

A47 Wansford to Sutton Dualling

Scheme Number: TR010039

Volume 6

6.1 Environmental Statement **Chapter 6 – Cultural Heritage**

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**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

A47 Wansford to Sutton
Development Consent Order 202[x]

ENVIRONMENTAL STATEMENT
Chapter 6 – Cultural Heritage

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6. Cultural Heritage

6.1. Introduction

- 6.1.1. Highways England (the Applicant) has submitted an application for a development consent order (DCO) for the A47 Wansford to Sutton Scheme (hereafter referred to as 'the Proposed Scheme'). The Proposed Scheme comprises the dualling of a section of the A47 between Wansford to Sutton; improvements to the A47 Wansford junction; creation of the A47 Sutton Heath roundabout to replace the Nene Way roundabout; associated side road alterations; and walking, cycling and horse-riding connections.
- 6.1.2. This section of A47 road is currently unable to cope with the high traffic volume and there are limited opportunities to overtake slower moving vehicles on the single carriageway. The Proposed Scheme aims to reduce congestion related delay, improve journey time reliability and increase the overall capacity of the A47. Full details of the Proposed Scheme are provided in Environmental Statement Chapter 2 (The Proposed Scheme) (**TR010039/APP/6.1**).
- 6.1.3. The key elements of the Proposed Scheme include:
- approximately 2.6km of new dual carriageway constructed largely offline of the existing A47, including the construction of two new underpasses
 - a new free-flow link road connecting the existing A1 southbound carriageway to the new A47 eastbound carriageway
 - a new link road from the Wansford eastern roundabout to provide access to Sacrewell Farm, the petrol filling station and the Anglian Water pumping station
 - closure of the existing access to Sacrewell Farm with a new underpass connecting to the farm from the link road provided
 - a new slip road from the new A47 westbound carriageway also providing access to the Petrol Filling station
 - a link road from the new A47 Sutton Heath roundabout, linking into Sutton Heath Road and Langley Bush Road
 - new junction arrangements for access to Sutton Heath Road and Langley Bush Road
 - closure of the existing accesses to the A47 from Sutton Heath Road, Sutton Drift and Upton Road
 - new passing places and limited widening along Upton Drift (also referenced as Main Road)
 - new walking and cycling routes, including a new underpass at the disused railway
 - new safer access to the properties on the A1, north of Windgate Way

- installation of boundary fencing, safety barriers and signage
- new drainage systems including:
 - two new outfalls to the River Nene
 - a new outfall to Wittering Brook
 - extension of the A1 culvert at the Mill Stream
 - realignment and extension of the A47 Wansford
 - compensatory flood storage
 - drainage ditch interceptors
 - new attenuation basins, with pollution control devices, to control discharges to local watercourses
- River Nene compensatory flood storage area
- works to alter or divert utilities infrastructure such as electricity lines, water pipelines and telecommunications lines
- temporary compounds, material storage areas and vehicle parking required during construction
- environmental mitigation measures

6.1.4. Under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, the Proposed Scheme is an Environmental Impact Assessment (EIA) development and as such requires submission of an Environmental Statement (ES) presenting the likely significant environmental effects of the Proposed Scheme.

6.1.5. As part of the Environmental Impact Assessment (EIA) process, this Environmental Statement (ES) chapter reports the potential significant effects on cultural heritage as a result of the Proposed Scheme. This assessment includes a review of the existing baseline conditions, consideration of the potential impacts, identification of proportionate mitigation and enhancement and describes predicted significant residual effects.

6.1.6. The approach to this assessment follows the Scoping Report (February 2018, **(TR010039/APP/6.5)**) and subsequent agreed Scoping Opinion (March 2018, **(TR010039/APP/6.6)**). The assessment has been undertaken in combination with the most up to date standards in the Design Manual for Roads and Bridges (DMRB); LA 104 Environmental assessment and monitoring (revision 1, August 2020), and LA 106 Cultural heritage assessment (revision 1, January 2020).

6.1.7. The main chapter text is supported by the following EA Appendices:

- Appendix 6.1 **(TR010039/APP/6.3)** – Cultural Heritage Baseline. A detailed description of baseline information gathered to date, including assessment of archaeological potential, contribution of setting to value / significance and of the value / significance of all identified heritage assets

- Appendix 6.2 (**TR010039/APP/6.3**) – Wansford to Sutton Dualling Geophysical Survey (WYAS 2018. Report No: 3135)
- Appendix 6.3 (**TR010039/APP/6.3**) – Geophysical and Metal Detector Survey (Magnitude Surveys 2020)
- Appendix 6.4 (**TR010039/APP/6.3**) – Archaeological observation during geotechnical investigations (MOLA 2018. Report No: 18/149)
- Appendix 6.5 (**TR010039/APP/6.3**) – Geophysical survey of the scheduled monument (Headland Archaeology 2017. Report No: WSRS/01)
- Appendix 6.6 (**TR010039/APP/6.3**) – Archaeological trial trenching survey report (Cotswold Archaeology 2020)
- Appendix 6.7 (**TR010039/APP/6.3**) – Former Wansford Road Station Building Advice Report (Historic England 2018)

6.2. Competent expert evidence

- 6.2.1. This assessment has been undertaken by a heritage consultant who holds corporate membership with the Chartered Institute for Archaeologists (ACIfA). The consultant has 5 years of experience undertaking heritage assessments for highways schemes throughout the UK and has used this knowledge and professional judgement to undertake this assessment. Technical review of this assessment was undertaken by a senior heritage consultant who has over 14 years of professional heritage experience.
- 6.2.2. The consultants have used their knowledge and professional judgement in identifying the likely significant impacts associated with the Proposed Scheme and providing technical guidance through the assessment process.

6.3. Legislation and policy framework

- 6.3.1. The relevant legislative and planning context for cultural heritage is presented below.

National legislation and policy

- 6.3.2. The overarching legislation and policy relating to the historic environment in England and relevant to this heritage assessment of the Proposed Scheme are:
- The Ancient Monuments and Archaeological Areas Act 1979, which provides legal protection for areas of national archaeological importance as well as setting out guidelines for the selection of sites for inclusion in the protected schedule. Separate scheduled monument consent under the 1979 Act is not a requirement (as a DCO can authorise works to a scheduled monument under the Act).

- The Planning (Listed Buildings and Conservation Areas) Act 1990, which provides legal protection for buildings recognised to be of special architectural or historic interest and are subject to additional controls over demolition and alteration. Section 1 of the Act requires the Secretary of State to compile and maintain lists of buildings of special architectural or historic interest. The principal statutory duty under the Act is to preserve the special character of heritage assets, including their setting.
- The Treasure Act (1996) defines 'Treasure' as any object that is at least 10% gold or silver, associated with coins or groups of coins which are over 300 years old, objects formerly classed as 'treasure trove' (i.e. deliberately deposited items with a high content of gold or silver) and any objects found in association with the above. Any find of 'Treasure' must be reported to the local Coroner.
- Under Section 25 of the Burial Act (1857), it is generally a criminal offence to remove human remains from any place of burial without an appropriate licence issued by the Ministry of Justice (MoJ), although recent legislative changes indicate that some cases are exempt from this requirement.
- Hedgerow Regulations (1997) A local authority can prohibit the removal of an 'important' hedgerow. Hedgerows can be considered important on grounds of historical or archaeological value or association in line with following criteria:
 - Marks a pre-1850 parish boundary (Criterion 1)
 - Physically incorporates or is part of a known and listed heritage asset; where the hedgerow is a contemporaneous or related to part of that heritage asset (Criterion 2 & 3)
 - Marks the boundary of, or is associated with, a pre-1600 estate or manor (Criterion 4)
 - Is part of a pre-Parliamentary Inclosure field system (i.e. that it is recorded before 1845 on any Tithe, Estate or Ordnance Survey map) (Criterion 5)

National Policy Statement for National Networks (NPS NN, 2014)

- 6.3.3. The *National Policy Statement for National Networks* (NPS NN, 2014) sets out guidance concerning infrastructure projects. Of relevance to this assessment is Section 5: The historic environment, which addresses impacts to heritage assets and the conservation and enhancement of the historic environment. The statement sets out requirements for the applicant's assessment and the Secretary of State's responsibilities when dealing with planning proposals which have the potential to impact on cultural heritage assets. The statement emphasises the importance of balancing the need for the conservation of heritage assets with the desirability of new development.

- 6.3.4. Paragraph 5.131 states “Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional”.

National Planning Policy Framework (NPPF, 2019)

- 6.3.5. Of relevance to the Proposed Scheme are paragraphs 188, 189, 190, 192, 193, 194, 195, 196, 197 and 199 of the NPPF. The framework sets out the local planning authority’s responsibilities when dealing with planning proposals which have the potential to impact heritage assets. These policies emphasise the importance of balancing the need for the conservation of heritage assets with the desirability of new development.
- 6.3.6. Although the Proposed Scheme will not be subject to the local authority planning process, these policies represent best practice when dealing with the cultural heritage resource.
- 6.3.7. The policy framework (para 195) goes on to state that *‘where proposed development will lead to substantial harm to or total loss of significance of a designated asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss’*.
- 6.3.8. The level of impact on an asset which could constitute substantial harm is set out in the National Planning Practice Guidance (NPPG) (2014), paragraph 18, which states that *‘in general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset’s significance rather than the scale of the development that is to be assessed’*. It goes on to say that *‘while the impact of total destruction is obvious, partial destruction is likely to have a considerable impact but, depending on the circumstances, it may still be less than substantial harm or conceivably not harmful at all... However even minor works have the potential to cause substantial harm’*.
- 6.3.9. It should be noted that less than substantial harm can still be significant, and any harm should be taken into consideration when assessing whether the Proposed

Scheme should be allowed. The NPPF (paragraph 16) states: ‘*where a development proposal will lead to less than substantial harm to the significance of the designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use*’.

Local planning policies

Peterborough Local Plan (as adopted) Sustainability Appraisal – Final Report (Peterborough City Council 2019)

6.3.10. The Peterborough Local Plan Sustainability Appraisal contains the following policies relevant to cultural heritage:

- Policy LP16 Urban Design requires proposals to demonstrate that they respect and respond appropriately to historic and built assets.
- Policy LP19 The Historic Environment recognises the importance of the historic environment and seeks to protect, conserve and enhance Peterborough’s heritage assets and their settings. Any development proposal that would directly affect any heritage asset and/or its setting, must be accompanied by a heritage statement.

Huntingdonshire Local Plan (Huntingdonshire District Council 2019)¹

6.3.11. The Huntingdonshire Local Plan contains the following heritage policy:

6.3.12. Policy LP 34 places weight on conserving heritage assets and their settings. The policy requires proposals to assess the potential for adverse impacts on the historic environment and measures for preventing or mitigating effects as well as any identifying ways in which the proposal could make a positive contribution to affected heritage assets and their settings.

6.4. Methodology

6.4.1. The assessment has been undertaken in accordance with DMRB LA 106 and has considered effects on designated and non-designated heritage assets. These assets include: scheduled monuments, conservation areas, registered parks and gardens, registered battlefields, listed buildings, non-designated locally recorded historically important buildings and landscapes, locally important buildings and structures identified during survey work, and non-designated below ground archaeological remains.

6.4.2. In addition to LA 106, the following guidance has been used to inform this assessment:

¹ Whilst the Proposed Scheme is located within the Peterborough City Council area, the study area for Cultural heritage includes areas within Huntingdonshire District Council.

- Chartered Institute for Archaeologists (CIfA) Standard and guidance for historic desk-based assessment (CIfA 2017)
- Conservation Principles, Policies and Guidance (Historic England 2008)
- Design Manual for Roads and Bridges (DMRB), LA 104 Environmental assessment and monitoring
- Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking (Historic England 2015)
- Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (Historic England 2017)
- Statements of Heritage Significance: Analysing Significance in Heritage Assets Historic England Advice Note 12 (Historic England 2019)

- 6.4.3. Temporary and permanent construction and operational effects on heritage assets have been considered in this assessment. Temporary effects relate to setting effects from construction-related activities. Permanent effects can be either physical effects on the heritage asset or effects on their setting.
- 6.4.4. All heritage assets affected by the Proposed Scheme are listed in ES Appendix 6.1 (**TR010039/APP/6.3**) with an assessment of their heritage value, impact magnitude and significance of effect. This appendix also provides the historic background necessary to place the assessments in context.
- 6.4.5. The results of site visits, geophysical survey and trial trenching have been received and used to inform the assessment of archaeological potential within the Proposed Scheme boundary.
- 6.4.6. The methodology was presented within Chapter 6 of the EIA Scoping Report (2018) (**TR010039/APP/6.5**). A schedule of responses detailing how each of the Scoping Opinion comments has been considered as part of this chapter is contained within Appendix 4.1 (**TR010039/APP/6.3**).
- 6.4.7. Changes to DMRB standards in 2019 since the date of scoping did not significantly affect the methodology as presented within the EIA Scoping Report (2018) (**TR010039/APP/6.5**).

Update to standards and scope of assessment

- 6.4.8. Following the Scoping Report (**TR010039/APP/6.5**), an update to DMRB standards was published in 2019 and updated in 2020. The scope of this assessment has been reviewed and changed to reflect the most up to date standards in DMRB LA 106 (Highways England 2020).

- 6.4.9. Table 6-1 (Summary of proposed scope) sets out the proposed scope for further assessment in the ES which was originally used in the scoping assessment to determine the proposed scope of the heritage assessment. Where the response to one or more of the scoping assessment questions is 'yes', further assessment shall be undertaken.

