

A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 6

6.1 Environmental Statement

Chapter 6: Cultural Heritage

Planning Act 2008

Regulation 5(2)(a)

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

26 February 2021

Infrastructure Planning

Planning Act 2008

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

**A428 Black Cat to Caxton Gibbet
improvements
Development Consent Order 202[]**

Chapter 6: Cultural Heritage

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6 Cultural heritage

6.1 Competent expert evidence

- 6.1.1 This chapter presents the results of an assessment of the likely significant effects of the Scheme on cultural heritage, a collective term used to describe archaeological assets, built heritage features and historic landscapes. The assessment has been undertaken and reported by a team of competent archaeology and built heritage experts within AECOM, the quality and completeness of which has been approved by a Technical Director who holds the qualifications of BSc Archaeology and MA Scientific Methods in Archaeology, and is a Member of the Chartered Institute for Archaeologists (MCIfA).
- 6.1.2 They have 20 years of experience in undertaking and reporting cultural heritage assessments as part of environmental impact assessments (EIA) for a wide variety of development types. They have worked on numerous road schemes across the UK from the options appraisal stage through to construction and have provided archaeological and heritage input into nationally significant infrastructure projects and public inquiries.

6.2 Legislative and policy framework

- 6.2.1 The following legislation and planning policy are of direct relevance to cultural heritage and have been considered as part of the assessment.
- 6.2.2 Compliance with statute and policy relating to the protection, conservation and enhancement of archaeology and built heritage assets is addressed within the Case for the Scheme [TR010044/APP/7.1].

Legislation

Ancient Monuments and Archaeological Areas Act 1979

- 6.2.3 Scheduled monuments are protected under the *Ancient Monuments and Archaeological Areas Act 1979* (as amended) (Ref 6-1) which imposes a requirement to obtain prior consent from the competent authority for any demolition, repair, and alteration works that might affect these nationally important assets.
- 6.2.4 The assessment has identified that although the Scheme would negatively affect the setting of two scheduled monuments, it would not physically affect the significance of any of these assets (see Section 6.9). The Scheme will also positively affect the setting of five scheduled monuments.
- 6.2.5 Based on this conclusion, there is no requirement to seek related consent(s) through the A428 Development Consent Order (DCO) application.
- ##### *Planning (Listed Buildings and Conservation Areas) Act 1990*
- 6.2.6 The *Planning (Listed Buildings and Conservation Areas) Act 1990* (as amended) (Ref 6-2) is the principal statutory instrument which must be considered in the determination of any application affecting listed buildings and conservation areas.

6.2.7 Under this legislation, local planning authorities and the Secretary of State are required to have special regard to the desirability of preserving a listed building, its setting, or any features of special architectural or historic interest that it possesses. It also places a duty on local planning authorities to publish proposals for their conservation areas and exercise their planning functions in a manner that gives regard to the desirability of preserving and enhancing the character or appearance of these areas.

6.2.8 The effects of the Scheme on conservation areas, listed buildings and their settings have been considered as part of the assessment of built heritage effects reported in this chapter.

The Infrastructure Planning (Decisions) Regulations 2010

6.2.9 The *Infrastructure Planning (Decisions) Regulations 2010* (Ref 6-3) set out matters to which the Secretary of State must have regard to when deciding applications for development consent. It states that when deciding an application which affects a listed building, conservation area or a scheduled monument, or its setting, the decision-maker must have regard to the desirability of preserving the asset or its setting or any features of special architectural or historic interest which it possesses (Regulation 3).

6.2.10 The effects of the Scheme on listed buildings, conservation areas and scheduled monuments have been considered as part of the assessment, with information provided in relation to their setting.

National Policy

National Policy Statement for National Networks

6.2.11 The *National Policy Statement for National Networks* (NPSNN) (Ref 6-4) acknowledges that the construction and operation of road infrastructure has the potential to affect the historic environment, and provides guidance on the identification, assessment and mitigation of effects on cultural heritage assets.

6.2.12 The NPSNN (Ref 6-4) sets out the matters that the Secretary of State for Transport should give due regard to when determining DCO applications that would harm or affect the significance of cultural heritage assets, their settings or their conservation.

6.2.13 The requirements of the NPSNN (Ref 6-4) in relation to identifying the significance of cultural heritage assets, and assessing and mitigating the effects of the Scheme on such assets have been taken account of in the assessment, in order to identify the likely significant effects that the Secretary of State for Transport needs to give due regard to in their decision-making.

Overarching National Policy Statement for Energy (EN-1)

6.2.14 The *Overarching National Policy Statement for Energy (EN-1)* (Ref 6-5) sets out the Government's policy on energy and infrastructure development.

- 6.2.15 In relation to the historic environment, EN-1 (Ref 6-5) states that applicants should provide a description of the significance of heritage assets affected by a development, and the contribution of their setting to that significance, acknowledging that the level of detail should be proportionate to understand the impacts on such assets.
- 6.2.16 The requirements of EN-1 (Ref 6-5) in relation to the assessment and mitigation of effects on the historic environment associated with the gas pipeline diversion within the Scheme have been accounted for in the assessment through the combination of desk studies, site surveys and archaeological evaluation to determine both the significance of heritage assets and the effects associated with construction of the diversion.
- National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)*
- 6.2.17 The *National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)* (Ref 6-6) relates to gas supply and gas and oil pipelines and sits under EN-1 (Ref 6-5).
- 6.2.18 Although EN-4 (Ref 6-6) does not contain any specific policies relating to effects on the historic environment associated with gas pipeline developments, consideration has been given in the assessment to the likely effects of construction of the gas pipeline diversion within the Scheme on heritage assets.
- National Planning Policy Framework*
- 6.2.19 A core principle of the *National Planning Policy Framework (NPPF)* (Ref 6-7) is that the planning system should conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of current and future generations.
- 6.2.20 The NPPF (Ref 6-7) acknowledges the importance of assessing the significance of heritage assets potentially harmed or lost through alteration or destruction or through development within their setting. It also sets out the considerations that local planning authorities should have when determining applications.
- 6.2.21 The requirements of the NPPF (Ref 6-7) have been accounted for in the assessment, with particular regard given to establishing the significance of designated and non-designated assets and their settings to inform decision making.
- Planning Practice Guidance*
- 6.2.22 *Planning Practice Guidance for the Historic environment* (Ref 6-8) adds further context to the NPPF (Ref 6-7) by advising on the conservation and enhancement of the historic environment. It clarifies that the assessment of the nature, extent and importance of the significance of heritage assets (and the contribution of their setting) is integral to understanding the potential effects or harm caused by development proposals.

- 6.2.23 This guidance has been considered by: undertaking desk-based and site-based surveys to establish the baseline archaeological, built heritage, landscape and geological conditions; applying best practice guidance to identify the potential loss or harm that could result from the Scheme (and the significance of any such effects); and developing mitigation measures and agreeing these with relevant statutory bodies.

Local Policy

Huntingdonshire District Council

- 6.2.24 *Huntingdonshire's Local Plan to 2036* (Ref 6-9) was adopted by Huntingdonshire District Council on 15 May 2019 and contains policies and strategies relating to the protection and conservation of the historic environment.

- 6.2.25 Policy LP 34: Heritage Assets and their Settings is relevant to the Scheme, the objectives of which have been given regard in the assessment.

South Cambridgeshire District Council

- 6.2.26 The *South Cambridgeshire Local Plan 2018* (Ref 6-10) was adopted by South Cambridgeshire District Council on 27 September 2018 and contains policies that seek to protect and enhance the historic environment.

- 6.2.27 Policy NH/14: Heritage Assets is relevant to the Scheme, the objectives of which have been given regard in the assessment.

Bedford Borough Council

- 6.2.28 The *Bedford Borough Local Plan 2030* (Ref 6-11) was adopted by Bedford Borough Council on 15 January 2020 and contains policies relating to the protection and management of heritage assets within the historic environment.

- 6.2.29 Policy 41S: Historic Environment and Heritage Assets is relevant to the Scheme, the objectives of which have been given regard in the assessment.

Central Bedfordshire Council

- 6.2.30 As part of its Local Development Framework, Central Bedfordshire Council adopted the *Core Strategy and Development Management Policies* (Ref 6-12) on 19 November 2009. The following policies seek to protect historic assets and conserve heritage and are of relevance to the Scheme and the assessment.

- a. Policy CS15: Heritage.
- b. Policy DM13: Heritage in Development.

- 6.2.31 The *Central Bedfordshire Pre-submission Local Plan 2015 – 2035* (Ref 6-13) comprises Central Bedfordshire Council's draft local plan (dated January 2018) and is currently being examined by the Secretary of State. The draft historic environment policies of relevance to the Scheme that have been given regard in the assessment are:

- a. Policy HE1: Archaeology and Scheduled Monuments.
- b. Policy HE2: Historic Parks and Gardens.
- c. Policy HE3: Built Heritage.

6.3 Assessment methodology

Scope of the assessment

- 6.3.1 A scoping exercise was undertaken in mid-2019 to identify the matters to be covered by the cultural heritage assessment and agree the approach with relevant statutory bodies.
- 6.3.2 The assessment scope was established at that time by comparing available design and landtake details for the Scheme with data, information and records relating to the historic environment.
- 6.3.3 The scoping exercise was informed by the technical and reporting guidance contained in the *Design Manual for Roads and Bridges Volume 11: Environmental Assessment* (Ref 6-14) (DMRB) and *Interim Advice Note 125/15: Environmental Assessment Update* (Ref 6-15).
- 6.3.4 The outcomes of scoping were recorded in a scoping report (Ref 6-16), which was consulted upon as part of a formal request to the Inspectorate for a scoping opinion and included a summary of all assessment work undertaken as part of the design-development of the Scheme.
- 6.3.5 The Inspectorate's scoping opinion [TR010044/APP/6.5] identified a number of additional overarching EIA and topic-specific matters that were subsequently brought into the overall scope of the assessment. These further considerations are detailed in **Table 1** of **Appendix 4.3** of the Environmental Statement [TR010044/APP/6.3] and include a summary of how Highways England has responded to the points raised, and where this information is reported.
- 6.3.6 Within the scoping opinion [TR010044/APP/6.5], the Inspectorate agreed with Highways England that activities associated with the future maintenance of the Scheme would have limited potential to result in significant effects on cultural heritage. Accordingly, the effects associated with the maintenance/management phase of the Scheme were scoped out of the assessment and are not considered further.
- 6.3.7 Subsequent to the publication of the scoping opinion [TR010044/APP/6.5], Highways England published a series of new DMRB standards relating to sustainability and the environment (Ref 6-17), resulting in the phased withdrawal of the guidance used to inform the scoping exercise (Ref 6-14; Ref 6-15) from July 2019.
- 6.3.8 A decision was made by Highways England to adopt the new DMRB standards (Ref 6-17) part way into the assessment process, the details of which are summarised in **Chapter 4, Environmental assessment methodology** of the Environmental Statement [TR010044/APP/6.1].
- 6.3.9 **Table 2** of **Appendix 4.3** of the Environmental Statement [TR010044/APP/6.3] sets out the changes to the scope and methodology of the cultural heritage assessment resulting from adoption of the new DMRB standards (Ref 6-17).

- 6.3.10 In addition to the matters raised in the scoping opinion [TR010044/APP/6.5] and through adoption of the new DMRB standards (Ref 6-17), the final assessment scope has also been shaped by the following:
- The outcomes of consultation and engagement with statutory bodies, non-statutory organisations and other stakeholders with an interest in the protection, conservation and enhancement of the historic environment.
 - Design changes made to the form and extent of the Scheme and the area of land required for its construction, operation and maintenance (the Order Limits).
 - The outcomes of non-intrusive walkover and geophysical surveys undertaken to establish the baseline conditions of the historic environment, and to inform the identification of the likely significant effects of the Scheme.
 - The interpretation of findings arising from intrusive archaeological evaluation trenching, undertaken to determine the presence or absence of archaeological features, structures, deposits and artefacts on areas of land within the Order Limits.
- 6.3.11 The assessment has focused on identifying and reporting the likely impacts and effects of the Scheme on the following elements of the historic environment:
- Monuments – comprising architectural works, works of monumental sculpture and painting; elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features.
 - Groups of buildings – comprising groups of separate or connected buildings (recognised for their architecture, homogeneity or their place in the landscape).
 - Sites – comprising material remains resulting from the works of humans or the combined works of nature and humans, and areas including archaeological sites.

Assessment standards and guidance

- 6.3.12 The following standards and guidance have been used to inform the scope and content of the assessment, and to assist the identification and mitigation of likely significant effects. This builds upon the overarching EIA methodology and guidance presented in **Chapter 4, Environmental assessment methodology** of the Environmental Statement [TR010044/APP/6.1].

Design Manual for Roads and Bridges

- 6.3.13 The following DMRB standards has been applied in the assessment to identify the value and significance of archaeological remains, historic buildings and historic landscapes, and to identify and evaluate the impacts and effects that construction and operation of the Scheme would likely have on these assets:
- LA 104 Environmental assessment and monitoring* (Ref 6-18).
 - LA 106 Cultural heritage assessment* (Ref 6-19).

- 6.3.14 *LA 116 Cultural heritage assessment management plans* (Ref 6-20) has also been used in the assessment to guide the development of mitigation measures.
Chartered Institute for Archaeologists standards and guidance
- 6.3.15 The assessment has been undertaken with reference to the following best practice standards and guidance published by the Chartered Institute for Archaeologists (CIfA):
- a. *Code of conduct* (Ref 6-21) – which sets out standards of ethical and responsible behaviour in the conduct of archaeological affairs to which members of the institute are expected to adhere; and
 - b. *Standard and guidance for historic environment desk-based assessment* (Ref 6-22) – which sets out the appropriate standards for undertaking desk-based cultural heritage assessments.
- Historic England guidance*
- 6.3.16 The following Historic England good practice advice notes and guidance have been used in the assessment to assist in establishing the significance of assets and their setting:
- a. *Managing Significance in Decision-taking. Historic Environment Good Practice Advice in Planning: 2* (Ref 6-23) – which emphasises the importance of having knowledge and understanding of the significance of heritage assets likely to be affected by the development, and where relevant the contribution of their settings to their significance; and
 - b. *The Setting of Heritage Assets. Historic Environment Good Practice Advice in Planning: 3* (Ref 6-24) – which advises that elements of a setting can make positive or negative contributions to an asset’s significance and the ways in which it is experienced. It acknowledges that settings can overlap due to not having defined boundaries, and that settings can change as an asset and/or its surroundings evolve over time.
 - c. *Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12* (Ref 6-25) – which explores the assessment of significance of heritage assets as part as a staged approach to decision making.
 - d. *Geoarchaeology: Using earth sciences to understand the archaeological record* (Ref 6-26) – which covers the use of geoarchaeology to assist in understanding the archaeological record.
 - e. *Deposit Modelling and Archaeology: Guidance for Mapping Buried Deposits* (Ref 6-27) – which assists archaeologists working within the context of development-led projects to understand what deposit models are and the benefits that can be gained by using them.
 - f. *Preserving Archaeological Remains: Decision-taking for Sites under Development* (Ref 6-28) – which provides advice to those working on projects where the intention is to retain and protect archaeological sites beneath or within a development.

Establishment of the baseline

- 6.3.17 Establishment of the baseline has involved reference to existing data sources, consultation with statutory bodies and other organisations, and fieldwork surveys.
- 6.3.18 The baseline conditions summarise the detailed desk-based information and fieldwork surveys reported in the following appendices of the Environmental Statement [TR010044/APP/6.3]:
- a. **Appendix 6.1** – Known Heritage Assets.
 - b. **Appendix 6.2** – Desk-based Assessment.
 - c. **Appendix 6.3** – Analysis of Aerial Images.
 - d. **Appendix 6.4** – Geophysical Survey Phase 1 & 2.
 - e. **Appendix 6.5** – Geophysical Survey Phase 3.
 - f. **Appendix 6.6** – Archaeological Evaluation Trenching Phase 1.
 - g. **Appendix 6.7** – Archaeological Evaluation Trenching Phase 2.
 - h. **Appendix 6.8** – Archaeological Evaluation Trenching Phase 3.
 - i. **Appendix 6.9** – Summary Table.
 - j. **Appendix 6.10** – Brook Cottages Heritage Appraisal.

Consultation

- 6.3.19 Details regarding the statutory consultation undertaken as part of the Scheme, and its outcomes in relation to cultural heritage, are presented in the Consultation Report [TR010044/APP/5.1].
- 6.3.20 In addition to statutory consultation, non-statutory consultation has been undertaken with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire throughout the production of the assessment to agree the scope of intrusive and non-intrusive archaeological investigations required to effectively evaluate buried archaeological resources that could potentially be encountered and/or affected by the Scheme.
- 6.3.21 Dialogue was also entered into with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire to agree the extents of the assessment study areas, the extents of which are described in Section 6.5.
- 6.3.22 The Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire were also consulted upon the scope and content of Written Schemes of Investigation (WSI) prepared in advance of the geophysical surveys and archaeological trial trenching. These were approved by the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire. The agreed WSIs for the geophysical survey and archaeological trial trenching are presented in **Appendix 6.4, Appendix 6.6, Appendix 6.7 and Appendix 6.8** of the Environmental Statement [TR010044/APP/6.3] respectively.

- 6.3.23 This engagement informed the development of a design brief jointly prepared by Cambridgeshire County Council, Central Bedfordshire Council and Bedford Borough Council which set out the requirements for the phased evaluation of the Scheme in relation to: the desk-based assessment; aerial photography and Light Detection and Ranging (LiDAR) analysis; geophysical surveys; and archaeological evaluation. The design brief is contained in **Appendix 6.2** of the Environmental Statement [TR010044/APP/6.3], the content of which was used to shape the approach to desk-based activities and fieldwork as part of the preparation of the cultural heritage assessment.
- 6.3.24 The findings and analysis of the phased intrusive and non-intrusive surveys undertaken during the preparation of the assessment were also shared with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire.
- 6.3.25 Consultation was undertaken with Historic England and Bedford Borough Council's Conservation Officers in relation to the loss of Brook Cottages, a Grade II listed asset, both of which are assumed to be currently inhabited which would be demolished to accommodate the proposed improvements to the existing Black Cat roundabout¹. Further details regarding the demolition of Brook Cottages are presented in the Black Cat Junction Design Options report [TR010044/APP/7.7].
- 6.3.26 Discussions were also held with Historic England and Cambridgeshire County Council in relation to the effects of the Scheme on listed milestones and mileposts. Details of the affected milestones and mileposts are presented in Section 6.9.
- 6.3.27 Engagement with Historic England also emphasised the need to consider the relationships between cultural heritage and the potential for indirect impacts on assets associated with noise, air quality, landscape and visual (including lighting), geology and hydrology.
- Desk study*
- 6.3.28 To inform the baseline, data, information and records relating to cultural heritage were obtained from the following sources:
- The Historic Environment Records (HER) of Cambridgeshire, Bedford Borough and Central Bedfordshire – to identify archaeological sites, historic landscape information, non-designated built heritage, fieldwork reports, information on local heritage assets, journals and other published (or unpublished) material.
 - The National Heritage List for England (Ref 6-29) – to identify scheduled monuments, listed buildings, registered parks and gardens, registered battlefields and protected wrecks.

¹ Due to the combination of proximity of Brook Cottages to the existing Black Cat roundabout and the A1 carriageway, the complexity of the new Black Cat Junction, the requirement to meet the Scheme objectives, and key constraints in the area, no acceptable design solution would enable retention of the asset in its current location.

- c. The archives of Cambridgeshire, Bedfordshire and Huntingdonshire – to source historic mapping, heritage information and records within both counties.
 - d. Portable Antiquities Scheme database (Ref 6-30) – to provide information on find spots.
- 6.3.29 The desk study was supplemented by a review of the following results and data obtained from surveys undertaken as part of the assessment:
- a. Aerial photography and LiDAR survey data contained in **Appendix 6.3** of the Environmental Statement [TR010044/APP/6.3] – to identify the existence and form of landscape elements such as field boundaries, street patterns, ponds, woods, lanes and paths.
 - b. Geophysical survey data contained in **Appendix 6.4 and Appendix 6.5** of the Environmental Statement [TR010044/APP/6.3] – to identify the archaeological potential of the Order Limits and inform the development of a programme of intrusive surveys and investigation.
 - c. The results of archaeological evaluation contained in **Appendix 6.6, Appendix 6.7 and Appendix 6.8** of the Environmental Statement [TR010044/APP/6.3] – to confirm the form, nature and extent of buried archaeology recorded through the process of trial trenching.
 - d. A heritage appraisal of Brook Cottages contained in **Appendix 6.10** of the Environmental Statement [TR010044/APP/6.3] – to understand the structure, historic development and survival of this Grade II listed building.
- 6.3.30 Information obtained through Ground Investigations undertaken to inform the design-development of the Scheme was also referenced in the assessment, the findings of which are summarised in **Chapter 9, Geology and soils** of the Environmental Statement [TR010044/APP/6.1]. This information has been referenced to identify existing geological and soils environment, and to identify any areas of previous ground disturbance.
- 6.3.31 Collectively, the information gathered through the desk study informed the understanding of the baseline conditions of land within and surrounding the Order Limits in relation to:
- a. Its topography and underlying geology.
 - b. Its historic development.
 - c. The location, survival, extent, condition, setting and significance of known designated and non-designated heritage assets.

Fieldwork

- 6.3.32 An archaeological walkover survey was undertaken by qualified and experienced archaeologists between 12 and 14 March 2018 on land within the Order Limits where access was authorised by landowners. The purpose of the walkover survey was to locate, identify and characterise recorded heritage assets, to identify any above ground remains which were previously unrecorded, and to assess how the current and former land uses may have affected the archaeological potential of the land.
- 6.3.33 A heritage appraisal of Brook Cottages was undertaken on 12 March 2018, the purpose of which was to gain an understanding of the significance of the building to inform the design-development and assessment of the Scheme. This involved a non-intrusive visual assessment of the exterior and interior of the building to establish its condition and setting. Further information relating to the heritage appraisal and its findings is presented in **Appendix 6.10** of the Environmental Statement [TR010044/APP/6.3].
- 6.3.34 A programme of evaluation comprising the following techniques was undertaken to establish the archaeological potential of land within the Order Limits:
- Geophysical surveys – undertaken in phases between spring and autumn 2019 in all accessible areas where ground conditions were appropriate for survey and used in conjunction with analysis of the aerial imagery to inform the scope and programming of the trial trenching.
 - Evaluation trenching – undertaken in phases between January and September 2020 at locations agreed with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire, to test for the presence or absence of archaeological deposits.
- 6.3.35 An assessment of the setting of designated heritage assets was undertaken by qualified and experienced archaeologists and built heritage experts on 4 August 2020 and 12 November 2020. The purpose of this fieldwork was to inform the assessment of the Scheme’s impacts and effects on the setting of assets including listed buildings and scheduled monuments.

Value of heritage assets

- 6.3.36 The value of a building, monument, area, site, place or landscape reflects its significance as a historic asset and therefore its sensitivity to change.
- 6.3.37 The *NPSNN* (Ref 6-4) requires the significance of heritage assets to be assessed and defines this as “*Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest are called ‘heritage assets’. Significance derives not only from a heritage asset’s physical presence, but also from its setting.*”.
- 6.3.38 The requirement to assess the significance of heritage assets is also set out within ClfA guidance (Ref 6-23).

- 6.3.39 The *NPPF* (Ref 6-5) defines the significance of heritage assets as “*The value of a heritage asset to this and future generations because of its heritage interest. Significance derives not only from a heritage asset’s physical presence, but also from its setting.*” It also sets out criteria which should be considered when assessing the significance of cultural heritage assets, which include archaeological, architectural, artistic and historic values.
- 6.3.40 Certain types of heritage asset have a level of significance that justify official designation, such as scheduled monuments and listed buildings; however, the absence of designation does not necessarily mean heritage assets are of lower value or significance.
- 6.3.41 Professional judgement has been used to identify the value and significance of assets guided by legislation (Ref 6-1; Ref 6-2), national planning policy (Ref 6-4; Ref 6-5), standards, official designations, and the assessment criteria contained in *LA 104* (Ref 6-18) (reproduced in **Table 6-1**).

Table 6-1: Environmental value (sensitivity) and descriptions

Value (sensitivity) of receptor/resource	Typical description
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Magnitude of impact criteria

- 6.3.42 Impacts have been identified by reviewing the identified sites, features and areas within the defined study areas (see Section 6.5) against the form and extent of the Scheme, in order to establish which assets would be affected by its construction and operation.
- 6.3.43 Impacts identified in the assessment relate to the predicted changes to key elements of an asset and/or its setting. These can, for example, derive from temporary or permanent actions such as the physical destruction of buried archaeology during construction works, and the introduction of new highway infrastructure into the historic setting of a building.
- 6.3.44 The identification of impacts takes account of the effectiveness of embedded mitigation measures described in **Chapter 2, The Scheme** of the Environmental Statement [**TR010044/APP/6.1**] (and summarised in Section 6.8), and essential mitigation measures described in Section 6.8.

