PART 2 : CULTURAL HERITAGE

2.1 Methodology

Data Gathering

2.1.1 A number of relevant data sources and fieldwork reports were used to compile the data. All sources consulted are listed below under 'Sources of Information' (paragraphs 2.5.53 – 2.5.56).

Fieldwork

2.1.2 Walkover surveys, geophysical surveys and trial trenching were employed to help assess the cultural heritage. A written scheme of investigation (WSI) was provided for each phase of fieldwork, and discussed with the relevant local authority planning archaeologists before any fieldwork took place. All work follows the Institute of Field Archaeologist's Code of Conduct (2006) and adheres to relevant Standards and Guidance.

Assessment methodology

2.1.3 This assessment has been carried out in accordance with DMRB Volume 11 Section 3 Part 2 Cultural Heritage (HA 208/07), August 2007.

2.1.4 Supplementary guidance from the Highways Agency (HA) / Department for Transport (DfT) / English Heritage (EH) entitled '*Assessing the Effect of Road Schemes on Historic Landscape Character*' published in March 2007 has also been followed in the preparation of a Historic Landscape Character Assessment (HLCA) of the offline route.

2.1.5 HA 208/07 describes Cultural Heritage as including three subtopics:

- **Archaeological Remains**, these can include artefacts, field monuments, structures, landscape features and can be visible or buried (HA 208/07 Annex 5).
- **Historic Buildings**, these are architectural or designed structures with a significant historical value and can be of any date (HA 208/07 Annex 6).
- **Historic Landscapes**, these can include countryside, townscapes, industrial landscapes and designed landscapes such as parks and gardens (HA 208/07 Annex 7).

Evaluating the Cultural Heritage Resource

2.1.6 In order to assess the cultural heritage resource, its value needs to be determined. Planning Policy Guidance Note (PPG) 16 (para 8), draws 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).
- **National** –Monuments that are scheduled and protected under the Ancient Monuments and Archaeological Areas Act (1979), 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 (1979); Listed Buildings under section1 of the Planning (Listed Buildings and Conservation Areas) Act (1990) and those under Building Preservation Notices; National Trust properties; Parks and Gardens of Special Historic Interest; Historic Battlefields.
- **Regional** – Sites listed in the Historic Environment Record (HER) (previously Sites and Monuments Record (SMR)), 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, such as non-designated buildings or landscapes of historic interest. Conservation Areas are locally designated, but usually contain listed buildings, including Grade I and II* buildings, and other designated heritage assets. Thus Conservation Areas are likey to be of high value.

2.1.7 The value of an archaeological or historic resource can be assessed using a scale of criteria from Negligible to Very High. As historical 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 (See Table 2.2.1 below).

Assessing the Magnitude of impact

2.1.8 The 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. 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 (HA 208/07, 4.19)).

2.1.9 The magnitude of impact is assessed taking into account any agreed mitigation and enhancement but not 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 to No Change (Table 2.2.2 below).

Evaluation of Environmental Effects

2.1.10 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. Table 2.2.1 defines the value of the resource and Table 2.2.2 sets out criteria for defining the magnitude of impacts. The significance is assessed upon reasoned argument, professional judgement and taking on board the advice and views of appropriate bodies regarding value and magnitude of impact. The matrix set out in Table 1.3.4 is used to evaluate the overall significance of effects on Cultural Heritage features (in accordance with HA 208/07) and as a check to ensure that these judgements are reasonable and balanced. Where a range is indicated a single description has been determined. Significance descriptors are described in Table 1.3.3.

Table 2.2.1 : Environmental Value and Typical Descriptors (from HA 208/07, Annexes 5 – 7, based on Tables 5.1, 6.1, 7.1)

Value	Typical descriptors		
	Archaeology	**Historic Buildings**	**Historic Landscapes**
Very High	• World Heritage Sites (including nominated sites). • Assets of acknowledged international importance. • Assets that can contribute significantly to acknowledged international research objectives.	• Structures inscribed as of universal importance as World Heritage Sites. • Other buildings of recognized international importance.	• 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	• Scheduled Monuments (including proposed sites). • Undesignated assets of schedulable quality and importance. • Assets that can contribute significantly to acknowledged national research objectives.	• 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 associations not adequately reflected in the listing grade. • Conservation Areas containing very important buildings. • Undesignated structures of clear national importance.	• Designated historic landscapes of outstanding interest. • Undesignated landscapes of outstanding interest. • Undesignated landscapes of high quality and importance, and of demonstrable national value. • Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	• Designated or undesignated assets that contribute to regional research objectives.	• Grade II Listed Buildings. • Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historic associations. • Conservation Areas containing buildings that contribute significantly to its historic character. • Historic Townscape or built-up areas with historic integrity in their buildings, or built settings (e.g. including street furniture and	• Designated special historic landscapes. • Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value. • Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s).

Value	Typical descriptors		
	Archaeology	**Historic Buildings**	**Historic Landscapes**
		other structures).	
Low	• Designated or 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.	• '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).	• 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	• Assets with very little or no surviving archaeological interest.	• Buildings of no archaeological or historic note; buildings of an intrusive character.	• Landscapes with little or no significant historical interest.
Unknown	• The importance of the resource cannot be ascertained.	• Buildings with some hidden (i.e. inaccessible) potential for historic significance.	• Not applicable.

Table 2.2.2 : Magnitude of Impact and Typical Descriptors (from HA 208/07, Annexes 5 – 7, based on Tables 5.3, 6.3, 7.3)

Magnitude of Impact	Typical descriptors		
	Archaeology	**Historic Buildings**	**Historic Landscapes**
Major	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting.	Change to key historic building elements, such that the resource is totally altered. Comprehensive changes to the setting.	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	Change to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.	Change to many key historical building elements, such that the resource is significantly modified. Changes to the setting of an historic building, such that it is significantly modified.	Changes to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Change to key archaeological materials, such that the asset is slightly altered. Slight change to setting.	Change to key historical building elements, such that the asset is slightly different. Changes to the setting of an historic building, such that it is noticeably changed.	Changes to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limitable changes to noise levels or sound quality; slight changes to use or access; resulting in limited changes to historic landscape character.
Negligible	Very minor changes to archaeological materials or setting.	Slight changes to historic buildings elements or setting that hardly affect it.	Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.
No change	No change.	No change to fabric or setting.	No change to elements, parcels or components; no visual or audible changes; no changes arising from amenity or community factors.

Mitigation Methodology

2.1.11 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 has been identified on a site-by-site basis and includes strategies such as avoidance, burial, excavation, photographic/measured surveys, information panels and landscaping (HA 208/07, Chapter 4).

2.1.12 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-situ. In addition there should be a presumption in favour of the physical preservation of nationally important remains. Where preservation in-situ is not possible, preservation by record through systematic investigation, analysis, interpretation and dissemination may be an acceptable alternative (HA 208/07, Chapter 2).

2.2 Key Guidance and Legislation

National Planning Policies

Buried Archaeological Remains

2.2.1 The Ancient Monuments and Archaeological Areas Act 1979, provides statutory protection for monuments of national importance (Scheduled Monuments or SMs). Planning Policy Guidance Note 16 (PPG16) Archaeology and Planning (1990) 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'.

Buildings

2.2.2 The principal legislation affecting built heritage is the Planning (Listed Buildings and Conservation Areas) Act 1990, 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.

2.2.3 Policy Guidance Note 15 (PPG15) Planning and the historic environment (1994) 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.

Local Policies

The East Midlands Integrated Regional Strategy (IRS) and Regional Spatial Strategy (RSS 8)

2.2.4 The IRS sustainable development framework for the East Midlands includes provisions for the protection and enhancement of the Historic Environment. Its Regional Environment Strategy and Action plan (2002 - 2003) states sustainable development objectives as:

> *'EN1: To protect, improve and manage the rich diversity of the natural, cultural and built environmental and archaeological assets of the region.'*

2.2.5 The RSS (March 2005) represents the spatial element of the IRS, and includes regional priorities for Protecting and Enhancing the Region's Natural and Cultural Resources (Policy 27) and Regional Priorities for the Historic Environment (Policy 31).

The Nottinghamshire Joint Structure Plan Adopted 2006

2.2.6 Policy 2/11 Scheduled Ancient Monuments And Other Sites Of Archaeological Interest:

> *'There will be a presumption in favour of the physical preservation of Scheduled Ancient Monuments and other nationally important archaeological remains. Development proposals affecting archaeological sites or their settings will only be permitted where the need for development in that location outweighs the relative importance of the remains and/or their setting. '*
>
> *'If development is permitted, priority will be given to preserving the remains in-situ. Where preservation in-situ is not feasible or justified, conditions will be imposed to ensure that full surveys, excavation and recording of the remains is undertaken.'*

Rushcliffe Borough Council Local Plan (Adopted 1996)

2.2.7 'EN6: ANCIENT MONUMENTS: Permission will not be granted for development which would destroy or detrimentally affect scheduled ancient monuments and their settings.'

2.2.8 'EN7: SITES OF ARCHAEOLOGICAL IMPORTANCE: Development affecting sites of known or suspected archaeological importance will only be permitted where:

a) There is a need for development which outweighs the importance of the archaeological site or its setting;

b) The proposal is supported by an archaeological field evaluation of the site; and

c) The proposed development would not damage the archaeological remains where these can be preserved in-situ.

Where preservation in-situ is not feasible or justified, a programme of preservation by surveying, excavation and recording of the archaeological remains will be required (through the use of planning conditions).'

Leicestershire, Leicester and Rutland Structure Plan 1996-2016 (Adopted 1994)

2.2.9 ENVIRONMENTAL POLICY 1:

'Measures will be taken to identify, protect, preserve and enhance areas, sites, buildings and settings of historic or architectural or archaeological importance.'

'Proposals for development on, in or adjacent to archaeological or other historic sites and buildings will be considered against the need to ensure their preservation and setting. Development will only be acceptable where it would not adversely affect any scheduled ancient monument or other nationally important archaeological site, or its setting or amenity value.

Where a known site of county or local significance is to be affected development may be acceptable if it allows its preservation in-situ, or, where this is impractical, its investigation and recording.

Development will only be acceptable in areas of archaeological potential if proper evaluation of the archaeological implications of the proposed development has been undertaken and taken into account.'

Regulations and Guidance

2.2.10 Other regulations and guidance relevant to Cultural Heritage assessment include:-

- Ancient Monuments and Archaeological Areas Act (1979) and Ancient Monuments (Class Consents) Order 1994 (S.I No 1381)
- Treasure Act (1996)
- Coroners Act (1988)
- Burial Act (1857) and guidance from the Ministry Of Justice (April 2008)
- Disused Burial Grounds Act (1884) and Amendment (1981)
- Environment Act (1995)
- Planning (Listed Buildings and Conservation Areas) Act (1990)
- Commons Registration Act (1965)
- Commons Act (2006)
- Codes of Conduct (Institute of Field Archaeologists, 2006, Reading)
- Standard and guidance for archaeological desk-based assessments (Institute of Field Archaeologists, 2006, Reading)
- Standard and guidance for archaeological field evaluations (Institute of Field Archaeologists, 2006, Reading)
- Standard and guidance for archaeological watching briefs (Institute of Field Archaeologists, 2006, Reading)
- Standard and guidance for the archaeological investigation and recording of standing buildings or structures (Institute of Field Archaeologists, 2006, Reading)
- Standard and guidance for the collection, documentation, conservation and research of archaeological materials (Institute of Field Archaeologists, 2006, Reading)
- Management of Archaeological Projects (MAP2 English Heritage 1991).
- Management of Research Projects in the Historic Environment (MoRPHE, English Heritage 2006)

2.2.11 A more detailed assessment of the key plans and policies of relevance to the A453 Widening scheme can be found in the report reference A021959-REP-E-PL-232, which is summarised in Section 2 Part 13 of this ES.

2.3 Consultations

2.3.1 The relevant archaeological representatives of the following bodies have been consulted on the scheme:-

- Nottingham City Council
- Leicestershire County Council
- Nottinghamshire County Council
- English Heritage

2.3.2 Consultations were undertaken at various stages of the assessment with the archaeological advisors for Leicestershire County Council, Nottinghamshire County Council and Nottingham City Council. English Heritage has been approached; they are happy to leave all comments and approval with the local county and city authorities including work within the vicinity of the Scheduled Monument (SM) at Glebe Farm (SM 35602). English Heritage was later approached about further intrusive work north-west of Glebe Farm SM. They are satisfied that the setting of this SM will not be compromised by the work.