Table 6-1 Summary of proposed scope

Scoping question	Comment	Scope in?
Is any designated or other cultural heritage resource in the area within the Proposed Scheme boundary or outside the boundary but still potentially physically affected by it?	Statutory and non-statutory sites recorded within the Proposed Scheme boundary.	Yes
Is the setting of any designated or other cultural heritage resource in the area within the Proposed Scheme boundary, within the zone of visual influence or potentially affected by noise?	Designated and non-designated assets have settings that include or partially include the area within the Proposed Scheme boundary, ZTV and / or is potentially affected by noise.	Yes
Is there new land-take associated with the Proposed Scheme?	The Proposed Scheme boundary has new land-take north of existing highway.	Yes
Could potential hitherto unknown archaeological remains be concealed?	Potential archaeological remains are indicated in the areas within the Proposed Scheme boundary from findspots and cropmarks visible on aerial photos.	Yes

Consultation

- 6.4.10. Throughout 2018 and 2020, the Peterborough City Council archaeologist approved the scope of archaeological evaluation. In February of 2021, the Peterborough City Council archaeologist agreed the methodology for determining the study area. The Peterborough City Council archaeologist also agreed the general approach to impact assessment and mitigation set out below, subject to receipt of detailed scheme designs. In April of 2021, they agreed to the approach taken in respect of the proposed land-take within the scheduled monument boundary.
- 6.4.11. In February of 2021, the Peterborough City Council Conservation Officer has agreed the methodology for determining the study area. The Peterborough City Council Conservation Officer also agreed the general approach to impact assessment and mitigation for grade II listed buildings, conservation areas, locally listed buildings and non-designated built heritage set out below, subject to receipt of detailed scheme designs.
- 6.4.12. In February of 2021, Historic England agreed the methodology for determining the study area. Historic England also agreed the general approach to impact

assessment and mitigation for Scheduled Monuments and Grade I, II* and II assets set out below, subject to receipt of detailed scheme designs. Historic England expressed an interest in a non-designated asset (WAN1 Wansford Road Railway Station) and this is reflected in the assessment below. In April of 2021, they agreed to the approach taken in respect of proposed land-take within the scheduled monument boundary.

- 6.4.13. The conservation officers for Huntingdonshire District Council were contacted in February of 2021 but have been unable to respond.
- 6.4.14. All consultees have stated that they cannot make formal statements or agreements on these specific assessments prior to their formal consultation response, as they require the finalised designs and mitigation proposals. However, initial informal comments from all consultees have been incorporated into the descriptions and consideration of impacts below.
- 6.4.15. A detailed description of the consultation which has taken place can be found in ES Appendix 6.1 (**TR010039/APP/6.3**).

Data sources

- 6.4.16. The following baseline research has been undertaken for this assessment:
- Examination of the local, regional and national planning policies in relation to the historic environment.
 - A search of the National Heritage List for England (NHLE), maintained by Historic England, for the location and status of designated heritage assets (in the case of the Proposed Scheme these are scheduled monuments, registered parks and gardens, and listed buildings).
 - A search of the Peterborough and Cambridgeshire Historic Environment Record (HER) database for details of known undesignated heritage assets: archaeological sites and find spots, locally listed buildings and archaeological event location. This data was collected for a 1km radius around the Proposed Scheme boundary, as any effects on these types of asset beyond this distance are not considered potentially significant.
 - A walkover survey of the land within the Proposed Scheme boundary to examine the ground conditions and potential for previously unrecorded heritage assets.
 - Consultation of the webpages of Peterborough City Council and Huntingdonshire District Council for details of Conservation Areas and Historic Landscape Characterisation data.
 - An examination of relevant published and unpublished archaeological and historic documentary sources, for example journals and historic records.
 - An examination of topographical and geological data.

- A map regression exercise was undertaken using historic maps to determine previous land use within the Proposed Scheme boundary.
- The results of an aerial photograph and LiDAR review were considered.
- An examination of the geophysical survey interpretive data completed for this project, Wansford to Sutton Dualling Geophysical Survey (WYAS, 2018: Report No: 3135) and Geophysical and Metal Detector Survey (Magnitude Surveys, 2020) (Appendices 6.2, 6.3 and 6.5 **(TR010039/APP/6.3)**).
- Results of a programme of archaeological trial trenching were considered (Appendix 6.6 **(TR010039/APP/6.3)**, Archaeological trial trenching survey report, Cotswold Archaeology, 2020) in accordance with the Written Scheme of Investigation (WSI) Doc Ref HE551494-GTY-EHR-000-SP-LH-00001.

- 6.4.17. The archaeological potential within the Proposed Scheme boundary has been determined through consideration of the available HER data, documentary evidence, geophysical survey and intrusive evaluation through trial trenching.
- 6.4.18. Figures showing the location of all heritage assets potentially affected by the Proposed Scheme boundary have been provided **(TR010039/APP/6.2)**. Results of the geophysical survey can be found in Appendix 6.2 **(TR010039/APP/6.3)**. Results of the trial trench evaluation can be found in Appendix 6.6 **(TR010039/APP/6.3)**. LVIA Visualisations used in assisting the Cultural Heritage assessments can be found in Figures 7.6.1 – 7.6.18 **(TR010039/APP/6.2)**.
- 6.4.19. Heritage assets are referred to by their National Heritage List for England (NLHE) or Peterborough Historic Environment Record (PHER) or Cambridgeshire (CHER) reference number. Assets recorded by multiple sources are referred to in the following order of preference, NLHE, PHER, CHER. Where assets have been identified by fieldwork undertaken as a part of this Proposed Scheme assessment, they are prefixed by “WAN”.

Assessment criteria

- 6.4.20. The assessment of heritage value/sensitivity of heritage assets and the magnitude and significance of effects follows the requirements of LA106 Cultural heritage which refers to the criteria outlined in in tables 3.2N, 3.4N, 3.7 and 3.8.1 of DMRB LA 104 Environmental assessment methodology.
- 6.4.21. Further clarification of how criteria in this assessment applies to cultural heritage is provided in Appendix 6.1 **(TR010039/APP/6.3)**.
- 6.4.22. Each heritage asset is graded for value / sensitivity on a scale of Negligible, Low, Medium, High and Very High. This accords with the criteria outlined in Table 3.2N of DMRB LA 104 and with reference to other appropriate criteria such as those used to designate scheduled monuments or listed buildings (that is, the

value/sensitivity of a heritage asset will derive from factors including fabric, rarity, completeness, historic and cultural associations, community, research and place-making potential) which is assessed through professional judgement.

6.4.23. An assessment of the sensitivity of a heritage asset to change within its setting is also a professional judgement, based on consideration of the asset's value/sensitivity and the contribution its current and historical setting makes to that value/sensitivity.

6.4.24. The value/sensitivity of heritage assets is based on the criteria outlined in Table 6-2.

6.4.25. It is worth clarifying that the terminology of "Value/Sensitivity" is a measure of the relative importance of an asset and should not be confused with the sensitivity to change or certain types of change within any one asset. For instance, a particular (theoretical) grade I listed building where its importance is bound up with a small amount of ancient fabric but, where its wider setting is relatively unimportant, might not be highly sensitive to change in the surrounding landscape. This kind of sensitivity is addressed as part of the assessment of magnitude of impact. This approach has been agreed with Historic England in respect of the Proposed Scheme, and in particular as it pertains to Grade II listed buildings in an email dated 24/03/2021.

Table 6-2. Criteria for establishing value/sensitivity of archaeological assets and historic buildings

Value/Sensitivity	Typical criteria
Very High	World Heritage sites, assets of acknowledged international importance, assets that can contribute significantly to acknowledged international research objectives.
High	Scheduled monuments, Grade I, II* and some II listed buildings, Grade I and II* registered parks and gardens, registered battlefields, undesignated assets of schedulable quality, undesignated monuments, sites or landscapes that can be shown to have specific nationally important qualities and assets that can contribute significantly to national research objectives. Grade II listed buildings can also be of high value and are assessed on an individual basis
Medium	Grade II listed buildings that are not of high value, Grade II registered parks and gardens, conservation areas, undesignated sites of high importance identified through research or survey, monuments or sites that can be shown to have important qualities in their fabric or historical association. Locally listed buildings can be of medium or low value and are assessed on an individual basis
Low	Non-designated assets - buildings, structures, monuments or archaeological sites with a local importance for education or cultural appreciation, and which add to local archaeological and historical research. Very badly damaged assets that are of such poor quality that they cannot be classed as high or medium, parks and gardens of local interest.

Value/Sensitivity	Typical criteria
Negligible	Heritage resources identified as being of little historic, evidential, aesthetic or communal interest, resources whose importance is compromised by poor preservation or survival or by contextual associations to justify inclusion into a higher grade.

6.4.26. The magnitude of impact is assessed on a scale of No Change, Negligible, Minor, Moderate or Major. This is based on consideration of each of the parts of each asset likely to be affected. These parts could be physical elements of the asset or its setting and how important those elements are to the heritage value of the asset. Impacts can be beneficial or adverse and there can be both beneficial and adverse impacts on the same asset. Beneficial and adverse impacts do not “balance out” and each type of impact gets carried forward to assessment of residual effect significance.

6.4.27. Magnitude of impact is based on the criteria outlined in Table 6-3.

Table 6-3. Factors in the assessment of the magnitude of impacts

Magnitude	Criteria
Major adverse	Total loss or fundamental alteration to heritage asset's significance or setting. Addition of new features that substantially alter the setting of a heritage asset.
Moderate adverse	Partial loss or alteration to a heritage asset's significance or its setting. Addition of new features that partially alter setting of a heritage asset to the extent where the significance is impacted.
Minor adverse	Minor loss of an element of a heritage asset or its setting. Addition of new features that form largely inconspicuous elements in the setting of a heritage asset to the extent that its significance is slightly impacted.
Negligible adverse	Very minor loss of elements of a heritage asset or its setting. Addition of new features that do not alter the setting of a heritage asset.
No change	No change to the heritage asset.
Negligible beneficial	Very minor enhancements to the heritage asset or its setting that help slightly better reveal the assets heritage value.
Minor beneficial	Changes that have a limited benefit to the heritage value of the asset. Changes to the setting of the asset which have a slight beneficial impact on heritage value and enhance the ability to understand the asset its historic context and setting.
Moderate beneficial	Changes that are beneficial to the heritage value of the asset. Changes that result in the setting of the asset being noticeably enhanced and improving the ability to understand the asset and its historic context and setting.
Major beneficial	Changes that are extremely beneficial to the value of the asset. Comprehensive changes to the setting of the asset which greatly reveal and enhance its heritage value.

Source: Based on DMRB (LA 104 Environmental Impact Assessment, Table 3.4N), 2019

- 6.4.28. The significance of identified effects are established by combining the assessment of both the heritage value/sensitivity of an asset with the magnitude of the impact as described in DMRB LA 104, Table 3.8.1. This informs the prediction of the significance of the effect on a scale ranging from Neutral to Slight, Moderate, Large, or Very Large as shown in the matrix at Table 6-4.
- 6.4.29. In accordance with DMRB LA 104, Table 3.7 note 3, predicted residual effects of moderate to very large are considered to be significant.

Table 6-4. Criteria for assessing significance of effect

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Heritage Value/sensitivity	Very High	Neutral	Slight	Moderate/Large	Large/Very Large	Very large
	High	Neutral	Slight	Moderate/Slight	Moderate/Large	Large/Very Large
	Medium	Neutral	Neutral/Slight	Slight	Moderate	Moderate/Large
	Low	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/Moderate
	Negligible	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

Source: Based on DMRB (LA 104 Environmental Impact Assessment, Table 3.8.1), 2019

- 6.4.30. Discussion with the Peterborough City Council Archaeological Advisor and Conservation Officer and Historic England has confirmed that beneficial and adverse effects from differing elements of the Proposed Scheme should be reported as separate significances. This is intended to remove the appearance of any “offsetting” which is not considered appropriate mitigation for heritage assets. However, where equal adverse and beneficial impacts come from the same element of the Proposed Scheme, both magnitudes are presented to preserve the nuance of the effect but are balanced for the final assessment of significance of effect.
- 6.4.31. Further detail of how criteria in this assessment applies to cultural heritage is provided in Appendix 6.1, Section 6.3 (**TR010039/APP/6.3**).

6.5. Assumptions and limitations

- 6.5.1. Some heritage assets are designated (Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Registered Parks and Gardens, or Registered Battlefields) and protected through legislation, or locally designated through policies in the Local Plan. Undesignated assets may be recorded in Historic Environment Records (HER), while many other assets are currently unrecorded.

- 6.5.2. Information provided by the HER can be limited due to its dependence on previous opportunities for historic and archaeological research, fieldwork, and discovery. Where nothing of historic interest is shown in a particular area, this can be down to a lack of research or investigation in the area to date, rather than proof that no heritage assets are present at that location.
- 6.5.3. Documentary sources are rare before the medieval period and many historic documents are inherently biased. Whilst it is accepted that historic documents may be biased depending on the author, wherever such documentary sources are used in assessing archaeological potential, professional judgment is used in their interpretation.
- 6.5.4. Older primary sources often fail to accurately locate sites and interpretation can be subjective.
- 6.5.5. Due to restrictions made necessary by the COVID-19 pandemic, in-person visits to data archives were not possible. This limitation is largely mitigated by undertaking archaeological field survey in the form of geophysical survey and trenching as well as the availability of digital images online.
- 6.5.6. During site inspections, notes on the settings of assets included the ambient noise effects of road traffic. The site inspections were undertaken in May of 2020, when traffic levels on trunk roads were lower across the UK due to the COVID-19 pandemic travel restrictions. As the site visit did not reflect normal conditions, the assessment was largely based on the specialist noise assessment. As such, a more precautionary approach has been undertaken when assessing setting impact.
- 6.5.7. Site meetings intended to discuss setting impacts with Historic England and Peterborough City Council were also cancelled due to COVID-19 controls. However, site photos were provided during discussions and the consultees were familiar with the site from previous experience.
- 6.5.8. Consultees noted the limitation that they could not reach agreements on specifics without the final scheme design (including landscape design). These details will be made available prior to the detailed design stage (PCF stage 5). The Huntingdonshire conservation team were unavailable for comment due to working restrictions and case load issues caused by COVID-19 measures.
- 6.5.9. Due to changes to the Proposed Scheme boundary throughout the project, some areas have not been archaeologically tested. These are addressed in the assessment for their potential for unknown remains, based on data gathered for other parts of the Proposed Scheme.

6.5.10. Landscape photomontages were not available for this assessment. Assessments of changes to settings of heritage assets has therefore relied on the ZTV, noise assessments, lighting design, environmental masterplan, scheme drawings and site visits. Given the nature of the Proposed Scheme design and the availability of these other sources of information, this is not considered a significant limitation.

Study Area

6.5.11. The study area shown on Figure 6.1 (**TR010039/APP/6.2**) has been defined in accordance with DMRB LA 106 Section 3.6-3.7 of DMRB LA 106 to include:

- Areas within the Proposed Scheme boundary which may be physically affected.
- The Zone of Visual Influence (ZVI) defined by the procedurally generated Zone of Theoretical Visibility (ZTV, see Figure 6.1 **TR010039/APP/6.2**) is modified using site observations to account for vegetation or other factors. The ZVI does not have a mappable output, as it is based partly on professional judgement and will change with season and weather. The ZTV also does not account for planting or other screening measures proposed as part of the Proposed Scheme.
- Any heritage assets which may potentially be affected by noise as identified in section 6.7 of this chapter.

