

# **A1 in Northumberland: Morpeth to Ellingham**

**Scheme Number: TR010041**

## **6.2 Environmental Statement – Chapter 8 Cultural Heritage**

### **Part A**

APFP Regulation 5(2)(a)

Planning Act 2008

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

June 2020

Infrastructure Planning

Planning Act 2008

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

**The A1 in Northumberland: Morpeth to Ellingham  
Development Consent Order 20[xx]**

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**Environmental Statement**

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<b>Regulation Reference:</b>	APFP Regulation 5(2)(a)
<b>Planning Inspectorate Scheme Reference</b>	TR010041
<b>Application Document Reference</b>	TR010041/APP/6.2
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<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	June 2020	Application Issue

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## 8. CULTURAL HERITAGE

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### 8.1. INTRODUCTION

8.1.1. This chapter presents the assessment of likely significant environmental effects as a result of Part A: Morpeth to Felton (Part A) on cultural heritage assets, below ground remains, above ground remains and historic landscapes. It is supported by a number of appendices in **Volume 7** of this Environmental Statement (ES) (**Application Document Reference: TR010041/APP/6.7**) as follows:

- a. Appendix 8.1: Historic Environment Desk Based Assessment (HEDBA)**
- b. Appendix 8.2: Geophysical Survey**
- c. Appendix 8.3: Light Detection and Ranging (LiDAR) Assessment**
- d. Appendix 8.4: Gazetteer of Cultural Heritage Assets**
- e. Appendix 8.5: WSI for an Archaeological Trial Trench Evaluation** (for post-consent trial trenching)
- f. Appendix 8.6: WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works)**, (for archaeological mitigation for an advanced package of works)

8.1.2. A full description of Part A, along with the Scheme as a whole is set out in **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). An assessment of combined effects of Part A is set out in **Chapter 15: Assessment of Combined Effects** of this ES and combined and cumulative effects of the Scheme are set out in **Chapter 16: Assessment of Cumulative Effects, Volume 4** of this ES (**Application Document Reference: TR010041/APP/6.4**).

8.1.3. **Section 4.3 of Chapter 4: Environmental Assessment Methodology, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) identifies any differences in the assessment methodology employed for Part A and Part B: Alnwick to Ellingham (Part B). Further to this, there are other differences between the chapters for Part A and Part B. All key differences include:

- a.** There are differences between Part A and Part B that relate to the scoping process, for example elements that are scoped in and out of the assessment. Refer to the **Scoping Report (Application Document Reference: TR010041/APP/6.10)** and **Scoping Opinion (Application Document Reference: TR010041/APP/6.12)** for Part A, and the **Scoping Report (Application Document Reference: TR010041/APP/6.11)** and **Scoping Opinion (Application Document Reference: TR010041/APP/6.13)** for Part B.
- b.** A LiDAR assessment has been undertaken for Part A but not Part B. A review of the availability of LiDAR data suitable for archaeological assessment was undertaken for both Part A and Part B. For Part A, data covering a total of 250 hectares was available which allowed for assessment of the two large sections of Part A. However, for Part B it was established that available data only covered 150 m of Part B and therefore there was no merit in undertaking an assessment of such a small area.
- c.** The Order Limits of Part B extend immediately adjacent to the boundaries of two Scheduled Monuments (high value heritage assets). Following consultation with Historic England and Northumberland County Council (NCC), targeted pre-consent trial trench evaluations were undertaken to determine if there were remains associated with Scheduled Monuments within the Order Limits of Part B. As the Order Limits for Part A

do not comprise high value heritage assets, pre-consent trial trenching was not considered to be required, and as agreed with Historic England and NCC.

- d. Part A identifies the assets that would be affected, together with a description of the value of those heritage assets, including the contribution of their setting to that value, within **Section 8.7**. Part B also identifies the assets that would be affected, together with a description of the value of those heritage assets within **Section 8.7**. However, Part B outlines the contribution of their setting to that value within **Section 8.8**, due to the higher number of sensitive receptors considered. However, the same level of information is presented for both Part A and Part B. For this reason, Part B does not separate out discussions relating to setting like Part A does.
- e. Part A contains specific headings relation to historic hedgerows, whereas for Part B these features are discussed within discussion of the historic landscape. This is due to the different scale and nature of Part A and Part B, in particular the proposed offline section of Part A.