2.3.3 A draft of the desk-based assessment was circulated to the appropriate bodies in November 2006 for comment. This was followed by a meeting with the Senior Archaeological Officer at Nottinghamshire County Council and the Senior Planning Archaeologist at Leicestershire County Council in December 2006 to discuss the results of the desk-based assessment and to agree on proposals for further fieldwork to inform the Environmental Statement. A representative of Nottingham City Council was unable to attend this meeting.

2.3.4 All of the archaeological advisors were consulted prior to archaeological fieldwork being undertaken in their area, given copies of the WSI for all phases of fieldwork and kept informed of the results.

2.3.5 On 27th June 2007 a meeting was undertaken with Nottingham City Council's Section Leader Planning Services, Principal Conservation Officer and Tree Officer to discuss the proposed scheme within the Clifton Conservation Area. The general comments were that the scheme was much more sensitive to the area than that proposed previously and the loss of that part of the Conservation Area was not considered a significant issue. The Conservation Officer noted that that the area of main impact lay on the very edge of the conservation area and was happy that every effort had been made to preserve the existing green and old village.

2.3.6 In July 2007 a further meeting was undertaken with the County Council's Senior Archaeological Officer to discuss the offline road section, the results of all the fieldwork and the mitigation strategies for the Nottinghamshire part of the scheme. She commented that she was happy with the nature and amount of work so far undertaken to inform the ES and that she agreed with the mitigation strategy.

2.3.7 A draft copy of the *Cultural Heritage Detailed Assessment*, (Revision 3 July 2007) was circulated to all relevant archaeological advisors in July 2007 for comment, particularly on the mitigation strategies.

2.3.8 Following a Public Consultation exercise held in June 2007, concern was raised from members of the public, English Heritage and other interested parties at the impact of the offline route on the historic landscape south of Clifton. Consequently consultation was sought with English Heritage and Nottinghamshire County Council's Senior Planning Archaeologist. A draft *Historic Landscape Character Assessment of the Offline Route* was prepared in accordance with up to date guidance (see paragraph 2.1.4) and was circulated prior to a meeting which was

held with both parties on the 6th December 2007. At the meeting details of the proposed offline route and its impacts, including possible mitigation measures, were discussed and agreed. The impacts of the alternative options were also discussed and compared with the Preferred Route.

2.3.9 A letter was received by the HA from English Heritage on the 9th February 2008 acknowledging that the HLCA of the offline route addresses the issues of the 'historic landscape' south of Clifton.

2.4 The Study Area

2.4.1 The main study area for the assessment comprises an area of approximately 500m either side of the proposed road alignment (see ES Volume 2 Figure 2.2.1). However this was extended to include other sites, buildings and landscapes close by to give an idea of the context and general character of the cultural heritage. The general archaeology of the Trent Valley landscape was also researched to place the study area within a local and regional context.

Assumptions

2.4.2 The archaeological resource is by its nature an incomplete record. Where there are significant alluvial/colluvial deposits, 'made-ground' (i.e. not natural, e.g. embankments from earlier road building) or lack of archaeological fieldwork, archaeological remains can be hidden. Local knowledge has been utilised to assess the resources within the study area and to identify and assess areas of potential archaeology (e.g. alluvial deposits close to known archaeological remains).

2.5 Baseline Conditions

Archaeological remains – existing baseline (ES Volume 2 Figure 2.2.2)

Palaeochannels and Flood deposits

2.5.1 The study area lies south of the confluence of the Rivers Trent and Soar and the geology comprises river terrace gravel with alluvial drift deposits and glacial till overlying Mercia mudstone (Score 2007). The soils vary across the site, but numerous archaeological surveys in this area suggest that geophysical survey and cropmark analysis are likely to provide good results in the north-eastern section of the study area, particularly on the higher areas (Score 2006). Geophysical survey also appears to work well between Thrumpton and the motorway, but the lack of visible cropmarks to match known archaeological sites and features suggest that the soils here are perhaps not well suited to cropmark identification, although a number of palaeochannels have been identified (Score 2006).

2.5.2 The River Trent has altered significantly and these changes are evident in its alluvial floodplain, terraces, and buried palaeochannels representing former courses

(Challis 2004). The potential for archaeological deposits buried under alluvium has long been recognised, and excavations in similar areas have shown that such deposits can protect archaeological remains from later disturbances (Clay 2002, 8). Palaeoenvironmental remains, including organic matter, may be preserved in any palaeochannels.

2.5.3 Alluvium deposition in the Trent valley increased in the late Roman period (Knight and Howard 1994, 2004). This could suggest the possibility of buried Roman landscape horizons within the late alluvium layers (Cooper ed. 2006).

2.5.4 The main area of palaeochannel and alluvial deposits affected by the scheme lie around the River Soar and the village of Ratcliffe on Soar where the river has migrated over time. In particular Site 4 appears to contain large amounts of alluvium and palaeochannels of unknown date identified by the analysis of LIDAR (Light Detection And Ranging – a method of surveying ground levels by laser scanning from the air) data. At Site 3 a large palaeochannel of unknown date identified by LIDAR analysis appears to mark off the higher area containing many of the geophysical anomalies.

Palaeolithic - Mesolithic

2.5.5 Although Palaeolithic implements have been recovered in quantities from the Trent valley, evidence for early activity is scarce in this area. However, two flint artefacts of possible Palaeolithic date were recovered by fieldwalking at Sites 7 and 16.

2.5.6 Mesolithic flint scatters have been found at Red Hill (Site 18) and Thrumpton (Site 17), which may be representative of hunter gatherer activity possibly representing small mobile groups utilising the marginal area between the higher ground and the wetlands along the river channels. There is a strong possibility, therefore, that Palaeo- and Mesolithic material could be preserved in palaeochannels.

Neolithic – Bronze Age (4000 BC – 700 BC)

2.5.7 The main evidence for prehistoric occupation in the area comes from cropmarks and finds of flint. There is a significant concentration of later Neolithic and earlier Bronze Age flint recorded by fieldwalking, particularly between the M1 and the River Soar (Sites 1 8, 19, 20, 22, 24). At Red Hill (Site 18) three Neolithic stone axes and a scatter of flint were found suggesting occupation. A geophysical survey just north of the A453 produced a curved features and a pit alignment that could also be of this date (Site 2). Part of the same survey also found a possible ring ditch close to Junction 24 (Site 27).

2.5.8 Lockington Barrow cemetery lies to the north-west of the study area and there are a number of potential ring ditches in the study area (Sites 5, 12, 22, 23, 27).

2.5.9 North of Clifton, cropmarks and a relict river channel exist adjacent to the road (Site 14). These suggest the presence of a Bronze Age settlement and cemetery.

Recently at Site 9, excavations uncovered a pit containing Neolithic flints (Hurford 2007a).

Iron Age – Romano-British (700 BC – AD 410)

2.5.10 A number of possible Iron Age/Romano-British enclosures exist particularly to the north-east of the study area, on the higher ground between Glebe Farm and Clifton (Sites 7, 9, 11, 25, 28). The enclosures identified at Clifton (Site 28) have been partially excavated (Hurford 2007b, 2007c) and Romano-British pottery suggests a possible 2nd century date for the settlement as well as earlier features. There are also a number of similar features produced by geophysical survey at Site 29, and the undated cropmarks at Site 8 and Site 26, could be of this date.

2.5.11 Further evidence of Iron Age settlement in the road corridor is provided by scatters of late Iron Age pottery from Thrumpton (Site 17) and Red Hill (Site 18), which also includes evidence for an Iron Age shrine (Palfreyman et al 2003). Possible Iron Age fortifications were noted at Brands Hill (Site 13) although these no longer exist, along with a number of cultivation terraces (lynchets) some of which do survive today.

2.5.12 There is a dense pattern of Roman settlement within this part of the Trent valley including enclosed and unenclosed rural settlements, trackways and a number of villas. There is a large rural settlement known at Lockington, at least two villas (Sites 9 and 21) and the Redhill Roman complex (Site 18) at Ratcliffe Power Station.

2.5.13 There is a possible Roman road running beneath Long Lane with a potential settlement close to the farm (Site 6). Iron Age and Roman pottery were also found at Site 3 suggesting a settlement with Iron Age origins continuing into the Roman and Saxon periods. There are also suggestions that there could be a Roman river crossing somewhere in this vicinity. Romano-British pottery scatters have been recovered around Ratcliffe on Soar, Thrumpton and Barton in Fabis.

Saxon (AD410 – 1066)

2.5.14 The modern settlement pattern hints that the study area was well populated before the Saxon conquest. However only one site close to the road corridor (Site 3), shows definite physical evidence of Anglo-Saxon activity comprising a large artefact scatter of Saxon pottery and associated slag suggesting possible industrial activity. Geophysical survey suggested a number of buried archaeological features, including a stone building. All of the features appear to lie to the north-east of a palaeochannel identified by LIDAR data analysis (Score 2007).

2.5.15 A few sherds of Anglo-Saxon pottery were also recorded north of the A453 (Site 5) and a moated site was recorded north of the power station. Early medieval finds have also been found close to the road near Barton.

Medieval (1066 – 1540)

2.5.16 Medieval activity in the study area is mostly confined to the buildings, agricultural evidence and the layout of the villages. Aerial photographs indicate that much of the study area has the remnants of ploughed out ridge and furrow suggesting it was cultivated during the medieval period. One of the features excavated at Mill Hill could be a medieval hollow way. At Clifton (Site 15) there is the possibility that the village green and associated grassed areas may have preserved some early medieval features although the recent geophysical surveys indicated that there had been a great deal of modern disturbance in the area.

Post-medieval - Modern (1540 – present)

2.5.17 Many of the post-medieval sites reflect the growing industrialisation of the Trent Valley. The valley between Clifton and the River Soar has been exploited for its extensive gypsum deposits since at least medieval times and the remains of mines are found at several locations. Plaster, a by-product of gypsum was manufactured and there is a plaster mill at Thrumpton along with a dismantled tramway.

2.5.18 A defining feature of the 20th century was the growth and improvement of the road network including the building of the M1 in 1964. The suburb of Clifton expanded and in the later twentieth century saw many new housing developments.

2.5.19 In the 20th century the Trent valley became utilised for Power Stations, and Ratcliffe on Soar is now dominated by the coal-fired Power Station built in the 1960s.

Scheduled Monuments

2.5.20 There are four Scheduled Monuments containing archaeological remains in the study area. These are (SM 35602), the Roman villa and enclosures at Glebe Farm (Site 9); LE140 and LE126, a Roman villa and settlement at Lockington (Site 21) and NT141 the Roman Site at Red Hill (Site 18)

Historic Buildings – existing baseline (ES Volume 2 Figure 2.2.3)

2.5.21 Historic buildings can include a wide range of buildings and structures. Structures may be of importance due to a variety of reasons such as architectural quality, character, age or association with events of people.

Ratcliffe on Soar

2.5.22 There are two listed buildings in Ratcliffe. The 13th century Holy Trinity church is a Grade I listed building and the early 18th century Manor Farmhouse is Grade II. Three other buildings in Ratcliffe are listed on a survey of buildings with local character and heritage including Riverside Farmhouse, Manor Cottage: Church View and Ivy Cottage.

Thrumpton

2.5.23 Thrumpton Hall is a Grade I Listed building dating from 1617. Several barns and outbuildings belonging to the Hall are also listed (Grade II). All Saints Church (Grade II*) and the font (Grade II) date from the 13th century. In addition there are a further 13 Grade II listed buildings in Thrumpton including an icehouse west of the village. All of the listed buildings lie within the Conservation Area which also extends to the east to include a section of Barton Lane.

2.5.24 Eleven buildings are listed on the survey of buildings of local heritage and character, within the Conservation Area. These include Wood Farm and Manor Farm Cottage and Fields Farmhouse to the north-east, all of which lie close to the A453.

Barton in Fabis

2.5.25 The village is based around the 14th Century St George's Church (Grade I). There are four Grade II listed buildings in the village including the 17th century Rectory. There are also four buildings in the village that appear on the County lists of buildings of Local interest and character. The Dovecote at Manor Farm is listed and also has Scheduled Monument Status.