6.5.12. As is standard methodology, to establish the archaeological potential and historic context of the Proposed Scheme, additional baseline information has been gathered from the above data sources for the wider region.

6.5.13. In response to a comment in the Scoping Opinion (2018, **TR010039/APP/6.6**), the study area has been expanded to identify designated assets within the ZTV that could have settings which may be sensitive to visual impacts. This was supplemented with a check for highly sensitive designated assets beyond the ZTV to ensure that any issues of long-distance views, asset inter-visibility or designed views are accounted for.

6.6. Baseline conditions

6.6.1. The archaeological and historical background is given in detail in ES Appendix 6.1 (**TR010039/APP/6.3**), along with an assessment of value / significance for all heritage assets identified. A summary of the baseline conditions and descriptions of the heritage assets which may be affected by the Proposed Scheme is set out below.

- 6.6.2. A total of 482 heritage assets have been identified within the study area. These assets are made up of:
- 13 Scheduled Monuments
 - 201 Listed Buildings
 - 246 non-designated assets
 - 8 Conservation Areas
 - 14 non-designated historic landscape types in 138 individual parcels²
- 6.6.3. There are no World Heritage Sites, Registered Parks and Gardens or Registered Battlefields within the study area.
- 6.6.4. Heritage assets are shown on Figures 6.1, 6.2 and 6.3 (**TR010039/APP/6.2**) and are listed in the gazetteer in ES Appendix 6.1, Table 6-4 (**TR010039/APP/6.3**).
- 6.6.5. Heritage assets were screened for potential impacts following reviews of all available information. Details of this process and comments on individual assets can be found in ES Appendix 6.1, Table 6-4 (**TR010039/APP/6.3**). In brief, the excluded assets mainly fell into three categories:
- Upstanding remains within the ZTV from where the Proposed Scheme would only be visible from an inaccessible location such as roof lines, the tops of trees, boundary walls or hedges and no other types of impacts were identified.
 - Archaeological remains with no upstanding elements outside the area within the Proposed Scheme boundary, as these could not be affected by the Proposed Scheme. However, these were still used to inform the assessment of potential for the presence of previously unknown archaeological remains within the areas within the Proposed Scheme boundary.
 - Findspots of artefacts that have been removed from their original location. These cannot be affected as they are no longer present; however, as above, these findspots may indicate other remains nearby and so were used to inform archaeological potential.
- 6.6.6. A screening exercise has been undertaken to identify environmental impacts of Proposed Scheme without site-specific detailed mitigation recommendations. For an assessment of all cultural heritage assets, including those where no likely significant effects have been reported, refer to Appendix 6.1 (**TR010039/APP/6.3**). This exercise identified 12 key assets (or groups of assets)

² An individual parcel is made up of a small area of land that is the same character throughout. In the study area, these are mostly post-medieval and modern landscape types distributed in a mosaic across the landscape,

which have the potential to experience significant effects. These key assets are discussed below and are presented west to east rather than in order of value.

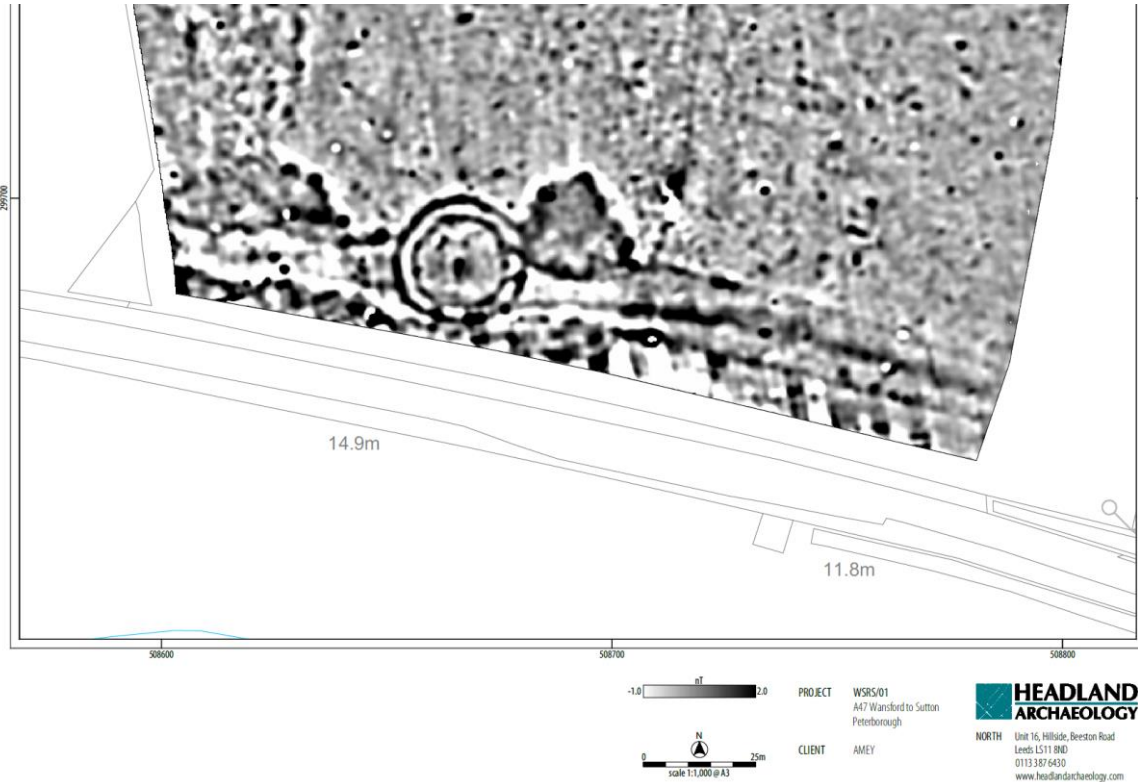
Key designated assets

- 6.6.7. The following 12 key assets (or groups of assets) have the potential to experience significant effects as a result of the Proposed Scheme.

Cropmark site of a barrow cemetery and a quadrilateral ditched enclosure, together with pits and a pit alignment, approximately 837m south-east of Sacrewell Farmhouse (1006796), Scheduled monument

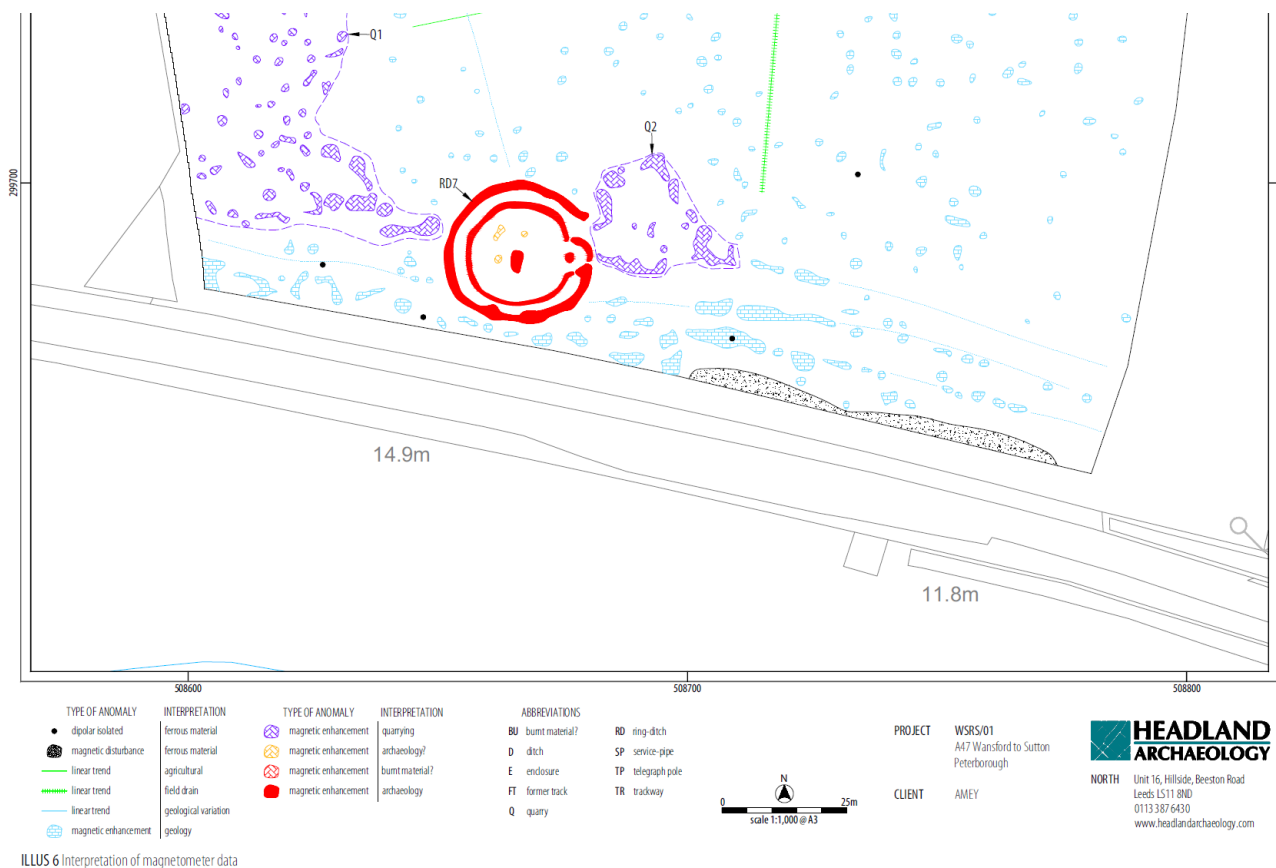
- 6.6.8. The Proposed Scheme follows the monument boundary for approximately 110m west to east, then crosses into the scheduled area, forming a triangular encroachment measuring approximately 6m by 9m. This scheduled monument comprises the buried remains of seven ring ditches, a quadrilateral, single-ditched enclosure interlinked with a smaller, single-ditched enclosure, a pit alignment and pits, all of which are visible as cropmarks on aerial photographs. The ring ditches are thought to represent the buried remains of a Bronze Age round barrow cemetery while the enclosure is believed to have originated as a prehistoric enclosed farmstead which was later reused in the Romano-British period. The round barrow cemetery and ditched enclosure demonstrate a significant sequence of development throughout the late prehistoric and Romano-British periods and offer an important understanding of the economic and social activities within the area during the period of occupation.
- 6.6.9. The geophysical survey (Headland Archaeology 2017, Appendix 6.2 (TR010039/APP/6.3)) determined that the southern area of the scheduled monument had been quarried (Caption 2 purple hatch), however this quarrying appeared to respect the boundaries of the barrows (Caption 2 red solid). This leads to the assumption that the barrows were retained as extant features until the field returned to agriculture and was ploughed, removing all above-ground traces. This may mean that the quarrying could have occurred any time between the Bronze Age and modern periods.

- 6.6.10. Other geophysical anomalies at the south-eastern corner of the monument (Captions 1 and 2) have been interpreted as geological in origin (Caption 2, blue hatch), and are partially obscured by the magnetic interference from a buried service in the verge of the existing A47 carriageway (Caption 2, grey hatch). These features may mask small or faint geophysical anomalies that may predict archaeological features or individual artefacts.



ILLUS 4 Processed greyscale magnetometer data

Caption 1 Detail from Headland 2018 (Appendix 6.2) (TR010039/APP/6.2), showing greyscale plot of the survey results



Caption 2 Detail from Headland 2018 (Appendix 6.2) (TR010039/APP/6.3) showing interpretive plot of the survey results.

- 6.6.11. This asset holds a **high** heritage value deriving from its evidential potential.
- 6.6.12. Although the monument has no upstanding remains, the setting can possibly be informed by the topography of the surrounding landscape. The known features seem to halt at an area roughly along the break of slope to the east, with the southern-most feature at the edge of the river valley. The northern features of the monument have not been mapped and so the entire picture of the setting cannot be determined. From within the field, the appreciation of the landform to the south has been visually obstructed by the existing A47 carriageway and hedgerow field boundaries. The contribution of setting to the monument's value cannot be accurately determined at this stage.

Thornhaugh Conservation Area

- 6.6.13. Thornhaugh was designated as a conservation area in 1979. The area constitutes the majority of Thornhaugh and contains the eight listed buildings within the settlement. The character of the settlement is portrayed by buildings of sandstone and ashlar with a small number of surviving thatched roofs throughout. The conservation area begins approximately 90m to the west of the Proposed Scheme.

- 6.6.14. The Church of St Andrew (List entry 1225298) is a grade I listed parish church originally dating to the 12th century. It is located 250m west of the Proposed Scheme. The building was restored in 1889 and is built of stone rubble and ashlar with Collyweston stone roofs. The oldest surviving architectural feature in the church is the four-bay north arcade which dates to the late 12th century. This is followed by the early to mid-13th century chancel, perpendicular south window, and east window. The tower was originally erected in the 13th century and was rebuilt during the 1889 restoration. The nave and chancel roofs and tiebeams are dated to the 15th century, along with the braced collars and wind braces and the crenelated wall plates. Around 1500CE the original church spire collapsed, destroying the south arcade in the process. The south transept with battlements and the south porch all date to the 16th century, and the large south windows, north aisle, and clerestory windows all date to the 19th century. The above elements contribute to the high evidential and aesthetic value of this heritage asset and inform the heritage asset's high level of heritage significance. The heritage asset also holds historic and communal value as it is the local parish church of Thornhaugh and is still open to worshippers, positively contributing to the sense of spiritual value associated with the heritage asset and positively informing the significance of the heritage asset.
- 6.6.15. Associated with the Church of St Andrew is The Old Rectory (List entry 1127496). This large mid-17th century stone house is constructed in stone with freestone dressings and a Collyweston stone roof. The building has numerous 19th century additions, with the original house being two storeys with an attic. The later additions consist of an extension to the north-east, built in stone with a hipped Collyweston slate roof to match the original building. This heritage asset contributes to the heritage value of St Andrews Church, and positively contributes to the rural character of the settlement and conservation area.
- 6.6.16. The five remaining designated heritage assets within Thornhaugh are the Conduit Head immediately South of No's 5 and 7 (List entry 1127456); the Thornhaugh and Wansford War Memorial (List entry 1428204); the Former Thornhaugh County Primary School (List entry 1127460); 2, 4 and 6, Russel Hill (List entry 1331254); and Stone Cottage (List entry 1225258). These assets are located between 220m and 570m west of the Proposed Scheme.
- 6.6.17. These assets contribute to the historic character of the surrounding area, and are similar in style and appearance to buildings throughout the local area. They identify Thornhaugh as an established settlement with a **medium** overall heritage significance which has been well preserved with the passage of time.