6.3.45 The magnitude of impact has been assessed using the criteria contained in *LA 104* (Ref 6-18) (reproduced in **Table 6-2**).

Table 6-2: Magnitude of impact and typical descriptions

Magnitude of impact (change)		Typical description
Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Significance of effect

6.3.46 The identification of the likely significant effects on cultural heritage assets has relied on reasoned argument, the professional judgement of competent experts, and consultation with stakeholders. It has also been informed by knowledge and experience gained from assessments of similar highway schemes.

6.3.47 The assignment of effects has involved combining the value of an asset with the predicted magnitude of impact, guided by the significance matrix set out in *LA 104* (Ref 6-18) (reproduced in **Table 6-3**).

Table 6-3: Significance matrix

		Magnitude of impact (change)				
		No change	Negligible	Minor	Moderate	Major
Environmental value (sensitivity)	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

6.3.48 Where the significance of an effect is represented by two descriptors, for example large/very large within the matrix, professional judgement has been used to determine which of the significance descriptors applies to the effect being assessed.

6.3.49 Significant effects comprise those effects that are within the moderate, large or very large categories, in accordance with *LA 104* (Ref 6-18).

6.3.50 Operational impacts are those that would arise from the use of a road development once constructed, and typically comprise activities such as lighting of the road, its future maintenance and traffic movement (see paragraph 3.12.3 of Ref-6-16). Features of new road developments (such as earthworks, structures and landscaping) should be considered as part of the construction assessment. Accordingly, the cultural heritage assessment has reported the predicted impacts and effects of construction and operation of the Scheme in this manner; however, this differs to the approach to reporting adopted in other chapters of the Environmental Statement which considers the features of the Scheme within the operational assessment.

Assessment of harm to designated heritage assets

6.3.51 The *NPSNN* (Ref 6-4) requires the Secretary of State for Transport to consider whether the impacts of the Scheme on a designated heritage asset amounts to substantial harm to or total loss of, or less than substantial harm to, its significance.

- 6.3.52 The *NPSNN* (Ref 6-4) explains that the significance of a designated heritage asset can be harmed or lost as a result of its alteration or destruction, or from development within its setting, and that any harm or loss affecting irreplaceable designated heritage assets requires clear and convincing justification. It also explains that any harmful impact on the significance of such assets should be weighed against the public benefit of the development for which consent is being sought (recognising that the greater the harm, the greater the justification required for any loss).
- 6.3.53 The *NPPF* (Ref 6-5) sets out similar requirements relating to harm caused by development projects to the significance of designated heritage assets.
- 6.3.54 There is no direct correlation between the significance of effect reported in this chapter and the level of harm on the significance of designated heritage assets resulting from the Scheme. Notwithstanding this:
- A very large or large (significant) effect on a heritage asset (including total loss of significance) would typically form the basis by which to determine that the level of harm to the significance of a designated asset would be substantial. However, substantial harm is considered to be a high test and a case-by-case assessment should be made.
 - A moderate (significant) effect is unlikely to meet the test of substantial harm and would therefore typically form the basis by which to determine that the level of harm to the significance of a designated asset would be less than substantial.
 - A minor or negligible (not significant) effect would typically amount to less than substantial harm to the significance of a designated asset.
 - A neutral effect amounts to no harm on the significance of a designated asset.
- 6.3.55 In all cases, the determination of the level of harm to the significance of a designated heritage asset arising from construction or operation of the Scheme has been one led by professional judgement.
- 6.3.56 The assessment of harm on designated heritage assets resulting from the Scheme in respect of the policy requirements of the *NPSNN* (Ref 6-4) are detailed in Section 6.9.

6.4 Assessment assumptions and limitations

Scheme design and limits of deviation

- 6.4.1 The assessment has been based on the Scheme description presented in **Chapter 2, The Scheme** of the Environmental Statement [TR010044/APP/6.1] and has taken into account the lateral limits of deviation illustrated on the Works Plans [TR010044/APP/2.3], and the vertical limits of deviation, in order to establish a realistic worst case assessment scenario.

6.4.2 This scenario identifies and reports the effect that any lateral (horizontal) and/or vertical deviation would realistically give rise to. This has, for example, taken into account the potential for components of the Scheme to be positioned at a slightly higher elevation, or brought into closer proximity to heritage assets, and thereby potentially result in different effects.

6.4.3 Notwithstanding any potential deviation, all embedded and essential mitigation measures would remain deliverable within the extents of the limits of deviation.

Baseline data and non-intrusive surveys

6.4.4 The assessment has been undertaken with reference to the baseline data, information and records pertaining to the historic environment derived from desk-based sources. These were subsequently validated and enhanced through field surveys where land access was obtained from landowners.

6.4.5 In areas where land access was unavailable as part of the walkover survey, site-based observations were made from public rights of way and other accessible areas.

6.4.6 In locations where access was unobtainable to undertake the first phase of geophysical surveys, for example due to the advanced growth of crops, these areas were subsequently surveyed as part of further phases of geophysical surveys undertaken after harvesting.

6.4.7 The baseline data and records obtained are considered to be representative of the conditions that would exist at the point of commencing Scheme construction and the year of operation, as described in Section 6.6. The nature of the historic environment is such that no material changes to its form, character and appearance are predicted to occur during this time.

Archaeological evaluation trenching

6.4.8 The scope of the archaeological evaluation trenching focused on targeting identified geophysical anomalies, areas of interest identified by the aerial photographic and LiDAR survey, and to sample areas seemingly blank of archaeological features within the Order Limits. As part of the evaluation, adjustments had to be made to a small number of trenches due to the presence of ecological constraints. Additionally, some trenches were unable to be excavated due to reasons including localised flooding and access restrictions.

6.4.9 Further details regarding these limitations are presented in **Appendix 6.6, Appendix 6.7 and Appendix 6.8** of the Environmental Statement [TR010044/APP/6.3]; however, it is not considered that these modifications and restrictions have compromised the ability to understand the archaeological potential of land within the Order Limits or the ability to assess the effects of the Scheme on buried archaeology.

Impact assessment

6.4.10 The value of most historic buildings identified within the study areas was established and assessed through desk-based research, external inspections and setting assessments. The exception to this was Brook Cottages where an internal inspection was undertaken on 12 March 2018.

- 6.4.11 The assessment of temporary construction effects has considered the peak activity periods, for example when taller and/or visually prominent plant and equipment such as cranes would be visible and in use, in order to identify and assess the reasonable worst case in relation to potential impacts and effects on the setting of assets.
- 6.4.12 The assessment of impacts and effects has assumed that all individual finds recorded within the study areas were removed when found and are therefore no longer *in situ*; however, the location of find spots has been considered when assessing the significance of archaeological sites in their vicinity.
- 6.4.13 The impacts and effects of the Scheme have been assessed based on the construction programme presented in **Chapter 2, The Scheme** of the Environmental Statement [TR010044/APP/6.1], which assumes a worst-case scenario of advanced archaeological mitigation works being undertaken post-consent of the DCO application. Notwithstanding this, opportunities are being explored by Highways England to secure separate planning consents outside of the DCO to deliver some of these works ahead of the DCO consent.

Milestones and mileposts

- 6.4.14 Site surveys were undertaken to establish the presence or absence of a number of recorded milestones and mileposts² within the Order Limits; however, these surveys were unable to fully confirm the presence and location of all such assets.
- 6.4.15 Where the status of a milestone was unconfirmed from the surveys, a worst case assumption was applied in the assessment whereby it was assumed that the asset survives *in situ* and the assessment accordingly reflects this status.

6.5 Study area

- 6.5.1 A study area has been adopted in the assessment to enable all heritage assets potentially affected by the Scheme to be identified and placed within their wider settings. This comprises land required temporarily and permanently to construct and operate the Scheme within the Order Limits and extends outward to a distance of approximately 1 kilometre (0.6 mile) beyond those limits.
- 6.5.2 The study area extents were defined through consideration of the following:
- The study area extents identified and presented in the scoping report (Ref 6-16).
 - Guidance presented in *LA 106* (Ref 6-19).
 - Zones of theoretical visibility generated for the Scheme, prepared as part of the Landscape and Visual Effects assessment reported in **Chapter 7, Landscape and visual effects** of the Environmental Statement [TR010044/APP/6.1].

² The term 'milestone' is used to refer to waymarkers along the highway network. This can include 'milestones' which are generally of stone, while 'mileposts' represent their cast iron counterparts.

- d. The preliminary findings of noise modelling carried out during the early stages of the Noise and Vibration assessment, reported in **Chapter 11, Noise and vibration** of the Environmental Statement [TR010044/APP/6.1].

6.5.3 Following a review of the Scheme's components, the following modifications were made to the study area where appropriate:

- a. Exclusion of the section of the existing A428 between the East Coast Main Line and east of the Wyboston interchange that would be de-trunked as part of the Scheme. Although forming part of the Order Limits, any works to this section of the existing road network would be confined to an existing highway boundary and would not result in significant effects on heritage assets. Accordingly, the extents of the Order Limits covering this section of highway were excluded from the 1 kilometre (0.6 mile) study area.
- b. Reductions to the study area were made around the locations of the proposed satellite construction compounds and the vehicle recovery areas, whereby a 500 metre (0.3 mile) study area has been adopted due to the nature of the works being unlikely to have effects on the setting of heritage assets. These were agreed with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire.

6.5.4 The potential need to extend the 1 kilometre (0.6 mile) distance were considered to capture assets of the highest significance (i.e. World Heritage Sites, Registered Battlefields, RPGs and scheduled monuments) where the wider landscape forms a key contributing factor to their significance and where potential was identified for this to be affected by the Scheme. Following a review of these sites, no potential for construction or operational effects on their setting was identified and accordingly no extensions were made to encompass sites beyond 1 kilometre (0.6 mile) of the Order Limits.

6.5.5 The extents of the study area and the modifications were agreed with the Planning Archaeologists for Cambridgeshire, Central Bedfordshire and Bedfordshire as being appropriate and proportionate to identify the likely impacts and effects of the Scheme on designated heritage assets and their settings, as well as to inform the archaeological background to the Scheme.

6.5.6 The extents of the study area in relation to the Scheme and the Order Limits, as adopted in the assessment, are illustrated on **Figure 6.1** of the Environmental Statement [TR010044/APP/6.2].

6.6 Baseline conditions

Overview of the historic environment

6.6.1 Within the study area, a total of 556 previously recorded heritage assets are identified on the Cambridgeshire, Bedford Borough and Central Bedfordshire HERs and the National Heritage List for England (NHLE). In addition, a total of 69 previous archaeological investigations have been identified within the study area.

- 6.6.2 These assets are illustrated on **Figure 6.1, Figure 6.2 and Figure 6.3** of the Environmental Statement [TR010044/APP/6.2] and comprise designated heritage assets, non-designated buildings, find spots and the sites of buildings which are not extant, dating from the Palaeolithic to the 20th century.
- 6.6.3 The assets have been collated and tabulated in **Appendix 6.1** of the Environmental Statement [TR010044/APP/6.3]. Where reference is made to individual assets within the chapter, a reference number in parenthesis has been added after the asset name which represents the reference number contained in the HER or NHLE. The location of the field in which the asset is located can be seen in **Appendix 6.9** of the Environmental Statement [TR010044/APP/6.3].
- 6.6.4 **Appendix 6.9** of the Environmental Statement [TR010044/APP/6.3] contains a summary table with details of assets recorded on the HERs and NHLE, previous fieldwork, the results of the analysis of aerial photographs and LiDAR, geophysical survey results and evaluation trenching results. This summary table is presented by field and should be read in conjunction with the desk-based assessment contained in **Appendix 6.2** of the Environmental Statement [TR010044/APP/6.3], and the information provided below.

Ground Conditions

- 6.6.5 British Geological Survey (BGS) online digital data (Ref 6-31) confirms that the underlying bedrock of the study area is formed by the following sedimentary rocks: Kimmeridge Clay Formation to the extreme east, and moving westwards the central area is dominated by the West Walton Formation and Ampthill Clay Formation (undifferentiated). Bordering this in the central area and to the west is Peterborough Member mudstone (the lower member of the Oxford Clay Formation). The gault formation, seen in the bricks used in buildings within the study area, lies to the east and south of the study area.
- 6.6.6 Superficial geology comprises, for the most part, till deposits with a smaller area of clay lacustrine deposits towards to western section of the study area (east of the River Great Ouse). Alluvium deposits of clay, silt and sand lie along the River Great Ouse which are contained either side by undifferentiated river terrace deposits of sand and gravel.
- 6.6.7 Further details of the geology of the study area and the geological deposits identified through Ground Investigations are presented in the following documents:
- a. Desk-based assessment in **Appendix 6.2** of the Environmental Statement [TR010044/APP/6.3].
 - b. Archaeological evaluation trenching results in **Appendix 6.6, Appendix 6.7 and Appendix 6.8** of the Environmental Statement [TR010044/APP/6.3].
 - c. The Geology and Soils assessment reported in **Chapter 9, Geology and soils** of the Environmental Statement [TR010044/APP/6.1].

- 6.6.8 The area surrounding the existing A428 is characterised by varying landform. Local topography at the existing Black Cat roundabout, the A1 and the western extents of the existing A428 in the Wyboston locality is relatively flat and situated around 20 to 30 metres Above Ordnance Datum (AOD), rising gradually to around 40 metres AOD near the settlement of Great Barford to the west.
- 6.6.9 East of St Neots, the profile of the land gradually rises in elevation before reaching 65 metres AOD surrounding the existing Caxton Gibbet roundabout. West of St Neots, the local topography generally lies between 30 to 40 metres AOD. South of the existing A428, the topography of the wider landscape gradually rises to between 50 to 60 metres AOD, west of Abbotsley, before dropping into the valley of Abbotsley Brook, Hen Brook and Wintringham Brook, which are further tributaries of the River Great Ouse that confluence in the centre of St Neots.
- 6.6.10 To the east of Wintringham Brook the Scheme follows a ridge of high ground, at approximately 60 to 65 metres AOD where it passes to the north of the villages of Croxton and Eltisle. The watercourses in the area have directly influenced the siting of settlement activity from the Iron Age, as well as the medieval moated manors on the periphery of St Neots.

Previously recorded heritage assets

- 6.6.11 The following section summarises the archaeological baseline, the full details of which are presented in the desk-based assessment in **Appendix 6.2** of the Environmental Statement [TR010044/APP/6.3]. It excludes sites located through archaeological evaluation, which are summarised separately within this section of the chapter.

World Heritage Sites

- 6.6.12 There are no World Heritage Sites within the study area.

Registered Battlefields

- 6.6.13 There are no Registered Battlefields within the study area.

Registered Parks and Gardens

- 6.6.14 There is one Registered Park and Garden (RPG) within the study area, Croxton Park, which is a Grade II* RPG (1000491).

Scheduled monuments

- 6.6.15 The following 11 scheduled monuments are located within the study area:
- A Bronze Age bowl barrow known as the 'Round Hill' (1013521).
 - Nine sites of medieval date comprising eight moated sites (1019176, 1019638, 1019177, 1010114, 1012076, 1013419) and three deserted villages (1006849, 1006815, 1006783).
 - One post-medieval bridges that is Grade II listed: the 19th century Tempsford Bridge (1005393).

Listed buildings

- 6.6.16 A total of 133 listed buildings are located within the study area, comprising nine listed at Grade II* and 124 listed at Grade II.
- 6.6.17 Many of the listed buildings are located within the five conservation areas identified within the study area, while seven are located within the Croxton Park Grade II* RPG (1000491).

Conservation areas

- 6.6.18 There are five conservation areas within the study area:
- Roxton Conservation Area.
 - Two conservation areas in Tempsford: Tempsford (Church End) Conservation Area; and Tempsford (Langford End) Conservation Area.
 - Croxton Conservation Area.
 - Eltisley Conservation Area.

Non-designated assets

- 6.6.19 A total of 406 non-designated assets are recorded within the study area.
- 6.6.20 The early prehistoric period (up to 2500BC) is largely represented by isolated finds such as hand axes dating from the Palaeolithic (up to 10,000BC) (MBD8801, MBD14666; MBD14668), flint implements and evidence of their manufacturing from the Mesolithic (10,000 – 4000BC) and Neolithic (4000 - 2500BC) periods (MCB670, MBD490, MBD14663 and MBD14668). These assets are largely found along the valley of the River Great Ouse.
- 6.6.21 There is an increase in evidence from the Bronze Age (2500 – 800BC). Many of the recorded sites are structural in nature or linked to potential areas of activity, such as ring ditches, pit alignments and enclosures (MBD1776 and MBD17147). Ceremonial monuments are also a key feature of this period, including the designated bowl barrow 'Round Hill' (1013521) and a site at Roxton comprising five ring ditches and timber structures containing a burial (617). Continuity of activity from the Neolithic period through to the Bronze Age is seen, as the River Great Ouse and River Ivel remained as a focus for activity throughout these periods and beyond.
- 6.6.22 The progression into the Iron Age (800BCC – AD43) is illustrated in the increase in assets providing clear evidence of settlement activity. The unenclosed settlements of the late Bronze Age progressed to a more enclosed form towards the middle of the period. Settlement evidence includes roundhouses, ditches, post-holes and pits (19765, MCB15790 and 02403). The transition into the Roman period (AD43 – 410) brought little immediate change with evidence from this time reflecting the settlement patterns and evidence recorded from earlier in the period.

- 6.6.23 The Roman period is well represented in the HERs. Archaeological evaluation and aerial photography analysis, undertaken mainly as part of the National Mapping Programme³ and recorded on the HER, has identified a significant number of assets dating to the period and range from settlement evidence to individual finds, which reflects the extent of movement and trade that was common at this time. The route of the existing A428 is bisected by two Roman roads: in the west is the Sandy to Godmanchester (Durovigutum) road (505), which now survives as a series of footpaths and tracks; and in the east is Ermine Street (CB15034), now the A1198. A road is also suggested, joining these two roads and following Cambridge Road and joining the alignment of the A428 (1044694).
- 6.6.24 Several higher status sites of the Roman period are also recorded within the study area. The first is indicated through cropmarks and artefacts and is believed to be the potential site of a villa located close to Tempsford (16799). A second site bisected by the A1 has also been indicated by the identification of a number of tesserae (801). The site of a temporary military camp (02472) is also located within the study area.
- 6.6.25 The changes within the early medieval period are difficult to track due to the overlap of the continued Roman influence in the area. In the region several Anglo-Saxon settlements have been recorded but evidence within the study area is limited. Archaeological evaluation recorded on the HER as being undertaken within the study area identified a settlement site north of Roxton along the A421 (13413, EBB687, EBB687).
- 6.6.26 The early medieval period (AD410 – 1066) is recorded in the place names of the study area, as well as the limited archaeological evidence recorded. Many of the settlements recorded in the Domesday Book have Anglo-Saxon origins, for example Eaton Socon and Eynesbury. Archaeological evidence has included settlement evidence close to Tempsford Park, as well as early examples of moated sites and Deserted Medieval Villages (DMV).
- 6.6.27 Evidence for the medieval period (AD1066 – 1500) is much more visible within the record and on the ground, with 106 assets recorded within the study area including moated enclosures, fishponds, deer parks, and religious buildings. Many of the sites are developments based on the infrastructure, the boundaries, settlements, religious sites, of the later early medieval or late Saxon period (Ref 6-32, [page 98]). Elements of the historic medieval landscape are identifiable in the modern landscape. A detailed analysis of the medieval landscape is presented in Annex D in **Appendix 6.2** of the Environmental Statement **[TR010044/APP/6.3]**.

³ The National Mapping Programme was an English Heritage initiative which sought to identify, map and interpret all archaeological sites throughout England that were visible on aerial photographs, the aim being to gain an understanding (and provide a synthesis) of past human settlement and activity.

- 6.6.28 Medieval rural settlement has been characterised by Rackham who zoned England by their common fields, with a central 'planned' countryside located between 'ancient' countryside to the east and west (Ref 6-33, [page 2]). The study area is largely dominated by the 'planned' countryside with common fields and nucleated settlements. Moated sites are also found throughout the area, several of which are scheduled. DMVs are also a feature of the medieval landscape, and a number are present within the study area, including the scheduled sites of Wintringham (1006815), Weald (1006849) and Croxton (1006783).
- 6.6.29 During the medieval period deer parks began to be established. Generally enclosed, they were often associated with a manor, and the Grade II* RPG Croxton Park (1000491) is an example of an early 16th century deer park and borders the site at its northern extent. The park incorporates elements of the 16th century deer park including earthwork remains of garden features; however, it predominantly dates to the early 19th century when it was enlarged and landscaped. The scheduled DMV of Croxton is also recorded within the park (1006783). The focus of the earthworks can be seen close to the church. The earthworks in rectangular patterns showing the alignments of sunken roads and the location of house platforms are visible. The good preservation of earthworks can be attributed to their incorporation into the later parkland design, resulting in protection from damage from ploughing and other farming practices.
- 6.6.30 Settlements which were established in the early medieval and earlier periods continued to develop in the medieval period. Within the Great Ouse Valley, a number of settlements established in this period have survived to the present day. Settlements within the study area which are recorded within the Domesday Book include Roxton, Wyboston, Croxton, Eltisley and Caxton. The size of these settlements in 1086 range from 17 households in Roxton to 40 households in Wyboston. The settlement evidence throughout the study area is set within a medieval agricultural landscape demonstrated by the farms and barns. The dominance of arable farming can be identified in the traces of ridge and furrow throughout the study area (for example 05753 and MCB16333), demonstrating that the soils and topography of the area has represented prime arable agricultural land for centuries. However, much of the earlier remains linked to agriculture, such as ridge and furrow, no longer survives as earthworks due to the intensive agriculture of the 20th century, with remains only surviving as sub-surface features.
- 6.6.31 The agricultural nature of the area is also recorded through document evidence, for example the parish of Croxton is recorded as predominately arable in 1279 and two windmills were recorded from the 13th century in association with the chief manor (Ref 6-34).

- 6.6.32 This rural character is reflected in the surviving medieval buildings. There are six Grade II listed buildings which retain 15th century timber-framing, although all have undergone some degree of later alteration. Five of these are located within Eltisley and comprise the Old Post House (1331397), the Manor Farmhouse (1309206), the Green Farmhouse (1331396), Pond Farmhouse (1163501) and 1, Potton End (1331398). The sixth building, Manor House (1127173), is located in Croxton.
- 6.6.33 The church was also an important feature within the medieval settlement and a number of ecclesiastical buildings within the study area have medieval origins. The survival of medieval fabric varies as churches were subject to continual expansion during the post-medieval period by wealthy benefactors alongside 19th century rebuilding and restoration. Notable examples within the study area include the Grade II* listed Saint Pandionia and Saint John the Baptist's Church (1127179) in Eltisley, the Parish Church of St Mary Magdalen (1114927) in Roxton, the Church of St Peter (1114096) in Tempsford, the Church of St Nicholas (1330437) in Hail Weston, and the Church of St James (1127168) within Croxton Park.
- 6.6.34 Non-designated buildings include medieval features within Eltisley church (ECB2853), and a timber frame barn at Wyboston (MBB18908), although it is not clear if it is medieval or post-medieval in origin, or if it is still extant.
- 6.6.35 The post-medieval period (AD1500 – 1900) is the most well represented period, with a large number of assets identified within the study area. During this period a number of nationally significant events left their mark on the landscape, with an increase in enclosure in the 17th century, the enclosure of commons and the Agricultural Revolution in the 18th and 19th centuries (Ref 6-35, [page 79]), the Industrial Revolution of the late 18th – early 19th centuries, and the agricultural decline of the late 19th century all influencing the extant layout of the landscape. The main effects seen in the landscape are changes in the division of land, abandonment of farmsteads, and growth of towns and urban centres.
- 6.6.36 The development of transportation had a significant impact on the landscape. The River Great Ouse was made navigable from St Ives in Cambridgeshire to Bedford in the 17th century, a stretch of which lies within the study area. Turnpike Trusts were set up in the 18th and early 19th centuries, although many of the associated toll houses are now lost to road improvements (Ref 6-36, [page 128]). The remains of a turnpike road (20571) run through Tempsford and through the Order Limits to the north of Tempsford. Tempsford Bridge (1005393/1321633) on the edge of the Order Limits is located at a staunch (8804) at the original ford crossing. Originally a timber bridge, it was replaced by a stone bridge in 1814 – 1820 (Ref 6-37, [page 22]). Nearby, Blunham Bridge (1004504/1004504) is an earlier bridge over the River Ivel, having been constructed in the 17th century (Ref 6-37, [page 69]) built of iron, limestone and ironstone.