Clifton

2.5.26 St Mary's Church in Clifton and the Hall are both Grade I. There are numerous Grade II listed buildings mostly clustered between the Hall and the green. The earliest secular buildings are two thatched timber framed cottages on the village road (Grade II and II*). Also of probable medieval date is the Clifton village green. The 18th century Dovecote on the green is listed and is also a Scheduled Monument. All of the listed buildings lie within the Clifton Conservation Area.

2.5.27 Also within the Conservation Area are a further nine buildings in Clifton listed as having local importance and character. These include the Forge on Glapton Lane south of the A453.

Other Buildings

2.5.28 There are a number of other buildings designated as of local interest. These include Fields Farm and Manor Farm north of the A453, and Riverside Farm and Winkling Hill Farm south of the A453.

Scheduled Monuments

2.5.29 There are two Historic Buildings in the study area that are also Scheduled Monuments. These are the Dovecote (29947), at Manor Farm, Barton in Fabis and the Dovecote (29956), east of Home Farm Clifton.

Historic Landscapes - existing baseline (ES Volume 2 Figures 2.2.3, 2.2.4 & 2.2.5)

2.5.30 The term landscape can include urban areas as well as the countryside. Historic landscape assessment concerns 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 (Highways Agency 2007).

Landscape Character Areas

2.5.31 Landscape Character Assessment describes the character of the countryside of England. This is described in more detail in the ES Section 2 Part 5 *Landscape Effects*. The wider context of the baseline landscape character is provided by the Character of England Map. From this the scheme lies within the *Trent Valley Washlands* (Area 69) and the *Leicestershire and Nottinghamshire Wolds* (Area 74).

2.5.32 Local landscape character is defined in Leicestershire by the *Leicester, Leicestershire and Rutland Landscape and Woodland Strategy* (2001). The scheme would pass through the *Trent Valley* landscape character area. In Nottinghamshire relevant character areas are the *Trent Washlands*, *South Nottinghamshire Farmlands* and *Nottinghamshire Wolds* as defined in the Nottinghamshire Landscape Guidelines (1997). See Figure 2.2.4

Rural Settlement

2.5.33 Rural settlement patterns have been mapped by English Heritage (Roberts and Wrathmell, 2000). The study area falls within the 'Central Province' characterised by large concentrations of nucleated settlements, villages and hamlets and lies mainly within the Trent valley sub-province, dominated by the River Trent and the Trent-Soar confluence and characterised by nucleated villages and hamlets with a scatter of deserted settlements. The area to the south is part of the East Midlands sub-province which generally comprises scarp and vale features, areas of ancient woodland and is dominated by villages and hamlets.

Historic Landscape Characterisation

Leicestershire

2.5.34 Historic Landscape Characterisation (HLC) of Leicestershire is currently being undertaken by Leicestershire County Council. At the time of writing, the Leicestershire part of the study area mainly falls into the broad groups of *Water and Valley Floor* and *Enclosed Land* with small areas of woodland. The area between the Motorway and Long Lane is dominated by *Very Large Post-War Fields*. (the result of Post-War agricultural improvements intended to meet the requirements of intensive arable cultivation). There is a small coniferous plantation close to Junction 24 (March Covert) and Green Spot Wood lies to the north.

2.5.35 East of Long Lane and north-east of Junction 24 are areas of *Planned Enclosure* (18th and 19th century enclosure). There is an area of *Re-organised Piecemeal Enclosure* north of the A453, just east of the River Soar (enclosure patterns developed through the amalgamation of fields created through piecemeal enclosure).

2.5.36 Along the western side of the River Soar are areas of enclosure on river floodplain classed as *Miscellaneous Floodplain Fields* traditionally used as meadows.

Nottinghamshire

2.5.37 The HLC of Nottinghamshire was undertaken by the County Council between 1998 – 2000. However, several of the character types within the study area are wrongly identified and traces of earlier landscape features have been missed. Further assessment of the Nottinghamshire area including map regression was therefore undertaken (Score 2007d) and has been used in this historic landscape assessment.

2.5.38 For most of the offline section, the landscape character to either side of the A453 is defined by the Nottinghamshire HLC as *Modern Modified Field Patterns.* These areas are the product of change since the 19th century and mostly since World War II, and are often a response to new agricultural policies and technology. These landscapes are similar in nature to the *Very Large Post-War Fields* and are continually evolving. However, a close look at the current landscape shows that despite the large scale removal of the field boundaries, enclosure field patterns identified on Sanderson's 1835 map are still visible in the modern fields.

2.5.39 The offline section runs along a ridge with sweeping views across the landscape. The land comprises an undeveloped area with large open fields that fall away from Mill Hill to the south-east. This area was originally enclosed; as shown on the 1835 Sanderson map, bordering a large unenclosed area (Clifton Pastures and Barton Moor).

2.5.40 Interspersed within the *Modern Modified Field Patterns* are areas of relatively modern *Current Woodlands*. There are several areas of *Historical Woodland* particularly to the south of Thrumpton and between the A453 and the River Trent, west of Clifton.

2.5.41 There are some small areas of *Regularly Laid Out Large Geometric Field Patterns* at Barton in Fabis and Clifton. These are commonly associated with the Parliamentary Enclosures of the 18th and 19th centuries. There are also large areas of *Irregular Geometric Field Patterns* to the east (towards Gotham) as well as small areas around Brands Hill, Barton in Fabis and Thrumpton. Like the *Regularly Laid Out Large Geometric Field Patterns,* these are often associated with parliamentary enclosures, but in locations where topography makes regular boundaries difficult to lay out.

2.5.42 There is a small area of *Semi-regular Field Patterns* around Barton Lane crossroads and another small area at Mill Hill Spinney with other areas at Thrumpton and around Ratcliffe. These are geometric field patterns (but less defined than the *Regularly Laid out* or *Irregular Geometric Field Patterns)* with discontinuous or wavy field boundaries. Although these are also associated with enclosure, their origins vary and often pre-date Parliamentary enclosure.

2.5.43 Around Winking Hill Farm a small area of *Patterns Reflecting Open Fields* survives (Open Fields are a collection of unenclosed fields for growing crops, each subdivided into smaller units, which in turn were divided into strips. A parish would normally have three or four such fields and each farmer would have numerous strips in different fields, in theory to allow everyone a fair distribution of good and poor land). There is a large area of *Patterns Reflecting Open Fields* on the slopes south of Glebe Farm, and also small parcels at Thrumpton and Clifton.

2.5.44 South of the River Trent at Clifton and east of the River Soar, much of the land is *Low Lying River Valley Pastures*, characterised by enclosures between watercourses.

2.5.45 Barton Moor and Clifton Pastures are identified and described in the Nottinghamshire HLC. These areas are low lying and likely to have been boggy and marshy for portions of the year. Because of their unsuitability for agriculture, the areas would have been Common Land used mostly for grazing and remained un-enclosed. By the 18th century the moors were beginning to be drained, but although the area is now drained and farmed they remain open areas.

2.5.46 Although Ratcliffe on Soar Power Station does not appear as a separate asset in the landscape assessment, electricity power stations are a prominent feature of the Trent valley landscape.

Ridge and Furrow

2.5.47 Most of the fields between Junction 24 and the River Soar contain ridge and furrow suggesting that they were ploughed. East of this the land around the river is likely to have been pasture. Further north-east aerial photographs also show evidence for some ridge and furrow in the fields along the route and finds of medieval pottery indicate manuring of the fields in the area during the medieval period.

Village Green

2.5.48 The Village Green still exists at the east end of Clifton village and retains similar boundaries shown on an estate map drawn up by Sir Gervais Clifton in 1763. Clifton Green is registered as a Village Green under the Commons Registration Act 1965.

Historic Parklands/Parks and Gardens of Special Historic Interest

2.5.49 There is a registered historic park and garden at Clifton Hall, but this lies well away from the works. There is also a park at Thrumpton Hall to the north of the Power Station although this is unregistered.

Summary

2.5.50 In general much of the fields and pasture along the line of the A453 have been modified since World War II and are part of a continually changing and evolving landscape. The only landscape evidence for earlier land patterns is an area of planned enclosure and some floodplain fields close to the River Soar that will be affected as well as some semi-regular fields around Barton Lane. The ridge and furrow identified by geophysical survey and cropmarks also hint at earlier field patterns, but much of these lie away from the main road. However, the offline section at Mill Hill will be clearly visible from the open areas of Clifton Pasture and Barton Lane and will have some impact on the setting of these unenclosed areas and the view of them from Mill Hill.

2.5.51 Both of the identified Park and Gardens lie well away from the road. The Conservation Area at Thrumpton will only be very slightly affected; however, the Conservation Area at Clifton will be impacted by the works. The designated Clifton Village Green will however be avoided by the works.

Future Baseline Conditions (prior to construction)

2.5.52 It is difficult to predict the future baseline conditions of most cultural heritage features with any accuracy. Unless any land development takes place, the historic landscape and archaeological remains are unlikely to change greatly prior to the construction of the new road. It is possible that buildings and their settings could change as a result of alteration or extension.

Sources of Information

Data Sources

2.5.53 The following data sources have been consulted in order to establish the baseline archaeological and historical conditions in the area and to enable an assessment of the proposed scheme:

- Historic Environment Record (HER) previously Sites and Monuments Record (SMR) for Nottinghamshire and Leicestershire
- The National Mapping Programme (NMP) for Nottinghamshire
- Statutory list of Scheduled Monuments
- Local list 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 historical maps, enclosure and tithe awards, geological maps)
- LIDAR data (Supplied by the Environment Agency)
- Photographic sources including Aerial Photographs held in the National Monuments Record
- Historic background material

Desk Studies and Fieldwork

2.5.54 Desk studies and fieldwork were undertaken in 1992 – 3. This included fieldwalking and augering by Trent & Peak Archaeological Trust and geophysical survey by Stratoscan. The results were reported in a series of reports:

- Liddle P, 1992, *Desk Study of the Route of the A453(T) at Kegworth Leicestershire*, MARS AST 92/6.
- Stratascan 1993a, *A Report for Trent and Peak Archaeological Trust on a Geophysical Survey associated with the proposed improvements of the A453, Nottingham*.
- Stratascan 1993b, *Addendum No 1 To the report for Trent and Peak Archaeological Trust on a Geophysical Survey carried out at A453, Nottingham.*
- TPAT 1992a, *Archaeology of the A453, Implications of the Proposed Duelling of the A453 Between Clifton and the M1*.
- TPAT 1992b *Report by Stratascan on a Geophysical Survey at various locations along the route of the proposed improvement of the A453, Clifton to M1 link.*
- TPAT 1993a *Archaeology of the A453, Implications of the Proposed Duelling Barton Lane to Clifton Bridge.*
- TPAT 1993b, *A453(T) Clifton Lane Improvement, Archaeological Evaluation.*

2.5.55 A Scoping Report was undertaken by White Young Green in September 2006 to gather together and update the findings from the previous assessments. This and the previous reports were used to compile an updated Desk-based Assessment. This was followed in 2007, after the issue of HA 20807 updating the Cultural Heritage section of DMRB (see paragraph 2.1.3), with a Detailed Assessment. Following supplementary guidance entitled *'Assessing the Effect of Road Schemes on Historic Landscape Character'* (Highways Agency, March 2007), a detailed HLC

Assessment of the offline route was prepared. The principal documents of reference are as follows:

- Kendall, G., 2006 *A453 Widening M1 Junction 24 to A52 Nottingham. Archaeological Survey Scoping Report*. White Young Green A021959.
- Score, V., 2006 *A453 Widening M1 Junction 24 to A52 Nottingham: Archaeological Desk-based Assessment*. ULAS Report 2006-160.
- Score, V., 2007 *A453 Widening M1 Junction 24 to A52 Nottingham: Cultural Heritage: Detailed Assessment.* ULAS Report 2007-082 Rev.4.
- Score, V., 2007 *A453 Widening M1 Junction 24 to A52 Nottingham: Historic Landscape Character Assessment of the Proposed Offline Route.* ULAS Report 2007-158.

2.5.56 Further fieldwork was undertaken in 2006-2007 to clarify the extent and nature of the archaeology, including a walkover survey, geophysical survey and trial trenching. Relevant documents are as follows:

- Smalley, RAJ, 2007a, *Geophysical Survey Report, A453 Clifton to J24 M1 Nottingham* (Stratascan Report J2274).
- Smalley, RAJ, 2007b, *Geophysical Survey Report, A453 Clifton to J24 M1 (2)* (Stratascan Report J2311).
- Hurford, M. 2007a, *An archaeological evaluation on land adjacent to the A453 from the Junction 24 to the A52 at Nottingham*. ULAS report 2007-020.
- Hurford, M. 2007b, *An archaeological excavation and watching brief at Grove Farm, Barton Lane, Clifton, Nottingham*. ULAS report 2007-071.
- Hurford M, 2007c A453 Widening M1 Junction 24 to A52 Nottingham Phase 3 Evaluation. ULAS report 2007-093.