Church of John the Baptist (1127440), Grade I Listed Building

- 6.6.18. The Grade I Listed Church of St John the Baptist in Upton (List entry 1127440) originally dates to the 12th century but has been largely rebuilt in 17th century Gothic with a chancel dated to 1842. It is located 430m east of the Proposed Scheme at Upton. The only surviving 12th century features of the church are the north arcade and parts of the chancel arch. The font dates to the 15th century, and the remainder of the building dates to the 17th-19th centuries. These factors contribute to the high evidential and aesthetic values of this heritage asset
- 6.6.19. This heritage asset also holds historical and communal value as it is the local parish church of Upton and is still open to worshippers, positively contributing to the sense of spiritual value associated with the heritage asset and positively informing the significance of the heritage asset. The above elements contribute to the **high** value of this heritage asset and inform the asset's high level of heritage significance.
- 6.6.20. The setting of the asset is that of a secluded village church. The church is located within open fields, with the main body of Upton to the west and a manor complex to the south-east. Upton Wood is located to the north-east, and pastoral fields with treeline boundaries are found to the south and north of the church. The church has no spire, and therefore it can be assumed that it was not constructed with the intention of being widely visible from the surrounding landscape. It is not visible from the current A47 carriageway, and very little road noise could be heard from within the church grounds. However, it is reasonable to assume that the reduced road use during the COVID-19 pandemic had an influence and a larger effect has been assumed for the purposes of this assessment.
- 6.6.21. The village setting of the asset, along with the visibility of the building and the churchyard, make a moderate positive contribution to the value of the church.

Church of St Mary the Virgin (1127442), Grade I Listed Building

- 6.6.22. The Grade I listed Church of St Mary the Virgin in Wansford (List entry 1127442) originally dates to the 12th century but has seen many alterations and renovations throughout the medieval to modern periods. It is located 370m west of the Proposed Scheme. It is built of coursed stone with freestone dressings and has lead and Collyweston stone roofs. The oldest surviving parts of the building are the south doorway of the church which dates to around 1200, with two orders of shafts and a round arch; and the stone broach spire with lucarnes and dog tooth frieze which dates to the early 14th century.
- 6.6.23. The church is located within the Wansford conservation area, which encompasses land on the northern bank of the River Nene and forms the historic

core of the village. The church is central to the conservation area, and it can therefore be assumed that the church was a central focal point of historic Wansford.

- 6.6.24. Although the spire of the church is relatively small and not imposing on the surrounding landscape, the building is located in a prime location to be visible to those travelling through the historic landscape. Located almost directly on a major historic crossing point for the River Nene and within the centre of an established settlement, the asset would have been unavoidable for those looking to cross the river and travel through the area.
- 6.6.25. Topography shields the church from view from the existing A47 carriageway, and established trees and buildings shield the main body of the church from sight for the most part at further distances. However, the spire of the church is tall enough to be visible from Wansford Bridge (1127445, 1274654) which has existed at its current elevation since the 16th century.
- 6.6.26. The current setting of the asset is that of a large village main street, although the asset is shielded from larger road infrastructure such as the A47 and A1 to the north and east respectively. Road noise can be heard from within church grounds to a moderately intrusive level, however this is mainly due to local traffic rather than the A47. However, it is reasonable to assume that the reduced road use during the COVID-19 pandemic had an influence and a larger effect has been assumed for the purposes of this assessment.
- 6.6.27. The above factors give the asset a **high** value, and the elements of the setting of the asset make a moderate positive contribution to the value of the church.

Church of St Michael (1127517), Grade I Listed Building

- 6.6.28. The Grade I listed Church of St Michael in Sutton (List entry 1127517) dates to the 12th century but was heavily restored in 1867-8. It is 510m south of a proposed turning point and 650m south of the main part of the Proposed Scheme. It is built of coursed stone rubble and arches, with a Collyweston stone chancel roof and a lead knave roof. It is likely that the nave was rebuilt in the early 15th century and further raised in the late 15th century in the perpendicular style. The church retains its 12th century chancel arch, and the chancel itself was rebuilt or enlarged in the late 12th century. Other surviving 12th century features include the south aisle and parts of the south chapel. The church was restored or expanded at some point in the 13th century, as evidenced by a number of windows, parts of the south chapel, and ornamentation on the east wall of the building.
- 6.6.29. The church has no spire and is well shielded from the surrounding landscape by trees and the buildings of Sutton, so its value in setting lies more with its

connection to the settlement of Sutton rather than the wider landscape. The church cannot be seen from the A47, and road noise was low but noticeable during the site visit. It is reasonable to assume that the reduced road use during the COVID-19 pandemic had an influence and a larger effect has been assumed for the purposes of this assessment.

- 6.6.30. The church lies within the Sutton Conservation area and has a strong shared character with the other buildings of the settlement. This demonstrates a strong relationship to setting within the village, and the church was likely a focal point of historical Sutton.
- 6.6.31. The above factors give the asset a **high** heritage value, and the elements of the setting of the asset make a moderate positive contribution to the value of the church.

Wansford Bridge (1127445, 1274654), Grade I Listed Building and Scheduled Monument

- 6.6.32. Wansford Bridge spans the common boundary of the parishes of Sibson Cum Stibbington (Cambridgeshire) and Wansford (Peterborough). It is 390m west of the Proposed Scheme. Built in 1577, it constitutes a fine ashlar bridge over the River Nene with a total of 12 arches. The south end was rebuilt in 1795, with the date in an oval panel above the keyblock. The next 3 arches are dated between 1672 and 1674, and the remainder are dated 1577 in the parapet with the initials “P.If”. This asset holds a high significance within the heritage record as it signifies a long-established crossing point that is likely to have been pivotal to the existence of Wansford itself. It is highly likely that a crossing point has existed near this point of the river since much earlier than the 16th century, as the Nene Way has likely been a well-used travelling route since the prehistoric period.
- 6.6.33. The setting of the asset is intrinsically linked to both the River Nene and the settlement of Wansford, possibly even pivotal to the existence of the settlement itself. It also falls partly within the Wansford conservation area that signifies the historic centre of the settlement. Although the bridge is an impressive piece of architecture, it is not particularly visible throughout the surrounding landscape as it is situated topographically lower than its surrounds and shielded by the village buildings and planting. The bridge is not visible from the current A47 carriageway (including from the A1 junction), and road noise within the site is from local traffic.
- 6.6.34. The above factors contribute to the **high** heritage value of this heritage asset and inform the asset’s high level of heritage significance. The elements of the setting of the asset make a large positive contribution to the value of the bridge.

Sacrewell Farm and Mill (1266496, 1127493), Grade II and Grade II Listed Building*

- 6.6.35. The Sacrewell Farm complex contains two designated assets, the Grade II listed Sacrewell Farmhouse (List entry 1266496) and the Grade II* listed Sacrewell Mill and Mill House and Stables (List entry 1127493). It shares a boundary with the Proposed Scheme at the southern extent of the complex.
- 6.6.36. The farmhouse dates to the mid-18th century and is built in coursed stone with a steeply pitched Collyweston stone roof with gabled ends. The main body of Sacrewell Mill slightly pre-dates this, having been constructed in the early 18th century, and the adjoined watermill is dated to 1755. This building is also constructed in coursed stone with steeply pitched Collyweston stone roofs. The Mill and attached buildings form an L-shape in plan, with the stables adjoining at a right angle to the north-west. The mill contains complete mill machinery in working order, with a cast iron overshot wheel and pit wheel, and a great spur wheel with a timber main drive and crown wheel. Two of the three original sets of stones remain, along with a chain hoist operated by the main drive on a windlass principle. The storage bins, chutes and hopper are all intact, and the stable has since been converted into a garage.



Photo 3 Sacrewell mill, looking south-west towards the existing A47/A1 junction



Photo 4 Detail from figure 1, showing visibility of existing road sign on junction.

- 6.6.37. These assets are a fantastic example of rural industry within the region and demonstrate how industry and agriculture could exist side-by-side during the post-medieval period onwards. The assets form a part of the Sacrewell Farm educational tourist attraction and hold a high community value, with the experimental nature of this asset further informing its significance.



Photo 5 Sacrewell mill, interior

- 6.6.38. The setting of this asset is relatively secluded due to topographic elements and planting visually shielding the built heritage assets from the surrounding modern infrastructure for the most part. The surrounding land historically associated with the assets is less shielded as it is bordered by the existing A47 carriageway to the south and the A1 to the west. Road noise can be heard throughout the grounds of the farm, and vehicles can be seen from the more elevated areas within the associated landscape surrounding the assets. These areas were limited to the main car park and current approach road, where vehicles can be seen on the eastern part of the current A1/A47 junction and parts of the current A47 carriageway to the south-east. The presence of the road was assessed as barely noticeable during survey.
- 6.6.39. The assets form part of a larger tourist attraction, of which heritage education is a large part. The mill machinery still functions, and whilst inside this overrides any road noise present during the walkover survey.
- 6.6.40. The asset has a **high** level of heritage value and the setting of the assets makes a large positive contribution to the value of the farm and mill. The living history elements of the asset are an important factor in the value.

Stibbington Conservation Area

- 6.6.41. The Stibbington conservation area has been grouped with the individual assets within it for simplicity of assessment. This is appropriate for the type of assets and the character of potential impacts that could arise.
- 6.6.42. The conservation area is located between 600m and 1050m south of the Proposed Scheme. There is no appraisal information available for this conservation area. However, the settlement dates to at least the early medieval period, as it is listed within the parish of Upton in the Domesday Book of 1086 (Open Domesday 2018a). The grade II* parish church of St John the Baptist (List entry 1274862) stands about a quarter of a mile east of the Great North Road near the old ford to Sutton. The church has several associated listed tombs in its cemetery (List entries 1222042, 1222315 and 1274863) as well as a grade II* rectory (List entry 1222331). Stibbington Hall is a grade I listed 17th-century house (List entry 1222241) with associated grade I gateway and boundary wall, as well as a grade II stable block, coach house and further wall and gate piers (List entries 1274861, 1274712 and 1222040). Other listed buildings within the conservation area are the grade II Stibbington Manor (List entry 1274697), Granary and Stables (List entry 1274697) and Old Castle Farmhouse (List entry 1222339). The earliest parts of the church may date to the Norman conquest while the hall and manor date to around the 16th and 17th centuries.
- 6.6.43. The character of the village is strongly inward-focused with large walls effectively separating the Hall and grounds from the rest of the village. There is an historic link to Sutton, across a former fording point of the River Nene. The ford is no longer extant but there is a small working marina there now. There is a large amount of mature tree planting within the village, contributing to the inward focus experienced during the site visit. Somewhat bypassed by the Great North Road, this settlement may have served as a secondary crossing point of the Nene, for east-bound traffic as well as an access point for local river craft following improvement of the river in the post-medieval period. Given its earlier start in history than Wansford, it is possible that Stibbington Village was more important for travel before the construction of reliable bridges.
- 6.6.44. The above strong character and time depth, combined with the group value of the listed buildings, gives this conservation area a **medium** heritage value, principally derived from its architectural and historic value. Its setting makes a moderate positive contribution to its significance.

Sutton Conservation Area

- 6.6.45. The Sutton Conservation area has been grouped with the individual assets within it for simplicity of assessment. This is appropriate for the type of assets and the character of potential impacts that could arise.
- 6.6.46. The village of Sutton is a small settlement located between 320m and 520m south of the main part of the Proposed Scheme and to the east of the River Nene. It was designated as a conservation area in 1979. The conservation area is tightly drawn around the settlement, but the parish includes riverside water meadows, arable land on the higher ground and wooded uplands. The associated parish extends to Sutton Wood to the north and is bisected by the current A47 carriageway.
- 6.6.47. The conservation area contains a total of 11 listed buildings, comprising one grade I listed building and 10 Grade II listed buildings. These are: the grade I listed Church of St Michael, Sutton (List entry 1127517); Village Pound (List entry 50344); 19 Graeme Road (List entry 1127515); Manor House (List entry 1127516); The Grange (List entry 1224371); Dovecote east north east of The Grange (List entry 1127518); 1, Nene Way (List entry 1224316); 12, Nene Way (List entry 1224408); 1, Lovers Lane (List entry 1238018); 2, Graeme House (List entry 1274413); and Graeme House (List entry 1331243).
- 6.6.48. A settlement likely existed within the area of Sutton during the Bronze Age, however hints of the settlement in its current form are not evident until the Roman period. A Roman villa was discovered east of Sutton Heath Road, and the known Roman road network supports the existence of settlement within this location. The current form of Sutton is reminiscent of a typical Anglo-Saxon form of settlement, with a central rectangular stockade bordered by tracks and enclosed by hurdles in which livestock could be protected. The village is bisected by the line of a railway, operating from 1857 to 1931.
- 6.6.49. In the modern day, Sutton has a highly rural and tranquil character relating to its agricultural legacy. The settlement is shielded from the A47 to the north by established trees and hedgerows and surrounded by arable farmland. 10% of the buildings within the settlement are dated pre 17th century, 10% have been dated to the 18th century, and 26% have been dated to the 19th century.
- 6.6.50. The principal elevations of the buildings focus in on the main road through the village. Access to gardens was not possible at the time of survey but, general observations indicated these were enclosed and screened to the north by internal planting. The disused railway is not accessible from the village and is highly screened except for the bridge carrying the main road over it. The Nene Way passes through the western end of the village although the river itself is not

present in the setting. The approach to the village along the Nene Way allows for longer views along the river and allows appreciation of the eroded relationship between the settlement and the river, as well as the railway line and wider landscape. In particular, some of the buildings of Sacrewell Farm are visible in long distance views from the path outside the conservation area in winter. These buildings include the farmhouse and modern visitor centre but not the mill. Views are screened by vegetation in spring, summer and autumn. Overall, the impression of the setting is one of strong inward focus, with accessibility to both the rural landscape and the major routes of the Nene Way, A1 and A47.



