2.10.4 In January 2006 geophysical survey was carried out on four areas including an area to the north-east off Junction 19 (part of Sites 3 and 4), a large area south-east of Junction 19 (parts of Sites 5, 6, 8, and 10), an area to the north-west (parts of Site 23 and 24) and an area south-west of the junction. This revealed a number of features, some of which are likely to be agricultural in origin. However others may be archaeological in nature and some of these will be investigated further as part of the mitigation to be carried out in advance of or during construction.
- 2.10.5 Sufficient survey has been carried out to identify the likely value of the archaeological features for the ES. Any further work would be carried out in advance of or during construction as described under mitigation above.

Historic Buildings

- 2.10.6 There are numerous historic buildings within the study area. These lie mainly within the villages and in the case of Shawell, Swinford and Catthorpe within Conservation Areas. Mostly the structures are Grade II 17-19th century farmhouses and buildings although they also include gate piers, barns and walls, a milepost, and a dovecote. The village churches are also listed. These are mainly Grade II* except for Lilbourne Church which is Grade I and has associated Listed tombstones. There are also a number of 19th century buildings that appear on the 1st edition OS map (1890), but which are not listed.

Historic Landscapes

- 2.10.7 The majority of fields immediately around Junction 19 appear to have been modified post-war with the removal of boundaries and the inclusion of coniferous planting along the western edge, although with evidence for earlier field patterns suggested. The remaining fields are *Piecemeal Enclosure*, *Planned Enclosure* (with and without ridge and furrow) and *Semi-Regular Enclosure with Ridge and Furrow*. The ridge and furrow and field patterns hint at previous agricultural patterns of open fields and ancient enclosure systems. The

area around Lilbourne is particularly important as a landscape as it preserves a large open area with evidence for medieval defence, settlement and agriculture.

Summary of Environmental Effects

- 2.10.8 A total of 24 archaeological sites (excluding Sites 5, 17 and 18,) nine groups of historic buildings and seven historic landscape types were identified within the study area.
- 2.10.9 The proposed scheme has been discussed and redesigned in order to avoid as many of the cultural heritage assets as possible. In areas where impacts are unavoidable, archaeological mitigation measures including strip, plan and sample are proposed for two sites, evaluation (trial trenching) for three sites, survey for one site and a watching brief on ten sites. This should ensure the preservation by record of the cultural heritage resources, both known and currently unknown, that will be disturbed by the construction. Landscaping is proposed as mitigation for the historic buildings and historic landscapes.
- 2.10.10 The Catthorpe Viaduct Replacement will have a *Slight Adverse* effect on Site 3 and the historic buildings within Catthorpe Conservation area.
- 2.10.11 For the main scheme, after mitigation there would be a *Moderate Adverse* effect on one archaeological site. There would be a *Slight Adverse* effect on 13 archaeological sites, three groups of historic buildings and one landscape area. There will be a *Neutral* effect on the remaining archaeological sites, four groups of historical buildings and historic landscapes. There would a *Moderate Beneficial* impact on Catthorpe Conservation Area and a *Minor Beneficial* impact on Shawell Conservation Area The overall significance of environmental effect for scheme would be *Slight Adverse*.

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