Baseline Value of the Cultural Heritage

2.5.57 The known archaeology has been grouped into numbered sites and assessed following the methodology in Section 2.1. In accordance with guidance in HA 208/07 (Annex 5) judgement has been exercised in assessing the overall cultural heritage effect, for example where all effects are adverse then the highest significance of effect would normally be taken as the overall effect, but this could distort the assessment. The results are summarised in Tables 2.2.3, 2.2.4 & 2.2.5.

2.5.58 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 (ES Volume 2 Figure 2.2.1)

2.5.59 A total of 29 sites of an archaeological nature were identified by the detailed assessment (Score 2007).

Site 1 Prehistoric Artefact Scatter and Features West of Long Lane

2.5.60 This is a prehistoric flint scatter identified during fieldwalking (Liddle 1992, TPAT 1992a, Priest 2000). Geophysical survey in 1992 and 2006-7 suggested the presence of archaeological features close to the road (TPAT 1992b, Smalley 2007a). Trenching was unable to be carried out here due to access issues.

2.5.61 Flint scatters of this age and type are relatively common in this area. However, if the flint scatter is associated with any of the geophysical features it could represent a settlement site. This site is considered to be of *Medium* value.

Site 2 Prehistoric features west of Long Lane

2.5.62 Geophysical survey in 2000 identified a pit alignment, ditches and other features north of the road (Butler & Coward 2000). Further geophysical survey in 2007 (Smalley 2007a), recorded a number of small pits and an L-shaped feature south of the road. At the western end were two more linear and pit-like features and a negative anomaly suggestive of a bank. Unfortunately trial trenching was unable to be carried out here due to access issues and the features remain undated although their form suggests a prehistoric date.

2.5.63 These features may represent part of a settlement, although the ring ditch could be a barrow. Without further information on their date and nature it is difficult to assess their significance, but they are considered to have a *Medium* value.

Site 3 Iron Age, Roman and Saxon site

2.5.64 A concentration of Iron Age, Roman and Anglo-Saxon pottery and slag was found during fieldwalking in 1991/2 (Liddle 1992, TPAT 1992a). Geophysical survey (TPAT 1992b) suggested the presence of buried archaeological remains. Analysis of LIDAR data indicates a possible palaeochannel or wet area running through the middle of this site with the area to the east lying on slightly higher ground.

2.5.65 Further geophysical survey (Smalley 2007a) suggested that the western side of the field was disturbed, possibly relating to road construction, with a single linear feature and a few associated pit-like structures. To the east lay a number of possible features including several pits, linear features and some bank and ditch arrangements with a disturbed area along the western side of the field. Trial trenching found a number of pits and gullies (Hurford 2007a). Only one sherd of Saxon pottery was recovered to date the features; however given the proximity of Roman and Saxon pottery, the features are likely to be of this date. No features were recorded in the trench west of the palaeochannel.

2.5.66 This is a multi-period site spanning the Roman and Saxon periods with possibly earlier material and quite rare. There is a high potential that the site could contribute to understanding of the Roman/Anglo-Saxon transition in the Trent Valley. Although the palaeochannel is undated, the association with a possible Anglo-Saxon industrial site would suggest a *High* value.

Site 4 Romano-British finds on the River Soar/Palaeochannels/Ratcliffe on Soar Village.

2.5.67 Romano-British pottery has been found in the bend of the river which may suggest occupation. Later structures (Northend Bridge and an earthwork bank) indicate a river crossing to the north. Between the river and the railway is a faint circular cropmark identified by aerial photographs (TPAT 1992a, 32). However, recent excavations suggest this is modern (Hurford and Score).

2.5.68 As expected the LIDAR data shows a great deal of activity from the river with numerous small channels and areas of flood, and the area is likely to be heavily alluvial in nature. Although the finds scatters are small and are common in the area, the possibility of preservation beneath the alluvium enhances the value. Because of the potential for palaeoenvironmental data, the site is considered to have *Medium* value.

Site 5 Roman/Medieval Pottery

2.5.69 Four sherds of Roman pottery and some medieval pottery were recovered from fieldwalking. The medieval pottery may well represent manuring/ploughing and as only a small amount of Roman pottery was recovered the site has a *Low* value.

Site 6 Roman Settlement and Road at Long Lane

2.5.70 A Roman road is thought to run south from Red Hill to Leicester (TPAT 1992a). As geophysical survey and LIDAR analysis has found no evidence for it, it may well lie beneath Long Lane. An assemblage of Roman pottery from south of Long Lane Farm suggests a settlement. Although Roman sites are well known regionally the association with a road would enhance its significance and information on the alignment of the road would increase knowledge of the site at Red Hill. The value is considered to be *Medium*.

Site 7 Cropmark Enclosures South of Brands Hill

2.5.71 South of Brands Hill are cropmarks suggestive of Late Iron Age – Romano-British enclosures (TPAT 1992a, TPAT 1993b). Fieldwalking produced flint, and heat-affected stones (TPAT 1993b), which could suggest prehistoric occupation. Geophysical survey (Stratascan 1993a, 1993b, Smalley 2007b) and trial trenching (Hurford 2007), found no evidence for the cropmark despite re-plotting of the older data.

2.5.72 Cropmark enclosures of this type are common in the Trent Valley although it may be associated with other enclosures. It has a *Medium* value.

Site 8 Bronze Age Flint/Cropmark Enclosure West of Barton Lane

2.5.73 This site contains probable Iron Age/Romano-British enclosures (TPAT 1993b). Geophysical survey (Stratascan 1993a) identified agricultural features as well as a possible trackway and ditch (TPAT 1993b). Borehole data suggests spreads of alluvium north of the road up to 1m deep which may explain why only modern features were picked up by the survey. Fieldwalking found flint and medieval pottery likely to represent the medieval practice of manuring fields with waste (TPAT 1993b). The area formed part of the open fields of Barton in the medieval period. A flint scraper was recovered from an area close to Barton Lane.

2.5.74 A single scraper is likely to be a chance find and the rest of the flint is probably a background scatter. The enclosure is undated and lies some distance away from the road. The site value is considered to be *Medium*.

Site 9 Glebe Farm Roman Villa and Cropmarks

2.5.75 This site contains the Roman villa at Glebe Farm (SM 35602). The site has been subject to excavations producing evidence for buildings dating from the 2nd to 4th centuries AD although earlier occupation may also survive.

2.5.76 Close to Glebe Farm are four enclosure cropmarks (TPAT 1992a). Their form is suggestive of Iron Age/Romano-British features similar to others in the Trent valley and it is possible that they are related to others in the area.

2.5.77 Only six sherds of Roman pottery were found during fieldwalking close to the road, suggesting that the main concentration of occupation lies further south-east or that features are well-buried and not truncated. Geophysical survey (TPAT 1992b, 1993) produced some faint anomalies close to the roadline. Trial trenching in 2007 (Hurford 2007a) produced undated features, probably boundary or drainage ditches.

2.5.78 Further geophysical survey was undertaken on two areas of higher land to the north-east of Glebe Farm (Smalley 2007a). Anomalies included linear features, banks and pits. Follow-up trial trenching recorded two undated ditches and a pit containing several Neolithic flints. Trial trenching to the north-east (Hurford 2007a) found no archaeological features.

2.5.79 Although Roman villas are relatively rare in the Trent valley, there is one nearby at Lockington (SM 140). The site contains substantial masonry remains and stratified deposits. The relationship between villas such as this one and those at Lockington, as well as the interaction with the small town at Redhill was identified in a recent assessment as of future research importance (Palfreyman and Ebbins 2003).

2.5.80 Although undated, the cropmark features to the east are most likely to be Iron Age - Romano-British and could be associated with the Roman villa. The features identified by field survey are probably Romano-British in date (except for the Neolithic pit), and although they are fairly uninformative their value is enhanced by their proximity to the villa. The value of the villa is reflected by its scheduled status making it of *High* value.

Site 10 Earthworks and Roman Finds at Winking Hill

2.5.81 At Winkling Hill a number of Romano-British coins and pottery were found associated with a circular earthwork, thought to be Romano-British in date (TPAT 1992a). A post-medieval gypsum mine lies to the west.

2.5.82 Roman earthworks are rare and this site would add to the general character and knowledge of Roman activity in the area. The value of the site is *Medium*.

Site 11 Cropmarks at Mill Hill

2.5.83 A number of cropmarks were identified from aerial photographs. A post-medieval windmill mound also existed in the area (TPAT 1992a).

2.5.84 Geophysical survey north of the A453 suggested the presence of features including a possible enclosure and several pits (Stratascan 1993b), as well as areas of burning. Fieldwalking found flint, ironstone and slag possibly suggesting undated industrial activity here (TPAT 1993b). The features were targeted by trial trenching in 2007 and recorded several post-medieval/modern features and a ditch that could be part of a hollow way (Hurford 2007a).

2.5.85 The identified features are either undated or post-medieval and the site is considered to be of *Low* value.

Site 12 Features at Drift Lane Plantation

2.5.86 A large curvilinear feature is visible in aerial photographs immediately south of the A453 (TPAT 1992a) with another enclosure just to the north. Geophysical survey south of the road (Smalley 2007a) failed to identify the circular feature; however a number of features were visible on the ridge. Further geophysical survey on the off-line route to the south identified another linear feature (Smalley 2007b). However, trial trenching failed to locate the geophysical anomaly and it could be a natural feature (Hurford 2007c).

2.5.87 Undated cropmarks are common. However, the features could be related to other cropmarks in the area, particularly the enclosures at Site 28. Their value is considered to be *Medium*.

Site 13 Lynchets and Iron Age Fortifications, Brands Hill

2.5.88 Seven lynchets, (cultivation terraces), survive on the north side of Brands Hill (TPAT 1992a, 1993b). Additionally, potential Iron Age fortifications were recorded on the hill in the 17th century. A number of coins possibly Iron Age in date are also recorded from the area (Score 2007).

2.5.89 Although the site has been damaged by ploughing, fortified Iron Age sites and lynchets are unknown in the Trent valley, and this represents a site of high regional and possibly national importance. The site has a *High* value.

Site 14 Cropmarks East of Clifton

2.5.90 Linear cropmark features and a relict river channel were identified by fieldwalking and augering north of the A453, (TPAT 1993a), although site investigation suggested these are natural in origin. However, a pit alignment and Bronze Age, Neolithic and Roman finds suggest some activity.

2.5.91 Cropmark traces representing the remains of five ploughed out Bronze Age burial mounds, other cropmarks, and a relict watercourse lie immediately south of the A453 (TPAT 1993a). Fieldwalking produced late Neolithic and Bronze Age flints in the area of the ring ditches. Three auger transects were undertaken indicating a gravel rise and suggested that much of the alluvium in this area is of recent origin (TPAT 1993b, 53). Geophysical survey failed to locate the cropmark ring ditches but did find some other anomalies (TPAT 1993b). The features and burial mounds form a group of *Medium - High* value.

Site 15 Clifton Village and Green

2.5.92 The potential archaeological remains within Clifton Village relate to the possibility that old building foundations may survive beneath undisturbed areas of grass. However, geophysical survey suggests that most of the grassed area south of the green is disturbed (Smalley 2007a), although there is a small area of possible stone rubble. The buildings and village are also discussed in the buildings and landscape sections.

2.5.93 Despite the disturbance, there is the possibility of buried structural remains here. Their potential value is *Medium*.

Site 16 Barton in Fabis Village

2.5.94 The village is surrounded by post-medieval flood defence earthworks with a substantial bank (TPAT 1992a, 1993b). Around the village are numerous cropmarks, dating from prehistoric times, lying on small gravel islands. Medieval ridge and furrow has been identified running parallel to the A453 (TPAT 1992a, 1993b). The buildings are assessed in the Historic Buildings section.

2.5.95 The cropmarks are similar to others found in the Trent Valley; however their density gives them a high group value. Post-medieval flood defences are common in river valleys. The value of the archaeological features is *Medium*.