- 6.6.37 Associated with the growing road network are a number of milestones and mileposts, including four which are 19th century Grade II listed. All but one of these is cast iron, triangular in shape and painted white with black painted raised inscription. The last of these is a limestone block with a pyramidal cap, with an incised inscription painted black. These are located along Cambridge Road in Croxton (1331371), Eltisley (1331394), Caxton (1162760) and near the junction with Elsworth Road (1331369).
- 6.6.38 A further significant development was the introduction of the railways. The London to Peterborough section of the Great Northern Railway (MCB20853) opened in 1850 (now the East Coast Main Line) and crosses through the Order Limits in two locations.
- 6.6.39 There are three post-medieval Grade II* listed buildings. These are a thatched cottage style congregational chapel built in 1808 (1146376) in Roxton; Crosshall, a 17th century timber-framed house (1331024) in St Neots and the country house (1127163) set within the grounds of Croxton Park.
- 6.6.40 There are 17 listed buildings and nine non-designated buildings within the Roxton Conservation Area. All of these, apart from Parish Church of St Mary Magdalen, date to the post-medieval period. Roxton started as a rural agricultural settlement and although it has evolved over the years, it still retains its original agricultural character. Timber-framing is common for the earlier buildings within the conservation area, while the later buildings are mainly constructed of brick. Thatch is also common including 14 High Street (1114923) and 46 and 48 High Street (1114925).
- 6.6.41 The village of Tempsford consists of two main groups of houses. The first group, known as Church End, developed around the Church of St Peter and The Old Rectory (1114098) and is located to the south-west of the village. The second, known as Langford End, is located to the north-east, along Station Road that used to lead to the former Tempsford railway station. The A1 runs south to north through the village, just west of Church End. Both groups are of special architectural and historic significance and are designated as conservation areas in their own right.
- 6.6.42 The character and appearance of Church End is denoted by waterways and roads, including the River Ivel that runs to the north-west of this part of the village, along with the vegetation associated with them. The construction of the A1 has introduced a modern infrastructure element to the setting of this rural settlement. Most of the buildings are located along Church Street while there is a group of farm buildings, including Ouse Farmhouse (1138237) and Cottage Farmhouse (1114097), both dating to the 18th and 19th centuries, close to the point where the River Ivel separates from the River Ouse.

- 6.6.43 Langford End Conservation Area lies on the eastern side of the A1, and includes most of the properties along Station Road, from the A1 to Lambcourt Farm (1138262), and an adjacent strip of the park land that surrounds Tempsford Hall. Tempsford Hall Landscape Park (7001) was laid out in the 18th – 19th century. Developments at Tempsford Hall have had a profound impact on the character of Langford End. This includes boundary walls around the park and plantation to the south of Station Road, as well as estate houses that were built at Langford End. Historic buildings at Langford End date from the 16th – 19th century with the older buildings being of timber framed construction, such as 88 Station Road (1114102), and later buildings constructed of brick with the estate houses of buff and red brick dating to the 1870s.
- 6.6.44 To the north of Roxton and Tempsford there are nine listed buildings and eight non-designated buildings in the village of Chawston, a medieval settlement which expanded in the post-medieval period. These include the Grade II listed Brook Cottages (1311862), a pair of thatched cottages dating to the 18th century. There are seven listed buildings and twelve non-designated buildings in the village of Wyboston. These are split by the A1 that runs south to north through the village. Listed buildings on the western side of the A1 include farm buildings, namely Moat Cottage (1146457) and Heddings Farmhouse (1114930), dating to the 17th and early 18th century respectively. Listed buildings on the eastern side include Forty Farmhouse (1146418) and its associated Dovecote (1321213), dating to the early 19th and 17th century respectively, as well as the 17th century 31, 64, and 66 & 68 Great North Road (all Grade II, 1146425; 1114928; and 1114929). The Crown Inn (1146453) and Bell Farmhouse (1321214) date to the 17th and 18th century respectively, with 19th century alterations, and are located further north at Little End.
- 6.6.45 The historic agricultural landscape is evidenced by surviving farms, such as those at Tithe Farm (1211328 and 1211327), North Farmhouse (1210919) and Wintringham Farm (1290056 and 1211324). Wintringham Farm is associated with Wintringham Hall (MCB1641) and park (MCB14315). The Hall is a late 19th century building surrounded by a moat which may have replaced an earlier 16th century building on the site.
- 6.6.46 Croxton Park (Grade II*, 1000491) is a key element of the historic landscape. Although it is of medieval origins, it owes much of its significance to its 19th century landscaping. Croxton Park is formed by an area of garden and pleasure grounds, including a walled kitchen garden, located to the north and north-east of the house, and the wider park defined by an undulating landscape made up of grassland scattered with veteran and more recently planted trees. Immediately to the north and north-west of the house is a lawn, separated from the surrounding pleasure grounds of Croxton Park by a ha-ha. The parkland is interspersed with open shrub and woodland planting and informal pathways running throughout. These pathways are recorded on the 19th century historic maps of the area including the 1887 Ordnance Survey map. The park is enclosed by a large 19th century plantation, particularly to the east, south and west. These groups of trees are particularly located along boundary lines and act as visual links with the house. There are three lodged entrances to the park and the main drive

approaches the hall from the north. The principal building within the park is a Grade II* mid-18th century manor house (Croxton Park; 1127163). The rest of the buildings were built to complement the main house and include a Garden House (1127166) and garden walls (1127164), as well as the Manor Farmhouse (1309293) which sits within Manor Farm to the north-east of Croxton Manor.

- 6.6.47 Outside Croxton Park is the hamlet of Croxton, a designated conservation area. The area is characterised as a linear settlement forming an estate village to the park. Focussed on High Street, the buildings are predominantly 17th century cottages, of which 11 are listed buildings. Alongside these sits a cluster of four listed buildings associated with Westbury Farm, to the south-west of the settlement and outside the conservation area.
- 6.6.48 There is a high concentration of listed buildings in the village of Eltisley, reflecting its status as a conservation area. Thirteen of these date to the post-medieval period. Uncommonly, the village of Eltisley has two village greens, indicating that there were originally two centres and, potentially two separate settlements. The larger of the two, once known as the Great Green, sits in the centre of the village, at the junction of historic routes running from Cambridge to St Neots and from St Ives to Potton. There are several post-medieval buildings standing along its edge. Only a small part of the second green, to the south-east of the village, survives as it was turned into allotments in 1868. The historic buildings within Eltisley are predominantly of timber frame construction with thatched roofs. These include 52 The Green (1163524) and 12 Caxton End (1163346). Unusually, some have corrugated tin roofs over timber frame including South View (1163520), dating to the 17th century, and Mistletoe House (1163409), dating to 1826. The conservation area is characterised by its good quality historic buildings and the survival of the village greens which give it historic character. The green forms a substantial part of the conservation area, emphasising the relationship between greenspace and buildings.
- 6.6.49 Approximately 1.6 kilometres (1 mile) to the east of Eltisley, a late 18th century dovecote (1163004) is located within Caxton Pastures Farm. The dovecote was converted to a small dwelling in the 19th century and is constructed of red brick with a tiled hipped roof with gablets. There is also an 18th century farmhouse located within the moat (MCB1524).
- 6.6.50 The listed buildings are accompanied by a number of non-designated historic structures of notable historic and architectural interest, but not identified for designation. These are predominantly situated within the settlements and include dwellings and outbuildings, alongside public buildings such as schools, religious buildings and public houses. All contribute to the historic character of the study area. Also notable are monuments and street furniture which further reinforce a sense of place, alongside surviving infrastructure such as bridges and milestones and mileposts. Six milestones and mileposts have been identified within the Order Limits, although they are not all impacted.

- 6.6.51 Evidence of development throughout the modern period (1900 – present) is well represented in the study area. The impact of the Second World War can still be seen in the landscape. Recorded sites within the study area include an anti-aircraft battery (MBD17958), pillbox (17966), and anti-tank traps (18001). In addition, elements of the site of the disused airfield RAF Caxton Gibbet (MCB15131), used for training aircrew, survive near the eastern end of the Order Limits. This was in use from 1934 – 1945, although the site of the main airfield has now been returned to agricultural use.
- 6.6.52 The expansion of St Neots continued through the 20th century, with Eaton Socon and Eaton Ford merging with St Neots in the 1960s, and continuing development within and directly bordering the settlement. This is not the case for many of the other settlements that appear to remain more contained, with only a small amount of development taking place. One noticeable exception, Cambourne, to the south-east of Caxton Gibbet, is a new settlement, having become a civil parish in 2004.
- 6.6.53 The landscape has remained mostly agricultural in nature throughout the 20th century to the present, interspersed with farmsteads and small settlements, many of which survive from the post-medieval period, including listed buildings such as the 17th century Grade II listed Birchfield Farmhouse (1114877) in Barford and non-designated buildings such as Common Farm, Elsworth (MCB4305), c.1800 in date.
- 6.6.54 Modern historic structures include two Grade II listed buildings, both K6 telephone kiosks designed in 1935 (1114110; 1223662), as well as four non-designated Lionhead standpipes (8446; 3526; 8587; 8589). Also of modern date is Tempsford Hall (MBD3077) which was built in 1903 in an Elizabethan style to replace an earlier hall which burned down in 1889, and the Stuart Memorial Hall and War Memorial (MBD18743) built in memory of those lost in the First World War.
- 6.6.55 Historic landscape character area information is not available for the areas covered by the Scheme. In its absence, an analysis of historic mapping and other available data has identified three distinct character areas across the Scheme.
- 6.6.56 The largest historic landscape type is agricultural in nature and is largely formed of post-enclosure field systems which have been enlarged in the 20th century. The second largest historic landscape type is areas of ornamental or designed garden and parkland, formed by the Grade II* registered park and garden at Croxton Park (12280) and the non-designated pleasure grounds surrounding Tempsford Hall (7001). The third character type identified is formed of modern settlement and light industry. Small towns and villages have grown up from the medieval period with the focus of the settlement largely surrounding the main road corridors of the A1 and the existing A428. The area is also crossed north-south at the western end of the Scheme by the railway. The settlements are largely formed of small, individual properties with private gardens. Some light industrial properties and local amenities are also present. The growth and spread of these settlements can be tracked on the historic mapping with rapid changes identified in the later part of the 20th century.

Walkover survey

- 6.6.57 The walkover survey recorded that the land within the Order Limits is mainly comprised of fields in use as both arable and pasture agricultural land, and is characterised by small, linear shaped fields towards its western extents around Roxton, and larger, irregularly shaped fields to the eastern extents. The land is predominately flat and the fields are delineated by hedgerows or small embankments. Fields are also interspersed with small areas of woodland.
- 6.6.58 Surveys to inform an assessment of the Scheme's impacts and effects on the setting of designated heritage assets involved a review of assets where access was possible, or from their nearest publicly accessible point.
- 6.6.59 Assets visited as part of the setting survey included conservation areas, listed buildings and scheduled monuments of moated sites, DMVs and the 'Round Hill' bowl barrow (1013521).
- 6.6.60 No additional assets were recorded during the walkover survey.

Brook Cottages Heritage Appraisal

- 6.6.61 An assessment was undertaken at Brook Cottages (1311862) to assess the significance of the building, taking into account the survival of historic fabric. The assessment was informed by desk-based research and a site visit. No intrusive survey was undertaken. The assessment confirmed that the historic fabric of the building survives internally and externally. The cottages have retained much of their original plan, character and appearance. Later alterations, such as the modern rear extensions and evidence for the replacement or rebuilding of some of the fireplaces was noted.
- 6.6.62 The research revealed that the cottages are associated with Bridge Farm to the north-west, incorporating the Grade II listed Bridge Farmhouse (1114920). The location of the cottages illustrates the relationship of the farm with land to the south and south-east and the Brook House Bridge.
- 6.6.63 The cottages are considered of special architectural interest as they are a typical example of vernacular architecture where local techniques and materials were used. They are also of historic interest as they illustrate important aspects of the agricultural history of the area and the country generally.
- 6.6.64 Notwithstanding this, although the building contributes to the local distinctiveness of the area, it is considered that the building is not rare but rather listed due to their typical character as workers cottages. The assessment concludes that other examples survive both locally and nationally in equal, or better condition, than Brook Cottages.
- 6.6.65 Further details of the outcomes of the assessment are presented in **Appendix 6.10** of the Environmental Statement [TR010044/APP/6.3].

Aerial photography and LiDAR

- 6.6.66 Analysis of the aerial photography and LiDAR information concluded that many of the identified sites could be matched to those previously recorded on the HER, the full details of which are presented in **Appendix 6.3** of the Environmental Statement **[TR010044/APP/6.3]**.
- 6.6.67 Much of the evidence is thought to indicate Iron Age/Roman features. These include a possible high-status Roman settlement near Pivot and Gorse Plantation, recorded through a large rectilinear compound with a smaller inner enclosure and various overlapping and subdividing elements (south of Fields 86 – 88). Further settlement sites were recorded to the north of Wintringham Hall (MCB19040, Field 74) where regular and rectilinear enclosures were recorded near to the Sandy to Godmanchester Roman road (MCB17569).
- 6.6.68 Other features of probable Iron Age or Roman date include possible hut circles north of Ingles Spinney (Field 84) and east of North Lodge Plantation, an oval palisaded enclosure near North East Farm and Pembroke College Farm (MCB24588, Field 93), D-shaped enclosures between Pembroke College Farm and Ermine Street (Field 97) and traces of possible field boundaries.
- 6.6.69 Later features within the study area comprise medieval and post-medieval remains. These consist of medieval moats at Wintringham Hall (01270) and Pastures Farm (1019177), plough headlands recorded to the north of Wintringham Hall (Field 74), north of Croxton Park (Fields 84-85) and north-east of Eltisle (Field 92), and ridge and furrow at Croxton Park and North Lodge Plantation (Field 85). There is also a post-medieval windmill mound, recorded to the north-east of Eltisle (02463, Field 93) and an undated cluster of pits in a field to the north-west of Caxton Gibbet (Field 97), which, although they lay between two groups of Iron Age/Roman features, it is uncertain whether they are of archaeological origin.
- 6.6.70 Many of the features were also recorded through geophysical survey and subsequently investigated as part of the archaeological evaluation trenching, the details of which are presented in **Appendix 6.9** in the Environmental Statement **[TR010044/APP/6.3]**.

Ground Investigation monitoring

- 6.6.71 A number of locations examined as part of Ground Investigations were archaeologically monitored due to their close proximity to potentially complex archaeological deposits.
- 6.6.72 Details of this archaeological monitoring are presented in the Phase 3 archaeological evaluation trenching report contained in **Appendix 6.8** of the Environmental Statement **[TR010044/APP/6.3]**.
- 6.6.73 No archaeological features were noted during the archaeological monitoring.

Geophysical survey

- 6.6.74 To aid the reporting of the results of the geophysical survey (and the archaeological evaluation), fields within the Order Limits have been allocated unique reference numbers. The location of these fields is illustrated on **Figure 6.1** of the Environmental Statement [TR010044/APP/6.2] and are detailed further in **Appendix 6.4 and Appendix 6.5** of the Environmental Statement [TR010044/APP/6.3].
- 6.6.75 The results of the geophysical surveys indicated numerous enclosure features of probable Iron Age or Roman date, some of which were identified on the HER and from analysis of aerial photographs. These features range from large enclosure complexes, such as that in Field 44, to small isolated enclosures and features such as roundhouses, pits and trackways that have been recorded in association with the enclosures.
- 6.6.76 Another widely recorded feature within the Order Limits was ridge and furrow, although this has been levelled by modern agricultural processes. The presence of these features indicates the dominance of agricultural land in the area during the medieval and early post-medieval periods. Later features comprise various former field boundaries dated to the 18th and 19th centuries, following the enclosure of medieval open fields.
- 6.6.77 The sites of two former farms were indicated through areas of magnetic disturbance, and the site of a post-medieval windmill was also recorded.

Archaeological evaluation

- 6.6.78 Three phases of archaeological evaluation trenching were undertaken to inform the assessment.

Phase 1

- 6.6.79 Phase 1 of the trenching investigated 37 areas (totalling 274 hectares) covering 34,360 linear metres of trenching. The evaluation confirmed the location of a number of archaeological sites ranging in date from the Late Bronze Age to the post-medieval period. The majority dated from the Iron Age and Roman periods.
- 6.6.80 The earliest site, dating to the late Bronze Age to early Iron Age, was a small agricultural landscape located on a ridge of high ground overlooking the River Great Ouse.
- 6.6.81 Fifteen fields found to contain Middle to Late Iron Age sites were identified. Nine fields were found to contain enclosures settlements located wholly or partially within the Order Limits. Three of these enclosures were also found to be part of a larger 'string' settlement and are connected to other settlements and enclosures by long landscape boundaries. Four of the Late Iron Age sites showed evidence of continued use into the 1st and 2nd centuries. Part of a 2nd to 4th century ladder settlement was also located. The later periods were represented by fragments of Saxon pottery found in a medieval windmill embankment. The windmill continued in use though to the post-medieval period. The remains of High Hayden Farm were also identified. The farm, which potentially dates to the late medieval period, is thought to be of high status.

6.6.82 The full report of the Phase 1 archaeological evaluation trenching is contained in **Appendix 6.6** of the Environmental Statement [TR010044/APP/6.3].

Phase 2

6.6.83 Phase 2 of the trenching covered 22 fields with a focus on the River Great Ouse valley and to the east of St Neots. A total of 20,145 linear metres of trenching were undertaken targeting areas of known archaeological potential as well as seemingly blank areas.

6.6.84 The results were similar to those found during Phase 1, with evidence from the late Bronze Age to post-medieval periods found, with most dating to the Iron Age and Roman. Late Bronze Age remains, including a potential roundhouse were found along with nine confirmed Iron Age sites, and multiple isolated Iron Age features. Evidence showed that occupation continued into the Roman period. In Field 70 enclosures and a trackway were identified that formed part of the DMV of Wintringham dating to the 11th and 12th centuries.

6.6.85 The full report of the Phase 2 archaeological evaluation trenching is contained in **Appendix 6.7** of the Environmental Statement [TR010044/APP/6.3].

Phase 3

6.6.86 Phase 3 of the trenching covered the final area of evaluation and several locations where access had been delayed from the previous phase. These areas were located across the Order Limits, and a total of 257 trenches were excavated covering 12,590 linear metres. As with previous phases, the trenching targeted not only areas of archaeological potential identified through other evaluation methods, but also areas that appeared to be clear of archaeological remains.

6.6.87 The archaeological evidence recorded dated from the Late Iron Age to the post-medieval period. The majority of the archaeological features followed the trends of the previous phases and dated to the Iron Age and Roman periods. The presence of Middle-Late Iron Age and Roman sites of varying complexity were recorded in five fields. Isolated features of these dates were recorded in another three fields. A curvilinear ditch and other evidence of agricultural activity dating to the medieval and post-medieval periods was also recorded.

6.6.88 The full report of the Phase 3 archaeological evaluation trenching is contained in **Appendix 6.8** of the Environmental Statement [TR010044/APP/6.3].

Review of the Scheme's contribution to the archaeological record

6.6.89 **Appendix 6.9** of the Environmental Statement [TR010044/APP/6.3] presents the details of the previously recorded heritage assets and the results of the evaluation works undertaken as part of the Scheme. It is structured by field, providing a summary of the results of the various techniques utilised to assess the cultural heritage within the Order Limits, and also provides information of the archaeological potential and significance of each field when all data and information is considered collectively.

- 6.6.90 None of the fields have been considered in isolation, and the relationships between features that either continue into adjacent fields or are thought to be related have been used to inform the assessment of significance in the impact assessment below.
- 6.6.91 **Table 6-4** lists the fields where archaeological sites, deposits and features have been identified through evaluation, where none were previously recorded, or where the evaluation has significantly expanded the understanding of individual archaeological sites. This demonstrates the effectiveness of the archaeological evaluation in locating additional sites and features. These sites contribute to the understanding of the historic development of the area.

Table 6-4: Archaeological deposits sites contributing to our understanding of the study area

Field	HER sites	Features found during evaluation
3	None	<p>A pattern of ditches defining part of a sub-rectilinear enclosure complex with a possible trackway identified through geophysical survey.</p> <p>Several enclosures and associated features dating to the Iron Age and Roman periods. A shallow curvilinear gully at the southern end of the main enclosure may indicate the presence of a roundhouse. The site contains archaeological deposits which will contribute to the understanding of the Iron Age and Roman periods in this area.</p>
9	<p>745 – Linear block of sub-rectangular enclosures visible on aerial photographs. Dated to Iron Age/Roman from excavations of peripheral features to the south.</p> <p>19824 – Find of a Roman copper alloy strap fitting.</p> <p>19827 – Find of an incomplete copper alloy barbarous Roman coin.</p> <p>19828 – Find of a copper alloy Roman coin, a nummus of Constans.</p> <p>19829 – Find of a Roman coin, a copper alloy barbarous radiate.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 9 beyond what was previously understood.</p> <p>Multiple small sub-square enclosures on the south side of a larger rectilinear settlement were identified. A small number of internal features within the enclosure were also excavated. Pottery recovered dated to the Late Iron age and Roman transitional period.</p> <p>A ditch running parallel to the main sites was recorded to the east of the main enclosure. This possibly formed a double-ditch boundary or trackway along the edge of the settlement marking the boundary.</p> <p>The sub-square enclosure relating to the settlement recorded to the north.</p> <p>The site contains complex archaeological deposits which will contribute to the understanding of the Iron Age and Roman periods in this area.</p>
34	EBB697 – Field walking survey and watching brief for the Huntingdon to Little Barford gas pipeline. Nine sites comprising Roman pits and ditches,	Evaluation has revealed the detail of the significance of the archaeological features in Field 34 beyond what was previously understood. Evidence of a multi-phase settlement including roundhouses, enclosures and a

Field	HER sites	Features found during evaluation
	<p>medieval ditches and a post-medieval surface scatter and wall foundation. Unstratified finds dated between the Neolithic to the post-medieval period were also recorded.</p> <p>1387 – A small ring ditch and linear features recorded on aerial photographs and on the HER. A flint scatter was recorded following stripping in the vicinity.</p>	<p>possible ladder settlement dating to the Late Bronze Age through to the Roman period was recorded.</p> <p>The site contains complex archaeological deposits which will contribute to the understanding of the Bronze Age, Iron Age and Roman periods in this area. The significance of the deposits is linked to the associated features in Field 35.</p>
35	None	<p>Archaeological deposits were recorded during geophysical and trenching phases. Features identified date to the Late Bronze Age to the Roman period. Evidence of a multi-phase settlement including round houses, enclosures and a possible ladder settlement.</p> <p>The site contains complex archaeological deposits which will contribute to the understanding of the Bronze Age, Iron Age and Roman periods in this area.</p> <p>The significance of the deposits is linked to the associated features in Field 34.</p>
44	<p>16800 – Cropmarks, south of Alington Hill, consisting of prehistoric rectilinear enclosures that abut a former stream course.</p> <p>16802 – A scatter of small curvilinear enclosures with a large sub-rectangular one to the south, recorded as cropmarks.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 44 beyond what was previously understood.</p> <p>The geophysical survey confirmed the presence of an enclosed and complex Iron Age and Roman settlement that had been noted through cropmarks.</p> <p>The outer enclosure ditch was up to 4m wide and 1.8m deep where recorded. Evidence suggested that there had been multiple phases of the boundary ditch. Iron Age and Roman pottery was found in the fill.</p> <p>Interior features indicate the presence of settlement enclosures, roundhouses, ditches and a possible ring gully. Finds included Iron Age pottery, Roman pottery and a Roman tegula roof tile.</p> <p>The site contains complex archaeological deposits which will contribute to the understanding the high value and archaeologically significant complex of the Iron Age and Roman farmstead. Excavation will also increase the understanding of the deposits which lie outside of the Order Limits and will remain <i>in situ</i>.</p>
49	473 – Giants Parlour, a field name shown on the 1840 tithe map.	<p>Archaeological deposits were recorded during the geophysical and trenching phases.</p> <p>The ditches identified during the geophysical survey were investigated during the trenching. The ditches contained Late Iron Age pottery (350 BD – AD 70) as</p>