Photo 6 Sutton Conservation Area, looking north towards the proposed scheme along Sutton Drift from the junction with Nene Way

- 6.6.51. The above factors contribute to the **medium** heritage value of this heritage asset. The elements of the setting of the asset make a large positive contribution to the value of the conservation area.

Model Farmhouse and Wall to the east of Model Farmhouse (1331283, 1127438), Grade II Listed Buildings

- 6.6.52. The Grade II listed Model Farmhouse in Upton (List entry 1331283) is dated to the 1685 by a tablet within the fabric of the building. It shares its northern boundary with the Proposed Scheme. It is square in plan and is constructed in coursed stone with a steeply pitched Collyweston stone roof. A later 19th century

wing has since been added to the western side of the building which retains the original character of the structure. The associated wall (List entry 1127438) fronts the road and turns westwards at the road junction. It likely dates to the 18th century and comprises a tall coursed stone rubble boundary wall on two sides of the garden to Model Farmhouse. It has been listed for its group value with Model Farmhouse. The wall is listed for its whole length, and the other walls around the farm buildings further along the road both south and west are considered curtilage listed with the listed farmhouse and wall.

- 6.6.53. The setting of these assets links directly with the village of Upton and the surrounding agricultural landscape. As a historic farm building it is well established with a clear historical purpose; and the assets are located on the western edge of Upton and mark the outer boundary of the settlement, making them a focal point when approaching the settlement from the south or west.



Photo 7 Model Farmhouse and wall, looking south-west

- 6.6.54. The above factors contribute to these assets' **medium** heritage value. The elements of the setting of the assets makes a large positive contribution to their value.

Key non-designated heritage assets

6.6.55. A total of 256 non-designated assets have been identified within the study area. These are made up of:

- 246 archaeological and built heritage assets identified from the PHER and CHER
- 10 assets identified from historic mapping and site visits
- Numerous anomalies and archaeological remains identified from geophysical survey and archaeological trial trenching undertaken for this assessment. These have been assembled into three broad groups of prehistoric, Roman, and medieval settlement remains, and a single larger area of multi-phase, undated field systems. Since these areas include assets previously recorded, they are not included in the totals. They are better understood in these groups rather than as multiple individual features.

6.6.56. 138 parcels of 14 separate Historic Landscape Characterisation landscape types have been identified within the Study Area. These are:

- 19th-20th century woodland plantation
- “Ancient³” woodland
- Built up areas – urban development
- Communications – motorways, railways
- Disused mineral extraction
- Formal parliamentary style – 18th century and later enclosure
- Later enclosure – piecemeal by agreement
- Post 1950’s enclosure
- ‘Prairie fields’ – post 1950’s boundary loss
- ‘Prairie fields’ with relict elements – post 1950’s boundary loss
- Pre-18th century ‘irregular’ enclosure
- Site of special scientific interest
- Water reservoir
- Waterway – major river

³ This is a mostly ecological designation and does not necessarily denote extreme age. It can be safely assumed as no less than 200 years old due to the limits of data sources however, the ecological designation can be confusing as it assumes an origin of at least 1600 CE. Based on Forestry commission and natural England, Guidance “Ancient woodland, ancient trees and veteran trees: protecting them from development” 2018.

- 6.6.57. The most prominent Historic Landscape Characterisations within the Study Area are 'Prairie fields' (37 parcels) and post 1950's enclosure (37 parcels).
- 6.6.58. Overall, the historic landscape primarily indicates the potential for archaeological remains and sensitivity of the historic environment to change. In this case, the landscape types are fairly common throughout England, especially alongside historic routeways. There are no particular sensitivities indicated by these landscape types, as might be the case were former parkland or designed landscapes present, or if there were a particular uniformity to the landscape. The land use indicates that plough damage is likely to have occurred over most of the agricultural land, save for perhaps the river edges, affecting the assessment of potential throughout this chapter.
- 6.6.59. All historic landscape types have been assessed as of **negligible** value except for the waterway type and "Ancient" woodland type, which are assessed as of **low** value.
- 6.6.60. Assets that will be significantly affected by the proposed scheme are discussed below. For a full account of non-designated assets and non-significant effects refer to Appendix 6.1 (**TR010039/APP/6.3**).

Wansford Road Railway Station (53529, WAN1, WAN2, WAN11), Locally Listed Buildings

- 6.6.61. A stretch of the now disused Stamford to Wansford railway line (53529) is located adjacent to the west of Sutton Heath Road. The railway line is oriented north-west to south-east, with approximately 235m of the railway within the Proposed Scheme boundary. The railway was opened in February 1857 and was originally 8.5 miles long between Stamford East Station and Wansford, on the Northampton to Peterborough line of the London and North Western Railway. The stations along the route were Barnack, Ufford, Wansford Road and Wansford. The branch was locally known as The Bread and Onion Line and due to its limited traffic potential, and the line was closed to passengers in 1929 and goods in 1931. This asset holds local significance as a historic travel route across the area, and the path of the railway intersects with numerous settlements along its route, meaning many bridges and embankments resulting from the construction of the railway can be seen throughout the area. The line also has a strong local history element in the narrative of its development. The Stamford to Essendine line (of which the Wansford section is a tributary) was championed by local residents of Stamford and heavily opposed by Midland Railway. In particular, the line is associated with and informally named after the Marquis of Exeter, a local magnate. Despite efforts by the local line directors to provide through journeys which might increase usage, they were foiled by technical issues and the on-going hostility of the Midland Railway.

6.6.62. The Former Wansford Road Railway Station (WAN1) is located within the Proposed Scheme boundary. It was constructed alongside the Stamford to Wansford railway in 1867 in the “house style” and comprises a single storey central stone building with smaller side extensions to each gable set forward to the platform. The building was constructed of squared and course local limestone and welsh slate roofing. Parts of the building have had their roofs reconstructed with flat roofs. The large gothic windows have been fitted with uPVC glazing and the original main entrance to the ticket hall has been blocked up with limestone masonry in keeping with the rest of the building. The interior has seen extensive changes in the conversion to a residential dwelling. The ladies waiting room, men’s lavatories, porter’s room and lamp room are now occupied by a modern kitchen. The station master’s office has been merged with a smaller room for use as a bedroom and several fireplaces have been lost. A later timber conservatory has been constructed on the platform side, preserving elements of the former platform canopy.



Photo 8 Former station, looking north-east



Photo 9 Former station, looking south, showing the platform and platform canopy

- 6.6.63. The station site also includes the original gate piers at the access road from the existing A47, the original platform and a linesman's hut. The platform is of blue engineering bricks and the large limestone kerbstones remain intact. The linesman's hut is contemporary with the station and matches the construction style, having a chimney stack and quoin detailing.



Photo 10 Cast iron gate pier and steel gate immediately north of the existing A47



Photo 11 Linesmans Hut

- 6.6.64. Also associated with the railway is the locally listed Bridge No.6 – A47 (WAN2). This asset is an excellent example of a skew arch bridge with a five-ring brick barrel displaying fine workmanship throughout. The asset is built of local limestone in a rusticated finish with red brick detailing. This asset holds group and setting value with other features relating to the railway and is locally listed

due to the quality of survival and workmanship on display. Close inspection of the bridge was not possible during site visits due to heavy plant growth.

- 6.6.65. The station elements were considered for listing by Historic England in 2018 as a group with the former station master's house (Heath House, WAN11, also locally listed). The buildings were not listed due to there being other, better preserved, examples in the region. For example, the station at Barnack, to the north, is almost identical. The historical associations were recognised but regarded as not of national significance. The architectural details were noted as good, well constructed examples but not of particular special interest that would warrant listing.
- 6.6.66. The locally listed assets were considered for listing by Historic England in September of 2018. Discussions with Historic England have identified the need for an enhanced statement of significance for these assets. The text below has been expanded on to provide that enhanced statement. However, the listing advice report produced by Historic England is an authoritative and exhaustive statement of significance in its own right and has been included as Appendix 6.7 (**TR010039/APP/6.3**) to enable proper consideration of the assets.
- 6.6.67. Overall, this heritage asset group is of local to regional historic and architectural interest and holds **medium** value. This value derives from the evidential and architectural interest as well as group value. The inclusion of three of the individual assets on the local list has been accounted for in this assessment.
- 6.6.68. The setting of these assets is principally defined by their relationships with each other and the industrial railway network throughout the region. The setting of the assets makes a moderate positive contribution to their value.

Royal Observer Corps Bunker (50635)

- 6.6.69. This small concrete bunker is located in woodland approximately 20m north of the existing A47 carriageway and immediately west of the existing Sacrewell Farm access road (excluded from the Proposed Scheme boundary). It was identified from MOD records, likely dating from WWII, and located on-site during a monitoring meeting for archaeological trial trenching. The steel door was noted as being unlocked but internal inspection was not undertaken for safety concerns. The bunker is partially buried in an embankment and screened on all sides by trees.
- 6.6.70. Overall, this heritage asset is of local to regional historic and architectural interest and holds **medium** value. This value derives from the evidential and architectural interest as a reasonably intact survival of a building type that is often destroyed

once abandoned. The building also has group value with other Defence of Britain sites in the region as part of an overall strategic defensive network.

- 6.6.71. The setting of the asset is principally derived from its camouflage from casual observation and access to the highway network. The setting makes a moderate positive contribution to the value of the asset.

Known archaeological remains, geophysical anomalies, cropmarks and findspots

- 6.6.72. The precise extent of these assets is unknown despite the archaeological surveys undertaken to date. These surveys have also not found some features and identified additional previously unknown features. Full details of the assets and surveys are available in ES Appendices 6.1 through 6.6 (TR010039/APP/6.3). For the purposes of this assessment, it is more useful to group the assets and survey results into zones of archaeological potential, linked by location and character. These are listed below and shown on Figure 6.3 (TR010039/APP/6.2).

- 6.6.73. The zones are numbered sequentially west to east. The numbering is different to that used in the trial trenching report (Appendix 6.6, TR010039/APP/6.6), as the zones are slightly different to account for additional information such as cropmarks and HER data.

- Zone 1 – covers two areas along the northern bank of the River Nene.
 - No evidence of other surviving in-situ archaeological remains has been presented within this area. The only known archaeological risk is that there are general notes of prehistoric and Roman artefacts recovered during dredging of the riverbed in the 19th century. Any such remains will be removed from their original context and likely damaged, especially in the western part of the zone which has seen significant modern disturbance for highway and utilities works. The eastern area is also the route of a stream bed that has meandered across the whole of this land parcel, potentially masking or removing archaeological assets. Given the potentially significant archaeological remains nearby, unstratified artefacts identified here may contribute to our understanding of these better-preserved assets.
 - The zone has potential to contribute to regional research objectives to investigate Roman industrial activity along with the Roman to Anglo-Saxon transition (Medlycot 2011).
 - This zone has been assessed as of medium heritage value, although this is entirely due to the potential to contribute to our understanding of archaeology in other zones.

- Zone 2 – Priority Area 3 within the trenching report – a field directly south of the A47 and east of Wansford measuring approximately 330m east-west and 200m north-south.
 - One sunken featured building and a further possible sunken featured building were discovered during the trenching of this zone, presenting evidence for early medieval domestic occupation dating to the 5th-6th centuries.
 - Evidence of quarrying thought to date to the Roman period was also discovered during trial trenching within this zone.
 - The zone has potential to contribute to regional research objectives to investigate Roman industrial activity along with the Roman to Anglo-Saxon transition. (Medlycot 2011).
 - This zone presents the most complete evidence for early medieval occupation near the Proposed Scheme and has therefore been assessed as of **medium** heritage value. However, evidence of the Roman to Anglo-Saxon transition period is rare throughout England and the zone has the potential for remains of **high** value.
- Zone 3 – Priority Area 4 within the trenching report (Cotswold Archaeology 2020) – fields directly north of the A47 and south of the Sacrewell Farm complex, measuring approximately 1010m east-west and 300m north-south.
 - Postholes, ditches, quarries and pits were present, some of which contained finds dating to the Iron Age, Roman, medieval and post-medieval periods. A sole disturbed and undated neonate⁴ burial was also recorded within a ditch fill, and this may imply the existence of further burials in the area.
 - Recorded within the HER is also a lithic findspot (01976), a bronze age cist burial (00176), a Roman iron working site (50343), a trackway (00190a), a linear feature (00190b), and a royal observer corps site (50635). These assets for the most part reinforce the image of a rural landscape with little dense archaeology, however the occurrence of two separate burials within the zone does present a degree of archaeological risk to encounter further burials. The royal observer corps site was not visible on walkover survey and parts of this asset may survive as below-ground remains.

⁴ A newborn infant under 4 weeks old

- This zone has the potential to make a good contribution to the regional research objectives to investigate Neolithic to Bronze Age flint working in non-gravel landscapes, the Bronze Age/Iron Age transition and Roman industrial activity, and bronze age burial practice and settlement patterns. The presence of two burials indicates a high potential for further burials.
 - This zone has been assessed as of **medium** heritage value.
- Zone 4 – Priority Area 6 within the trenching report – land directly south of the A47, with the road bordering on the northern edge and the River Nene to the south, measuring approximately 580m east to west and 100m north to south.
 - This zone contained a significant ditch, visible across multiple trenches, which contained a large number of mollusc shells. This is likely to be akin to the midden recorded in HER record 50596, located in the western section of this zone, which contained shell finds of a similar nature and is theorised to have been a result of dredging in the Nene. 50596 has been attributed to the post-medieval period, however no diagnostic finds were recovered from the features revealed by trial trenching.
 - Flaxen Ford (WAN6) is visible on historic mapping within this zone, and although remains of this have almost certainly been removed by dredging within the River Nene, there is an outlying chance that evidence of its existence will be visible within the riverbank or in historic trackways leading to the bank.
 - The zone has potential to contribute to regional research objectives to investigate the historic dredging of waterways and post medieval industrial activity.
 - The zone is assessed as of **medium** heritage value.
- Zone 5 – encompasses the scheduled barrow cemetery and quadrilateral ditched enclosure (1006796) which abuts the Proposed Scheme Boundary directly north of the A47 and ends upon contact with the Stamford and Wansford railway line to the east and north-east. This zone measures approximately 285m east to west and 430m north to south. The land within this zone has been previously disturbed by quarry pits visible on geophysical survey results (Appendix 6.2, **TR010039/APP/6.3**), and by the construction of the A47. The Proposed Scheme Boundary skirts the scheduled monument for most of its length and occupies an area of approx. 27m² at the south-west corner of the monument. Within the monument boundary, geophysical anomalies indicate geological variations and possible disturbance from utilities. These anomalies may

mask archaeological features. Outside of the monument boundary, the exact extent of the remains is unknown and previously undiscovered assets relating to the monument, or of potentially schedulable quality, may be unearthed during any ground-breaking on land around the borders of the monument. Although possible, this is an outlying risk as archaeology outside the boundary of the scheduled monument has likely been destroyed by previous quarrying, the construction of the existing A47 carriageway, and installation of various buried utilities. It is worth noting that the quarrying is undated and could date from any time between the establishment of the barrows and the late 19th century. Given the presence of Roman quarrying in other parts of the study area, and the known Roman findspots, a Roman date for the quarrying is not beyond the realms of possibility.