Site 17 Thrumpton Village

2.5.96 Casual finds of flint as well as Iron Age scored ware and Romano-British pottery has been found in the area (TPAT 1992a) suggesting prehistoric activity. There are several quarries around the village and an earthwork bank runs along the river, probably part of the post-medieval flood defences for the village and park (TPAT 1992a). This site is also discussed in the buildings and landscapes section.

2.5.97 The finds, medieval and post-medieval features are common survivals in local villages. The archaeology is considered to have a *Medium* value.

Site 18 Red Hill Roman Complex

2.5.98 The site sits on a prominent Mercian mudstone hill overlooking the flood plain of the Rivers Trent and Soar. Prehistoric flint scatters have been found here; however, the site is essentially a Roman 'small town' with probable Iron Age origins (Palfreyman et al 2003) and is a Scheduled Monument (SM141). Earthworks and artefacts associated with medieval quarrying and mining for gypsum are also known from the summit of the hill.

2.5.99 Roman-British religious sites are rare in the Trent Valley. The relationship between the Redhill site and the villas at Lockington and Barton and other Iron Age cropmarks is identified in a recent assessment as of research importance (Palfreyman et al, 2003; Taylor 2006, 158). The exceptional rarity and national importance of the site is reflected by it protected status as a SM giving it a High value. Any associated features would also be of *High* value.

Site 19 Flint Scatters

2.5.100 This site comprises several flint scatters close to the river, along with the find of a quern and a skull possibly from an inhumation burial or ritual deposit (Score 2007).

2.5.101 The flints may suggest a prehistoric settlement nearby and the skull although undated could represent an associated burial. The finds lie close to a palaeochannel which could preserve buried deposits and organic remains. Similar sites are relatively common in the area and the site has a *Medium* value.

Site 20 Flint Scatters

2.5.102 This site comprises several flint scatters close to the river. The flints may suggest a prehistoric settlement nearby and are close to palaeochannel which could preserve buried deposits and organic remains. Similar sites are relatively common in the area and the site has a *Medium* value (Score 2007).

Site 21 Lockington Roman Villa

2.5.103 This site contains the cropmarks of a large Roman villa and settlement. The site is scheduled (SM 140, 126). The extent of the cropmarks makes it a significant landscape feature resulting in its scheduled status and *High* value (Score 2007).

Site 22 Cropmarks and Flint Scatters

2.5.104 A cropmark of an isolated ring ditch lies north-west of Barn Farm. Although some distance from the main focus of the cemetery, it could be associated with the cemetery to the north-west. South of this are two flint scatters and possible palaeochannels (Score 2007).

2.5.105 The flints represent a small scatter. Because of the possible association with other cropmarks and palaeoenvironmental deposits, the site has a *Medium* value.

Site 23 Ring Ditch Cropmark

2.5.106 A cropmark of a ring ditch lies close to the motorway and could be a Bronze Age barrow, although there is no direct dating evidence for it (Score 2007). The possibility that the ring ditch represents a barrow gives it a *Medium* value.

Site 24 Earthwork and Flint Scatter

2.5.107 A flint scatter lies west of March Covert along with an earthwork of unknown date (Score 2007). The site is considered to have a *Medium* value.

Site 25 Cropmarks and Finds at Wrights Hill

2.5.108 There are cropmarks and Romano-British pottery scatters at this site (TPAT 1992a). A medieval/post-medieval moated site also existed in this area although much was destroyed during the construction of the power station (TPAT 1992a).

2.5.109 Cropmark features are relatively common in this area although they may be related to activity at Red Hill. Moated sites are also common in Nottinghamshire and part of the site has already been disturbed by the construction of Ratcliffe on Soar Power Station. The site is considered to have a *Medium* value.

Site 26 Cropmarks near Thrumpton

2.5.110 The site comprises a number of irregular cropmarks. There are also parchmarks which could indicate the buried footings of masonry buildings (TPAT 1992a)

2.5.111 Cropmark features are relatively common in this area. The possible masonry structures may be Roman and associated with other Roman sites in the area. These features are considered to be of *Medium* value.

Site 27 Ring Ditch Cropmark

2.5.112 Geophysical survey between the A453 and the M1 (Butler and Coward 2000), recorded a small ring ditch close to the motorway junction. Although undated the form is suggestive of either a Bronze Age ring ditch or an Iron Age round house. Geophysical survey was undertaken to the east in 2007 producing evidence for a possible bank and some small features (Smalley 2007a). Trial trenching along the road line did not locate any archaeological features.

2.5.113 The cropmark is small and could be a round house or a ring ditch and is considered to be of *Medium* value.

Site 28 Enclosure at Grove Farm, Clifton

2.5.114 Geophysical survey and trial trench excavations were undertaken in 2007 on an area immediately south of Clifton and the A453 (Hurford 2007b). Along the southern edge a Romano-British enclosure ditch was recorded (Hurford 2007b). Further geophysical survey on the offline route located a large enclosure to the west; the previous trial trenching had exposed the east and south edge of the enclosure. A number of features were noted both inside the enclosure and outside to the west. Trial trenching confirmed the presence of features and pottery suggests a 2nd century date. Just to the south-east is a cropmark of another possible Iron Age/Romano-British enclosure.

2.5.115 Enclosure cropmarks are well known in the area. However, this site appears to be part of a complete settlement landscape with interior and exterior features including potential buildings. Its proximity to other enclosures also enhances the regional value. The site is considered to have a *Medium* value.

Site 29 Features South of the A453

2.5.116 Geophysical survey produced a number of possible archaeological features (Smalley 2007b), mostly in the centre and the south-east corner of the site. The northern edge close to the road is disturbed.

2.5.117 The features are undated. However, there are a number of them close together and they could represent an archaeological site of unknown date. Without further information on the date and nature of the features the site would have a *Low* value.

Historic Buildings (ES Volume 2 Figure 2.2.3)

2.5.118 There are no listed or historic buildings physically affected by the proposed development. However the setting of some listed buildings will be affected. The impact on setting is usually assessed by examining the visual and aural impact of the proposed development on the monument. Other impacts on buildings include noise, vibration and visual intrusion.

Ratcliffe on Soar

2.5.119 Although there are only two listed buildings in Ratcliffe, the Church is Grade I and therefore a High value is associated with it. Three other buildings in Ratcliffe are listed as having local character and heritage and have a *Low* value.

Clifton Village and Green and Conservation Area

2.5.120 There are 22 listed buildings in Clifton (two Grade I, one Grade II* and the rest Grade II). Ten of the listed buildings lie within the immediate vicinity of the road, including the Scheduled Monument Dovecote (29956) and are within the Conservation Area. The combination of the buildings including a Scheduled Monument with two Grade I buildings gives the listed buildings a *High* value.

2.5.121 There are a further ten buildings of local interest including a smithy to the south of the green, all within the Conservation Area. The buildings of local interest have a *Low* value.

Barton in Fabis Village

2.5.122 Although this group of buildings is quite small it includes the Grade I listed church and a Scheduled Monument and is therefore considered to have a *High* value. In addition there are four buildings of local interest that have a *Low* value.

Thrumpton Village and Conservation Area

2.5.123 There are a substantial number of listed buildings (18), and buildings of local interest (11), all of which lie within a Conservation Area making the village of considerable historic interest. Although the medieval and post-medieval features are common survivals in local villages, the 18th century estate buildings are rarer. Most of the listed buildings are clustered in the north-west corner of the village and as a group have a *High* value. The local interest buildings have a *Low* value.

Other Buildings

2.5.124 Winkling Hill Farm lies south of Ratcliffe Power Station; the value of the farm is *Low*.

Historic Landscapes (ES Volume 2 Figures 2.2.3 & 2.2.4)

General – Online Widening

2.5.125 Much of the historic landscape to either side of the A453 has been modified since World War II. However, studies of early maps suggests that with the exception of the area around Ratcliffe Power Station, most of the field patterns remain the same as they were in the 19th century, although large scale removal of boundaries including hedgerows and associated trees has resulted in much more open and exposed landscapes than the original 19th century landscape. Indications of ridge and furrow also hint at earlier field patterns. Most of the field patterns are indicative

of 18th – 19th century enclosure and evidence for pre-enclosure landscapes in the study area is limited. The value is therefore considered to be *Low*.

Offline Route

2.5.126 The offline section has been subject to a more detailed Landscape Assessment (Score 2007d). This identified four landscape types within the study area that could be affected including the open landscapes of Clifton Pastures and Barton Moor which had been wrongly identified by the HLC.

Current Woodlands

2.5.127 Drift Lane Plantation first appears on the 1901 OS plan with the small plantation to the south first appearing in 1916-22. Generally these are small areas of 20th century plantation and extensions to existing woodland. The value of this character type is considered to be *Low*.

Semi Regular Fields

2.5.128 These exist around Barton Lane crossroads and reflect the past enclosure of open fields mostly dating to the 16th – early 18th centuries. In general these areas are mainly small, isolated sections of land associated with buildings. The value of this character type is considered to be *Medium.*

Modern Modified Field Patterns

2.5.129 These represent areas where the early patterns shown on 19th century maps are no longer readable or have been radically changed, usually associated with post World War II agricultural policies and technology. However, further assessment has shown that many of the field patterns shown on the 1835 Sanderson map area are still largely visible and many of the Parliamentary enclosure field patterns are still evident despite the removal of boundaries and trees. Only the area immediately south-east of the existing A453, through which the offline route would pass, has been significantly changed with the removal of all nearly all of the trees and hedges (except along Barton Lane) and many of the original smaller field patterns barely visible in the existing landscape as ploughing patterns and soil marks. This landscape type also contains the current A453. Although much changed and modified this road follows an old road linking Clifton, Barton in Fabis, Thrumpton and Ratcliffe on Soar. The road is called ‘Green Lane’ in the 1930s which changes to the current name of ‘Green Street’. Parts of the original line still survive as a local road (notably at Thrumpton where the main road was straightened leaving the existing road to the north-west). The earliest map evidence shows it in 1835 and the name ‘Green Lane’ and the association with the villages suggests that it is likely to have originated earlier. Although the views from the A453 across the open land to Clifton Pasture and Barton Moor are of importance to the local communities the historical legibility and value of this character type is considered to be *Low.*

Clifton Pasture and Barton Moor

2.5.130 Although these areas have been classified as other types within the Nottinghamshire Historic Landscape Characterisation Project, it seems obvious that these preserve a much older landscape tradition of unenclosed land, held for the most part in common by the local community. This landscape has been subject to some change in the 20th century with the use of drainage to cultivate the area, and a footpath across the site. This has changed the character somewhat – from the air the once completely open landscape now divided into sections by straight lines. However, from the ground it is still very much an open landscape and the views of it from local villages and the public access onto the open space gives local people a sense of common ownership. Despites the changes the ancient landscape patterns are still visible and its heritage is accessible to the public via the footpath. The value of the character type is considered to be *High.*

Clifton Conservation Area, Park and Village Green

2.5.131 The village of Clifton has been in existence since Domesday and probably dates from Saxon times. There is a registered park to the north along the bank of the River Trent. The Conservation Area is based around the Village Green and the old village but spreads to cover the adjacent junction. The landscape area has a strong historic character, coherence and legibilty with the green and many of the local buildings dating from at least the 18th century and possibly much earlier. It has survived virtually intact through some fairly drastic modern changes and its historic landscape value is *High.*

Thrumpton Park

2.5.132 An unregistered park lies to the north-west of the village. The value of this landscape is *Medium*.

Ratcliffe on Soar Power Station

2.5.133 Despite its lack of formal identification in any cultural heritage list, electricity power stations are a prominent feature of the Trent valley landscape and are considered to be part of the later 20th century landscape. It is difficult to assess as it is still in use but its value is mainly local and therefore *Low*.

2.6 Potential Impacts

Construction Phase

2.6.1 Most construction impacts are likely to be permanent in nature such as the removal of archaeological features during ground breaking works, or the creation of structures that would have a visual or aural impact on the cultural heritage feature.

2.6.2 Design plans for the proposed development have been made available, showing the likely extent of disturbance that will occur during construction. Discussions have

also been undertaken with regards to services, drains, balancing ponds and flood compensation areas. The implications for known archaeological sites can therefore be accurately determined from these sources; however it does not include potential impacts from compounds or other land uses whose location has not been decided at the time of writing. Impacts on archaeology, buildings and landscapes are outlined below and summarised in Tables 2.2.3, 2.2.4 & 2.2.5 below.