Field	HER sites	Features found during evaluation
		<p>well as pottery dating to either 25 BC – AD 70 or 50 BC – AD 70. This indicated more than one phase of activity or that some features can be assigned to a later date.</p> <p>The site contains archaeological deposits which will contribute to the understanding of the Iron Age and Roman periods in this area. The significance of the deposits is linked to the associated features in adjacent fields.</p>
50	None	<p>Evaluation trenching identified evidence of possible Iron Age date.</p> <p>One trench contained the terminus of a shallow ditch in a similar nature to those in adjacent fields. One sherd of Late Iron Age pottery was recovered.</p> <p>The results contribute information to the understanding of how the landscape was occupied and utilised during the Late Iron Age when considered with associated features in adjacent fields.</p>
53	<p>MCB17211 – Undated and medieval features recorded during watching brief and evaluation. Features consisted of three undated gullies and the furrows of a medieval ridge and furrow field system. Also finds of a single prehistoric flake and a small quantity of medieval pottery.</p> <p>ECB2121 – Watching brief and trial trenching were undertaken at Potton Lane, Eynesbury Hardwicke.</p> <p>Evidence of medieval ridge and furrow was found along with medieval and post-medieval pottery and a single prehistoric flint flake.</p>	<p>Archaeological deposits were recorded during the geophysical survey and the trial trenching revealed deposits of Late Iron Age date beneath the medieval/post-medieval farming evidence.</p> <p>The oval enclosure identified through geophysical survey was found to be Late Iron Age in date. Two pits, two ditches and a possible waterhole were recorded. Later furrows were also present across the fields.</p> <p>The results contribute information to the understanding of how the landscape was occupied and utilised during the Late Iron Age period and medieval and post-medieval farming practices.</p>
54	<p>MCB21136 – Enclosures adjacent to Rectory Farm Cottages, Abbotsley. Recorded from 2013 aerial photography.</p> <p>ECB2121 – Watching brief and trial trenching were undertaken at Potton Lane, Eynesbury Hardwicke.</p> <p>Evidence of medieval ridge and furrow was found along with medieval and post-medieval pottery and a single prehistoric flint flake.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 54 beyond what was previously understood.</p> <p>Evaluation trenching identified a large oval ditched enclosure approximately 250m north of the Iron Age enclosure in Field 53. The interior space on the enclosure holds a complex with a central internal space surrounded by five or six smaller enclosures and a potential roundhouse. Pottery recovered shows the features date to the Iron Age.</p> <p>Furrows and a ditch were also identified.</p>

Field	HER sites	Features found during evaluation
		The site contains archaeological deposits which will contribute to the understanding of the Iron Age period in this area.
56	<p>MCB18832 – Pits recorded on 1996 aerial photography in Eynesbury Hardwicke.</p> <p>MCB18836 – Ditches forming possible enclosure plus adjacent ditches, recorded on 1996 aerial photography in Eynesbury Hardwicke.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 56 beyond what was previously understood.</p> <p>Trenches excavated were found to contain features associated with the Iron Age settlement to the south and west. A further enclosure was also identified and is considered to be contemporary.</p> <p>Post-medieval field boundaries were also identified.</p> <p>In the north-west corner of the field the post-medieval and modern features associated with Eynesbury Fields Farm were recorded. The features were clearly defined on the geophysical survey and recorded on Ordnance Survey maps.</p> <p>The site contains archaeological deposits which will contribute to the understanding of the Iron Age period in this area.</p>
58	<p>MCB18833 – Ditches forming a possible enclosure recorded on 1996 aerial photography.</p> <p>MCB18835 – Levelled ridge and furrow recorded on 1996 aerial photography in Eynesbury Hardwicke</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 58 beyond what was previously understood.</p> <p>A sub-square Iron Age-Roman enclosure was located in the south-east corner of the field. The main boundary ditch survived to a depth of up to 0.52m with evidence of re-cutting. Within the enclosure two roundhouse drip gullies have been excavated, one containing large quantities of slag. These features correlated with features identified during geophysical survey. Boundary ditches outside the enclosure were excavated in two trenches, which are undated.</p> <p>Linear features were recorded in the north of the field.</p> <p>The results contribute information to the understanding of how the landscape was occupied and utilised during the Late Iron Age period.</p>
63	ECB2017 – Field walking carried out in 1984 at the St Neots Bypass.	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 63 beyond what was previously understood.</p> <p>Ditches identified through the geophysical survey were located at the south end of the field, aligned east to west. It is likely these ditches form part of the medieval/post-medieval farming landscape.</p>

Field	HER sites	Features found during evaluation
		<p>Evidence of ridge and furrow noted across the field through geophysical survey was identified in all but three trenches.</p> <p>The results contribute information to the understanding of how the landscape was occupied during the medieval/post-medieval period.</p>
64	<p>03532 – A flint scraper found in a drainage ditch.</p> <p>ECB2017 – Field walking carried out in 1984 at the St Neots Bypass.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 64 beyond what was previously understood.</p> <p>At the southern end of the site was a pit sealed by colluvial deposits. No finds were recovered. A small “U” shaped ditch aligned north-south was recorded which may relate to the Late Iron Age/Roman enclosures in Field 65.</p> <p>The results contribute information to the understanding of how the landscape was occupied and utilised during the Late Iron Age and Roman periods.</p>
65	<p>MCB18824 – Ditches forming a possible enclosure recorded on 1996 aerial photography.</p> <p>04064 – A pit observed in section, measuring 6m long and 0.5m deep.</p> <p>ECB2017 – Field walking carried out in 1984 at the St Neots Bypass.</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 65 beyond what was previously understood.</p> <p>The eastern portion of a predominantly Roman settlement dating to the 2nd and 3rd century AD was identified in Field 65. A large quantity of pottery was recovered.</p> <p>Large shallow pits, likely to have been used for the extraction of clay, and areas of burning were recorded.</p> <p>The site contains complex archaeological deposits which will contribute to the understanding of the Roman period in this area.</p>
66	<p>MCB19041 – Ditches which may represent part of an irregular enclosure and adjacent features with possible pits nearby, recorded on 1996 aerial photography.</p> <p>04062 – Undated V-shaped ditches observed in section, 1m wide and 0.4m deep below top of subsoil.</p> <p>03535 – A flint flake found in a drainage ditch.</p> <p>03539 – A flint flake found in a drainage ditch.</p> <p>505 – Roman road running from Sandy to Godmanchester. A section measuring 17ft (5m) wide and</p>	<p>Evaluation has revealed the detail of the significance of the archaeological features in Field 66 beyond what was previously understood.</p> <p>A large Iron Age to Roman enclosure and additional external boundaries which largely match the geophysical survey results were identified during evaluation excavation. 1st and 2nd century pottery was identified from the surface of these features.</p> <p>All of the boundaries (including internal divisions) were found to represent substantial features. A potential roundhouse drip gully was also identified.</p> <p>A dump of sand and cobbles was located close to the existing trackway. Its purpose is unknown.</p> <p>The site contains archaeological deposits which will contribute to understanding this medium value and</p>

Field	HER sites	Features found during evaluation
	<p>surfaced with rammed gravel was revealed in 1954.</p> <p>ECB2017 – Field walking carried out in 1984 at the St Neots bypass.</p>	<p>archaeologically significant complex of an Iron Age and Roman farmstead.</p>
70	<p>MCB17569/505 – Roman road running from Sandy to Godmanchester. A section measuring 17ft (5m) wide and surfaced with rammed gravel was revealed in 1954.</p>	<p>Evaluation has revealed archaeological features in Field 70 beyond what was previously understood.</p> <p>Features identified in Field 70 represented a Bronze Age roundhouse drip gully, as well as a stone-filled pit, and remnants of medieval settlement and field system.</p> <p>Remnants of medieval/post-medieval farming practices were also recorded. The settlement extends along a gentle curving linear track bordered on each side by ditches. Either side of the trackway are a number of enclosures, also defined by ditches. This site is likely to be associated with the Wintringham DMV to the south-east.</p> <p>The site contains complex archaeological deposits which will contribute to understanding the Bronze Age and medieval settlement patterns.</p>
72	<p>None.</p>	<p>Historical aerial photos show medieval or post-medieval earthworks in the parkland to the west of Wintringham Hall, comprising a small moat, fragment of ridge and furrow and possible plough headland and drainage ditches. Evaluation has revealed archaeological features in Field 72 beyond what was previously understood.</p> <p>A furrow with three sherds of 18th – 19th century pottery was recorded but no further archaeological features were present. This information will contribute to the understanding of the post-medieval period in this area.</p>
73	<p>None</p>	<p>Historic aerial photos show series of fragmentary earthworks north of the existing A428. These comprise short ditches, running perpendicular to the road and the corner of a possible embanked enclosure, likely of post-medieval date. Complex faint cropmarks north-west of Wintringham Hall comprise several curvilinear and rectilinear enclosures and a series of east-west aligned ditches. The rectilinear enclosures are thought to be Roman in date while the others of Iron Age or Roman date.</p> <p>Archaeological deposits were recorded during the geophysical and trenching phases.</p> <p>Two small Iron Age enclosures were identified in the centre of the field.</p>

Field	HER sites	Features found during evaluation
		<p>The north-east corner of the field contains another predominantly Roman site, dating to the 1st – 2nd century AD. This comprises several sub-square enclosures.</p> <p>The most complete enclosure is present across four trenches and had ditches, post-holes and pits within it.</p> <p>A rectangular enclosure contained no dating evidence but is likely to relate to the Roman activity.</p> <p>The southern section of the field contained a trackway defined by parallel ditches approximately 10m apart. Pottery from the feature date to the Roman period.</p> <p>The site contains complex archaeological deposits which will contribute to understanding the medium value and archaeologically significant Late Iron Age and Roman deposits.</p>
74	<p>MCB19040 – Ditched features including rectangular forms, irregular shapes and a possible ditch running to a pond, recorded on 1996 aerial photography.</p>	<p>A large polygon enclosure with three small enclosures within it was recorded on aerial photographs. A long field boundary runs nearby east to west. There is a possible small rectilinear enclosure and other short lengths of ditch. There are also several long straight cropmarks representing post-medieval field boundaries. Remains of a plough headland is shown on LiDAR</p> <p>Evaluation has revealed the detail of the significance of the archaeological features in Field 73 beyond what was previously understood.</p> <p>The southern edge of the field contains the northern extent of a sub-circular enclosure identified during geophysical survey. Excavation confirmed the enclosures dated to the Iron Age with evidence of occupation continuing into the Late Iron Age.</p> <p>Roman activity, comprising a series of ditches on different alignments was identified in the north-east corner. A moderately-sized assemblage of Roman pottery was recovered.</p> <p>The site contains complex archaeological deposits which will contribute to understanding the medium value and archaeologically significant Late Iron Age and Roman deposits.</p>
75	None	<p>Archaeological deposits were recorded during the trenching phases.</p> <p>An Iron Age ditch relating to the settlement identified in F76 was identified. This may have formed an elongated boundary ‘string’.</p> <p>An area of colluvial/alluvial deposits and plough activity was identified in one isolated area. This sealed a small</p>

Field	HER sites	Features found during evaluation
		<p>ditch, matching the alignment of the existing field boundary.</p> <p>Remnants of other undated boundaries and ditches were also identified.</p> <p>This information will contribute to the understanding of the Iron Age period in this area.</p>
76	None	<p>Archaeological deposits were recorded during the geophysical and trenching phases.</p> <p>All trenches identified furrows following the north-south alignment identified through geophysical survey. Five also contained archaeological features.</p> <p>Evidence of a small Iron Age enclosure was identified in the south-west corner of the field, immediately east of Roman Way. Pottery dating to the Late Iron Age was recovered. The external boundary was over 1m deep and shallow internal divisions were also recorded.</p> <p>This information will contribute to the understanding of the Iron Age period in this area.</p>
77	<p>MCB24576 – Linear features recorded as cropmarks on aerial photography in 2009. The cropmarks may form several enclosures.</p>	<p>Analysis of aerial photographs identified three or more rectilinear enclosures and other ditches, as well as post-medieval field boundaries and blocks of ridge and furrow. Evaluation has revealed the detail of the significance of the archaeological features in Field 73 beyond what was previously understood.</p> <p>Several sub-square enclosures dating to the early Roman period were identified. The site was also truncated by well-preserved furrows.</p> <p>A curvilinear ditch was excavated to the east of the main settlement which was interpreted as being contemporary with the adjacent settlement and potentially forming a field boundary or livestock area.</p> <p>The site contains complex archaeological deposits which will contribute to understanding the archaeologically significant Roman deposits.</p>
78	None	<p>Evidence of medieval/post-medieval farming practices, including a possible medieval plough headland shown on LiDAR imagery.</p> <p>Features in adjacent fields formed a string of continuous fields which were considered as a grouping when undertaking evaluation trenching.</p> <p>Furrows were recorded and were on a north to south, north-west to south-east and east to west orientation. No finds were identified to date the furrows.</p>

Field	HER sites	Features found during evaluation
		<p>A small number of gullies and ditches of unknown date were also regarded.</p> <p>This information will contribute to the understanding of the medieval/post-medieval periods in this area.</p>
80, 83, 84	None	<p>While some features were identified through geophysical survey and analysis of aerial photographs in the potential development area, evidence of Middle to Late Iron Age date was recorded in other areas where nothing was previously seen. This included pits, enclosures and ditches. A pit containing a possible cremation burial was also recorded in Field 80. The burnt material was found to include Late Iron Age pottery and three lithics, as well as a small quantity of burnt bone.</p>
86	None	<p>Geophysical survey had indicated the location of an enclosure with a connecting ditch similar to other Iron Age 'string' enclosures in adjacent fields. This was tested through evaluation trenching and a section of curvilinear enclosure was identified. The boundary ditch was found to be 2.2m to 3.7m wide and extended outside of the Order Limits.</p> <p>This information will contribute to the understanding of Iron Age settlement and the wider understanding of string settlements across the landscape.</p>
88	None	<p>Possible remains of a medieval plough headland were identified on aerial photographs. Evaluation has revealed archaeological features in Field 88 beyond what was previously recorded.</p> <p>Trenching identified several ditches and gullies with no datable material. One archaeological feature, a stone-lined pit, was recorded. Three sherds of Iron Age pottery were recovered along with charcoal and snail shells identified through environmental sampling.</p> <p>This information will contribute to the understanding of the Iron Age period in this area.</p>
92	<p>MCB24587 – A single enclosure visible as cropmarks measuring c.65x55m.</p> <p>MCB24588 – An oval enclosure visible as cropmarks, measuring c.40x27m.</p> <p>05753 – Extensive ridge and furrow</p>	<p>Analysis of aerial photographs has identified ridge and furrow and short ditches, Evaluation has revealed the detail of the significance of the archaeological features in Field 92 beyond what was previously understood.</p> <p>Features identified through aerial photographs and geophysical survey were investigated during the evaluation trenching phases. Several enclosures and associated features including a roundhouse indicate multiple phases of occupancy and a significant settlement in this area.</p>

Field	HER sites	Features found during evaluation
94, 95, 96, 97	<p>1162760 – A Grade II listed milestone south of Pembroke Farm. It is 19th century in date and is cast iron with three angled faces.</p> <p>1019177 – A scheduled moated site at Pastures Farm. It is roughly square-shaped island measuring 150m wide.</p> <p>11873 – Two early Bronze Age flints found during field walking.</p> <p>CB15034 – Ermine Street Roman road, visible as a gravel track without agger.</p> <p>02494 – Find of a Neolithic patinated, polished axe</p>	<p>Analysis of aerial photographs identified two groups of three or four possible Iron Age or Roman small curvilinear and rectilinear enclosures, cropmarks of a large D-shaped enclosure, smaller rectilinear enclosures, a possible trackway and other ditches, of possible Iron Age/Roman date. A dense cluster of pits were recorded at the edge of the field, as were two possible Iron Age/Roman enclosures and fragments of a ditch. Ridge and furrow was also identified.</p> <p>Evaluation has revealed the detail of the significance of the archaeological features in Fields 94 - 97 beyond what was previously understood.</p> <p>Evidence of Middle to Late Iron Age and Roman enclosures were recorded which included internal features such as ditches and roundhouses. Significant artefactual evidence was also recovered.</p> <p>The former medieval/post-medieval parish boundary between Caxton and Papworth Everard was identified</p> <p>The site contains complex archaeological deposits which will contribute to the understanding the archaeological significant Iron Age and Roman deposits.</p> <p>Further work would also increase the understanding of the deposits which lie outside of the Order Limits and which will remain <i>in situ</i>.</p>
99	None	<p>An enclosure encompassing a smaller enclosure of Middle to Late Iron Age date.</p> <p>The results contribute information to the understanding of how the landscape was occupied and utilised during the Middle to Late Iron Age period.</p>

6.6.92 The programme of archaeological evaluation identified archaeological deposits, not previously recorded on the HER, across the Order Limits. Archaeological deposits and features were identified and recorded in seven fields where no assets have previously been recorded. A further 27 fields were found to contain deposits and features more significant than those recorded on the HER.

6.6.93 The earliest significant remains encountered through evaluation date to the Late Bronze Age/Early Iron Age. Sites of this date are known across the east of England, but within Bedfordshire are still relatively rare. The size and type of features found in Fields 34/35, 44 and 70 indicate settlement evidence and comprise not only pits but also potential field systems and two possible roundhouses which would be rare for this period in the region. The remains are of local significance and have the potential to contribute to the understanding of the Late Bronze Age in the area.

- 6.6.94 Extensive Middle Iron Age to Roman remains were found during all phases of evaluation. The potential presence of these features has been indicated through the analysis of aerial photographs and many potential sites were recorded through the National Mapping Programme. The geophysical survey and trench evaluation confirmed the presence of many of these sites as well as identifying multiple new features. Extensive excavations have been undertaken in Bedfordshire and Cambridgeshire providing detailed information with which comparisons can be made. Several new sites of Iron Age and Roman date have been added to the archaeological record and contribute to the understanding of the region during these periods.
- 6.6.95 Archaeological remains from the medieval period demonstrate phases of continued settlement within the study area following the decline of the Roman influence. Many of the previously recorded assets from the medieval period are represented by moated sites and DMVs. The evaluation undertaken has contributed to this understanding through the identification of further medieval settlement evidence and understanding of the wider landscape during the period.
- 6.6.96 The dominance of arable farming continued across the landscape through the post-medieval period. However, the majority of the earlier remains linked to agriculture, such as ridge and furrow, no longer survive as earthworks due to the intensive agriculture of the 20th century, with remains only surviving as sub-surface features. Although this destruction of the earthworks associated with ridge and furrow cultivation limits the information that can be gleaned from the remains, the study of the features that survive as sub-surface remains has provided a useful contribution to the archaeological record.
- 6.6.97 The archaeological evaluation undertaken has not only contributed to the archaeological record of Cambridgeshire and Bedfordshire but will also provide data to answer questions set in the research strategy for the region. The data already collected, along with the results of future excavation and recording, will provide a detailed resource for future academic research.

Future baseline conditions

- 6.6.98 As detailed in **Chapter 4, Environmental assessment methodology** of the Environmental Statement [TR010044/APP/6.1], a review has been undertaken to determine whether the existing baseline conditions might change between the time of undertaking the assessment and the future years in which the Scheme is planned to be constructed and become operational, as a result of future planned development.
- 6.6.99 Consideration was given to the following development-related changes that could potentially alter the historic environment in the future:
- a. The partial or total loss of known or potential buried archaeological resources within the Order Limits or known above-ground assets within the study area as a consequence of land being disturbed or developed.
 - b. Changes to the sensitivity (value) and significance of assets within the study area through the introduction of new development in their setting.

- 6.6.100 The review evaluated the planned development projects summarised in **Chapter 15, Assessment of cumulative effects** of the Environmental Statement [TR010044/APP/6.1] and involved:
- The identification of any permitted (i.e. consented) projects within the assessment study area that have yet to be implemented.
 - Analysis of the likely environmental effects and planned timescales for each identified project.
 - An assessment of the potential for each identified project to change the existing baseline conditions in the Construction Year (2022) and Opening Year (2026), in the manner described above.
- 6.6.101 Although a small number of the development projects are expected to form part of, and influence, the future baseline conditions of the study area, the review concluded that there would be no material change to the form, character and appearance of the historic environment in year 2022 or year 2026.
- 6.6.102 Accordingly, the assessment does not consider future baseline conditions further.

6.7 Potential impacts

- 6.7.1 The scoping exercise identified that the introduction and/or modification of road infrastructure associated with the Scheme would potentially result in different types and durations of impact on cultural heritage, during both the construction and operational phases.
- Construction**
- 6.7.2 Temporary construction impacts lasting for all or part of the construction phase of the Scheme potentially include the following:
- The presence and movement of construction plant and equipment, which may impact on the significance of heritage assets caused by changes to their setting.
 - The siting of construction compounds and activities within working areas, including associated construction noise and lighting, which may impact on the significance of heritage assets caused by changes to their setting.
 - The use of traffic management and increased volumes of traffic travelling on the local road network, which may impact on the significance of heritage assets caused by changes to their setting.
- 6.7.3 Permanent construction impacts lasting beyond the construction phase potentially include the following:
- Physical impacts on known heritage assets arising from construction activities such as earthworks excavation, the formation of construction compounds and the installation of drainage infrastructure.
 - Physical impacts on landscapes of historical, cultural or archaeological significance as a consequence of construction, such as the loss of important elements of the landscape as a result of site clearance.

- c. The disturbance, compaction or removal of previously unrecorded sub-surface archaeological deposits through construction activities.
- d. Impacts on archaeological remains, historic buildings and the historic landscape associated with the introduction of the physical form and appearance of the Scheme in their setting.

Operation

6.7.4 Operational impacts of the Scheme potentially include the following:

- a. Changes to traffic movements (and associated vehicle lighting), which could affect the significance of heritage assets caused by changes to their setting.
- b. Changes in road noise from vehicle movements, which may affect the setting of heritage assets.
- c. The operation of road lighting introduced as part of the Scheme, which may affect the setting of heritage assets.

6.8 Design, mitigation and enhancement measures

Embedded mitigation

6.8.1 Through the design-development process, the Scheme has been designed, as far as possible, to avoid effects on cultural heritage through option identification, appraisal, selection and refinement, as described in **Chapter 3, Assessment of alternatives** of the Environmental Statement [TR010044/APP/6.1].

6.8.2 Based on the review of the geophysical surveys and archaeological evaluation, the following modifications were made to components of the Scheme and the Order Limits to avoid potential impacts on buried archaeology and to preserve features of potential interest:

- a. Reductions in land within the Order Limits and that required to divert existing utilities infrastructure.
- b. Movement of the position of borrow pits and construction compounds.
- c. Modifications to construction compound layouts and extents.
- d. The fencing off of areas within the construction compounds and borrow pits to avoid effects on known archaeology.

6.8.3 Mitigation measures have been integrated (embedded) into the Scheme for the purpose of minimising effects on cultural heritage. These measures are described in **Chapter 2, The Scheme** of the Environmental Statement [TR010044/APP/6.1] and in summary comprise the following:

- a. Limiting landtake within the Order Limits to only that required to construct, operate and maintain the Scheme – to minimise disturbance to buried archaeology.
- b. Confining road lighting introduced as part of the Scheme to new and improved sections of road where road safety is a priority – to reduce the potential for light spill to intrude into the setting of heritage assets.

- c. Planting (once established) to visually screen elements of the Scheme, for example the new dual carriageway, to reduce adverse effects on the setting of heritage assets.

Essential mitigation

- 6.8.4 Measures have been identified which would be implemented by the Principal Contractor to reduce the impacts and effects that construction of the Scheme is likely to have on cultural heritage.
- 6.8.5 In relation to buried archaeological remains, the scope of mitigation required to record and evaluate known archaeological assets during construction has been informed by the results of the geophysical surveys and the archaeological trench evaluation summarised in Section 6.6.
- 6.8.6 The First Iteration EMP **[TR010044/APP/6.8]** contains a framework Archaeological Management Plan which details the mitigation measures that would be undertaken prior to, and during construction of, the Scheme.
- 6.8.7 Construction of the Scheme would be subject to measures and procedures defined within the Second Iteration EMP, which would be produced prior to the commencement of construction by the Principal Contractor and would be based on, and incorporate, the content and requirements of the First Iteration EMP **[TR010044/APP/6.8]** and its associated Archaeological Management Plan.
- 6.8.8 A detailed mitigation strategy has been developed which contains the requirement for archaeological mitigation at each site, as well as a generic scope of works for the different techniques required. This is contained within the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**.
- 6.8.9 The basic principle of the mitigation strategy is to mitigate impacts on archaeological sites identified within the Order Limits. Rather than taking a blanket approach of strip, map and record, excavations would instead be targeted upon those sites that would maximise knowledge gain in order to answer the Scheme and site-specific research questions detailed in the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**. For sites that do not fit this criteria, additional work would not be undertaken. Other sites, although within the Order Limits, would be fenced off during construction to ensure they are preserved.
- 6.8.10 Within the mitigation strategy, sites have been divided into four categories:
 - a. Sites with intrinsic value (those so important they need to be excavated fully and with increased sampling).
 - b. Sites with group value (those which, taken with other sites, have increased value. For example, these examine different types of Iron Age enclosures, and the string settlements) and key sites (sites that require full excavation where their investigation is key to understanding a period or site type).
 - c. Sampling (sites that only need further investigation into certain elements, such as structures or for environmental information).