- The zone contains multiple HER assets, most of which relate to the scheduled monument (01989, 00190, 00190c, 00190d, 00190e, 00190f, 00190g, 00190h). These include a pond barrow, ring ditches, a pit alignment, an enclosure, and findspots of Roman artefacts.
 - This zone has the potential to make a very strong contribution to the regional research objectives to investigate prehistoric burial practice and settlement patterns.
 - The zone has potential to contribute to regional research objectives to investigate Roman industrial activity along with the Roman to Anglo-Saxon transition. (Medlycot 2011).
 - The zone is assessed as of **high** heritage value due to its designation as a scheduled monument.
- Zone 6 – Priority area 1 within the trenching report – the largest zone within the study, this area encompasses priority area 1 and additional land to the north. This zone measures approximately 1.3km east-west and 670m north-south, bordered to the east by Ermine Street Roman Road.
 - Trial trenching of this area revealed evidence suggesting low intensity occupation from the Mesolithic, Neolithic, Roman, medieval and post-medieval periods evidenced by finds within the area. Trial trenching was undertaken over the southern part of this zone only, with the central and northern areas of the zone lacking intrusive excavation due to access restrictions.
 - HER assets within the zone include a rectangular enclosure (05665), a field system and pit alignment (10044), a linear feature and ring ditch (00227), and an excavated posthole (00230). These assets correlate with evidence provided by trial trenching and are indicative of ephemeral occupation of the area.

- Historic mapping locates a post-medieval toll house, Sutton Toll (WAN8) near to the south-west corner of this area. While the main structure was removed during construction of the current A47 carriageway, related remains such as buried garden features may survive adjacent to the road.
 - The zone could potentially contribute to regional research framework objectives for settlement evidence from the Bronze Age to medieval periods and is assessed as of **medium** heritage value.
- Zone 7 – Priority area 2 within the trenching report (Cotswold Archaeology 2020, Appendix 6.6, **TR010039/APP/6.3**) – land between the Sutton Conservation area to the south and the A47 to the north, measuring approximately 1km east-west and 420m north-south. The northern border of the zone is identified as a previous Roman Road on OS mapping, and the River Nene is located approximately 90m to the south-west.
 - Small clusters of features were identified by trial trenching in this zone, consisting mainly of pits lacking diagnostic finds. This coincides with a pit alignment identified in the HER (08368) and these features most likely form a shared context with each other.
 - Other assets within this zone recorded in the HER comprise five ring ditches (08359, 01986, 01987, 08144, 01653) visible on aerial photography, a probable Roman road (08369), and a selection of surface finds dating to the Neolithic period (00229).
 - This zone has the potential to make a good contribution to the regional research objectives to investigate Neolithic flint working in non-gravel landscapes; the Bronze Age/Iron Age transition and Roman industrial activity, and Bronze Age to Roman settlement patterns.
 - The zone is assessed as of **medium** heritage value.
- Zone 8 – Land to the west of Upton, surrounding a Neolithic causewayed enclosure and pit alignment (MPB2229) identified by aerial photography and comprising an incomplete double arc of segmented ditches representing around half of a complete circuit. HER records indicate that cropmarks were visible on aerial photography of the area; however, these could not be obtained due to COVID-19 pandemic restrictions. These images suggest that the enclosure measures approximately 200m across, and the south-eastern section is cut by a linear pit alignment which measures approximately 190m in west-north-west to east-south-easterly direction.
 - The zone could potentially contribute to regional research framework objectives for the investigation of Neolithic causewayed enclosures.
 - The zone is assessed as of **medium** heritage value, however quality of survival of the enclosure could warrant a high value after further investigation.

- Zone 9 – This is a 20m buffer of the line of Ermine Street Roman Road.
 - The line of the road is well preserved in the current field boundaries but has not been archaeologically investigated within the area of the Proposed Scheme.
 - This zone has the potential to make a contribution to the regional research objectives to investigate Roman settlement patterns.
 - The zone is assessed as of **medium** heritage value

Unknown archaeological remains

- 6.6.74. The remainder of the areas within the Proposed Scheme boundary could be grouped into a further archaeological zone, as the archaeological fieldwork to date is sufficient to characterise the likely remains. However, as this is spread out and interrupted by many roads, buildings, hardstanding, service trenches and woodland, it has not been presented as a “zone 10” to avoid a confusing presentation.
- 6.6.75. The areas within the Proposed Scheme boundary outside of the 9 zones include areas without significant geophysical or archaeological trenching results as well as untested areas. The trenching results show a good correlation with the geophysical survey. However, enough features were found through excavation that were not present on the geophysical or cropmark surveys that it must be assumed that the remainder of both the surveyed and un-surveyed land retains further archaeological potential.
- 6.6.76. The character of identified remains is consistent across the Proposed Scheme, with the greatest quantity of finds from the evaluation comprising material of Roman and early-medieval dates, and this can be expected to inform the undiscovered remains. The remaining open land within the Proposed Scheme boundary has the potential for remains which will contribute to regional research framework objectives as listed above for the 8 zones. However, the unknown remains are likely to be less substantial than the known remains and related to the identified activity. The banks of the River Nene are known to have archaeological remains redeposited from dredging. This is likely to be the case throughout the area south of the Proposed Scheme. While these have value in their own right as evidence of activity, the removal from their original stratification will have lessened their heritage value.
- 6.6.77. An overlying risk of unknown archaeology throughout the Proposed Scheme is presented by the potential discovery of downed World War II aircraft. The proposed development lies on a line between RAF Wittering and the various European WWII theatres. HER points are given for assets such as these but they have a very low degree of accuracy, meaning that aircraft crash sites and

potential war graves should be considered a risk throughout the Proposed Scheme.

- 6.6.78. The potential value of any such remains might technically be of medium value, but as the value would be principally derived from their contribution to our understanding of the wider context of the 8 zones, they are more correctly of **low** heritage value in themselves. This would not preclude individual features or artefacts from being of higher value.
- 6.6.79. The likelihood of finding unknown remains within the area within the Proposed Scheme boundary is high, save for the following areas which have entirely or substantially removed the potential archaeology:
- Road surfaces and hardstanding which will have removed any archaeological remains within their footprints.
 - Modern ponds and drainage ditches which will have removed any archaeological remains within their footprints.
 - Buried services and their working areas which will have removed any archaeological remains within their footprints.
 - Extant mature and semi-mature woodland, where historic root action and grubbing up prior to construction would destroy any potentially preserved archaeological remains.
 - 19th century and later quarries which are likely to have removed any earlier remains and are of negligible heritage value in themselves.
 - 19th century railway cutting, which will have removed earlier remains within its footprint.

6.7. Potential impacts

- 6.7.1. This section provides a brief description of the potential impacts on the environment during both construction and operation and a justification for scoping these impacts in or out of the remainder of the assessment.

Construction impacts

Temporary construction impacts

- 6.7.2. Temporary construction impacts would last for all or part of the construction period. They are short term and reversible, usually simply by ceasing of the activity and include:
- noise generated by construction work which could impact the quiet, rural setting of heritage assets
 - movement of construction plant within the setting of heritage assets

- siting of construction compounds, including the introduction of noise and lighting and potential impact on the setting of heritage assets
- siting of haul routes and traffic diversions introducing traffic and plant movement deeper into the rural setting of heritage assets

6.7.3. All of these potential effects, apart from one, are screened out of the assessment due their short term and 100% reversible nature. This nature would adjust the magnitude of any impact to negligible, and so cannot result in significant effects.

6.7.4. The effect of traffic diversions has been scoped in due to the potential disruption to a publicly accessible asset that relies on visitor income.

Permanent construction impacts

6.7.5. Permanent impacts are works carried out during the construction period which would result in a direct or indirect permanent impact. Permanent impacts are likely to include:

- Earthworks required for construction of the Proposed Scheme which have the potential to permanently impact the setting of heritage assets.
- Structural damage to historic buildings due to demolition or proximity of works (vibration or other ground movement).
- Excavation required for construction of the Proposed Scheme, site compounds, and haul routes, which have the potential to permanently remove archaeological remains.
- The appearance of the Proposed Scheme, including landscaping works and presence of structures and signage which have the potential to permanently alter the setting of heritage assets.

6.7.6. All of these potential sources of impact are scoped in due to the presence of assets sensitive to these forms of impact within the study area.

Operational impacts

6.7.7. Operational impacts would arise for heritage assets from the use of the Proposed Scheme. Operational impacts may include:

- changes to traffic movements from the Proposed Scheme, which have the potential to alter the setting of heritage assets through noise and visual intrusion.
- road lighting around the altered junctions, which have the potential to alter the setting of heritage assets

6.7.8. Both these potential sources of impact are scoped in due to the presence of assets sensitive to these forms of impact within the study area.

Construction impacts

Temporary construction impacts

- 6.7.9. Whilst temporary impacts are predicted for the Proposed Scheme, none of these will have residual effects.

Permanent construction impacts

- 6.7.10. The scheduled barrow cemetery and quadrilateral ditched enclosure (1006796) will have a 27m² triangular section of its south-eastern corner removed during construction. This section contains geophysical anomalies thought to be geological in origin, that may mask other features. The encroachment into the monument is necessary to move the Proposed Scheme further from the River Nene Flood Zone, reducing the need for flood compensation earthworks. In a meeting held 09/03/2021, the options were discussed with Historic England, who agreed that on balance the case was sufficient to justify the encroachment, provided the land-take within the monument was subject to appropriate archaeological mitigation. It was agreed that the land-take of the proposed scheme within the scheduled monument was the maximum reasonably allowable.
- 6.7.11. The asset is of high value, and the Proposed Scheme would remove a small area of land that is not known to, but has the potential to, contain archaeological remains. For potential remains to be masked by geological features, the character of any such remains is likely to be simple, such as small pits or shallow ditches and unstratified finds. The location of the encroachment is away from the main activity on the site, which is to the north.
- 6.7.12. The Former Wansford Road Railway Station (WAN1) will be demolished as part of the Proposed Scheme. The associated platform would be partly demolished.
- 6.7.13. Historic England have requested that the justification for removal be repeated in this section for ease of reference. It is presented below without any changes:
- 6.7.14. *“Station House will need to be demolished as the new carriageway alignment will have the Earthworks embankment through the location of the existing building. There will also be no safe access to the building in future so the building will be demolished to prevent future maintenance requirements.”*
- 6.7.15. Related assets such as the No.6 bridge (WAN2), Heath House (WAN11) and the Former Stamford and Wansford Railway (53529) will also be impacted by this loss of group value.
- 6.7.16. Model Farmhouse (List entry 1331283) and the Wall to the East of Model Farmhouse (List entry 1127438) will be within close proximity to works at the

junction of Main Road and Church Walk and are therefore at risk of up to major impacts without mitigation. The main risk of major impacts is to the wall directly abutting the junction. This asset is at risk of damage from vibration or ground movement during any construction works. The main risk to the farmhouse itself is from damage to context as a knock-on effect of any damage to the surrounding wall. Both the wall and farmhouse will also suffer impacts to their setting from the removal of rural context as a result of works near Upton, although the works within close proximity to the assets will mostly adhere to the established road network. The physical impacts are not confirmed and will be subject to further investigation of structural risk and controls but at this stage, the precautionary principal has been applied.

- 6.7.17. The Sacrewell Farm complex, consisting of the Sacrewell Farmhouse (List entry 1266496) and Sacrewell Mill and Mill House and Stables (List entry 1127493) could receive setting impacts due to a loss of associated land to the south and west. Proposed ponds to the west of the main mill pond will not have an effect as they are in keeping with the established landscape and will not adversely affect the water levels of the mill ponds.



Photo 12 Sacrewell mill, south side of the listed barn, showing the existing access road in the centre-right of frame. The proposed access would tie in to this, minimising change



Photo 13 Sacrewell farm, looking north toward the south side of the listed barn, showing the existing access track.

- 6.7.18. The Sutton Conservation area could experience a change to its historic connection to the existing A47 and its predecessors through severance of Sutton Drift. However, this road will be left intact for most of its length within the conservation area and as a tree-lined grassland pathway, preserving the notional link, as well as the actual link to the existing A47 being maintained via Nene Way. Further, the route would remain accessible to pedestrians, cyclists and horse riders.
- 6.7.19. There are potential construction impacts on the settings of several built heritage assets of up to high value identified in *Key Designated Assets in section 6.6*. These impacts would derive from the presence of new road structures, adding urbanising elements and removing parts of the existing rural landscape. The potential impacts would be minimal due to the relatively small change to the existing road corridor and the low visibility of the proposed junctions from those assets. Details of the assessment of impact with non-site-specific mitigation can be found in Appendix 6.1 (**TR010039/APP/6.3**).
- 6.7.20. The known and potential archaeological assets have been grouped into 9 zones. An assessment of impacts for individual features and assets from the HER and desk-based resources is available in Appendix 6.1, table 5 (**TR010039/APP/6.3**). For the sake of clarity, this chapter will refer only to the zones from this point on.

- 6.7.21. The Proposed Scheme could remove all identified and potential remains within the area within the Proposed Scheme boundary. While indicative layouts for storage areas, haul routes and site compounds have been set out, these cannot be fully committed to at this stage. As a worst-case scenario, we have assumed that the whole of the Proposed Scheme boundary will be disturbed, except for the current road elements to be retained.
- 6.7.22. The physical removal of parts of historic landscape types and the setting changes from increased urbanising elements could have an impact on the historic landscape.