Archaeological remains

2.6.3 There will be no impact (*No Change*) on Sites 5, 6, 8, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26.

Site 1 Prehistoric Artefact Scatter and Features West of Long Lane

2.6.4 Most of the features identified by the geophysical survey lie outside the area of impact and only a very small area will be affected. The development is therefore considered to have a *Minor Adverse* impact on the archaeology.

Site 2 Prehistoric Features West of Long Lane

2.6.5 The geophysical survey identified a number of features close to the proposed route, but it is not known whether these features continue into the area of impact. If they do, there is likely to be a *Minor Adverse* impact.

Site 3 Iron Age, Roman and Saxon site

2.6.6 The geophysical survey and trenching suggests that the site continues up to the A453. Although only the northern edge of the site is likely to be affected, there are likely to be a number of features that will be destroyed by the scheme. To the north of the existing road a second flood compensation area/borrow pit and associated topsoil storage will be constructed. This area is unevaluated but there are suggestions that this area may be alluvial and contain palaeochannels. The scheme is considered to have a *Moderate Adverse* impact on the site.

Site 4 Romano-British Finds on the River Soar/Palaeochannels

2.6.7 The main impact on archaeological remains is on the south side of the A453 where there is less archaeology and fewer potential palaeochannels. The impact on the site will be *Moderate Adverse*.

Site 7 Cropmark Enclosures South of Brands Hill

2.6.8 Although the cropmark was not identified by the geophysical survey or trial trenching, its position located from the aerial photographs may be inaccurate and the scheme would mean total destruction of this feature. The impact is therefore *Major Adverse*.

Site 9 Glebe Farm Roman Villa and Cropmarks

2.6.9 The lack of finds from previous fieldwalking in this area suggests that the core of the villa lies on the higher ground to the south-east and it is unlikely that the main buildings would extend as far as the new roadline. However, the roadline here moves away from the existing road, cutting across previously undisturbed ground. The identified features are likely to be drainage/boundary ditches of probable Romano-British date and will be at least partly destroyed by the offline section of the road. All of the remains are below ground and English Heritage is satisfied that the setting of this SM will not be overly affected. Although the scheme will not affect the SM or its setting, it will have a *Moderate Adverse* impact on the other (possibly related) features.

Site 11 Cropmarks at Mill Hill

2.6.10 The scheme only affects the very southern edge of the site and does not impact on any of the known features, although there could be as yet unknown features within the site. The impact is likely to be *Negligible*.

Site 12 Features at Drift Lane Plantation

2.6.11 The road scheme will destroy some features identified by the geophysical survey (although not found by trial trenching), having a *Moderate Adverse* impact.

Site 15 Clifton Village and Green

2.6.12 The main area of archaeological potential lies outside the area of the development. Any archaeological deposits are likely to be heavily disturbed making the impact on the archaeological remains *Minor Adverse*.

Site 27 Ring Ditch Cropmark

2.6.13 Although trial trenching suggests the geophysical features do not extend into the area affected by the road scheme, there is still a slight possibility of associated features outside the evaluated areas. The proposed access route from Dowell's Barn onto the existing trackway would run very close to the ring ditch as plotted by the geophysical survey. Topsoil storage for the flood plain compensation area would lie between Sites 27 and Site 29. As the geophysical survey found little to suggest archaeological potential in this area and the storage area will not be stripped there will be no extra impact on either site. There is therefore a *Minor Adverse* impact.

Site 28 Enclosure at Grove Farm, Clifton

2.6.14 Most of the enclosure and associated features will be destroyed by the roadline and associated roundabout. A large topsoil storage area lies to the south-west of the island, but will involve no topsoil stripping. The impact will therefore be *Major Adverse*.

Site 29 Features South of the A453

2.6.15 The main impact from the road and access track is along the northern edge of the site away from the main archaeological features. However this area is also proposed for a flood compensation area. This would remove almost half of this field (the western half) and a portion of the field to the south. This area has been subject to geophysical survey which identified a number of potential archaeological features particularly to the east of the site. However, none of these have been tested by excavation and the southern field remains unevaluated. The scheme would therefore have a *Moderate Adverse* impact on the known archaeology.

Historic Buildings

2.6.16 There are no listed or historic buildings directly affected by the proposed development. All of the listed buildings lie outside the area of impact and as the proposed work comprises the upgrading of existing roads, changes are likely to be mostly minor despite the greater volume of traffic. In addition many of the villages are screened by existing mature vegetation from the main road.

Ratcliffe on Soar

2.6.17 There will be some slight impact on the settling of Holy Trinity Church and Manor Farm at Ratcliffe although these are already well screened by vegetation from the existing A453 and the effects will be minimal. The impact on the listed buildings is considered to be *Negligible*. Riverside Farm already lies close to the road and its setting is already compromised; however the road earthworks will be much closer to the building and the impact on its setting will be *Minor Adverse*.

Clifton Village and Conservation Area

2.6.18 The buildings and green at Clifton are already set within a busy modern landscape including the existing A453. However, there is to be substantial remodelling of the area at this junction and it will have some impact on the setting of the historic buildings, particularly the forge on the south side of the road. There is likely to be some impact on the setting of the buildings from temporary works during construction. The scheme will have a *Minor Adverse* impact on the setting of the buildings (see also the discussion of this area in historic landscapes).

Barton in Fabis Village

2.6.19 None of the buildings are directly affected by the scheme. The SM Dovecote also lies at some distance from the road. The new road runs south of the existing A453 at this point and will have no impact on the setting of the SM or most of the buildings. The impact will be therefore be *Negligible*.

Thrumpton Village and Conservation Area

2.6.20 The village is mainly unaffected by the development. Most of the listed buildings lie away from the roadline and as the scheme is expanding on the existing road, there is likely to be very little change to their setting (*Negligible* impact). There will be slightly more of an impact on the three buildings of local interest which lie closer to the road within the Conservation Area. The impact on these is likely to be *Minor Adverse*.

Other Buildings

2.6.21 Winking Hill Farm lies close to the existing junction and its setting is already compromised. However, there is considerable alteration to the junction which will bring the road closer to the building. The impact will therefore be *Minor Adverse*.

Historic Landscapes

General – Online Widening

2.6.22 Most of the proposed changes involve the online widening of the existing A453. Given that a main road already severs the historic landscape, it is unlikely that the proposed scheme will affect the character greatly. The landscape elements are mainly large units that will not be unduly affected by the extra landtake and modifications associated with the scheme. The smaller units of woodland, and older field patterns identified will not be affected, with the exception of the area around Barton Lane which is already disturbed by a crossroads and planting to the north. There will be no extra severage of land west of Barton Lane, and the offline section of the road runs through a large unit of modified land, although there will be some visual and aural impact. The magnitude of impact is therefore considered to be *Minor Adverse*.

Offline Route -

Current Woodlands

2.6.23 The offline section of the proposed widening scheme will cut through the southern part of Drift Lane Plantation. This would sandwich the remaining wooded area between two roads. The reduction in size could lead to a change in land use and management, changing the character of this area. The magnitude of impact is therefore considered to be *Moderate Adverse*.

Semi-Regular Fields

2.6.24 There would be significant alteration of the Junction at Barton Lane and the A453. Although the north-western part of this landscape type will remain unaltered (this is currently wooded and grassed areas), the new road will run through the south-east section along with a new local access underpass. This will have a direct effect on the coherence of this section of landscape including the loss of boundaries. There

would also be some visual and noise impacts. Temporary effects are likely to include noise and visual impacts during construction. The magnitude of impact is considered to be *Moderate Adverse.*

Modern, Modified Field Patterns

2.6.25 The new road will cut through approximately 2.5km of this landscape with a roundabout at the northern end. However, there is already a main road running through the landscape (with severe congestion causing long tailbacks at certain times of the day). There will be severance of a large section of land between the current A453 and the new road, however the size of the severed fields means they are likely to remain in agricultural use. Four boundaries will be severed. Although the general character of the majority of this landscape will remain the same a localised area including the area around the roundabout will be altered.

2.6.26 The nature of the view from the A453 is also likely to be changed. The magnitude of impact is therefore considered to be *Moderate Adverse*.

Clifton Pastures and Barton Moor

2.6.27 There will be no direct physical threat to Clifton Pasture or Barton Moor. The main impact is likely to be the view to Mill Hill from the footpath. There could also be some noise effects. At the moment the (often stationary) traffic on the current A453 is highly visible on the skyline. The proposed scheme would reduce the amount of traffic on this road drastically. In addition the new road would be set against the backdrop of the landscape and partially landscaped to blend in to the scenery, much more so than the existing road. The possibility of an interpretation board on the A453 would enable people looking out onto this area to appreciate the history of, and reasons for the landscape. Although the views would be different this would not necessarily affect the character of this landscape. The magnitude of impact is therefore considered to be *Minor Adverse.*

Clifton Conservation Area, Park and Village Green

2.6.28 The proposed development will have no impact on the registered park to the north. The north-west area and the green will also remain mostly untouched, although there will be some minor works to improve existing roads and paths. The main area of impact lies south-east on the very edge of the Conservation Area, around the existing junction. There will be an aural and visual impact on the landscape character of the area, particularly during construction, however the village already exists within a busy, modern and continually evolving landscape. The impact is therefore *Minor Adverse*.

Thrumpton Park

2.6.29 Most of the road widening in this area lies to the south and there will be *No Change* to this landscape character type.

Ratcliffe on Soar Power Station

2.6.30 As the Power Station is currently in use and therefore changing and evolving with the modern landscape, there will be *No Change*.

Operational Phase

2.6.31 There should be no extra direct impact on the cultural heritage during operations. However, certain impacts are likely to be temporary in nature. These might include visual intrusion (e.g. the presence of construction works, plant and temporary structures), dust, noise and vibration, all of which might affect the settings of the built heritage. Most of the buried cultural heritage assets are unlikely to be affected.

2.7 Design and Mitigation Measures

Design Development

2.7.1 During the design phase of the project, consideration has been given to the need to modify the design in order to mitigate the potential effect on the cultural heritage. In particular care has been taken with the design of works close to the SM Roman Villa at Glebe Farm (Site 9) and around Barton Lane, the Roman/Saxon site near Long Lane (Site 3) and the village green at Clifton (Site 15).

Historic Buildings

2.7.2 No historic buildings would be directly affected by the scheme, although there will be a slight visual and aural impact on the setting of some buildings and their conservation areas. However, their settings are already compromised by the existing main road. No archaeological mitigation is required. The use of screening and landscaping to reduce noise and visual effects, particularly during construction, are outlined in Section 2 Parts 7 and 5 respectively of this ES.

Historic Landscapes

General Online Section

2.7.3 There will be no extra severage of land west of Barton Lane. The proposed road is additional to an existing main road and as such will have little additional effect on the landscape character of this area. The use of screening and landscape measures to reduce noise and visual effects on the historic landscapes and to improve and add to existing hedgerows are outlined in Section 2 Parts 7 and 5 respectively of this ES.

Offline Section

2.7.4 To the east, the offline section of the road runs through a large unit of land that has already been recently modified. Mitigation will include planting to replace the trees lost from Drift Lane Plantation. The new junction at Barton Lane will have a direct effect on the coherence of this section of landscape. The remaining boundaries will be retained to keep the field pattern, and further planting will screen the road and underpass from the remaining section of the landscape. The de-trunking of the A453 to a local road would return the north-west section to a more rural environment making it less vulnerable to change in the future.

2.7.5 In addition, detrunking of the A453 will allow greater public access to the landscape and the views across the lowland area to the east which is currently only possible while travelling by vehicle on the A453. Local travel is also likely to be easier and less busy. The views from vehicles on the new road to the south-east are likely to remain similar; however, those from the current A453 will include the new road. This will be partly screened by hedgerow and tree planting on the western side to help blend it in. As one of the key characteristics of Mill Hill is the open views across to Clifton Pasture and Barton Moor, open areas to allow similar views will be built into the design. Consideration would be given to siting an interpretation board along the local route, which would help members of the public, who would be able to linger on a much safer stretch of road, to enjoy the view and to understand the history of the visible landscape.

2.7.6 The roundabout will be in a cutting to reduce the impact, and will be screened with planting. However, it will be lit which will affect the view of the landscape at night.