- d. Sites where no further work is required (including those that can be fenced off).
- 6.8.11 Taking into account the form and significance of archaeological remains or other heritage assets that would be impacted by the Scheme, the principal techniques to be used are:
- a. Full excavation.
 - b. Archaeological sampling.
 - c. Geoarchaeological assessment.
- 6.8.12 Preservation of archaeological remains (i.e. fencing).
- 6.8.13 A total of 41 sites have been identified that require archaeological mitigation:
- a. Five sites have intrinsic value and therefore require detailed excavation (Fields 9, 34 & 35, 44, 65 & 77). These sites are presented as 3, 4, 7, 15 & 22 in the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**.
 - b. 18 sites are considered to be of group value and key sites and require excavation or further sampling (Fields 34, 49, 53, 54 & 56, 58, 59, 69 & 70, 73 & 74, 92 (x2), 93, 94 (x2), 95 & 97 (x4)). These sites are presented as 5, 9, 10, 11, 13, 14, 17, 18, 29, 30, 31, 32, 33, 34, 36, 37, 38 & 39 in the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**.
 - c. 13 sites require further sampling, including geoarchaeological assessment (Fields 3, 5, 26, 47 & 48, 58 & 62, 66, 69 & 70, 75 & 76, 80, 83 & 84, 86, 88 & 90. These sites are presented as 1, 2, 8, 16, 19, 20, 23, 24, 26, 27, 28, 35 & 41 in the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**.
 - d. Five sites require preservation of archaeological remains (Fields 35, 56, 59, 85 & 99). These sites are presented as 6, 12, 21, 25 & 40 in the Archaeological Mitigation Strategy **[TR010044/APP/6.12]**.
- 6.8.14 Brook Cottages would be demolished by the Scheme. A Level 3 record⁴ of this building would be undertaken prior to its demolition.
- 6.8.15 Three Grade II listed milestones and mileposts and one non-designated milestone would be impacted by the Scheme. These assets would be removed, stored and reinstated as close as possible to their original location, with all works undertaken in accordance with a Method Statement to be prepared by the Archaeological Contractor and agreed with the relevant local authorities.
- 6.8.16 Other measures that would be implemented during construction include:
- a. Raising the awareness of construction workers and operatives to any control and reporting procedures to be followed, should archaeological deposits be encountered during the works, for example through toolbox talks and regular briefings.

⁴ Level 3 comprises an analytical written, drawn and photographic record of a historic building.

- b. The protection of built heritage assets and archaeological sites during construction, for example through the demarcation of buffer zones around such interests with fencing and signage.
- c. The controlled removal, storage and reinstatement of any street furniture which lies within the Order Limits.
- d. The control of light spillage, noise and dust within construction compounds and working areas, for example by adhering to working hours and through good site layout and working practices, to minimise impacts on the setting of heritage assets.

6.8.17 Delivery of the mitigation measures contained within the Archaeological Mitigation Strategy [TR010044/APP/6.12] would be delivered within the Scheme's Order Limits, and would be secured through Requirement 9 of the DCO [TR010044/APP/3.1].

6.8.18 Based on the effectiveness of these mitigation measures, no additional or offsetting mitigation measures would be required during construction of the Scheme.

Enhancement measures

6.8.19 No enhancement measures relating to cultural heritage have been incorporated into the design of the Scheme.

6.9 Assessment of significant effects

6.9.1 In accordance with LA 104 (Ref 6-18), the prediction of impacts and the assessment of effects (and their significance) on cultural heritage associated with construction and operation of the Scheme has taken account of the effectiveness of both the embedded and essential mitigation measures summarised in Section 6.8.

6.9.2 The assessment reports the temporary and permanent impacts and effects on those heritage assets that would be directly or indirectly affected by the Scheme by virtue of their proximity to the works, or through a shared relationship or setting.

6.9.3 The assessment of the non-designated assets in **Table 6-5** within the Order Limits has determined there would be no effect as a result of construction or operation of the Scheme.

Table 6-5: Non-designated assets within the Order Limits with no effect

Asset ID	Grid Reference	Asset
8810	TL 153 551	Site of a former mile post.
13413	TL 152 552	Evidence for Saxon identified during previous trial trenching, now under the A1.
8629	TL 1642 5678	Gravel pits, now under A1.
8818	TL 1599 5639	Cropmarks. Nothing found during evaluation.
1651	TL 161 559	Sub-rectangular enclosure.
17182	TL 158 554	The foundations of a 17th – 18th century wall, now under road.
15047	TL 148 550	Cropmarks of a probable group of sub-rectangular enclosures and cremations. Quarried away
1832	TL 161 548	Cropmarks indicating a block of sub-rectangular enclosures thought to be prehistoric. Quarried away
20567	TL 1742 4988	The route of a former turnpike road. No change.
11862	TL 2177 6701	Great Northern Railway. No change.
00616	TL 1982 5744	Find spot. No longer in place
01307	TL 193 583	Find spot. No longer in place
03543	TL 192 583	Find spot. No longer in place
01562	TL 196 585	Find spot. No longer in place
01319	TL 1968 5861	Find spot. No longer in place

Asset ID	Grid Reference	Asset
03532	TL 2021 5932	Find spot. No longer in place
03535	TL 2075 5987	Find spot. No longer in place
03539	TL 2088 5992	Find spot. No longer in place
04063	TL 2091 5995	Pit. Now under the line of the road
02494	TL 294 609	Find spot. No longer in place
11873	TL 2960 6060	Find spot. No longer in place
20881	TL 2969 6063	Site of a building, now demolished.
MCB4320	TL 303 608	Ditches identified during trial trenching undertaken as part of the previous A428 Caxton to Hardwick improvements (now under the existing A428).

6.9.4 The assessment of the following designated assets within and outside the Order Limits has determined there would be no effect as a result of construction or operation of the Scheme:

- a. Chawston Manor (1010114) – a scheduled monument located outside the Order Limits to the north-west of the existing Black Cat roundabout. Due to its topographic location and the extent of planting which surrounds much of the asset, it currently experiences minimal road noise and would have no intervisibility with the Scheme. Accordingly, there would be no impact upon this asset.
- b. Milepost (1331369) – A Grade II listed milepost located near the existing junction of Elsworth Road and St Neots Road. This is positioned in an area of the Order Limits where no physical works would be undertaken. Accordingly, there would be no impact upon this asset. The road upon which it is located would remain and the information on the milepost will continue to be accurate.

- c. Milepost (1331371) – A Grade II listed milepost located to the north-west of former Spread Eagle Public House, Cambridge Road. This is positioned in an area of the Order Limits where no physical works would be undertaken. Accordingly, there would be no impact upon this asset. The road upon which it is located would remain and the information on the milepost will continue to be accurate.
- d. Any listed building recorded in **Appendix 6.1** of the Environmental Statement [TR010044/APP/6.3], and not discussed below, will not be significantly affected as a result of construction or operation of the Scheme.

Construction effects

Assets within the Order Limits

Field 3

- 6.9.5 Geophysical survey undertaken as part of the Scheme identified a number of ditches thought to be associated with an Iron Age/Romano-British complex of enclosures and trackways recorded during works for the existing A421 (Great Barford bypass) (EBB687 and EBB688). Archaeological evaluation identified the features recorded during geophysical survey and determined that they date to the Iron Age and Roman periods. A broadly rectilinear enclosure with a smaller internal enclosure located along the east side was recorded. A further sub-square enclosure with a right-angled ditch contributes to the complexity of the features and suggests the presence of a significant settlement complex. A shallow curvilinear gully at the southern end of the main enclosure may indicate the presence of a roundhouse and the discovery of datable artefacts contributes to this significance. The site is considered to have archaeological and historic interest as full excavation of the archaeological deposits could provide further information about land use and settlement activity in the Iron Age through to the Roman period and help add to existing knowledge about the site under the Great Barford Bypass. The remains are considered to be of medium heritage value.
- 6.9.6 The magnitude of impact of the Scheme upon this asset is moderate adverse and permanent as elements of the asset would be adversely affected by the construction of the new dual carriageway. However, the site extends into fields to the south, and these remains would be unaffected.
- 6.9.7 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

Field 5

- 6.9.8 Geophysical Survey results indicated a curving length of ditch in the north-east section of the field along with several other weak anomalies. Evaluation trenching identified that this ditch contained Early Middle Saxon and 9th–10th century pottery. Evaluation also found two sub-square kilns, which may date to the medieval or post-medieval periods, along with a large area of clay extractions. These assets show the presence of local brick and or tile manufacturing in this area. A cluster of small sub-rectangular pits were located to the south-west of the clay extraction area and are believed to have been used for the laying out of tiles or bricks prior to firing. These features have archaeological and historic interest.

The early medieval ditch contributes to the understanding of the wider land use and settlement patterns during that period. It may be associated with settlement recorded at the Black Cat quarry site to the east. The kilns provide information on how local industries and manufacturing developed in the area during the medieval and/or post-medieval period. The remains are considered to be of medium heritage value.

6.9.9 The magnitude of impact of the Scheme upon this asset is minor adverse and permanent as limited elements of the asset would be affected by the excavation of a borrow pit.

6.9.10 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.

Field 9

6.9.11 A linear block of linked sub-rectangular enclosures visible on aerial photographs and on geophysical survey (745) is recorded in Field 9. Evaluation at the site has revealed that it comprises multiple small sub-square enclosures on the south side of a larger rectilinear settlement. A small number of internal features within this enclosure were also excavated, with most of the pottery recovered dating to the late Iron Age/Early Roman transitional period. The sub-square enclosures appear to relate closely to the settlement design to the north, and pottery indicates a similar date for these. The archaeological remains present in the trenches was expected from the geophysical survey, with the addition of extra features, such as a potential roundhouse drip gully to the east of the central circular enclosure, and a small number of other internal enclosure divisions in other trenches. East of the main enclosure was a ditch running parallel to the main site. This possibly formed a double-ditched boundary or a trackway along the edge of the settlement. Pottery from this area dates to a later period than the rest of site (at least the early 2nd century). Several copper alloy find spots (MBB19824; MBB19827; MBB19828; MBB 19829) have been found to date to the 3rd to 4th centuries and are recorded nearby. The site is of archaeological interest due to its ability to provide insights on agricultural process, land management, settlement patterns, and transition from the Iron Age to the Roman period. This asset is therefore considered to be of high heritage value.

6.9.12 The magnitude of impact of the Scheme upon this asset is moderate adverse and permanent as elements of the asset would be adversely affected by the construction of the new dual carriageway, the Roxton Road link (south) and an attenuation basin. However, the site extends into fields to the north beyond the Order Limits, and these remains would be unaffected.

6.9.13 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

6.9.14 Ploughed out ridge and furrow has also been recorded in the field, and although it has some minor archaeological and historic interest, it is considered to be of no heritage value.

Field 17

- 6.9.15 A number of features have been recorded in Field 17 including possible ditches which were identified by both geophysical survey and evaluation trenching. Although their purpose was not identified, three sherds of medieval pottery were recovered from one ditch, suggesting an approximate date. A farmstead (8614) has also been recorded on historic mapping of the area, although no trace of this now survives. The study of the ditches and any other remains that might survive as subsurface features could provide information about past landscape use and settlement, but these are considered to have limited archaeological and historic interest. Although the ditches are not fully understood, they are thought to relate to the medieval field system linked to Wyboston, and as such are considered to be of low heritage value as they represent a type of feature quite common in the area. Any remains of the former farmhouse recorded on historic mapping are of negligible value as they are related to a form of building relatively common in the landscape.
- 6.9.16 The Roxton Road link (north) would pass through this area, and the magnitude of impact would be no more than negligible adverse.
- 6.9.17 Construction of the Scheme would have a neutral effect (not significant) on these features.

Fields 19

- 6.9.18 Wyboston Green (8621) is the site of a former medieval village green, enclosed in c.1799. The Green was divided into six allotments, and by 1977 the eastern end had been developed and the remainder is now under pasture. The latter may possess greater archaeological potential due to the undeveloped nature of the land and earlier remains may survive at this site. The Green is of local archaeological and historical interest in the information it may contain in relation to medieval settlement patterns and the transition from the medieval to post-medieval period, as well as the enclosure of land during the 18th and 19th centuries. The only feature identified during evaluation was an irregular depression of post-medieval to modern date. The heritage value is therefore considered to be negligible.
- 6.9.19 The Scheme would involve the construction of the Roxton Road link (north) running through the centre of the asset, resulting in a permanent magnitude of impact of negligible adverse.
- 6.9.20 Construction of the Scheme would have a neutral (not significant) effect on the asset.
- 6.9.21 The medieval roadside settlement of Wyboston (17149), located along the Great North Road and The Lane, remains to the present day with little redevelopment throughout the post-medieval and modern period. The settlement is recorded in the Domesday Book, and the suffix 'ton' suggests the settlement may have had its origins in the Anglo-Saxon period, although it has also been suggested the name is Old English. This asset is of archaeological and historical interest due to its ability to potentially inform local and regional research framework aims, derived from the information it may contain regarding medieval settlement

patterns. Due to the fact that the settlement still exists and has not been subject to extensive post-medieval and modern development, remains dating to the medieval period have a high potential to have survived in areas that have not been developed. It has further value derived from its associated village green (8621); however, evaluation trenching in this field only revealed an irregular depression of post-medieval to modern date, probably associated with ploughing activity or nearby quarrying. Although the heritage value of the medieval roadside settlement of Wyboston is medium, the heritage value of the field is no more than negligible.

6.9.22 The Scheme would only affect a narrow strip, and in that area, construction would result in permanent ground disturbance. However, there are no recorded remains here, and overall the Scheme would result in a negligible adverse magnitude of impact.

6.9.23 Construction of the Scheme would have a neutral (not significant) effect on the asset.

Field 28

6.9.24 An area of sub-rectangular enclosures and other linear features (1833), probably prehistoric in origin, are recorded on the edge of this field. The remains would not be affected by the Scheme. No evidence of the site was encountered by the geophysical survey and evaluation trenching. As the site was previously excavated and no further evidence was found during the evaluation, the site is considered to be of no heritage value.

6.9.25 Accordingly, there would be no impact or effect upon this site.

Field 29

6.9.26 A number of possible boundaries were recorded as part of the evaluation trenching undertaken, along with a single sherd of Roman pottery. These features are thought to relate to post-medieval field systems and as such have archaeological and historic interest as their study could provide information relating to landscape development and management. As these features are of a type common within the study area, as well as the wider area, they are considered to be of negligible value.

6.9.27 A satellite compound is proposed in the south-west corner of this field, and part of an access road crosses the area. However, the magnitude of impact upon the ditches is considered to be no more than minor adverse and permanent.

6.9.28 Construction of the Scheme would have a neutral effect (not significant) on these features.

6.9.29 A former milestone (8808) was also recorded in the field on historic mapping. It is likely that this has been removed and as a result is not considered to retain any value. However, should it be located, it would possess historical interest in regard to the development of transportation infrastructure in the 18th and 19th century. Assuming it remains in its original position, the milestone is of low heritage value.

- 6.9.30 Should the milestone be affected, it would be removed to a position as close to its current location as possible. The resulting magnitude of impact would be moderate adverse and permanent.
- 6.9.31 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.
Field 33 – 34
- 6.9.32 A part of the post-medieval former turnpike road (20571), which ran from Tempsford Bridge to Godmanchester, follows the line of the existing Barford Road. Turnpike Trusts were set up in the 18th and early 19th centuries to build and maintain the roads, although many of the associated toll houses are now lost to road improvements. The remains of this turnpike road runs through Tempsford and through the Order Limits towards Little Barford and St Neots. This asset is of archaeological and historical interest based on its ability to inform on past human activities relating to the movement of people, the growth of the transport infrastructure, and the development of turnpike trusts in the 18th and 19th centuries. Turnpike roads are common throughout England and are well recorded on 19th century and later maps. Furthermore, the line of the existing Barford Road appears to follow the alignment of the turnpike road, and as a result, it is likely that the original road fabric has been lost to later development. As a result, the heritage value of this asset is low.
- 6.9.33 As the Barford Road bridge would carry the realigned Barford Road across the new dual carriageway, it is not considered that there would be more than a permanent negligible adverse magnitude of impact on the asset, given both the length of the asset and the ability to understand it within the landscape.
- 6.9.34 Construction of the Scheme would have a neutral effect (not significant) on this asset.
Field 34 & 35
- 6.9.35 Several areas of archaeological potential were identified in these fields during the evaluation. Area 2 comprised a long (c.280 metre) linear boundary ditch aligned west to east through part of Field 34 and into Field 35. No dateable material was recovered from the fills of the ditch. It was possibly the focus of other archaeological activity revealed as several geophysical anomalies, including a potential roundhouse. These features may be of Late Bronze Age date. Area 4, in the northern part of Field 34, comprises a large settlement extending for c.215 metre (south to north) and continuing beyond the Order Limits to the east and west. The settlement site comprised a series of rectangular and circular enclosures, and associated ditches and gullies. It contains three phases of activity, dating from the Iron Age to the Roman period.
- 6.9.36 The sites provide partial views of larger settlement areas which lie beyond the Order Limits and have the potential to further understanding of settlement patterns in the region. This may be especially the case for the northern end of Field 34, which has the potential for study into the Iron Age and Roman transition.

- 6.9.37 The settlement site has interest in relation to the archaeological and historic potential as further excavation could provide information linked to settlement activity from the Bronze Age through to the Roman period. Such information could contribute to regional research agendas and as such the remains in the field are considered to be of medium heritage value.
- 6.9.38 Both of the areas identified from the evaluation would be permanently impacted by the Scheme. There would be a magnitude of impact of moderate adverse.
- 6.9.39 Construction of the Scheme would have a moderate adverse effect (significant).
- 6.9.40 In the south-west corner of Field 35 is a second Roman rectilinear enclosure. This measures approximately 45 metres north to south by over 35 metres east to west, as it continues beyond the Order Limits to the east. The site has archaeological interest regarding Roman settlement patterns and is considered to be of medium heritage value. However, this asset would be fenced off during construction and therefore would be unaffected by the Scheme.

Field 39

- 6.9.41 Geophysical survey and evaluation trenching recorded a number of features including Roman bedding trenches as well as traces of field systems and ridge and furrow. These assets have archaeological and historic interest as their study could provide further information on land use and development from the Roman period onwards. They are considered to be of low heritage value as better examples are known to survive in the study area.
- 6.9.42 These features would be permanently impacted by an area proposed for multiple construction uses, resulting in a moderate adverse magnitude of impact.
- 6.9.43 Construction of the Scheme would have a slight adverse effect (not significant) on these features.

Field 44

- 6.9.44 An Iron Age and Roman farmstead, recorded as cropmarks (16800 and 16802), was located during evaluation. The deposits which hold archaeological interest represent a settlement which developed possibly from as early as the Middle Iron Age and was occupied, in some form, through to the 3rd and 4th centuries AD. The trial trench results confirm that the settlement was principally confined to the core area defined by the D-shaped outer boundary ditch, an area in excess of two hectares. Occupation was centred within the core of the D-shaped enclosure, with internal sub-divisions and up to seven roundhouses. The presence of a surviving vertical stratigraphic sequence elevates the interest of the site to beyond that of the normal developed farmsteads found in the wider area. Analysis of aerial images suggests that the archaeological deposits recorded in Field 44 form part of a larger complex of features extending to the east and south. The site has the potential to inform both local and regional archaeological research frameworks. Specifically, the remains may contain valuable information on agricultural processes, land management, and settlement patterns dating to the prehistoric periods and into the Roman period. The remains are therefore considered to be of high heritage value.

- 6.9.45 The new dual carriageway would result in a permanent change to key archaeological elements relating to this asset as a result of groundworks. The magnitude of impact is therefore considered to be moderate adverse.
- 6.9.46 Construction of the Scheme would have a moderate adverse effect (significant) on the asset.
- Field 45
- 6.9.47 Works undertaken as part of the Scheme have identified archaeological remains within Field 45. Geophysical survey recorded a possible trackway, as well as ridge and furrow ploughing. Evaluation trenching was undertaken, and this identified a number of features in addition to the ridge and furrow. A ditch in the south-east corner of the field was found to contain pottery from the Roman period as well as fragments of burnt clay. It is considered these features relate to the Iron Age/Roman settlement to the south. Several other linear features and pits were located, although dating evidence was limited. The features had similar profiles and fills and were interpreted as forming the corner of a small enclosure.
- 6.9.48 The remains have archaeological and historic interest as their study could provide information of the later land use of the area; however, as the remains are currently considered to be of a type common in the wider study area, they are deemed to be of low heritage value.
- 6.9.49 The magnitude of impact upon this asset is minor adverse and permanent as elements of the asset would be adversely affected by construction of the new dual carriageway. However, the site extends into fields to the west, and this part of the asset would be unaffected.
- 6.9.50 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.
- Field 46
- 6.9.51 The site of a former kiln dating to the post-medieval period has been recorded on historic mapping, although the asset has now been demolished (9070). Geophysical survey undertaken as part of the Scheme also recorded traces of ridge and furrow as well as a number of possible enclosure ditches and other linear features. Evaluation trenching found little evidence of the features identified though geophysical survey. One shallow ditch was recorded in the southern end of the field but no relationship between this and other furrows in the field could be identified. This ditch is believed to be Roman in date. One other shallow, undated, ditch was found crossing through two trenches but was not found to continue across the field.
- 6.9.52 Remains that survive as subsurface deposits have archaeological and historic interest as their study could provide information relating to the agricultural land use in the area. However, as the remains currently appear to be of a form common in the study area, they are considered to be of negligible heritage value.

- 6.9.53 The magnitude of impact upon this asset would be minor adverse and permanent as elements of the asset would be adversely affected by the construction of the new dual carriageway. The site extends into fields to the west and this part of the site would be unaffected.
- 6.9.54 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.
Field 47
- 6.9.55 Geophysical survey has identified traces of ridge and furrow cultivation, as well as other linear features and a possible enclosure. An oval enclosure was identified at the edge of a hilltop plateau enclosed in a broad but shallow ditch. A possible internal ditch was also noted. To the north-west and south of the enclosure further ditches were also recorded. The enclosure and ditches are believed to be Iron Age in date. The remains have archaeological and historic interest as they contribute to the understanding of the landscape in the Iron Age period. As they are of a form common in the study area, they are considered to be of low heritage value.
- 6.9.56 The magnitude of impact upon this asset is moderate adverse and permanent as elements of the asset would be adversely affected by the construction of the new dual carriageway.
- 6.9.57 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.
Field 48
- 6.9.58 Archaeological remains in the field recorded to date are limited to faint traces of ridge and furrow cultivation identified through geophysical survey. Evaluation trenching did not identify any of the features identified on the geophysical survey. Three large, shallow pits containing Late Iron Age pottery and fragments of animal bone were recovered. The pits are located half-way between the Iron Age enclosures in Fields 47 and 50.
- 6.9.59 The remains identified through the geophysical survey and evaluation trenching have archaeological and historic interest as the study and mapping of the remains could provide information on land use during the Iron Age; however, based on current knowledge the remains are considered to be of low heritage value as better examples are known from the wider area.
- 6.9.60 The new dual carriageway would result in a permanent change to archaeological features due to groundworks. The magnitude of impact is therefore considered to be moderate adverse.
- 6.9.61 Construction of the Scheme would have a slight adverse effect (not significant) on the asset.

Field 49

- 6.9.62 The Giants Parlour (473) is a field name shown on the 1840 Tithe Map. The HER suggests that this field name may relate to a local myth of a giant which is said to have stood on earthworks of the site of a Roman fort. A series of small sub-rectangular enclosures visible as cropmarks have been identified in the middle of the field (16821) which were confirmed by the evaluation. These features also likely extend outside of the Order Limits.
- 6.9.63 The evaluation trenching confirmed the complex of ditches, crossed by a later trackway, recorded during the geophysical survey. Within the ditches, fragments of Late Iron Age pottery were recorded and indicated that the site was subject to more than one phase of activity. A ring ditch at the east end of the arrangement of ditches was found to contain a fragment of human skull. A gully, not detected though geophysical survey and believed to indicate a roundhouse, was also recorded.
- 6.9.64 The ditches crossing the centre of the field possibly mark a trackway and are thought to be Roman in date, although no datable evidence was recovered. Some Roman pottery was found in an isolated ditch to the north of the Late Iron Age features.
- 6.9.65 Analysis of the geophysical survey and evaluation trenching results has identified features relating to Late Iron Age activity similar to that recorded in the wider area. As such the remains have archaeological and historic interest as their study could provide information linked to settlement activity and land use in the area. Excavation and analysis of remains could also contribute to regional research frameworks, and the remains are considered to be of low heritage value.
- 6.9.66 The new dual carriageway would pass through the extent of this asset, which would have a permanent and moderate adverse magnitude of impact.
- 6.9.67 Construction of the Scheme would have a slight adverse effect (not significant) on the asset.