Operational impacts

- 6.7.23. The Sutton Conservation area could experience change to its rural setting with the introduction of lighting at the proposed Sutton Heath roundabout. The changes would be limited to the rear of properties on Nene Way and Sutton Drift, which all have some level of screening from intervening vegetation. The lighting could potentially be visible from within the conservation area on Sutton Drift in winter, when vegetation has thinned out.
- 6.7.24. The change in use of the existing A47 carriageway will remove motorised vehicles, reducing both road noise and vehicle lighting in the setting of Sutton Conservation area. Since the proposed carriageway will be very close to the existing one, even though a noticeable reduction in noise and lighting is predicted, there will still be some noise and light present and so the potential benefit is considered negligible in terms of change to the historic setting.
- 6.7.25. Stibbington conservation area could experience change to its rural setting with the introduction of new lighting and vehicle lights on the new Sacrewell access. The new lighting would not be a significant impact, as it will be virtually identical to the existing lighting at the junction. The vehicle lighting will be primarily from traffic bound for Sacrewell Farm and the Petrol Filling station. Headlights would be directed toward the north-western side of the conservation area, where it is largely screened by the modern part of Stibbington and intervening vegetation. The distance to the Proposed Scheme would further reduce the impact. As the lights would be only experienced intermittently, during hours of darkness and from the edges of the inwardly-focused conservation area, the potential impacts are very small.
- 6.7.26. The changes to the historic landscape consist of small scale boundary hedge removal and removal of small parts of post-enclosure fields, which would change from agricultural use to scrub and woodland planting (see Section 6.9 below). As the proposed route is either online or parallel to the existing A47 carriageway, the

change in character as it affects the historic landscape is not considered significant.

6.8. Design interventions and mitigation

Design measures

- 6.8.1. Design intervention is mitigation embedded into the design of the Proposed Scheme and is achieved through an iterative process. Mitigation measures to address potentially significant effects are listed in Table 6.6.
- 6.8.2. The Proposed Scheme boundary has been amended to exclude the Cropmark site of a barrow cemetery and a quadrilateral ditched enclosure (List entry 1006796) so as to not cause negative impacts to any archaeological features within.
- 6.8.3. The scheduled Roman fort at Sutton Cross (1006837) has been avoided by restriction of proposed works to a shorter length of the A47 and Old Peterborough Road, which might otherwise have had effects on its setting.
- 6.8.4. The Royal Observer Corps Site (50635) has been excluded from the Proposed Scheme Boundary to avoid any potential physical impacts, and the current access track will be reinstated back to agricultural land.

Construction mitigation measures

- 6.8.5. Construction would be carried out using industry best practice and in accordance with implementation of an Environmental Management Plan (EMP, **(TR010039/APP/7.5)** to minimise potential adverse effects. Compliance with the EMP is secured by Requirement 4 in the draft DCO. Outside of these best-practice measures, the Outline Traffic Management Plan (**TR010039/APP/7.6**) also aims to ensure that access to local businesses will not be altered during construction works. This will help to avoid any indirect impacts on the maintenance and continued viable use of the asset.

Former Wansford Road Railway Station (WAN01) and associated railway bridge (WAN02)

- 6.8.6. In addition to the identified Proposed Scheme design mitigation measures, historic building recording of the locally listed former Wansford Road Railway Station (WAN01) and associated railway bridge (WAN02) will be carried out to Level 3 according to Historic England's guidance for investigating and recording historic buildings (Historic England, 2016).
- 6.8.7. This is required prior to the planned demolition of the former station as part of planned construction works and should be undertaken after sensitive removal of

vegetation to enable adequate recording. To also be included in the recording are; the linesman's hut, platform, cast iron gate piers, and the railway earthworks within the Proposed Scheme boundary. Heath House (WAN11) will also be included for context but will not be subject to full recording, due to being unaffected by the Proposed Scheme other than through loss of group value. Heath House is also a private dwelling and access for photographs may not be possible. This would not invalidate the recording works, as the house will still exist and can be included through mapping and text references. Steps may be taken to enhance the visibility of related assets to the former Wansford Road Railway Station (i.e. platform, linesman hut) via vegetation clearance, as the site is currently overgrown and inaccessible in many places. This would improve the setting and public appreciation of the asset from the proposed footway route and potentially from the proposed carriageway.

- 6.8.8. While the former station building itself and the gate piers must be removed due to engineering concerns, there is a potential for the linesman's hut and elements of the platform to be retained. The detailed design stage will include examination of options for retention of these elements in consultation with the Peterborough City Council Conservation Officer as the relevant authority and Historic England as a technical advisor.
- 6.8.9. Original building materials from demolition will be made available to reputable organisations for the purposes of historic building restoration and reclamation. Preference shall be given to local railway organisations or projects first.

Grade II listed wall to the east of Model Farmhouse

- 6.8.10. Historic building recording of the Grade II listed wall to the east of Model Farmhouse alongside a full structural survey and construction risk assessment will be undertaken prior to the starting of any permanent or temporary works nearby. This will enable design of appropriate preventative measures in consultation with the Peterborough City Council Conservation Officer. Such measures are likely to include protective fencing but may also include preventative conservation works.

Royal Observer Corps bunker (50635)

- 6.8.11. The Royal Observer Corps bunker (50635) will be screened from the works by appropriate fencing.

Archaeological monitoring, excavation, recording and testing

- 6.8.12. The heritage value of the known and potential archaeological resource within the areas within the Proposed Scheme boundary lies in its potential to contribute to the regional research framework objectives. Preservation by record would be an

appropriate method to mitigate adverse effects. Identified remains are not of such complexity and sensitivity that preservation in situ would be necessary. However, good practice dictates that where remains need not be disturbed, they should be protected to ensure they are preserved for the future. Throughout detailed design development at PCF stage 5, design proposals for temporary structures, services, haul routes, storage methods etc should have regard to this and preserve remains where reasonably practicable by excluding open areas from works with appropriate fencing.

6.8.13. All zones have been and may further be subject to archaeological excavation and recording by various methods. The precise scope of this work will be agreed with Peterborough City Council as the relevant authority, with Historic England providing technical advice. Archaeological methods may need to adapt to changing conditions and discoveries throughout the works. Recommendations are set out below but these should be seen as a strategy and a starting point for agreement.

- Archaeological monitoring of GI works to make additional observations in previously tested and untested areas and recommendation of appropriate design and mitigation response. Locations of test pits and boreholes will be reviewed to minimise harm to potential archaeological remains, whether designated or non-designated.
- Archaeological monitoring of groundworks in zone 1 (north bank of the Nene at the west end of the Proposed Scheme). The attending archaeologist will scan all arisings with a metal detector for ferrous and non-ferrous metal finds. Examination of any such potentially high-status finds would add to the understanding of results from zone 2, even though they would be unstratified. Ecofacts and pottery fragments would be of much lower potential value due to disturbance by dredging but, will still be subject to recording if identified during monitoring.
- Full pre-construction archaeological excavation of that part of Zone 5 within the scheduled monument boundary to be encroached on. Exclusion of the remainder of zone 5 from the construction site through placement of appropriate barriers. An archaeological observer will be present during all works within 30m of the Scheduled Monument to ensure there is no damage outside of the Proposed Scheme boundary and to appropriately record any potentially related unstratified finds not previously recorded as set out below (for example during excavation of existing road and verge layers).
- Pre-construction excavation for zones 2, 3, 6, 7, 8 and 9. These zones contain the main locations of sensitive remains and will likely require the most time to excavate appropriately. Sampling levels should be agreed in advance of works but, will require flexibility to adapt to the emerging archaeological remains in consultation with Peterborough City Council. Advance excavation will limit the risk to the subsequent construction phase programme.

- Construction-integrated recording for zone 4. This zone has been disturbed through excavation for utilities, dredging operations and construction of the existing A47 carriageway and petrol station. There are also known buried and overhead services here that would present logistical problems for pre-construction recording. The time required for adequate recording will be less and it may be more efficient to schedule the works during topsoil stripping for construction. This could take the form of archaeological monitoring of topsoil stripping by the earthworks contractor with programme allowance for recording of exposed remains before further earth-moving. Alternatively, the removal of overhead lines may take place before archaeological recording and the area fully recorded before handing over to the main construction works.
- Archaeological monitoring with potential construction integrated recording in all other parts of the Proposed Scheme save for the exclusions set out in section 6.6.70 above. This work should focus on the mapping of archaeological features related to zones 2-9 and recovering dating evidence to clarify the results of previous excavation in those areas. The monitoring will also provide a safety net to catch any unexpected remains of archaeological value. The monitoring would be targeted on areas of impact defined during detailed design of temporary works at PCF stage 5.
- Parts of Zones 6, 8 and 9 have not been archaeologically tested. While the above recommendations apply to these areas equally, they do not preclude further investigative works such as geophysical and trenching surveys. Any investigations would be designed in consultation with Peterborough City Council and would be used to refine the design of appropriate mitigation works.

Written Scheme of Investigation (WSI)

6.8.14. During construction, a protocol for unexpected archaeological discoveries will be developed as part of the Environmental Management Plan (EMP) (TR010039/APP/7.5). This protocol will be agreed with Historic England and Peterborough City Council and is likely to include:

- Toolbox talks or other instruction methods to allow operatives to identify potential archaeological remains
- Protocols for protection, recording, and archiving of relevant finds
- Protocols and communications plans for temporarily halting works and consulting with the relevant stakeholders in the event of unexpected remains of high or very high value / sensitivity

6.8.15. All recording and conservation measures will be secured through a DCO requirement and captured within a Written Scheme of Investigation (WSI) which will be agreed with Historic England and Peterborough City Council as appropriate. Historic England should be the primary consultee of any works potentially affecting the scheduled monument and Peterborough City Council for

all other locations. However, both bodies should be kept informed of all works and given the opportunity to offer technical advice.

- 6.8.16. The WSI would include measures to ensure adequate monitoring, adaptation to change based on arising information, analysis, reporting and archiving, as well as methods of public dissemination appropriate to the results. The WSI shall set out the appropriate standards and guidance that apply to the works.
- 6.8.17. The objectives of all fieldwork will be focused on local, regional, and national research themes and agendas. They will provide a clear statement of how the project is expected to contribute to the value, understanding and dissemination of the cultural heritage resource, and how this is to be achieved, monitored, and validated.
- 6.8.18. It is likely that the results of mitigation excavations and building recording will be of sufficient interest to warrant engagement with the local communities through outreach and education. Where this is identified in consultation with Historic England and Peterborough City Council, it should be noted that this would form part of necessary appropriate mitigation rather than optional enhancement.
- 6.8.19. Peterborough City Council usually requires archaeological WSIs to be written by the appointed archaeological contractor undertaking the work. However, depending on the final scope of works, government policy may require an agreed scope of works in order to undertake appropriate procurement. In this case, it may be appropriate to agree a general (project-wide) archaeological mitigation strategy, which would include layouts of the areas of works, minimum standards, roles and responsibilities and monitoring arrangements. Appointed archaeological contractors would then supply method statements for the specific works which would, together with the general strategy, form a WSI for agreement.
- 6.8.20. Both the strategy and WSIs would be live documents, to be updated as results emerge from the works and allowing for a rolling agreement of appropriate methodology with the consultees.

Operation

Mitigation

Landscape planting

- 6.8.21. Focused planting of vegetation along the route corridor has been applied to mitigate potential impacts to the setting and location of heritage assets within the study area. The planting design is presented in Chapter 7 (Landscape and Visual) (**TR010039/APP/6.1**). The replacement of field boundaries removed during construction will have a mitigating effect on the historic landscape,

however, as the unmitigated impact is negligible the effect of this design element has not been noted as positive intervention in order to not overstate benefits.

- 6.8.22. The landscape and planting design has been developed to be in keeping with the current character of the immediate setting of the existing A47 and surrounding area. This briefly consists of open fields, bordered by dispersed tree lines with areas of block planting around the roads and watercourses. This will reduce potential impact on the historic landscape as well as the setting of built heritage.
- 6.8.23. Considerate planted vegetation would reduce the predicted adverse impacts of the new proposed junctions and traffic on the setting of nearby heritage assets. The majority of these impacts are not significant and are reported in Appendix 6.1, Table 5 (**TR010039/APP/6.3**). Specific mitigation for significant impacts is discussed below.
- 6.8.24. Sacrewell Farm may benefit from intermittent tree-planting along the proposed free-flow lane at the A1/A47 junction and new access road. A proposed block of woodland north-east of the proposed A1/A47 roundabout may also contribute to this effect, providing more screening than the current environment. The current intrusion from built elements is minimal, so this effect is not considered large enough to be recorded as a significant positive impact.
- 6.8.25. Trees removed from the verge north of Model Farmhouse and the associated wall (1331283 and 1127438) will be replaced with trees of similar species as close as possible to the original locations, to retain the effect of the partial screening adding to the sense of transition into/out of the settlement at these assets.
- 6.8.26. The potential impacts on Stibbington conservation area will be reduced through partial screening from planting along the proposed Sacrewell access road.
- 6.8.27. The potential impact on Sutton Conservation area will benefit from screening planting between the current A47 carriage way and the Proposed Scheme. This will complement existing screening and reduce the visibility of the proposed Sutton Heath roundabout, Sutton Heath Link Road and the additional lighting (both that proposed for the roundabout and from vehicles using the roundabout).
- 6.8.28. Retention and reinforcement of planting along the existing A47 carriageway, east of the proposed Sutton Heath Roundabout, will reduce the current visual intrusion of modern vehicles in the rural setting of the conservation area. However, the relationship of the settlement to the road is equally important to its historical context and loss of vehicles will reduce the indexing effect that this has. It is difficult to quantify these nuanced elements changes in terms of the matrix approach set out by the DMRB standards above. However, as the predicted

changes are subtle, overall the change to the heritage significance of the asset will be neutral.

Enhancement measures

- 6.8.29. Heritage enhancement in the area could possibly be achieved through the installation or improvement of information boards and signage. Examples of this could be brown heritage signs for Sacrewell Farm and information signs to identify assets such as Ermine Street Roman Road and the Nene Way. As a minimum, the current level of tourist signage will be retained. This is not set out as a commitment, as safety considerations will have to be considered in sign placement, and some of the optimal locations may not be within the Proposed Scheme boundary.