2.7.7 The character of the area to the south-east of the offline section and around the Mill Hill Roundabout will change due to development reducing the expanse of open land. However, as there are few boundaries, the landscape would remain predominantly open in nature. Planting as part of the road scheme would be in keeping with the current landscape – i.e. in small blocks or linear belts, which together with existing roadside hedgerows and the few field boundaries which remain might help to restore some of the early 19th century character to the area.

Clifton Village

2.7.8 Although the green itself would remain mostly intact, the setting and character of this small landscape unit could be affected. Careful consideration has therefore been given to the design and the use of landscaping to preserve the setting of the green and the character to the greatest possible extent. The current scheme has been designed to retain as much of the character of the green and old village by moving the road to the south-east leaving an extra strip of land along the south-east edge of the green. The inclusion of a new cycle path would separate the green from the road even further, and the current mature ash trees would continue to screen the north-east area from the road. It is suggested that the area around Clifton Green be fenced to shield the north-east area of the old village from the

works during construction. Special care should also be taken not to prevent access to the Green, damage it or occupy it during any works in the area.

Archaeological Remains

Aims and Objectives

2.7.9 The specific objective of the scheme is to reduce the effect upon the archaeological resource by providing a robust and suitable mitigation strategy. It is intended that the mitigation measures proposed for the scheme, will contribute to the value, understanding and dissemination of the cultural heritage. The mitigation strategy provides a comprehensive programme which will provide a full record of archaeological features within the scheme.

Research Aims

2.7.10 All mitigation work will be considered in light of the East Midlands Research Framework (Cooper ed. 2006). Potential research objectives that this scheme might contribute towards include;

Neolithic and Early Middle Bronze Age (Clay 2006)

2.7.11 The development of ceremonial monuments and their environs – the study area contains several prehistoric ceremonial landscapes and the scheme may uncover archaeological assets associated with these.

Late Iron Age (Willis 2006)

2.7.12 Evaluations suggest there are Iron Age settlements that could be affected by the scheme. The character of aggregated settlements and the reasons for their emergence are an agreed regional priority. The comparison of such sites with similar complexes in the Trent Valley and Northamptonshire and their location and intra-site spatial arrangements is also a regional research aim. Information on the sequence and chronology of boundaries and their relationship to settlements may be recovered and palaeoenvironmental evidence could provide information on agricultural practices and land use. Artefacts can provide evidence for evidence for craft industry and exchange across broad landscape areas.

The Roman Period (Taylor 2006)

2.7.13 There are several Roman sites within the study area including a villa close to the roadline and excavations might contribute to knowledge on rural settlement, landscape and society. Artefacts could identify trade links and economy. The relationship between villas at Glebe Farm and Lockington and their interaction with small towns such as at Redhill was identified in a recent assessment as of future research importance (Palfreyman et al 2003).

Anglo-Saxon Period (Vince 2006)

2.7.14 There is at least one Saxon site that will be affected by the scheme. This could contribute to research on the Roman – Anglo Saxon transition. Importantly the discovery of large amounts of slag at the site might suggest an industrial use which could be used as a comparison to other regional sites.

2.7.15 These research aims have been identified based on the current state of knowledge within the area of the scheme. Further research aims will be considered as new information comes to light.

Pre-Construction Mitigation

2.7.16 Archaeological and cultural heritage 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 (PPG 16). Where there are overriding factors or where preservation in-situ is not feasible, appropriate investigation to achieve preservation by record may be an acceptable alternative (HA208/07, Annex 5, 5.11.2). Mitigation is proposed for 12 sites.

2.7.17 Although all known design details have been included, there are likely to be areas of groundworks not yet assessed by this report (e.g. compounds, flood compensation areas, haul roads, storage areas, etc.). Mitigation for these areas should be considered once the final details are available.

2.7.18 Several mitigation strategies were discussed with the planning archaeologists for Nottinghamshire and Leicestershire and each site was looked at on a case by case basis. Given the amount of evaluation that has already been undertaken to inform the project, the preferred mitigation scheme for the majority of known sites is to Strip, Plan and Excavate prior to the start of construction on a number of identified sites. Full archaeological excavation is proposed at one site – the enclosure complex at Clifton (Site 28). The remaining mitigation strategies involve various levels of watching brief during construction.

Strip, Plan and Excavate

2.7.19 This method is a flexible approach that involves topsoil over an area being stripped under archaeological control to expose archaeological remains. The features are then characterised and the scope of work, time and resources required agreed on site with the planning archaeologist and immediately implemented. This work would be completed before construction commences in that area.

2.7.20 Strip, plan and excavate is proposed for parts of Sites 1, 2, 3, 7, 9, 12 & 29. Provision is also required for excavation and appropriate sampling/dating of the palaeochannel at Site 3.

Full Excavation

2.7.21 This involves the targeted excavation of an area of known archaeology. The excavation would be designed to excavate and record archaeological remains within the defined area to achieve specific archaeological objectives. This work will be completed prior to the start of construction.

2.7.22 Full excavation is proposed for Site 28.

Operational Phase Mitigation

Detailed Watching Brief with Contingency

2.7.23 This involves archaeological attendance during construction phase on identified sections of the route, where there is a risk of archaeological deposits being found. If archaeological remains are identified, the contingency will be used to sample excavate and record the deposits. A contingency for the recovery of possible palaeoenvironmental material should also be included for Site 4. Although this will take place during construction and is not designed to hold up the construction process, enough time will need to be allowed in the programme to deal with any archaeological discoveries.

2.7.24 A detailed watching brief is proposed for parts of sites 3, 4, 9, 11, 15 & 27, and across the offline section of the scheme that is not covered by other mitigation.

Balancing Ponds

2.7.25 None of the balancing ponds will have a direct effect on any known archaeology. However, many of them lie close to known sites or are in unevaluated areas. A watching brief during their construction will be required with adequate provision for any recording that may be necessary. The balancing pond to the north-east of the SM at Glebe Farm lies next to an area marked for strip, plan and excavate. Given the presence of archaeology close by and that the area for the pond is unevaluated, the strip, plan and excavate area could be widened to include the pond.

Urban Compound Area

2.7.26 Two fields north of the Crusader Island are proposed for an urban compound area. There are no known archaeological sites here. However, there have been no archaeological investigations here and a watching brief during groundworks for construction of the compound may be required.

Standard Watching Brief

2.7.27 This assessment has been completed only for known archaeological sites affected by the proposed routes. The study area is part of a large archaeological landscape utilised from the prehistoric period onwards. The archaeological sites identified here, as well as being important in their own right, also exist within a much wider

context. In particular the artefact scatters and cropmark evidence suggests that the whole of the study area was utilised during prehistoric and Roman 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. The presence of alluvium in the area means that archaeological deposits may be buried and not visible on the surface.

2.7.28 A standard watching brief during groundworks for all previously undisturbed areas, not already mitigated for is suggested in order to record any unforeseen archaeological deposits. 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. The watching brief will be intermittent depending on the nature of the ground and work involved and is designed to allow isolated minor archaeological features and unexpected discoveries to be recorded.

Topsoil Storage

2.7.29 There are several areas of topsoil storage across the scheme. However as these all avoid the main areas of archaeological deposits and will not involve any removal of topsoil the impact will be minimal. There may be some impact on the setting of the landscape and structures during construction (e.g. at Ratcliffe on Soar, Winking Hill Farm, buildings at Thrumpton and Clifton) and appropriate management and screening will be required. Any impact will be temporary.

Archaeological Methodology and Monitoring

2.7.30 All work will be undertaken in accordance with the Institute of Field Archaeologists' *Code of Conduct, Standards and Guidance for Archaeological Excavations and Standards and Guidance for Archaeological Watching Briefs*.

2.7.31 Written Schemes of Investigation (WSI) will be produced in advance for each phase of work and will be discussed with the relevant Planning Archaeologist. The archaeological objectives and strategy will be continuously reviewed in light of the archaeological remains uncovered. All work will be monitored internally by the archaeological contractor and the County Planning Archaeologists.

2.8 Magnitude of Impacts

2.8.1 This section summarises the residual impacts of the proposed development on cultural heritage resources taking into account the mitigation strategies outlined above. There will be *No Change* to Sites 5, 6, 8, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26. The impacts are summarised in Tables 2.2.3, 2.2.4 & 2.2.5.

Direct Impacts

2.8.2 The worst impact is the physical destruction of the archaeological resource (HA 208/07 Annex 5, para. 5.12.5). There are direct impacts that will damage archaeology on Sites 1, 2, 3, 4, 7, 9, 11, 12, 15, 27, 28, & 29.

Moderate Adverse Impacts

Site 7 Cropmark Enclosures South of Brands Hill

2.8.3 The identified cropmark would be completely destroyed by the proposed scheme. The mitigation strategy of a controlled strip of the area would identify, sample and record any features (Strip, map and excavate), destroyed and would therefore have a *Moderate Adverse* impact.

Site 28 Enclosure at Grove Farm, Clifton

2.8.4 The extent of the enclosure and associated features within the roadline has been mapped by the geophysical survey. Trenching confirmed the location and Romano-British date of the features. Although the site will be completely destroyed by the scheme, the mitigation strategy comprises full excavation to preserve the site by record reducing the impact to *Moderate Adverse*.

Minor Adverse Impacts

Site 1 Prehistoric Artefact Scatter and Features West of Long Lane

2.8.5 The proposed mitigation strategy of strip, plan and excavate would record the known and any other features reducing the *Minor Adverse* impact.

Site 2 Prehistoric Features West of Long Lane

2.8.6 As no excavation has been undertaken in the area, the proposed mitigation strategy includes a strip, plan and excavate programme. Only a small proportion of the features would be affected and the impact would remain *Minor Adverse*.

Site 3 Iron Age, Roman and Saxon site

2.8.7 The geophysical survey and trial trenching indicate that there are likely to be Saxon and possibly earlier features at this site that would be destroyed by the scheme. The proposed mitigation strategy comprises strip, plan and excavate, combined with a watching brief across the areas of disturbance in case they obscure archaeological deposits, with a contingency for excavation and recording. This would reduce the impact to *Minor Adverse*.

Site 4 Romano-British Finds on the River Soar/Palaeochannels

2.8.8 Further information on construction methods in this area will be required before a full mitigation strategy can be formulated. However, a watching brief to cover the stripping of any ground or trenching in areas where there could be palaeo-environmental deposits with a contingency for the recovery and processing of such deposits will reduce the impact to *Minor Adverse*.

Site 9 Glebe Farm Roman Villa and Cropmarks

2.8.9 Geophysical survey and trial trenching suggest there are features which would be destroyed, however, these lie away from the villa and appear to be mainly truncated gullies and ditches with few finds. Proposed mitigation strategies include strip, plan and excavate, with a watching brief on other areas where previously undisturbed ground is affected and will reduce the impact to *Minor Adverse*.

Site 12 Features at Drift Lane Plantation

2.8.10 Although trial trenching failed to locate any features, the cropmark location could be inaccurate. The mitigation strategy therefore includes strip, plan and excavate of the area reducing the impact to *Minor Adverse*.

Site 15 Clifton Village and Green

2.8.11 Any features here are likely to be badly truncated and disturbed. A watching brief with contingency for excavation and recording would be sufficient to deal with any unexpected features and reduce the *Minor Adverse* impact.

Site 27 Ring Ditch Cropmark

2.8.12 Although no archaeological features were identified by the trial trenching within the roadline, the farm access road will run close to the ring ditch. A watching brief with contingency will reduce the *Minor Adverse* impact.

Site 29 Features West of Dowell's Barn

2.8.13 The proposed flood compensation area would destroy any archaeology in this area. A programme of archaeological work such as strip, plan and excavate or depending on the programme, evaluation followed by further contingency work would reduce the impact to *Minor Adverse.*

Negligible Adverse Impacts

Site 11 Cropmarks at Mill Hill

2.8.14 Given the lack of features identified during trial trenching a watching brief with a contingency to excavate and record any further features identified is considered significant mitigation to reduce the impact to *Negligible*.

Other Impacts

2.8.15 Alterations to the existing road and the new offline section will have a direct impact on the setting of a number of historic buildings and the historic landscape.

Historic Buildings

2.8.16 There will be no physical damage to any listed or historic buildings as a result of the proposed development. All of the listed buildings lie outside the area of the new road lines and as the proposed work adjacent to these receptors comprises the upgrading of existing roads, changes are likely to be mostly minor despite the greater volume of traffic. In addition many of the villages are screened by existing mature vegetation from the main road. Mitigation will include screening and landscaping to reduce noise and visual effects and are outlined in Section 2 Parts 7 and 5 respectively of this ES.