Field 53

- 6.9.68 An oval enclosure was identified by the geophysical survey on the south-facing slope. Evaluation excavation determined that this was Middle to Late Iron Age in date. Elsewhere two pits, a possible waterhole, and two ditches were present but undated. The interior of the enclosure contained the remains of a possible roundhouse, a possible internal subdivision and a pit. The location of the enclosure is perhaps significant in that it was on a prominent south facing slope, although not visible from the other side of the hill to the north-east, and there was easy access to water at the base of the slope to the south-west. It forms a less common enclosure form than seen elsewhere in the Order Limits. A number of undated ditches were also located in the southern end of the fields but no relationship with the Iron Age enclosures were identified.

- 6.9.69 The enclosure may be contemporary with other Iron Age settlements (Fields 54 and Fields 56/57), and the remains are considered to have archaeological and historical interest in their ability to inform on past human activity, along with group value with other enclosures in the vicinity. They are considered to be of medium heritage value.
- 6.9.70 The site would be permanently affected by the construction of the new dual carriageway, resulting in a magnitude of impact of moderate adverse.
- 6.9.71 Construction of the Scheme would have a moderate adverse effect (significant) on this site.
- Field 54 & 56
- 6.9.72 A large oval ditched enclosure, which measured approximately 50 metres long, north to south, by 45 metres wide, east to west was located in Field 54 from the evaluation and was also recorded on aerial photographs (MCB21136). The interior of the enclosure exhibited a complex arrangement with a central internal space surrounded by five or six enclosures. Possible annexes to the exterior of the enclosure were located to the east and north-west sides (the latter may have been part of the original enclosure rather than an annex), and a ditch extended south from the southern side of the enclosure. The site presents an almost complete Iron Age settlement; however, the absence of isolated features and structures within the evaluation may indicate a higher level of truncation than other similar sites. Pits and ditches had been identified in Field 56 through analysis of aerial photography and recorded on the HER (MCB18836). Geophysical survey also recorded the eastern edge of a circular feature, at the western end of the field which is believed to extend into Field 57. Evaluation trenching identified a cluster of Middle to Late Iron Age features in the east of the field, which relate to a group of enclosures which extend westwards beyond the Order Limits into Field 57, and form part of the enclosure complex recorded in Field 54.
- 6.9.73 The site may be contemporary with other Iron Age settlements and has archaeological and historic interest due to its ability to inform on past human activity, along with group value with other Late Iron Age features in the vicinity. The site is considered to be of medium heritage value.
- 6.9.74 The site would be permanently impacted by the construction of the new dual carriageway, the realigned Potton Road, a soil storage area and a construction area, with a magnitude of impact of moderate adverse.
- 6.9.75 Construction of the Scheme would have a moderate adverse effect (significant) on this site.

Field 56

- 6.9.76 A second cluster of features of Middle to Late Iron Age date in Field 56 correlated with an anomaly on the geophysical survey in the south-east of the field. The site may be contemporary with other Iron Age settlements and has archaeological and historic interest due to its ability to inform on past human activity, along with group value with other Late Iron Age features in the vicinity. As it is considered to be of medium heritage value, the site would be fenced off during construction and would not be impacted by the Scheme.
- 6.9.77 In the north-west corner of the field, post-medieval and modern features associated with Eynesbury Fields Farm were recorded. The features include an enclosure to the north of the farm buildings which is clearly defined on the geophysical survey, and also shown on the 1901 25 inch OS map for Bedfordshire (Sheet IX.10). The site has some historic interest pertaining to post-medieval farming patterns but is of no more than low heritage value.
- 6.9.78 As it would be impacted by construction, the magnitude of impact would be major adverse and permanent.
- 6.9.79 Construction of the Scheme would have a slight adverse effect (not significant) on this site.

Field 57

- 6.9.80 A post-medieval pond was recorded in a trench in Field 57. This feature is visible on the 1901 OS map and contained 18th and 19th century pottery together with a small amount of animal bone and various metal objects. It is considered to be of no more than negligible value and has very limited historic interest.
- 6.9.81 It would be partially and permanently impacted by the realigned Potton Road, resulting in a magnitude of impact of moderate.
- 6.9.82 Construction of the Scheme would have a neutral effect (not significant) on this feature.

Field 58

- 6.9.83 A sub-square Iron Age/Roman enclosure was located in the south-east corner of the field. This was recorded in the geophysical survey and on aerial photography (MCB18833), and subsequently confirmed during evaluation excavation. Within the enclosure, divisions are present, separating the north-east corner of the enclosure. Two roundhouse drip gullies have been excavated, as well as a number of internal pits/post-holes. Boundary ditches outside the enclosure were excavated and to the south and east were found to contain Middle to Late Iron Age pottery. Roman pottery was also found in the northern boundary ditch. The site has archaeological and historic interest due to its ability to inform on past human activity, along with group value with other enclosures in the vicinity. The site is considered to be of medium heritage value.
- 6.9.84 The site would be permanently impacted by construction of the new dual carriageway and an attenuation basin, with a magnitude of impact of moderate adverse.

- 6.9.85 Construction of the Scheme would have a moderate adverse effect (significant) on this site.
Field 59
- 6.9.86 Field 59 contains a number of archaeological features. It was evaluated as part of the Urban and Civic development project in 2008 and 2009 (Ref 6-38), and this evaluation resulted in the location of a number of discrete sites. Site 1 is located to the western end of Field 59 and extends to the north, outside the Order Limits, and is formed as a significant rectilinear enclosure with associated settlement features dating from the Late Iron Age to the Late Roman period. An enclosure complex with rectilinear buildings, an enclosure with a roundhouse and a small C-shaped enclosure all dating to the Late Iron Age were also identified. Although located within the Order Limits, the site would not be impacted by the main construction compound as it would be fenced off. Similarly, cropmark enclosures are recorded in this area (MCB18829 & 09972) and these also fall within the area that would be fenced off.
- 6.9.87 Site 2 forms a small separate settlement in a sheltered location. It consists of a trackway and pits, along with other features only identified on the geophysical survey. In addition, there were several other features and boundaries dating to the later Iron Age. Although there was a relative lack of finds, the number of features close to the track suggests a discrete settlement in its own right. As such, the remains have archaeological and historic interest as their study could provide information linked to settlement activity and the inter-relationships between settlements through excavation of the Iron Age droveway. The remains are considered to be of medium heritage value.
- 6.9.88 Site 2 would be permanently impacted by the formation of the main site compound, with a magnitude of impact of moderate adverse.
- 6.9.89 Construction of the Scheme would have a moderate adverse effect (significant) on this site.
Field 62
- 6.9.90 Field 62 was waterlogged and contained a possible palaeochannel. The remains possess archaeological interest for the palaeoecological/geoarchaeological evidence they can provide from samples of the palaeochannel leading towards Hen Brook. Evaluation trenching identified areas of high disturbance from bioturbation believed to relate to trees and vegetation.
- 6.9.91 The site has archaeological interest due to its ability to inform on the environmental changes in the area through paleoenvironmental evidence; however, due to the level of disturbance the site is considered to be of low heritage value.
- 6.9.92 The site would be permanently impacted by the construction of the new dual carriageway and an attenuation basin, with a magnitude of impact of moderate adverse.
- 6.9.93 Construction of the Scheme would have a slight adverse effect (not significant) on this site.

Field 65

- 6.9.94 A large Roman farmstead was recorded within this field. This was recorded on geophysical survey and aerial photography (MCB18824) and confirmed during evaluation excavation. The geophysical survey results show that a significant proportion of the settlement extends to the north and beyond the Order Limits. On the eastern edge of the site, two trenches contained the only confirmed Iron Age archaeology identified within the field. There are a small number of ditches likely forming enclosures focussed outside of the Order Limits. The main site contained the eastern portion of a predominantly Roman settlement dating from the 2nd – 3rd century AD. Relatively large quantities of pottery have been recovered from the features. Large shallow pits were identified as likely used for the extraction of clay. West of these, but within the same enclosed area, is a possible kiln. To the west and north of this industrial area are a series of sub-square enclosures with evidence of multiple recuts and containing ceramics of Late Iron Age and Roman date. At the north end of the field, a trench contained an isolated pit filled with burnt stones, although no dating evidence was recovered from it. A ditch found to be truncated by a pit was also recorded through the geophysical survey and trenching, and was interpreted as a quarry, similar to those found to the south, but dating to the Early to Middle Saxon period.
- 6.9.95 The remains have archaeological and historic interest as their study would provide information linked to Iron Age/Roman settlement activity and land use in the area, particularly in relation to the industrial activity. Excavation and analysis of remains could also contribute to regional research frameworks, and the remains are considered to be of high heritage value.
- 6.9.96 The part of the site which lies within the Order Limits would be impacted by soil storage, road construction and planting, although a significant portion of the site falls outside of the Order Limits. The magnitude of impact on the site as a whole is considered to be moderate adverse and permanent.
- 6.9.97 Construction of the Scheme would have a moderate adverse effect (significant) on this site.

Field 66

- 6.9.98 The large enclosure and additional external boundaries broadly match the geophysical survey. This site was also recorded on aerial photographs (MCB19041). Pottery from the 1st and 2nd century AD has been identified from the surface of some these features, with no earlier finds present. Evaluation trenching confirmed the presence of an enclosure complex of Late Iron Age to Roman date in the north of the field and largely located outside the Order Limits. The remains have archaeological and historic interest due to the information they could provide regarding settlement activity and land use in the area. Excavation and analysis of remains could also contribute to regional research frameworks, and the remains are considered to be of medium heritage value.

- 6.9.99 Only a very small part of this site would be permanently affected by the construction of a farm access track, and the majority of the remains would be fenced off to avoid accident damage during construction. The magnitude of impact would be negligible.
- 6.9.100 Construction of the Scheme would have a slight adverse effect (not significant) on this site.
Field 70
- 6.9.101 Towards the south and east of Field 70 evaluation trenching confirmed that features identified from geophysical survey were of Late Bronze Age and medieval date. A possible roundhouse drip gully, as well as a stone-filled pit, were recorded. These were of Bronze Age date. Remnants of medieval/post-medieval farming practices were also recorded. The settlement extends along a gentle curving linear track bordered on each side by ditches. Either side of the trackway are a number of enclosures, also defined by ditches. This site is likely to be associated with the Wintringham DMV to the south-east. The remains identified have archaeological and historic interest as the study of the remains could provide information linked to settlement and agricultural land use in the area. The remains are of medium heritage value.
- 6.9.102 As the site is located in an area that would be used for soil storage, the magnitude of impact would be minor adverse and temporary.
- 6.9.103 Construction of the Scheme would have a slight adverse effect (not significant) on this site.
Field 73 & 74
- 6.9.104 Two small Iron Age enclosures were located in the centre of Field 73, likely related to the larger enclosure to the east in Field 74. To the north-east and west of these is a predominantly Roman site, dated to the 1st – 2nd century AD. A rectangular enclosure measuring c.75 metres x 55 metres was recorded containing several smaller ditches, pits and post-holes.
- 6.9.105 To the north-east and south of this enclosure are further enclosures and boundaries which extend from Field 73 and into Field 74. This included the northern extent of a complex of sub-circular enclosures identified through geophysical survey and proven through evaluation trenching. This site is also recorded on aerial photographs and on the HER (MCB19040). These features extend outside the Order Limits and are of Iron Age date. The evidence detailed a complex settlement and a long period of occupation. In the north-east corner of Field 73, several ditches were recorded. The features contained an assemblage of Roman pottery and a sherd of Huntingdonshire ware dating to 1050 – 1200. These systems could be related and date to the 1st – 2nd century. A further small enclosure that has been excavated likely related to the Roman activity. The southern portion of the site contained medieval/post-medieval field boundaries (matching existing boundaries to the west and east) as well as further Roman features that included a possible east-west aligned trackway. The remains identified have archaeological and historic interest as they provide information linked to settlement and agricultural land use in the area. Excavation and

analysis of remains could also contribute to region research frameworks on the relationship between the Iron Age and Roman settlements. The remains are of medium heritage value.

- 6.9.106 The site would be permanently impacted by the construction of the new dual carriageway and an attenuation basin, and part of the site would also be covered by a soil storage area. The magnitude of impact would be moderate adverse.
- 6.9.107 Construction of the Scheme would have a moderate adverse effect (significant) on this site.

Field 75 & 76

- 6.9.108 A small Iron Age enclosure was identified in the south-west corner of Field 76 and the eastern edge of Field 75, crossed by Roman Way. The external boundary ranged from 0.7 metres – 1.6 metres deep with Mid-Late Iron Age pottery and animal bone recovered from this. A small number of shallower internal divisions were present within this enclosure, most of which contained Iron Age pottery. The remains possess archaeological and historical interest for the knowledge they provide regarding settlement and agricultural land use. Excavation and analysis of remains could also contribute to regional research frameworks on the relationship between the Iron Age and Roman settlements, due to the proximity to the Roman Way. The remains are of medium heritage value.
- 6.9.109 This site would be permanently affected by a compound and soil storage, with small elements affected by an access road. As a result, the magnitude of impact is considered to be moderate adverse.
- 6.9.110 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

Field 77

- 6.9.111 A linear feature identified from aerial photographs in 2009 has been recorded in the north-eastern extent of the field (MCB24576). Geophysical survey recorded a Roman settlement, comprising a dense concentration of features including several sub-square enclosures, potentially dating to the Iron Age and Early Roman period. A further large curvilinear ditch was found to the east of the main settlement. This ditch was interpreted as being probably to the main settlement, possibly marking a field boundary or livestock area. A large sub-oval enclosure was also recorded.
- 6.9.112 Evaluation trenching confirmed the presence of the features identified through geophysical survey. The centre of the field contains a dense multi-phase settlement of Iron Age and Roman date. While the evaluation largely confirmed the findings of the geophysical survey, several additional features were also recorded. The large sub-oval enclosure it is believed to represent the earliest phase of occupation and it is surrounded by a later, more regular, 'grid' of sub-square enclosures. Pottery evidence shows that the chronology of the site is complex and further analysis would be required to fully understand the sequence. Evidence that the settlement moved and expanded to the north and west was

also present. Significant artefactual evidence was also recorded. On the western side of the settlement a series of parallel ditches were recorded and are believed to represent cultivation ditches or lazy-beds. The upper stone from a domed rotary quern of likely Late Iron Age to early Roman date was also found in this field.

6.9.113 The remains identified have archaeological and historic interest as they provide information linked to settlement and land use in the area. The remains are considered to be of medium heritage value.

6.9.114 The site would be permanently impacted by construction of the new dual carriageway, and the magnitude of impact would be major adverse.

6.9.115 Construction of the Scheme would have a moderate adverse effect (significant) on this site.

Field 80

6.9.116 A small number of dispersed archaeological features were recorded during the trial trench evaluation. This includes a Middle to Late Iron Age cremation pit and an undated ring-gully. The remains possess archaeological interest for information on Iron Age settlement and burial practices.

6.9.117 The remains are of low heritage value. The remains would be impacted by multi-use construction activity but are not under the new dual carriageway. The magnitude of the permanent impact is considered to be moderate adverse.

6.9.118 Construction of the Scheme would have an effect of slight adverse (not significant) on these features.

Field 84

6.9.119 Two associated Middle to Late Iron Age enclosures and connected boundary ditches were identified within this field. Only the southern end of a sub-oval enclosure was excavated at the extreme northern end of the field. A long, slightly curving sinuous ditch was aligned approximately north to south through Field 84 and connected the enclosure to a smaller sub-oval enclosure/roundhouse located in the middle of this area and continued on to join one of two rectangular enclosures beyond the Order Limits to the south.

6.9.120 This site provides evidence for activities within landscapes that were peripheral to a larger settlement area located just beyond the Order Limits. The remains have archaeological and historical interest related to this larger settlement. Investigation of these features could also contribute to regional research frameworks on Iron Age settlements and how they interconnect. The remains are of medium heritage value.

6.9.121 As only part of the whole of the string settlement would be affected by construction of the new dual carriageway, with the majority of the settlement complex located to the south, the magnitude of the impact is considered to be minor adverse and permanent.

6.9.122 Construction of the Scheme would have a slight adverse effect (not significant) on this site.

Field 85

- 6.9.123 Within Field 86 is the site of the complex at High Hayden Farm (MCB24563). The historic mapping suggests that this was a notable farm that was highly developed and included a significant house (possibly late medieval in origin) with formal gardens, fishponds, model farm type buildings to the north in the rear courtyard and woodland planting, including triangular plantations at the corners of the boundaries. The remains possess archaeological and historical interest in regard to medieval/post-medieval farming buildings and processes. The remains are of low heritage value. This area would be used for topsoil storage and would be fenced off. Accordingly, no impacts on the remains are predicted.

Field 86

- 6.9.124 The southern half of an Iron Age curvilinear enclosure, which continued north beyond the Order Limits, was found within this field. Excavations through the outer boundary ditch located Iron Age pottery and this large enclosure ditch cut through an earlier ditch that also contained Iron Age pottery. The remains have archaeological and historical interest for the knowledge they provide regarding Iron Age land use and settlement patterns. The remains are considered to be of low heritage value.
- 6.9.125 The site would be affected by construction of the new dual carriageway. The magnitude of the impact would be moderate adverse and permanent given the remains extend outside of the Order Limits and therefore only part of the site would be affected.
- 6.9.126 Construction of the Scheme would have a slight adverse effect (not significant) on this site.

Field 88

- 6.9.127 An Iron Age pit and undated ditches and gullies were recorded within this field; however, the features were not recorded on the geophysical survey. The remains have limited archaeological and historical interest for the knowledge they could provide on Iron Age land use. The remains are of negligible heritage value as they are of no more than local importance and are limited in extent.
- 6.9.128 The features would be impacted by construction of the new dual carriageway and the magnitude of impact would be moderate adverse and permanent.
- 6.9.129 Construction of the Scheme would have a slight adverse effect (not significant) on these features.

Field 90

- 6.9.130 A Middle to Late Iron Age enclosure and boundary ditch were recorded within this field. This was recorded on geophysical survey and aerial photography (MCB24586) and confirmed during evaluation excavation. The enclosure located in the north-east corner of Field 90 extended northwards beyond the Order Limits. The elongated D-shaped main enclosure was approximately 50 metres north to south by 25 metres east to west, divided internally by two parallel ditches. Extending south and turning south-westwards from the southern side of the enclosure was a long sinuous boundary ditch. Immediately south of the main

enclosure were three possible unenclosed roundhouses. The remains have archaeological and historical interest related to this larger settlement. These features would also contribute to regional research frameworks on Iron Age settlements and how they interconnect. They also provide an opportunity to examine how Iron Age settlements were laid out in relation to these extended meandering boundary strings that now appear common to this region, but which are currently under studied. The remains are of medium heritage value.

- 6.9.131 Part of the enclosure would be affected by the construction of an access to an attenuation basin, while the 'string' would be impacted by construction of the new dual carriageway and other activities. The magnitude of impact would be moderate adverse and permanent.
- 6.9.132 Construction of the Scheme would have a moderate adverse effect (significant) on this enclosure.
- 6.9.133 Milestone (1163534) is a Grade II listed, 19th century or earlier milestone. It consists of a limestone block with pyramidal cap with inscriptions incised and painted black: 'Eltisley, St Ives 8, Potton 8', and is located at the junction of the existing A428 and St Ives Road to the north of Eltisley. The location of the milestone coincides with one illustrated on the 1887 Ordnance Survey map, although historic redevelopment of the existing A428 may have altered the location of the milestone, as this is shown at a slightly more southerly location on the 1982 Ordnance Survey map. The milestone possesses historical interest in regard to the development of transportation infrastructure in the 18th and 19th century. Assuming it remains in its original position, the milestone is considered to be of high value. The milestone would be affected by the realigned B1040 on which it sits.
- 6.9.134 The milestone would be removed to a position as close to its current location as possible, reducing the impact on its heritage significance. Once relocated, the magnitude of impact would be minor adverse and permanent.
- 6.9.135 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

Assessment of harm

- 6.9.136 The effect on this asset is considered to be less than substantial harm. Although the milestone would be physically affected, it would remain intact, being removed, appropriately stored and relocated as close to its original location as possible. The setting of the milestone would be preserved, being relocated as close to its original location as possible, retaining its accuracy as a distance marker.

Field 92

- 6.9.137 Two single enclosures had previously been recorded in the north-east of this field from aerial photographs on the HER (MCB24587 & MCB24588). Archaeological evaluation trenching investigated these enclosures and also identified an associated boundary ditch in the north-east corner of the field. In the north-east corner, a pair of sub-rectangular enclosures of Iron Age date were confirmed from the evaluation. The main boundary ditches survived to a depth of up to 1.3m

with evidence for several re-cuts. Middle to Late Iron Age pottery was present within the boundary ditches of both enclosures. No internal divisions were located within the enclosures, with the only internal feature being a potential oven/hearth.

- 6.9.138 A larger D-shaped enclosure complex was also recorded to the south-west which had been recorded through geophysical survey. Pottery was found in the ditches of the two sub-rectangular enclosures and dated them to the Iron Age. The more substantial D-shaped enclosure contained pottery dating to the Late Iron Age and represents a later period of occupation. Adjoining the west side of the main enclosure a small subsidiary enclosure was also recorded containing pits/post-holes and a shallow gully. It is considered that this may represent a roundhouse. To the south of the main enclosure ditches, pits and a circular enclosure, several of which were not recorded through the geophysical survey, were also found. These features also date to the Iron Age and Roman periods.
- 6.9.139 The features recorded in this field all suggest the presence of a substantial Iron Age occupation in this area. A series of intercutting shallow ditches and gullies were noted along with several undated pits and ditches. It is considered these relate to the Iron Age occupation and the later medieval/post-medieval farming practices.
- 6.9.140 The remains have archaeological and historic interest related to Iron Age settlement patterns. Investigation of these features could also contribute to regional research frameworks on Iron Age settlements and how they interconnect. They also provide an opportunity to examine how Iron Age settlements were laid out in relation to these extended meandering boundary strings that now appear common to this region, but which are currently under-studied. The remains of both areas of archaeology are of medium heritage value.
- 6.9.141 Much of the main D-shaped enclosure and the associated enclosures in the south-west of the field would be affected by the construction of the new dual carriageway, the Eltislely link south roundabout and other construction activities. The magnitude of impact would be major and permanent.
- 6.9.142 Construction of the Scheme would have a moderate adverse effect (significant) on these enclosures.
- 6.9.143 The enclosures in the north-east of the field would be permanently affected by soil storage. This site of medium heritage value would require excavation and therefore the magnitude of impact would be major and permanent.
- 6.9.144 Construction of the Scheme would have a moderate adverse effect (significant) on these remains.
- 6.9.145 The Grade II listed Milepost (1331394) on Cambridge Road, Eltislely is 19th century in date of cast iron with three angled faces and painted white with black painted raised inscription 'Oxford 75, St Neots 6, Cambridge 12, Eltislely'. The listing description for the milepost records that it is located on the south-east side of Cambridge Road at the junction to Eltislely, within an area of thick vegetation. The milepost appears on late 19th century mapping and is thought to remain in the same location. The milepost possesses historical interest which derives from the development in transportation infrastructure in the post-medieval period,

particularly in relation to the turnpike road and turnpike trust. The turnpike trusts were created in the 18th century to build, maintain and operate these tolls through Acts of Parliament. During the medieval and early post-medieval periods, the maintenance of the roads was the responsibility of local parishes, but the increased traffic during the industrial revolution led to the creation of the trusts (Ref 6-39, [page 4]). The milepost is of high value.

6.9.146 Although the milepost could not be located during surveys, the assessment is based on a worst case scenario. The milepost would be affected by the modifications made to Cambridge Road (as part of the Eltisbury link south roundabout) on which it sits. As the milepost would be removed, stored and relocated to a position as close to its existing location as possible, this mitigation would reduce the impact on its significance. Once relocated, the magnitude of impact would be minor adverse and permanent.

6.9.147 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

Assessment of harm

6.9.148 The effect on this asset is considered to be less than substantial harm. Although the milepost would be physically affected, it would remain intact, being removed, appropriately stored and relocated as close to its original location as possible. The setting of the milepost would be preserved, being relocated as close to its original location as possible, retaining its accuracy as a distance marker.