6.9. Residual effects

- 6.9.1. This section details likely significant adverse or beneficial effects with mitigation described in section 6.8 above in place. The only significant residual effect is on the railway station. Impacts which are not significant after mitigation have been included here for assets described above. This is to demonstrate the efficacy of mitigation and to aid in transparency and readability of the chapter.
- 6.9.2. For an assessment of all cultural heritage, including those assets where no likely significant effects have been reported, refer to Appendix 6.1, Table 5 (TR010039/APP/6.3).
- 6.9.3. Demolition of the locally listed former Wansford Road Railway Station (WAN01) will not be fully mitigated by recording works. The physical loss of the building cannot be entirely replaced with a written record and the loss of group value and context for the railway line (53927), locally listed Heath House (WAN11) and the locally listed Bridge No 6 (WAN2) will remain after mitigation.
- 6.9.4. The magnitude of effect on the station is reduced to moderate adverse, for a **moderate adverse** significance of effect.
- 6.9.5. The magnitude of impact on the railway line and locally listed buildings after mitigation is minor adverse, for a significance of effect of **slight adverse** for the group.
- 6.9.6. Construction land-take within the scheduled monument boundary of the scheduled barrow cemetery and quadrilateral ditched enclosure (1006796) will be mitigated by archaeological recording works. However, the potential archaeology within the monument will be removed where it would otherwise be preserved for future generations, who may develop improved analytical techniques to better understand the remains. The loss of this protection and future potential means

that the magnitude of impact will be reduced from minor adverse to negligible adverse rather than no change, giving a **slight adverse** significance of impact. The remaining effect of loss of protection and future potential might have resulted in no lessening of the magnitude of impact, were it in a different location within the monument. In this case, the magnitude is considered to be reduced due to the likely nature of the potential remains as agreed with Historic England and Peterborough City Council.

- 6.9.7. The impact of the Proposed Scheme on heritage assets is considered to be in accordance with national and local planning policy. As outlined above in section 6.9 and Tables 6.5, 6.6 and 6.7, there are residual impacts resulting from the Proposed Scheme after mitigation on a small number of heritage assets only, including 1 designated heritage asset and 3 undesignated heritage assets.

National Planning policy

- 6.9.8. The single designated heritage asset on which the Proposed Scheme has a residual impact after mitigation is the scheduled barrow cemetery and quadrilateral ditched enclosure (1006796). In relation to paragraphs 5.131 and 5.134 of the National Policy Statement for National Networks (NPS NN 2014, see paragraph 6.3.3 above), the impact of the Proposed Scheme on the scheduled monument is considered to constitute "less than substantial harm". This is because only a relatively small section of the scheduled monument will be impacted on and therefore the significance of the heritage asset, including the key elements of its special historic interest, will not be substantially affected. Historic England agrees that the harm to the scheduled monument caused by the Proposed Scheme will be less than substantial.
- 6.9.9. As noted above at 6.7.11, the main justification for the encroachment of the Proposed Scheme onto a section of the scheduled monument is that under the current proposed alignment, a much smaller area of land to the south of the A47 needs to be compulsorily acquired, with consequently less impact on flooding, than would otherwise be required if the scheme was to avoid the scheduled monument completely.
- 6.9.10. According to the 2013 DCLG guidance on compulsory acquisition relating to DCOs, *Planning Act 2008: guidance related to procedures for the compulsory acquisition of land* (Planning Act, 2008), applicants have a duty to ensure that any land that is to be compulsorily acquired as part of an application for development consent is "no more than is reasonably required for the purposes of the development" (paragraph 11). The alignment of the Proposed Scheme is therefore intended to strike a balance between (1) ensuring that no more land is compulsorily acquired than is reasonable required for the scheme and (2) minimising harm to the scheduled monument.

- 6.9.11. The public benefits of the Proposed Scheme are outlined in the Case for the Scheme (**TR010039/APP/7.1**) and include improving road safety and traffic flow, reducing delays and journey times on the A47, improving the region's attractiveness for business and unlocking economic growth and development in the area. These public benefits are considered to outweigh the limited amount of less than substantial harm that would be caused by the Proposed Scheme to the scheduled monument as well as the "slight adverse" and "moderate adverse" harm that would be caused to the three undesignated heritage assets as outlined in section 6.9.

Local planning policy

- 6.9.12. The impact of the Proposed Scheme on the scheduled monument and the other undesignated heritage is considered to be in accordance with the Peterborough Local Plan Sustainability Appraisal Policies LP16 (Urban Design) and LP19 (The Historic Environment) and Huntingdonshire Local Plan Policy LP 34 (see paragraphs 6.3.10 and 6.3.12 above). The Proposed Scheme has sought to protect heritage assets affected by the scheme and their settings as much as possible and a range of mitigation measures has been proposed to avoid or reduce the impact of the Proposed Scheme on heritage assets (see section 6.8 and Tables 6-5, 6-6 and 6-7 above). While there are significant effects that cannot be completely mitigated, there are no significant effects where no mitigation is possible or where no mitigation is proposed, either on a site-specific basis or through general design measures.

Construction temporary effects

- 6.9.13. The predicted beneficial and adverse significant effects predicted on heritage assets for temporary construction effects are reported in Table 6-5. The impact magnitude is given before and after site specific mitigation and significance of effect is given after site-specific mitigation.

Table 6-5 Significant construction effects

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation proposals	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
1127493 Sacrewell Mill and Mill House and Stables	Grade II*	High	Temporary closure of access roads may lead to a reduction in maintenance measures and educational value for the regional community. Magnitude of impact is unknown as this depends on duration and frequency of closures. Mitigation measures will consist of due consideration of the site when planning road closures, as well as maintaining appropriate signage for diverted traffic and consultation with the site operators during construction to ensure disruption is minimised.	Unknown	No change	Neutral

Construction permanent effects

6.9.14. The predicted beneficial and adverse significant effects predicted on heritage assets for permanent construction effects are reported in Table 6-6. The impact magnitude and significance of effect is given after site-specific mitigation. For impacts before mitigation, please refer to Appendix 6.1, Table 5 (TR010039/APP/6.3).

Table 6-6 Significant construction effects

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation proposals	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
Barrow Cemetery and Quadrilateral Ditched Enclosure	Scheduled Monument	High	Physical removal of 6m by 9m triangle (approx. 27m ²) of land from the south-eastern corner. No known significant remains will be removed but there is potential for small or ephemeral remains, masked by geological anomalies. The land within the scheduled monument will be fully archaeologically excavated prior to construction. The Proposed Scheme boundary will be surveyed and fenced, with archaeological supervision to ensure there is no further encroachment or accidental damage.	Minor Adverse	Negligible Adverse	Slight Adverse
1331283 Model Farmhouse	Grade II	Medium	Setting may be severely damaged if the associated wall (1127438) is damaged Mitigation measures to protect the wall are noted below for 1127438 "Wall to east of Model Farmhouse fronting road and turning westwards at road junction".	Moderate Adverse	No change	Neutral
1127438 Wall to east of Model Farmhouse fronting road and turning westwards at road junction	Grade II	Medium	Construction activities may physically impact the asset by collision, vibration or other ground movement. Removal of trees from the road verge north of these assets will open the landscape views, reducing the sense of transition between the settlement and surrounding farmland Mitigation measures to prevent damage to the asset will comprise a full structural survey to determine further mitigation requirements. The structure	Major Adverse Slight adverse	No change	Neutral

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation proposals	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
			and any ground around it that may create a vulnerability if disturbed shall be excluded from the works by appropriate fencing. Trees will be replaced with appropriate species in the closest locations available within the new verge. There may be a temporary effect while the trees mature to previous levels but this is temporary and not considered significant.			
1127493 Sacrewell Mill and Mill House and Stables	Grade II*	High	Loss of associated land to the south of the asset will damage the historic setting of the structure. These impacts will be softened in character by the retention of existing planting and use of on-site screening from modern barn structures. The layout of the access road closest to the asset has been developed in consultation with the site operators.	Negligible	No change	Neutral
1266496 Sacrewell Farmhouse	Grade II	High	Loss of associated land to the south of the asset will damage the historic setting of the structure and widening of the access road will add urbanising elements to the asset. These impacts will be softened in character by the use of sympathetic landscape planting design and retention of existing planting.	Minor adverse	No change	Neutral
50635 Royal Observer Corps Bunker	None	Medium	The asset may be physically harmed by accidental damage or possible site clearance. The asset will be excluded from the works by appropriate fencing.	Major adverse	No change	Neutral
WAN1 Former Wansford Road Railway Station	Locally Listed	Medium	The station building is to be demolished. A suitable level of historic building recording will preserve the asset by record. The record will conform to Historic England standards for a level 3 record and will include written, drawn and photographic records of the station building, platform, linesmans hut and gate piers. A topographic survey will be included	Major adverse	Moderate adverse	Moderate adverse

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation proposals	Magnitude of impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
			to record the railway earthworks. The immediate context will also be recorded, including Heath House. Efforts will be made to retain as much of the platform as possible and the linesman's hut through sensitive design during PCF stage 5. Demolition of all or part of these features will require a written justification, provided to Peterborough City Council for discussion. Original building materials from demolition will be made available to reputable organisations for the purposes of historic building restoration and reclamation. Preference shall be given to local railway organisations or projects.			
WAN2 Wansford to Sutton Railway Bridge No.6	Locally Listed	Medium	The asset will suffer impacts to setting from the demolition of the Former Wansford Road Railway Station, The asset will receive positive impacts to setting from vegetation clearance and re-purposing of the historic railway line to an footway. The asset will be recorded as part of the mitigation measures for WAN1 above. Results of recording will be used to inform any further conservation works that may be required. Results of all surveys and conservation reports will be incorporated into the Cultural Heritage Asset Management Plan for the network at large.	Moderate adverse	Minor adverse Minor beneficial	Slight adverse Slight beneficial
WAN11 Heath House	Locally listed	Medium	The asset will suffer impacts to setting from the demolition of the Former Wansford Road Railway Station, The asset will be recorded as part of the mitigation measures for WAN1 above	Moderate adverse	Minor adverse	Slight adverse
Archaeological assets zones 1-9	None	Medium	Construction works will physically remove large parts of these assets. A programme of archaeological recording will be agreed with the Local Authority to preserve the assets by record and contribute to regional research framework objectives. The significance of effect could be given as neutral or slight. Neutral has been chosen to reflect that recording and dissemination of archaeological information will add significantly to our understanding of the archaeology of the region.	Major adverse	Negligible	Neutral

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation proposals	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
Known and Potential archaeological remains outside of zones 1-9	None	Low	Construction works will physically remove large parts of these assets. A programme of archaeological recording will be agreed with the Local Authority to preserve the assets by record and contribute to our understanding of the remains in zones 1-9.	Major adverse	Negligible	Neutral

Operational effects

6.9.15. The predicted beneficial and adverse significant effects on heritage assets during operation are reported in Table 6-7. for non-significant adverse effects, please refer to Appendix 6.1, Table 5 (TR010039/APP/6.1).

Table 6-7 Significant operational effects

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
Stibbington conservation area	Conservation Area	Medium	Increased visual intrusion from new road surfaces, vehicle lights and streetlighting on the proposed Sacrewell access. This would increase urbanising elements in the wider rural setting of the northern edge of the asset. Planting in keeping with the local landscape will soften the effect of the new surfaces and partially screen the intermittent effect of lighting.	Minor adverse	No change	Neutral

NHLE / HER / BLO Ref Name	Designation	Value / Sensitivity	Description of impact and mitigation	Magnitude of Impact before mitigation	Magnitude of impact after mitigation	Significance of Effect
Sutton Conservation area	Conservation Area	Medium	Increased visual intrusion from new road surfaces, vehicle lights and streetlighting on the proposed Sutton Heath Roundabout and new road surfaces at Sutton Heath link road. This would increase urbanising elements in the wider rural setting of the northern and eastern edges of the asset.	Minor adverse	Negligible	Neutral
			Screening planting in keeping with the local landscape will reduce the effect of the new road surfaces and screen the intermittent effect of lighting. Removal of vehicle traffic from the existing A47 and Sutton Drift will change the character of historic links to the road network, reducing the indexing element of traffic but reinstating more of the rural character by limiting traffic to non motorised users and local access only. A significance of Slight would be the outcome of minor magnitude impacts on this asset. Discussion with the Peterborough City Council Archaeological Advisor and Conservation Officer and Historic England has confirmed that beneficial and adverse effects from differing elements of the proposal should be reported as separate significances. This is intended to remove the appearance of any "offsetting" which is not considered appropriate mitigation for heritage assets. However, the equal adverse and beneficial impacts come from the same element of the Proposed Scheme. Both magnitudes are presented to preserve the nuance of the effect but are balanced for the final assessment of significance.	Minor beneficial and Minor adverse	Minor beneficial and Minor adverse for a balanced magnitude of no change	Neutral

6.10. Monitoring

- 6.10.1. The monitoring of any protection measures would be undertaken during construction to ensure that they remain effective including regular inspections of temporary fencing. Monitoring measures and protocols for managing any disturbance or removal of archaeological remains and heritage assets would be detailed within the EMP (**TR010039/APP/7.5**) and compliance is secured by Requirement 4 in the draft DCO.

6.11. Summary

- 6.11.1. Landscaping and planting have been incorporated into the design of the Proposed Scheme to reduce adverse effects on the setting of cultural heritage. Design intervention and mitigation has been included in the impact assessments for the heritage assets.
- 6.11.2. The assessment has identified a permanent significant adverse effect to the locally listed heritage asset Former Wansford Road Railway Station (WAN1) as a result of permanent impacts during construction. The temporary construction effects are related to potential noise and visual intrusion. The permanent construction effect relates to the demolition of the heritage asset. A programme of historic building recording and engagement with stakeholders on re-use of historic materials is proposed to partially mitigate these effects.
- 6.11.3. Possible significant effects for unknown archaeological remains dating from the prehistoric, Roman and early-medieval periods have been identified and this assessment presents the most likely worst case. A programme of archaeological recording is proposed to mitigate these effects and efforts will be made during the detailed design stage to avoid effects from temporary works where possible.
- 6.11.4. No significant effects are predicted for the historic landscape. The impact of the Proposed Scheme on heritage assets is considered to be in accordance with local and national planning policy.

6.12. References

- 6.12.1. For a full list of references and a glossary of terms, please refer to ES Appendix 6.1 (**TR010039/APP/6.3**).