2.8.17 There will be a *Minor Adverse* Impact on the setting of listed buildings at Clifton Village as well as other buildings in Ratcliffe, Clifton, Thrumpton and Winking Hill Farm.

2.8.18 There will be a *Negligible* impact on listed buildings at Ratcliffe on Soar, Barton in Fabis and Thrumpton and on other buildings in Barton in Fabis.

Historic Landscapes

2.8.19 Given that a main road already runs through and severs the historic landscape it is unlikely that the proposed scheme will greatly affect the character of the adjacent landscape. In addition the landscape elements are mainly large units that will not be unduly affected by the extra landtake and modifications associated with the scheme. Mitigation will include sensitive road alignment and appropriate planting, as outlined in Section 2 Part 5 of the ES. The impact on the general landscape of the online section is *Minor Adverse*. The residual impacts on the Current Woodlands, Semi-regular fields and Clifton Pastures and Barton Moor, after mitigation will be *Minor Adverse.* Residual impacts on the Modern Modified Field Patterns will be *Moderate Adverse.*

Clifton Conservation Area, Park and Village Green

2.8.20 Although the park, northern area and the green will remain untouched, the character of this landscape particularly south of the road which includes the Forge and lies within the southern edge of the conservation area will be impacted by the new scheme. However the village already exists within a busy, modern and continually evolving landscape and the restructuring builds on existing road lines and the extra landtake is close to the existing road. Mitigation will include landscaping and is outlined in Section 2 Part 5 of the ES. There will be some slight visual and aural effects and the impact is therefore *Minor Adverse*.

Positive Effects

2.8.21 Although there can be no positive effects where there is a direct impact on archaeological features, discussion of the scheme has allowed for many of the archaeological sites to be avoided or the impact reduced through design changes. This is particularly true for the area around Site 9 (Glebe Farm SM Roman Villa), Site 3 (Saxon site) and Site 15 (Clifton Village). Impacts on the setting of historic buildings and the historic landscape have been reduced (although not removed) through screening and landscaping.

2.8.22 The part of the A453 bypassed by the proposed offline section will be de-trunked, that is it will become a local road in Local Authority control, which will return the area to the north-west to a more rural setting and help preserve the character of this area in the future. This will allow views down towards the open moorland without having to drive along a busy trunk road. Consideration will be given to siting an interpretation board here, subject to engineering and other safety considerations, to help people understand the history of the landscape before them.

2.8.23 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.

Negative Effects

2.8.24 Cultural Heritage is a finite resource which once altered or removed cannot be replaced. The scheme would have negative effects wherever there are direct impacts on archaeological remains. There are also negative impacts on the settings of historic buildings and historic landscapes.

2.9 Significance of Effects

2.9.1 The significance of the effects of the scheme combines the value of the resource and the magnitude of the impact (incorporating the mitigation strategy) for each cultural heritage asset. The significance is assessed using judgements regarding value, magnitude of impact and significance of effect that are reasonable and balanced. A matrix is used as a check to ensure that these judgements are reasonable and balanced. The significance of effects on each Cultural heritage asset is summarised in Tables 2.2.3, 2.2.4 & 2.2.5 below.

Archaeological Remains

2.9.2 There will be *Neutral* effects on Sites 5, 6, 8, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26.

2.9.3 After mitigation there will be *Slight Adverse* effects on Sites 1, 2, 3, 4, 11, 12, 15, 27, 29.

2.9.4 After mitigation there will be *Moderate Adverse* effects on Sites 7, 9, 28.

Historic Buildings

2.9.5 There will be a *Neutral* effect on non-listed buildings in Barton in Fabis.

2.9.6 There will be a *Slight Adverse* effect on the listed buildings in Ratcliffe on Soar, Clifton, Barton in Fabis and Thrumpton. There will also be a *Slight Adverse* effect on non-listed buildings of local interest in Ratcliffe on Soar, Clifton and Thrumpton.

Historic Landscapes

2.9.7 There will be a *Neutral* effect onThrumpton Park and Ratcliffe Power Station.

2.9.8 There will be a *Slight Adverse* effect on the general online historic landscape, the offline historic landscape, and on Clifton village.

Significance of Effects on the Overall Cultural Heritage Resource

2.9.9 This section assesses the significance of effects, 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 (see paragraph 5.41, Page 5/6 of HA208/07).

2.9.10 The assessment of the Archaeological Remains sub-topic is that there will be a *Moderate Adverse* effect on the archaeology after mitigation.

2.9.11 The assessment of the Historic Buildings sub-topic is that there will be a *Slight Adverse* effect on the setting of the buildings after mitigation.

2.9.12 The assessment of the Historic Landscapes sub-topic is that there will be a *Slight Adverse* effect on the historic landscape, of both the online and offline sections, after mitigation.

2.9.13 The overall assessment of the significance of effects on cultural heritage assets is that after mitigation there will be a *Moderate Adverse* effect.

Table 2.2.3 : Summary of Assessment of Archaeological Remains

Site No:	Description	Previous work (for the scheme)	Value	Impact	Mitigation	Residual Impact	Significance of Effects
1	Flint scatter and features west of Long Lane	Geophysics / Fieldwalking	Medium	Minor Adverse	Strip, plan and excavate	Minor Adverse	Slight Adverse
2	Prehistoric features west of Long Lane	Geophysics	Medium	Minor Adverse	Strip, plan and excavate	Minor Adverse	Slight Adverse
3	Iron Age, Roman, Saxon Site	LIDAR analysis Fieldwalking / Geophysics / Trial trenching	High	Moderate Adverse	Strip, plan and excavate / Watching brief with contingency	Minor Adverse	Slight Adverse
4	Romano-British finds on the River Soar/ Palaeochannels	LIDAR analysis	Medium	Moderate Adverse	Watching brief with contingency	Minor Adverse	Slight Adverse
5	Roman/Medieval pottery	None	Low	No Change	None	No Change	Neutral
6	Roman Settlement and road at Long Lane	LIDAR analysis Geophysical survey	Medium	No Change	None	No Change	Neutral
7	Cropmark enclosures south of Brands Hill	Fieldwalking / Geophysical survey	Medium	Major Adverse	Strip, plan and excavate	Moderate Adverse	Moderate Adverse
8	Bronze Age flint/ Cropmark Enclosure west of Barton Lane	Geophysical Survey	Medium	No Change	None	No Change	Neutral
9	Glebe Farm Roman villa and cropmarks	Fieldwalking / Geophysical Survey / Trial trenching	High	Moderate Adverse	Strip, plan and excavate / Watching brief with contingency	Minor Adverse	Moderate Adverse
10	Earthworks and Roman finds at Winking Hill	None	Medium	No Change	None	No Change	Neutral
11	Cropmarks at Mill Hill	Fieldwalking / Geophysical Survey / Trial trenching	Low	Negligible	Watching brief with contingency	Negligible	Slight Adverse
12	Features at Drift Lane Plantation	Geophysical Survey	Medium	Moderate Adverse	Strip, plan and excavate	Minor Adverse	Slight Adverse
13	Lynchets and Iron Age fortifications, Brands Hill	None	High	No Change	None	No Change	Neutral
14	Cropmarks between Clifton and Fareham Brook	Geophysics / Fieldwalking	Medium – High	No Change	None	No Change	Neutral
15	***Clifton Village and Green – archaeological remains***	***Geophysical Survey***	***Medium***	***Minor Adverse***	***Watching brief with contingency***	***Minor Adverse***	***Slight Adverse***

Site No:	Description	Previous work (for the scheme)	Value	Impact	Mitigation	Residual Impact	Significance of Effects
16	Barton in Fabis Village – archaeological remains	None	Medium	No Change	None	No Change	Neutral
17	Thrumpton Village – archaeological remains	None	Medium	No Change	None	No Change	Neutral
18	Red Hill Roman Complex	None	High	No Change	None	No Change	Neutral
19	Flint scatters	None	Medium	No Change	None	No Change	Neutral
20	Flint scatters	None	Medium	No Change	None	No Change	Neutral
21	Lockington villa	None	High	No Change	None	No Change	Neutral
22	Cropmarks and flint scatters	None	Medium	No Change	None	No Change	Neutral
23	Ring Ditch Cropmark	None	Medium	No Change	None	No Change	Neutral
24	Earthwork and flint scatter	None	Medium	No Change	None	No Change	Neutral
25	Cropmarks and finds at Wright's Hill	None	Medium	No Change	None	No Change	Neutral
26	Cropmarks near Thrumpton	None	Medium	No Change	None	No Change	Neutral
27	Ring ditch cropmark at Junction 24	None	Medium	Minor Adverse	Watching brief with contingency	Minor Adverse	Slight Adverse
28	Enclosures south of Clifton	Geophysics	Medium	Major Adverse	Full Excavation	Moderate Adverse	Moderate Adverse
29	Features west of Dowell's Barn	Geophysics	Low	Moderate Adverse	Evaluation or Strip, Plan & Excavate	Minor Adverse	Slight Adverse
	Bold Italic = Not counted towards the final score for this sub-topic to avoid double counting						

Table 2.2.4 : Summary of Assessment of Historic Buildings

Site Description	Value	Impact	Mitigation	Residual Impact	Significance of Effects
Ratcliffe on Soar - Listed buildings	High	Negligible	None	Negligible	Slight Adverse
Ratcliffe on Soar - other buildings	Low	Minor Adverse	None	Minor Adverse	Slight Adverse
Clifton Village – Listed buildings and Conservation Area	High	Minor Adverse	None	Minor Adverse	Slight Adverse
Clifton Village – other buildings	Low	Minor Adverse	None	Minor Adverse	Slight Adverse
Barton in Fabis Village – Listed buildings	High	Negligible	None	Negligible	Slight Adverse
Barton in Fabis Village – other buildings	Low	Negligible	None	Negligible	Neutral
Thrumpton Village – Listed buildings and Conservation Area	High	Negligible	None	Negligible	Slight Adverse
Thrumpton Village – other buildings	Low	Minor Adverse	None	Minor Adverse	Slight Adverse
Winking Hill Farm	Low	Minor Adverse	None	Minor Adverse	Slight Adverse

Table 2.2.5 : Summary of Assessment of Historic Landscapes

Site Description	Value	Impact	Mitigation	Residual Impacts	Significance of Effects
General Historic Landscapes - Online	Low	Minor Adverse	Scheme alignment & characteristic planting	Minor Adverse	Slight Adverse
Offline Section – Current Woodlands	Low	Moderate Adverse	Scheme alignment & characteristic planting	Minor Adverse	Slight Adverse
Offline Section – Semi-regular Field Patterns	Low	Moderate Adverse	Scheme alignment & characteristic planting	Minor Adverse	Slight Adverse
Offline Section – Modern Modified Field Patterns	Low	Moderate Adverse	Scheme alignment & characteristic planting	Moderate Adverse	Slight Adverse
Clifton Pasture and Barton Moor	High	Minor Adverse	Scheme alignment & characteristic planting. Interpretation board?	Minor Adverse	Slight Adverse
Clifton Village Landscape	High	Minor Adverse	Scheme alignment & characteristic planting	Minor Adverse	Slight Adverse
Thrumpton Park	Medium	No Change	None	No Change	Neutral
Ratcliffe on Soar Power Station	Low	No Change	None	No Change	Neutral

2.10 Summary

2.10.1 Twenty-nine archaeological and heritage sites have been identified within the study area centred on the proposed route. Of these, twelve sites will be directly impacted by the proposed scheme. There will be a *Slight Adverse* effect on nine sites and a *Moderate Adverse* effect on three sites; Site 7 (cropmark enclosures south of Brands Hill), Site 9 (Glebe Farm Roman Villa SM) and Site 28 (enclosures south of Clifton) with an overall impact on archaeological remains of *Moderate Adverse.*

2.10.2 The scheme will have an indirect impact on historic buildings and historic landscapes. There would be a *Slight Adverse* effect on eight groups of historic buildings assets and *Slight Adverse* effects on six historic landscape assets.

2.10.3 The overall effect on the Cultural Heritage of the proposed road scheme is a *Moderate Adverse* effect.

2.10.4 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 full excavation of one site, strip, plan and excavation of six sites and various levels of watching briefs for the remainder, have been defined. This should ensure the preservation by record of the cultural heritage resources, both known and currently unknown, that will be disturbed by the construction.