Field 93

6.9.149 The site of a windmill mound (02463 & 02541) is recorded in this field. The windmill mound was surrounded by a moat on early 19th century Ordnance Survey mapping. The geophysical survey recorded a ditch/enclosure around the site. The evaluation trenching confirmed the presence of the feature, and sherds of medieval pottery were recovered, suggesting a date earlier than post-medieval for the origin of the mill. The asset is of archaeological and historical interest as it provides information on the origins and use of mills in the region. It is considered to be of low heritage value.

6.9.150 The asset lies wholly within the Order Limits and would be impacted by the construction of the new dual carriageway. The magnitude of impact would be major adverse and permanent.

6.9.151 Construction of the Scheme would have a moderate adverse (significant) effect on this asset.

Fields 94, 95 and 96

6.9.152 There are a collection of enclosures and fields recorded between Fields 94, 95 and 96 of Iron Age to Roman date. In Field 94, two Iron Age enclosures were investigated in the central and eastern parts of the field, initially identified in the geophysical survey data. The western enclosure was a complex of three conjoined sub-circular enclosures. A field system of at least three rectangular fields or paddocks extended eastwards from the enclosures. The ditch fills contained middle to late Iron Age pottery. The second enclosure was located

towards the eastern end of Field 94 and was circular in form. In Field 95 were two square Roman enclosures, with potentially related boundaries and field systems to the west, north and east, the latter extending into Field 96. The enclosures and associated field systems possess archaeological and historical interest. They provide a useful insight into the close-knit relationship between smaller occupation areas and how these developed through the Iron Age into the Roman period. The current understanding of how smaller Iron Age enclosures were joined to form sprawling settlements over vast areas is more limited and investigation of these sites would assist interpretation. The remains are accordingly of medium heritage value.

- 6.9.153 As all of the enclosures would be permanently impacted by construction of the new dual carriageway, a moderate adverse magnitude of impact is predicted.
- 6.9.154 Construction of the Scheme would have a moderate adverse effect (significant) on these enclosures.
- 6.9.155 Milepost (1162760) is located near south of Pembroke Farm and is Grade II listed. It is of 19th century date and cast iron with three angled faces and painted white with black painted raised inscription: 'Oxford 76, St Neots 7, Cambridge 11'. The milepost is located on the southern side of the existing A428. The milepost is recorded on the late 19th century Ordnance Survey map of 1887 along the original alignment of the existing A428, then known as the A45. The milepost possesses historical interest which derives from the development in transportation infrastructure in the post-medieval period, particularly in relation to the turnpike road and turnpike trust. The turnpike trusts were created in the 18th century to build, maintain and operate these tolls through Acts of Parliament. During the medieval and early post-medieval periods, the maintenance of the roads were the responsibility of local parishes, but the increased traffic during the industrial revolution led to the creation of the trusts (Ref 6-39, [page 4]). The milepost is of high value.
- 6.9.156 As the milepost would be affected by the new dual carriageway, it would be removed and stored for the duration of the works and reinstated in a position as close to the existing location as possible to reduce the impact on this interest. Once relocated, the impact would be minor adverse and permanent.
- 6.9.157 Construction of the Scheme would have a moderate adverse effect (significant) on this asset.

Assessment of harm

- 6.9.158 The effect on this asset is considered to be less than substantial harm. Although the milepost would be physically affected, it would remain intact, being removed, appropriately stored and relocated as close to its original location as possible. The setting of the milepost would be preserved, being relocated as close to its original location as possible, retaining its accuracy as a distance marker.

Field 97

- 6.9.159 Field 97 contained five areas of archaeological features. Area 1 contained a sub-rectangular, Middle to Late Iron Age enclosure with rounded corners, on the east side of the field towards Ermine Street. Internally it appeared to contain at least four roundhouses. The enclosure measured 57 metres north to south and 50 metres east to west. Outside of the enclosure to the west were other, likely associated, features. Area 2 formed another enclosure with a single internal roundhouse. Other ditches were located south of the enclosure, and one of these may have formed the southern side of a larger outer enclosure. Area 3 formed an enclosure complex in the south-western corner of the field. A large rectangular enclosure was appended to the north-eastern side of the main complex. It was possible that the sites in Area 2 and Area 3 were connected via a system of fields between them. Ditches, possibly associated with field systems, were also identified. Area 4 comprised a possible rectilinear enclosure or field system identified by the geophysical survey in the north-west corner of the field. The main enclosure contained two possible roundhouses and had parallel ditches leading from its south-eastern corner to another possible smaller enclosure to the south-east. During the evaluation trenching a small curvilinear gully was recorded and interpreted as a possible roundhouse drip gully. In addition, the boundary between the parishes of Papworth Everard and Yelling was also seen. A small curvilinear gully was identified in Area 5, which may be a roundhouse drip gully, based on its shape and size. This feature produced four sherds of Late Iron Age/Roman pottery. Two shallow ditches also contained pottery of similar date. A number of undated linear ditches of various size and alignment were recorded nearby. They may be related to the areas of Iron Age and Roman settlement to the east or south, but this is uncertain.
- 6.9.160 Along with features located in Fields 94 – 96, the enclosures provide a useful insight into the close-knit relationship between smaller occupation areas, and how these developed through the Iron Age into the Roman period. Current understanding of how smaller Iron Age enclosures were joined to form sprawling settlements over vast areas is more limited and further investigation of these sites would assist interpretation. They contain archaeological and historical interest. The remains are therefore of medium heritage value.
- 6.9.161 Areas 1, 4 and 5 would be impacted by soil storage and the excavation of a borrow pit, resulting in a permanent magnitude of impact of moderate adverse. Areas 2 and 3 would be affected by construction activity, also resulting in a permanent magnitude of impact of moderate adverse.
- 6.9.162 Construction of the Scheme would have a moderate adverse effect (significant) on Areas 1-5.

Other heritage assets within the Order Limits

- 6.9.163 The site of a possible Roman villa (801) has been identified from cropmarks to the east of the A1, located opposite the vehicle recovery area. West of the A1, within the land identified for the compound, evaluation excavation revealed high-status building material, although no evidence for a building was located. There are numerous sites of Iron Age/Roman date recorded within the wider area, such

as various enclosures, ditches and pits representing settlement sites and field systems indicating a well-occupied landscape. Prehistoric flints have also been recorded in the field (14671), suggesting earlier remains might also survive in the area. The asset is of archaeological interest for the information it contains about a high-status Roman settlement. Its relationship with nearby Roman roads would provide information about settlement patterns and further archaeological interest is derived from the presence of additional Roman sites within the study area. The asset is of high value.

- 6.9.164 While the asset would be affected by the vehicle recovery area, only a very small part of the asset would be permanently affected. In addition, the asset is located in an area subject to previous evaluation, and away from the location of the possible villa, which is likely to be located to the east of the existing A1. Therefore, the magnitude of impact would be minor.
- 6.9.165 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.
- 6.9.166 Six assets, MCB18837 (Field 52), MBD21767 (Field 9), MCB16333 (Field 99), 05753 (Field 92), MCB17211 (Field 53), and MCB18835 (Field 58), consist of medieval ridge and furrow. These are examples of ridge and furrow recorded on the HER and represent multiple examples across the study area. Many were identified as cropmarks on aerial photography, through geophysical survey or during evaluation trenching and are considered to be medieval or post-medieval in date.
- 6.9.167 These assets are of local archaeological and historical interest based on their ability to inform on past human activities relating to agricultural processes and land management during the medieval period. Studies of the scars of ploughed out ridge and furrow can provide useful information when looking at landscape and field system development, especially where traces of ridge and furrow do not respect modern/19th century field systems. Such features are very common throughout the region and England as a whole, with better examples surviving in many other locations. The ridge and furrow within the Order Limits, with the exception of the fields described below, is considered to be of no more than negligible heritage value.
- 6.9.168 Although groundworks within the Order Limits would result in the removal of these assets, the ridge and furrow areas which lie within the study area and in the wider region would be preserved. Accordingly, there would be a moderate magnitude of impact on the assets, which would be permanent.
- 6.9.169 Construction of the Scheme would have a neutral effect (not significant) on these assets.
- 6.9.170 There are some locations where ridge and furrow is considered to be of higher value than that recorded in other locations across the study area. In most locations the ridge and furrow are a common form and overlie sites that appear to be earlier in date. A potential exception to this is Field 44 where it is possible that features associated with the Iron Age/Romano-British settlement may have survived as earthworks into the medieval period. The geophysical survey of this area suggests limited evidence for ridge and furrow across the site with the block

of reverse S-shaped ridge and furrow possibly stopping at/respecting the northern limit of the earlier settlement.

- 6.9.171 As well as the ridge and furrow respecting the earlier remains in Field 44, there are a number of sites where the ridge and furrow appears to be in an earlier s-shaped form, such as Fields 66, 70, 78 and 80. In addition, the earlier field pattern lies fossilised in the landscape, with fields including 54, 57, 59, 65, 66, and 70, as well as 99 and 100, showing ridge and furrow on multiple alignments that do not respect modern field boundaries. These fields contribute to the understanding of the agricultural processes as a whole, and the archaeological interest of these remains lies in providing information on the history of the agricultural landscape. These examples are less common and therefore the ridge and furrow is considered to be of low heritage value.
- 6.9.172 A permanent and moderate magnitude of impact on the assets is predicted.
- 6.9.173 Construction of the Scheme would have a slight adverse effect (not significant) on these assets.
- 6.9.174 Three Roman roads are recorded within the Order Limits. These consist of Ermine Street Roman road (CB15034), the Sandy to Godmanchester Roman road (MCB17569/505) and a road joining these two roads, following Cambridge Road and joining the alignment of the existing A428 (1044694). Ermine Street Roman road (CB15034) ran from London to York, via Lincoln, and was visible as a gravel track without agger, while the Sandy to Godmanchester Roman road (MCB17569/505) comprised a 5 metre wide surfaced road with rammed gravel dated to the 1st century. The roads are of archaeological and historic interest, as they are indicative of the network of routes established by the Roman armies which enabled them to maintain control of their territories. Consequently, they are considered to be of medium heritage value.
- 6.9.175 Given the overall length and preservation of the roads and given that construction is likely to only impact on small sections of the roads, the magnitude of impact on these assets would be minor and permanent.
- 6.9.176 Construction of the Scheme would have a slight adverse effect (not significant) on these assets.
- 6.9.177 A sign in the shape of a black cat is located at the existing Black Cat roundabout, the name of which originates from a garage located there in the 1920s. The shape of the current Black Cat sign came from the shape of the cat on the original garage clock tower. The sign was first installed in 2004 but was replaced in 2006 following construction of the A421 Great Barford Bypass. The asset has some limited historical interest, being associated with a historic feature at this location, but is also important as a landmark. The sign would be removed in advance of construction and stored safely. Following construction of the Scheme, the sign would be reinstated at the Black Cat junction. As a locally important feature, the sign is of no more than low heritage value.
- 6.9.178 The magnitude of impact would be no more than minor adverse and permanent, as it would be reinstated close to its original context.

- 6.9.179 Construction of the Scheme would have a neutral effect (not significant) on this sign.
- 6.9.180 Caxton Gibbet (02470/ MCB3100) stood on Caxton Common, a piece of land around the crossing of the existing A428 and the A1198. The gibbet timbers are in fairly good condition; however, those that are *in situ* at the entrance to the Caxton Gibbet Services are a modern replica and may have been installed when the service area was constructed. It is suggested that the gibbet may have been a Royal Gallows and was in use until the last hanging in 1753. The site possesses historical interest as an example of medieval and post-medieval judicial punishment. The asset is of low heritage value.
- 6.9.181 Although construction of the Caxton Gibbet junction would modify the form of the existing Caxton Gibbet roundabout, there would be no change to the setting of the asset given its current position. Accordingly, there would be no impact upon this site.
- 6.9.182 The impact of changes to ground water through dewatering or increased flooding has been considered. The assessment has considered the results of **Chapter 13, Road drainage and the water environment** and **Chapter 9, Geology and soils** of the Environmental Statement [TR010044/APP/6.1]. There are five fields where archaeological sites discussed in this chapter extend outside of the Order Limits which are in proximity to watercourse (either streams or brooks and drainage ditches) or borrow pits, where deep excavations could cause dewatering. These comprise Field 9, Field 34, Field 35, Field 65 and to the south of Field 84. Although other sites cannot be discounted, these sites are those that are most likely to be impacted by changes to water levels.
- 6.9.183 It is concluded that while there will be an impact upon groundwater caused by the excavation of road cuttings or borrow pits (including that near the archaeological site in Field 9) this would have no more than a slight adverse impact on groundwater (see **Table 13-13**), and consequently not significant. Furthermore, paragraph 9.6.65 of **Chapter 9, Geology and soils** of the Environmental Statement [TR010044/APP/6.1], concludes that, apart from the River Terrace Deposits, groundwater does not form a significant water resource. Paragraph 9.9.10 states that “In summary the significance of the effects on groundwater level and groundwater receptors, such as licensed groundwater sources, as a result of dewatering at these locations are considered to be no worse than slight adverse, which is not significant.” While the site in Field 9 is located on the River Terrace Deposits, it is located a minimum of 400m away from the borrow pit, separated by Roxton Road. Changes to the groundwater caused by the excavation of the borrow pit would consequently not cause changes to the groundwater in Field 9, or impact the survival of archaeological remains outside of the Order Limits.
- 6.9.184 No other recorded archaeological sites that extend outside of the Order Limits are located on River Terrace Deposits and will not be affected.

- 6.9.185 Surface water run-off is also not considered to be an issue and will therefore not impact archaeological sites outside of the Order Limits. It would be no more than slight adverse near the River Great Ouse, and neutral on the rest of the Scheme (see **Chapter 13, Road drainage and the water environment** of the Environmental Statement [TR010044/APP/6.1], paragraph 13.9.51). Similarly, groundwater flooding is considered to be no more than slight adverse (not significant) (**Chapter 13, Road drainage and the water environment** of the Environmental Statement [TR010044/APP/6.1], paragraph 13.9.56).
- 6.9.186 Surface water run-off from road drainage will not impact the burial conditions of archaeological sites outside of the Order Limits. **Chapter 13, Road drainage and the water environment** of the Environmental Statement [TR010044/APP/6.1] paragraph 13.9.69 states that there will be no routine road run-off directed to groundwater. This results in a neutral (not significant) effect to groundwater.
- 6.9.187 Brook Cottages (1311862) is a pair of Grade II listed cottages dating to the 18th century. They are typical of the local vernacular being of timber frame construction with clay daub under colour washed rough cast and half-hipped thatched roof containing four dormers to the main (south) elevation. The building retains gable stacks at each end, with a central stack serving both dwellings. To the north are a series of poor quality 20th century extensions. There has also been alteration in the replacement of windows and addition of a porch to one cottage. Internally, the cottages retain their original partitions with two rooms to each floor and panelled staircases. The fire surrounds have been largely replaced, but evidence of the inglenook fireplaces survive within the main ground floor rooms, complete with integrated bread ovens. Brook Cottages are aligned, roughly, west to east facing away from the present A1 onto a private garden screened by high and mature hedges. The cottages are surrounded by agricultural land to the south and west, while to the north the site adjoins South Brook, after which the cottages were named. Further north, there is agricultural land possibly related to Bridge Farm to the north-west of the cottages that dates at least from the 17th century. It is likely that the cottages served as worker's housing for the farm.
- 6.9.188 The cottages have retained most of their historic fabric and appearance, with survival of interesting features such as the bread ovens. Exceptions are the 20th century additions that are mostly concentrated to the rear of the building. The architectural and aesthetic interest of the cottages derives from their vernacular style, their plan form and materials. Of special interest is the timber frame construction highlighted by the exposed timber beams in the interior of the building while the thatched roof is a characteristic feature of the vernacular architecture. The building lies within the Order Limits and would be demolished as part of construction, resulting in a total loss of significance. This represents a major adverse and permanent magnitude of impact. Further details regarding the demolition of Brook Cottages are presented in the Black Cat Junction Design Options report [TR010044/APP/7.7].
- 6.9.189 As a building of high value, construction of the Scheme would have a large adverse effect (significant) on this asset.

Assessment of harm

- 6.9.190 The effect on the cottages is considered to be substantial harm as the Scheme would result in the loss of the building and a total loss of significance.

Heritage assets outside the Order Limits

Round Hill

- 6.9.191 The bowl barrow, known as the "Round Hill" (1013521), is Bronze Age in date and located 440 metres west-north-west of College Farm. It is circular in plan, measuring c.21 metres in diameter, and survives to a height of c.1.7 metres, with steep sloping sides descending from a level area on the summit which measures c.10 metres across. The barrow, which is recorded as unexcavated, is thought to be an outlying example associated with a pattern of Bronze Age barrows located along the gravel terraces flanking the River Great Ouse.
- 6.9.192 The barrow is a scheduled monument and of archaeological interest due to its outstanding level of preservation in relation to surrounding barrows within the Great Ouse Valley. It has potential to inform on Bronze Age funerary practices and their association with the surrounding prehistoric landscape, as funerary evidence is thought to survive undisturbed. The setting of the asset, which contributes to its significance, encompasses the gravel terraces flanking the River Great Ouse and, within the wider area, includes some 200 poorly recorded monuments in the upper and middle sections of the Great Ouse Valley. The A1 and the A421 also form part of its setting.
- 6.9.193 The monument was designed to be visible in the landscape, and its interest also derives from its association with surrounding Bronze Age barrows as a part of a wider landscape of prehistoric features. Excavation of several of these associated barrows to the south-east of Round Hill in the 1970s recorded burials dating from 1800BC. Given its level of preservation, position within the landscape, and its designation, the Round Hill barrow is considered to be of high value.
- 6.9.194 There would be no physical impact from groundworks during construction, with the barrow located c.80 metres to the west of the existing A421, which is located within the asset's setting. Construction of the Scheme would modify the existing A421 west of the existing Black Cat roundabout and would bring this road closer to the barrow (to a distance of c.30 metres). The Black Cat junction and the new dual carriageway on the eastern side of the Great Ouse Valley would also be visible from this asset. This is likely to slightly alter the setting of the scheduled monument and would therefore result in a permanent impact of minor adverse magnitude on the significance of the asset.
- 6.9.195 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.

Assessment of harm

- 6.9.196 The effect on this asset would be less than substantial harm. It is currently located close to the A421, which forms part of its setting. The Scheme would modify the existing A421 west of the existing Black Cat roundabout, and would bring this road closer to the barrow. In addition, the Black Cat junction and the new dual carriageway on the eastern side of the Great Ouse Valley would also be visible from this asset. However, there would be no loss of physical fabric and only elements of the setting would be affected. It would still be possible to appreciate the asset and understand the significance of its setting.

Moated enclosure and associated building platforms, The Lane, Wyboston

- 6.9.197 The moated enclosure and associated building platforms, The Lane, Wyboston (1012076) is a scheduled monument situated 80 metres west of the Order Limits in Wyboston. The moated enclosure is 'D' shaped in plan and measures 85 metres along the straight southern edge of the moat. The surrounding moat is 8 metres wide and about 1.2 metres deep and is dry, except for part of the east arm. Prominent external banks, surviving up to 1 metre high, flank the west and east sides. The island is believed to be the site of a manor house and a number of deep hollows mark the position of former buildings; both these building platforms and the moated enclosure survive well.
- 6.9.198 The asset is of archaeological and historical interest in its ability to inform on specific research themes, such as aspects of medieval settlement patterns, moated sites, and medieval manorial estates, as buried remains may provide occupation evidence relating to the nature and development of the site. The interest is increased through the survival of the adjacent building platforms. The setting of the asset includes the remains of the medieval village of Wyboston and the surrounding fields, both of which contribute to its significance. Given the size of the moat and the excellent preservation of several features both within it and in the surrounding medieval settlement, it is considered to be of high heritage value.
- 6.9.199 Although construction of the Roxton Road link (north) would cause very minor changes to its setting, intervening farm buildings and trees would continue to screen the Scheme from the asset. Therefore, there would be an impact magnitude of no change to the site.
- 6.9.200 Construction of the Scheme would have a neutral effect (not significant) on this asset.

Assessment of harm

- 6.9.201 There is no change to the asset, its setting or its significance; therefore, there would be no harm as a result of the Scheme.

Deserted Medieval Village at Croxton

- 6.9.202 The DMV at Croxton (1006783) contains the earthworks of the deserted village, overlain by post-medieval landscape features. The former village lies within Croxton Park, to the south-east of the manor house. The settlement of Croxton was recorded within the Domesday Book, 1086 consisting of 23 households and the settlement is thought to be late Scandinavian in origin, as part of the Danelaw. A church is recorded within the settlement from the 13th century and the current St James' Church in Croxton Park possesses several 13th century features including the nave arcades and restored windows. The village was dominated by agricultural land, recorded in 1279 as mostly arable.
- 6.9.203 The village is thought to have remained until Croxton Park was extended in the 19th century, at which time the buildings were removed, and the settlement moved to its present location to the north-west. The site has archaeological interest for the information it contains regarding settlement activity both through the survival of the earthworks and any buried remains, as well as historic interest for information on both settlement development in the medieval period, and the later garden landscape. As a scheduled monument the asset is of high heritage value.
- 6.9.204 The asset is bounded on the northern side by the existing A428, although it is screened by vegetation. As construction of the Scheme would position the new dual carriageway to the north of the existing A428, this would slightly and permanently improve the setting of the asset. The magnitude of impact would be minor beneficial.
- 6.9.205 Construction of the Scheme would have a slight beneficial effect (not significant) on this asset.

Assessment of harm

- 6.9.206 The Scheme would position the new dual carriageway to the north of the existing A428, permanently improving the setting of scheduled DMV. There would be no harm to the asset.

Moated Site at Pasture Farm

- 6.9.207 The Moated Site at Pasture Farm (1019177) is a medieval moated site located 2 kilometres (1.2 miles) north-west of Caxton. It consists of a roughly square-shaped island surrounded by a 9 metre wide and 1.5 metre deep moat and associated pond. Seven causeways connect the island to the surrounding landscape, some of which are likely post-medieval or modern in date while the causeway on the eastern arm of the moat is thought to represent the original medieval route of access across the moat. The site may hold the remains of the medieval manor of Brockholt, which in 1279 consisted of 80 acres of land and 50 acres of meadow and pasture. Within the moat currently stands an 18th century farmhouse and dovecote, both Grade II listed.

6.9.208 The moated site is a scheduled monument and of both archaeological and historical interest in its ability to inform on the development of settlement patterns in the medieval period, and for information on the distribution of wealth and status in the landscape. As the monument remains mostly undisturbed, buried evidence of occupation at the site would survive providing information on the nature and development of the site. Environmental remains are also thought to survive within buried silts in the base of the moat, highlighting the landscape within which the moat was set. The setting of the asset includes the surrounding farmlands that would have formed part of the estate and its connection to the surrounding medieval villages of Caxton and Eltisley, elements of which contribute to its significance. Given the scheduling of the asset and its state of preservation, it is considered to be of high value.

6.9.209 The monument is surrounded by trees which provide a degree of screening to the asset. Construction of the Caxton Gibbet junction would result in a permanent impact on the significance of the asset of no more than minor adverse magnitude, as it would still be possible to understand the site and its landscape context.

6.9.210 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.

Assessment of harm

6.9.211 The Scheme would result in less than substantial harm to the scheduled moated site at Pasture Farm. Construction of the Caxton Gibbet junction would result in a permanent impact on the significance of the asset through changes to its setting, but it would still be possible to appreciate and understand the site and its landscape context.

Tempsford Bridge

6.9.212 Tempsford Bridge (1005393/1321633) is a scheduled monument as well as a Grade II listed building and is of high value. It carries the existing A1 over the River Great Ouse. Originally a timber bridge, it was replaced by a stone bridge in 1820. It possesses historic interest as the site of an early crossing point of the river, with architectural interest as an example of an early 19th century river bridge, using local materials. The setting of the bridge includes the river landscape. Since the early 1960s, Tempsford Bridge has carried the northbound carriageway of the road, marking its original alignment, while a modern, concrete bridge constructed to carry the southbound traffic when the road was expanded. The construction of the new bridge and adjustments to modernise Tempsford Bridge have eroded some of its significance; however, Tempsford Bridge continues to dominate the surrounding landscape and contributes to picturesque views from the river.

6.9.213 The bridge lies outside the Order Limits and would not be physically affected by construction of the Scheme. It would continue to carry the A1 over the River Great Ouse, therefore the key characteristics of the asset (including the relationship with the river landscape and road infrastructure) would experience a magnitude of impact of no change.

6.9.214 Construction of the Scheme would have a neutral effect (not significant) on this asset.

Assessment of harm

6.9.215 There is no change to the asset, its setting or its significance; therefore, there would be no harm as a result of the Scheme.

Roxton

6.9.216 Roxton conservation area is of special architectural and historic interest. The historic interest lies in the surviving buildings within the original historic core of the settlement. These historic buildings range mainly from the 17th to the 19th century, illustrating the different phases of development of the village.

6.9.217 Architectural and artistic interest derives from the appreciation of the vernacular buildings in the village, mostly comprising timber-framed cottages with thatched roofs as well as the later brick buildings. The conservation area has retained its rural character, surrounded by countryside but also with an abundance of trees, hedges and open spaces within the village. The conservation area is an asset of medium heritage value.

6.9.218 The Scheme would involve construction of the Black Cat junction to the north-east of the settlement, alongside the Kelpie Marina access road to the north-east. Construction of the Black Cat junction is unlikely to impact on the significance of the conservation area; however, the Kelpie Marina access road would involve further erosion of the agricultural landscape around the settlement.

6.9.219 The listed buildings within the village would not individually be impacted by the Scheme, as their setting is considered to be the village itself.

6.9.220 A permanent minor adverse magnitude of impact on the conservation area is predicted.

6.9.221 Construction of the Scheme would have a slight adverse effect (not significant) on this conservation area.

Assessment of harm

6.9.222 The Scheme would not result in any physical changes to the Roxton Conservation Area; however, the Kelpie Marina access road would involve further erosion of the agricultural landscape around it. The relationship of the settlement with its wider landscape setting would still be appreciated; therefore, the Scheme would result in less than substantial harm.

Tempsford Church End and Langford End

6.9.223 Tempsford Church End and Langford End conservation areas have special architectural and historic interest and are of medium heritage value. Although they are part of the same village, they have the character of distinctive, separate settlements. The Church End has as its main focus the Grade II* listed 14th and 15th century Church of St Peter (1114096) and includes a rectory (1114098) and medieval cross base and stump (1311917), as well as a number of 17th and 18th century buildings along Church Street (1321634; 1138206; 1114094; 1321635).

- 6.9.224 The Langford End is associated with Tempsford Hall, an early 20th century hall which replaced an earlier version built in the 18th century. The buildings of the Langford End Conservation Area are mostly 16th – 18th century in date, of timber frame with colourwash roughcast and are located along Station Road.
- 6.9.225 Although both conservation areas would be in proximity to construction activity within the Order Limits, there would be no measurable change to their significance. Accordingly, a magnitude of impact of no change is predicted.
- 6.9.226 Construction of the Scheme would have a neutral effect (not significant) on both conservation areas.

Assessment of harm

- 6.9.227 There is no change to the Tempsford Church End and Langford End conservation areas, their setting or their significance; therefore, there would be no harm as a result of the Scheme.

North Farmhouse

- 6.9.228 Situated to the west of Croxton, off the existing A428 is the Grade II listed North Farmhouse (1210919). The farmhouse is a building of high value dating to the 18th century and is set within large gardens with farm buildings to the east. To the south is the existing A428, while to the north are open agricultural fields.
- 6.9.229 Construction of the new dual carriageway would occur within this open landscape, at a distance of approximately 200 metres to the north of the building. Planting incorporated into the design of the Scheme would screen views of the new dual carriageway once matured; however, this infrastructure would sever the listed building from its wider rural setting.
- 6.9.230 This would result in a permanent minor adverse magnitude of impact predicted as a consequence of the impact on its setting.
- 6.9.231 Construction of the Scheme would have a slight adverse effect (not significant) on this asset.

Assessment of harm

- 6.9.232 Construction of the new dual carriageway would occur within the open landscape surrounding the Grade II listed North Farmhouse, severing the listed building from its wider rural setting. Planting incorporated into the design of the Scheme would screen views of the new dual carriageway once matured. The resulting harm is considered to be less than substantial.

Eltisley

- 6.9.233 The village of Eltisley is located south of the existing A428. Much of the village forms a conservation area as it contains listed buildings which are of high value. The existing A428 does not contribute to the setting of heritage assets within the village, as these are focussed on the central green.

- 6.9.234 The Scheme would involve the realignment of the existing A428 to the north of the conservation area. Although construction of the Eltisley link north of the village would not impact on the significance of the individual listed buildings, there would be temporary visual and noise intrusion into the setting of the conservation area associated with construction of the Eltisley link. This is predicted to have a negligible adverse magnitude of impact on an asset of medium heritage value.
- 6.9.235 Construction of the Scheme would have a slight adverse effect (not significant) on the conservation area.

Assessment of harm

- 6.9.236 Although the Scheme would involve the realignment of the existing A428 to the north of the Eltisley Conservation Area and the construction of the Eltisley link north of the village, this would not physically affect the asset or the listed buildings within it. There would be temporary visual and noise intrusion into the setting of the conservation area associated with construction of the Eltisley link, leading to temporary effects on the significance of the conservation area. This is considered to be less than substantial harm to its significance.

Wintringham Hall

- 6.9.237 Wintringham Hall (01270a) is a late 19th century non-designated building located south of the existing A428. It is a brick-built building surrounded by a moat and set within formal grounds which are surrounded by vegetation. To the south of this are the associated Grade II listed barn and granary (1211324 & 1290056) which relate to the earlier Elizabethan manor which stood on the site. The group remains in agricultural use and the now includes modern farm buildings. The farm is bounded to the north by the exiting A428, with open fields to the north and south.
- 6.9.238 The Cambridge Road junction eastbound off-slip road would bring traffic nearer to the assets. Traffic would be displaced from the existing A428 and onto the new dual carriageway further to the north. The junction and much of the carriageway would be screened by mitigation woodland planting. The historic buildings themselves are situated within an enclosed complex; however, their setting does extend to the fields surrounding them. Wintringham Hall is of medium heritage value.
- 6.9.239 During construction there would be a temporary visual intrusion into this setting resulting in a measurable change to their significance and a minor adverse magnitude of impact. Upon completion there would be a permanent measurable change to the setting of the assets with the encroachment of the road into the open agricultural landscape. This would result in a minor adverse magnitude of impact.
- 6.9.240 Construction of the Scheme would have a slight adverse effect (not significant) on both the listed outbuilding (less than substantial harm) and the non-designated hall.

Nagshead Lane historic buildings

- 6.9.241 Located to the north of Chawston on Nagshead Lane are a group of non-designated historic buildings (12456, 12457, 12460). The buildings date to the 18th century and represent much altered thatched cottages. Two of the cottages (12456 and 12457) lie in close proximity to the existing A1, while the third (12460) lies to the rear. These assets are of low heritage value.
- 6.9.242 None of the buildings would be physically altered by the Scheme; however, works would be undertaken to the existing A1 with the Roxton Road link (north) constructed to the north and west.
- 6.9.243 During construction there would be an increase in noise and visual intrusion into the setting of these buildings resulting in a temporary change in the ability to appreciate their significance, and a minor adverse magnitude of impact.
- 6.9.244 Construction of the Scheme would have a slight adverse effect (Not significant) on these assets.
- 6.9.245 The Scheme itself would result in a magnitude of impact of no change to asset 12460; however, there would be a very minor change to the setting of cottages 12456 and 12457, resulting in a negligible adverse magnitude of impact on these two assets.
- 6.9.246 Construction of the Scheme would have a neutral effect (not significant) on these assets.

Historic Landscape

- 6.9.247 When considered as a whole the historic landscape within the Order Limits is considered to have historic interest and low heritage value. It presents a robust fieldscape which, whilst it has its origins in the medieval period, has been subjected to further field sub-division in the 19th century and from the construction of the modern road network and spread of the urban centres.
- 6.9.248 The historic landscape within the Order Limits would be physically impacted during construction of the Scheme, particularly from the road construction, which would require the removal of several historic field boundaries and result in the partial loss of minor elements of the medieval and post-medieval enclosed landscape. However, areas of the wider surrounding landscape, both within the study area and beyond, would be preserved. The magnitude of impact on the historic landscape is considered to be no more than negligible adverse and permanent. The construction of the Scheme would have a slight adverse effect (not significant) on the historic landscape.

Operational effects

Deserted Medieval Village at Croxton

- 6.9.249 The DMV at Croxton (1006783) contains the earthworks of the deserted village, overlain by post-medieval landscape features. The former village lies within Croxton Park, to the south-east of the manor house. The settlement of Croxton was recorded within the Domesday Book, 1086 consisting of 23 households and the settlement is thought to be late Scandinavian in origin, as part of the

Danelaw. A church is recorded within the settlement from the 13th century and the current St James' Church in Croxton Park possesses several 13th century features including the nave arcades and restored windows. The village was dominated by agricultural land, recorded in 1279 as mostly arable.

- 6.9.250 The village is thought to have remained until Croxton Park was extended in the 19th century, at which time the buildings were removed, and the settlement moved to its present location to the north-west. The site has archaeological interest for the information it contains regarding settlement activity both through the survival of the earthworks and any buried remains, as well as historic interest for information on both settlement development in the medieval period, and the later garden landscape. As a scheduled monument the asset is of high heritage value.
- 6.9.251 The asset is bounded on the northern side by the existing A428, although it is screened by vegetation. As the new dual carriageway would be positioned to the north of the existing A428, this would slightly and permanently improve the setting of the asset. The magnitude of impact would be minor beneficial.
- 6.9.252 Operation of the Scheme would have a slight beneficial effect (not significant) on this asset.

Assessment of harm

- 6.9.253 The Scheme would position the new dual carriageway to the north of the existing A428, permanently improving the setting of the scheduled DMV at Croxton through a reduction in traffic noise. There would be no harm to significance.

Deserted Medieval Village at Weald

- 6.9.254 The DMV at Weald (1006849) contains remains of the village as well as a moated manor site, with a church that stood in the chapel yard. The site has archaeological interest for the information it contains regarding settlement activity both through the survival of any earthworks and the buried remains, as well as historic interest for information on settlement development in the medieval period. As a scheduled monument the asset is of high heritage value.
- 6.9.255 The asset is located in agricultural land to the south of the existing A428, and although visually screened by vegetation, road traffic noise is perceptible.
- 6.9.256 The new dual carriageway north of the existing A428 would permanently improve the setting of the asset through a reduction in road traffic noise. The magnitude of impact would be permanent and minor beneficial.
- 6.9.257 Operation of the Scheme would have a slight beneficial effect (not significant) on this asset.

Assessment of harm

- 6.9.258 The Scheme would position the new dual carriageway to the north of the existing A428, permanently improving the setting of the scheduled DMV at Weald through a reduction in traffic noise. There would be no harm to significance.

Deserted Medieval Village at Wintringham

- 6.9.259 The DMV at Wintringham (1006815) includes earthworks comprising a rectangular pattern of sunken roads and rectangular house platforms typical of DMVs. As a scheduled monument the asset is of high heritage value.
- 6.9.260 The asset is located south of the existing A428 in an area of agricultural land, and although the monument itself is not farmed, it is covered in scrubland. Whilst the asset is partially screened by vegetation, glimpses of road traffic are visible and road traffic noise is audible.
- 6.9.261 The new dual carriageway would be constructed north of the existing A428, although a new junction would be constructed to the west. While there would be an improvement to the setting of the asset through a reduction in traffic and light, to the north, there may be further effects to the west, although these are mitigated by landscape planting. While road traffic noise will increase this is only by 1-2.9dB. The magnitude of impact would be permanent and neutral.
- 6.9.262 Operation of the Scheme would have a neutral effect (not significant) on this asset.

Assessment of harm

- 6.9.263 The Scheme would position the new dual carriageway to the north of the existing A428, although a new junction would be constructed to the west. While the new road to the north would permanently improve the setting of the scheduled DMV at Wintringham, there would be further effects to the west, although landscape planting will reduce these effects. There would be no harm to significance.

Scheduled moated sites in Eltisley

- 6.9.264 There are two scheduled moated sites within the village of Eltisley. These comprise the Moated Site at Manor Farm (1019638) and the Moated Site at Pond Farm (1019176). The site at Manor Farm forms a 74 metre by 64 metre island, surrounded by a waterfilled moat, approximately 12 metres wide. In the centre of the island is the Grade II Manor House Farm, of 15th century origin. At Pond Farm, the island is approximately 50 metres square, with a water filled moat on three sides. A non-designated house of 16th century date is located on the island. Both sites are located in a village setting, with views of agricultural land. Pond Farm also looks onto the village green.
- 6.9.265 Both assets are of high value and have archaeological and historical interest for the information they contain on specific research themes, such as aspects of medieval settlement patterns, moated sites, and medieval manors. Buried remains may also provide occupation evidence, relating to the nature and development of the site. The existing A428 cannot be seen from either asset, but road traffic noise is audible.
- 6.9.266 The Scheme would lead to the transfer of traffic from the existing A428 onto the new dual carriageway, leading to a reduction in road traffic noise. The magnitude of impact would be minor beneficial.
- 6.9.267 Operation of the Scheme would have a slight beneficial effect (not significant) on both assets.

Assessment of harm

- 6.9.268 The Scheme would position the new dual carriageway to the north of the existing A428, permanently improving the setting on the scheduled moated sites in Eltisley through a reduction in traffic noise. There would be no harm to significance.

Croxton Park

- 6.9.269 Croxton Park (1000491) is a Grade II* RPG located to the south of the Scheme. The asset possesses archaeological and historic interest due to the survival of features from the medieval and post-medieval periods, and incorporates buildings dating from the 13th century (Church of St James; Grade II*, 1127168), the early 16th century (Manor Farmhouse; Grade II*, 1309293) and the 19th century (South Lodge; Grade II 1127170). The principal building in the park, Croxton Park (Grade II*, 1127163), is a country house that was rebuilt in the 18th century, possibly incorporating parts of the original 16th century house.
- 6.9.270 The park is scheduled as the site of the former Croxton estate and surrounding deer park, built in the 16th century (1006783). A series of earthworks comprising a circular feature measuring c.50 metres in diameter with associated ditches and banks located to the north-west of the present Croxton Park Hall indicate the location of possible former formal garden features. The park was subsequently enlarged and re-landscaped in the late 18th to early 19th century as the formal setting of a country house. It is associated with a prominent family in the area, as well as the renowned landscape gardener, Humphry Repton. Elements of this survive in the tree belts and woodland that survive, particularly the plantations along boundary lines that act as visual links with the house. Structures within the parkland also contribute to the architectural interest including the three lodges for the Hall and a Grade II listed, late 19th century thatched garden house (1127166) as well as various other listed features within the garden, such as 18th century brick garden walls (1127164), and 19th century icehouse (1127167) and garden seat (1127165), which highlight the development of the park and the architectural styles employed in such. The 13th century church of St James (1127168) provides an important visual element within the landscape of the park. Running through the park is a 19th century avenue of lime and walnut trees, which remains intact. Changes to the park have been made in the 20th century, including renovation of the walled kitchen garden into an ornamental flower garden, ploughing of the southern end of the parkland and additional tree planting across the park; however, its historic and artistic interest remains.
- 6.9.271 The existing A428 runs directly to the north of Croxton Park, and construction of the new dual carriageway to the north would result in the existing A428 being de-trunked. Although construction would result in the introduction of new road infrastructure into the rural surroundings of the park, it would also result in road traffic being reassigned onto the new dual carriageway and away from the asset, leading to reduced noise and light impacts.

6.9.272 Assets within the park are likely to experience no change as a result of the Scheme due to the limited impact the existing A428 currently has on their setting, the exception being the registered park itself and the scheduled monument, both of which border the existing A428. The magnitude of impact on these assets would be minor beneficial.

6.9.273 Operation of the Scheme would have a slight beneficial effect (not significant) on these assets.

Assessment of harm

6.9.274 The existing A428 runs directly to the north of Croxton Park, and construction of the new dual carriageway to the north would result in the existing A428 being de-trunked. This would result in road traffic being reassigned onto the new dual carriageway and away from the asset, leading to reduced noise and light impacts. There would be no harm to significance.

Croxton

6.9.275 Associated with Croxton Park is the hamlet of Croxton, which forms the estate village to the park and is designated as a conservation area. The historic settlement forms a linear settlement aligned along High Street with buildings of predominantly 18th and 19th century date, including a number of listed buildings.

6.9.276 The existing A428 runs directly to the north of Croxton. Construction of the new dual carriageway to the north would result in the existing A428 being de-trunked resulting in road traffic being reassigned onto the new dual carriageway and away from the asset, leading to reduced noise and light impacts. The historic route to Croxton would be retained as part of the Scheme. A permanent impact of negligible beneficial magnitude is predicted on this asset resulting in a slight beneficial effect on this asset of medium heritage value during operation.

6.9.277 While the majority of the listed buildings within Croxton would not experience a change as a result of the Scheme, The Downs (1127171), a Grade II listed mid-19th century villa, would experience a beneficial change. The building lies at the northern end of High Street, adjacent to the existing A428. A permanent impact of negligible beneficial magnitude is predicted on this asset of high value.

6.9.278 Operation of the Scheme would have a slight beneficial effect (not significant) on this asset.

Assessment of harm

6.9.279 Construction of the new dual carriageway to the north of Croxton Conservation Area would result in the existing A428 being de-trunked resulting in road traffic being reassigned onto the new dual carriageway and away from the asset, leading to reduced noise and light impacts. The historic route to Croxton would be retained as part of the Scheme. There would be no harm to significance.

North Farmhouse

- 6.9.280 Situated to the west of Croxton, off the existing A428 is the Grade II listed North Farmhouse (1210919). The farmhouse is a building of high value dating to the 18th century and is set within large gardens with farm buildings to the east. To the south is the existing A428, while to the north are open agricultural fields.

The new dual carriageway would be positioned within this open landscape at a distance of approximately 200 metres to the north of the building. Planting incorporated into the design of the Scheme would screen views of the new dual carriageway once matured. The movement of the road would involve the reassignment of traffic away from the present A428 resulting in a decrease in noise within the setting of the listed building. During operation this will result in a permanent impact of slight beneficial resulting in a slight beneficial effect (not significant) on the asset of high value during operation.

Assessment of harm

The Scheme would involve the realignment of the existing A428 to the north of the North Farmhouse. The existing A428 does not contribute to the setting of the listed building; however, the removal of the road is likely to lead to a reduction in noise during operation. There would be no harm to the asset. Eltisley

- 6.9.281 The village of Eltisley is located south of the existing A428. Much of the village forms a conservation area as it contains listed buildings which are of high value. The existing A428 does not contribute to the setting of heritage assets within the village, as these are focussed on the central green.
- 6.9.282 The Scheme would involve the realignment of the existing A428 to the north of the conservation area. The existing A428 does not contribute to the setting of the conservation area, or the listed buildings within it; however, the removal of the road is likely to lead to a reduction in noise and visual intrusion. The magnitude of impact on the conservation area which is an asset of medium heritage value is considered to be negligible beneficial.
- 6.9.283 Operation of the Scheme would have a neutral effect (not significant) on this conservation area.

Assessment of harm

- 6.9.284 The Scheme would involve the realignment of the existing A428 to the north of the Eltisley Conservation Area. The existing A428 does not contribute to the setting of the conservation area, or the listed buildings within it; however, the removal of the road is likely to lead to a reduction in noise and visual intrusion. There would be no harm to the asset.

Summary of significant effects

- 6.9.285 A summary of the likely significant effects on known heritage assets arising from construction of the Scheme is presented in **Table 6-6**.

Table 6-6: Summary of significant construction effects on heritage assets

Asset ID	Description	Heritage value	Magnitude of impact	Significance of effect
EBB687, EBB688	Field 3 – Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse
745	Field 9 – Features of Late Iron Age and Early Roman date	High	Moderate adverse	Moderate adverse
-	Field 34 and 35 – Features of Late Bronze Age, Iron Age and Roman date.	Medium	Moderate adverse	Moderate adverse
16800, 16802	Field 44 – Iron Age and Roman farmstead.	High	Moderate adverse	Moderate adverse
-	Field 53 – Features of Middle to Late Iron Age date.	Medium	Moderate adverse	Moderate adverse
MCB21136	Field 54 and 56 – Features of Iron Age date	Medium	Moderate adverse	Moderate adverse
MCB18833	Field 58 – Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse
-	Field 59 – Features of Iron Age date	Medium	Moderate adverse	Moderate adverse
MCB18824	Field 65 – Roman farmstead and other features of Iron Age and Roman date	High	Moderate adverse	Moderate adverse
-	Field 73 and 74 – Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse
-	Field 75 and 76 - Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse

Asset ID	Description	Heritage value	Magnitude of impact	Significance of effect
MCB24576	Field 77 - Features of Iron Age and Roman date	Medium	Major adverse	Moderate adverse
1163534	Field 90 – Grade II listed milestone	High	Minor adverse	Moderate adverse
-	Field 90 – Features of Iron Age date	Medium	Moderate adverse	Moderate adverse
MCB24587, MCB24588	Field 92 - Features of Iron Age and Roman date	Medium	Major adverse	Moderate adverse
1331394	Field 92 - Grade II listed milepost	High	Minor adverse	Moderate adverse
02463, 02541	Field 93 – Site of a windmill mound	Low	Major adverse	Moderate adverse
-	Field 94, 95 and 96 - Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse
1162760	Field 94, 95 and 96 - Grade II listed milepost	High	Minor adverse	Moderate adverse
-	Field 97 - Features of Iron Age and Roman date	Medium	Moderate adverse	Moderate adverse
1311862	Brook Cottages, Grade II listed	High	Major adverse	Large adverse

6.9.286 The construction assessment has concluded that, save in respect of Brook Cottages, all heritage assets subjected to an adverse effect would experience effects no greater than moderate adverse.

6.9.287 In addition, save for Brook Cottages, the assessment of harm has concluded that all effects on heritage assets would result in harm that is considered to be less than substantial. Brook Cottages is the only heritage asset where substantial harm would occur as a result of the loss of Brook Cottages.

6.9.288 The assessment of operational effects has concluded that no significant effects would occur on known heritage assets and all heritage assets would experience less than substantial harm.

6.10 Monitoring

Construction effects

- 6.10.1 As the assessment has concluded that there would be significant adverse effects arising from construction of the Scheme, monitoring of the measures identified to mitigate these effects would be undertaken to ensure their successful delivery.
- 6.10.2 The archaeological mitigation works (including protection measures for heritage assets and preservation *in situ* of archaeological remains) would be undertaken during the advanced works (the majority of the archaeological fieldwork and recording) and construction works stages.
- 6.10.3 Details of the monitoring required during the construction phase are presented in the Archaeological Mitigation Strategy [TR010044/APP/6.12], the parameters and duration of which are proportionate to the nature, location and size of the Scheme and the significance of its effects on identified heritage assets.
- 6.10.4 Monitoring by the Archaeological Clerk of Works (to be employed by the Principal Contractor) would include, but not be limited to:
- Monitoring of fencing to ensure its condition and signage.
 - Monitoring of the archaeological mitigation works to ensure they are in line with the requirements of the mitigation strategy and the Site Specific Written Schemes of Investigation to be prepared by the Principal Contractor's archaeological contractor.

Operational effects

- 6.10.5 As the assessment has concluded that there would be no significant adverse or beneficial effects arising from operation of the Scheme, no monitoring of operational effects is required.

6.11 References

- Ref 6-1 Ancient Monuments and Archaeological Areas Act 1979. HMSO (1979).
<https://www.legislation.gov.uk/ukpga/1979/46>
- Ref 6-2 Planning (Listed Buildings and Conservation Areas) Act 1990. The Stationery Office (1990).
<https://www.legislation.gov.uk/ukpga/1990/9/contents>
- Ref 6-3 The Infrastructure (Planning) Decisions Regulations 2010. The Stationery Office (2010).
<https://www.legislation.gov.uk/ukdsi/2010/9780111490266/contents>
- Ref 6-4 National Policy Statement for National Networks. Department for Transport (2014).
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387223/npsnn-web.pdf
- Ref 6-5 Overarching National Policy Statement for Energy (EN-1). Department of Energy & Climate Change (2011).
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- Ref 6-7 National Planning Policy Framework. Ministry of Housing, Communities and Local Government (2019).
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf
- Ref 6-8 Planning Practice Guidance: Historic environment. Ministry of Housing, Communities and Local Government (2019).
<https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment>
- Ref 6-9 Huntingdonshire's Local Plan to 2036. Huntingdonshire District Council (2019).
<https://www.huntingdonshire.gov.uk/media/3872/190516-final-adopted-local-plan-to-2036.pdf>
- Ref 6-10 South Cambridgeshire Local Plan 2018. South Cambridgeshire District Council (2018).
<https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/the-adopted-development-plan/south-cambridgeshire-local-plan-2018/>

- Ref 6-11 Bedford Borough Local Plan 2030. Bedford Borough Council (2020).
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