## 8.2. COMPETENT EXPERT EVIDENCE

8.2.1. **Table 8-1** below demonstrates that the professionals contributing to the production of this chapter have sufficient expertise to ensure the completeness and quality of this assessment.

**Table 8-1 - Relevant Experience**

Name	Role	Qualifications and Professional Membership	Relevant Experience
Alexandra Grassam	Author	BA (Hons) Archaeology and Prehistory  MSc Professional Archaeology  Member of the Chartered Institute for Archaeologists	Principal Consultant  17 years professional experience in impact assessment. Other recent relevant experience includes: <ul style="list-style-type: none"> <li>- Lead specialist for the Great Yarmouth River Crossing Development Consent Order (DCO) application</li> <li>- Lead specialist for the Spalding Relief Road Environmental Impact Assessment (EIA)</li> <li>- Specialist for the West Midlands Interchange scoping stage and Preliminary Environmental Information Report (PEIR) stage</li> </ul>
Sally Hales	Reviewer	BA (Hons) Archaeology, MA Archaeology	Associate consultant  25 years professional archaeology experience in impact assessment. Other recent relevant experience includes:

Name	Role	Qualifications and Professional Membership	Relevant Experience
		Member of the Chartered Institute for Archaeologists	<ul style="list-style-type: none"> <li>- Heritage Team Lead for the A5 Western Transport Corridor in Northern Ireland, which also comprised implementation and management of archaeological fieldwork and expert witness at Public Inquiry</li> <li>- Heritage lead for Lincoln Eastern Bypass and Grantham Southern Quadrant Link Road which also comprised negotiation of archaeological fieldwork strategies with the Lincolnshire Planning Archaeologist</li> </ul>

### 8.3. LEGISLATIVE AND POLICY FRAMEWORK

#### LEGISLATION

##### National

##### **Ancient Monuments and Archaeological Areas Act 1979**

8.3.1. The Ancient Monuments and Archaeological Areas Act (AMAA) 1979 largely relates to Scheduled Monuments. Section 61, 7. a). defines sites that warrant protection due to their being of national value as 'ancient monuments'. A monument is defined by the Act as "*any building, structure or work above or below the surface of the land, any cave or excavation; any site comprising the remains of any such building, structure or work or any cave or excavation; and any site comprising the remains of any vehicle, vessel or aircraft or other movable structure or part thereof.*"

8.3.2. Section 2 of the AMAA states that deliberate damage to a monument is a criminal offence and any works taking place within one would require Scheduled Monument Consent from the Secretary of State. No works would be undertaken within the boundaries of a Scheduled Monument under Part A and Scheduled Monument Consent is therefore not required.

##### **The Infrastructure Planning (Decisions) Regulations 2010**

8.3.3. Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010 sets out the obligations on the Secretary of State when deciding applications for development consent under the Planning Act 2008 (the 2008 Act) affecting Listed Buildings (or their settings), Conservation Areas or Scheduled Monuments (or their settings). The obligations are:

- a. When deciding that an application which affects a Listed Building or its setting, the Secretary of State must have regard to the desirability of preserving the Listed Building or its setting or any features of special architectural or historic interest which it possesses.
- b. When deciding an application relating to a Conservation Area, the Secretary of State must have regard to the desirability of preserving or enhancing the character or appearance of that area.
- c. When deciding an application for development consent which affects or is likely to affect a Scheduled Monument or its setting, the Secretary of State must have regard to the desirability of preserving the Scheduled Monument or its setting.

### **Planning (Listed Buildings and Conservation Areas) Act 1990**

- 8.3.4. The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the legal requirements for the control of development and alterations which affect buildings, including those which are Listed or in Conservation Areas. Buildings which are Listed, or which lie within a Conservation Area are protected by law. Grade I Listed are buildings of exceptional interest. Grade II\* are particularly significant buildings of more than special interest. Grade II are buildings of special interest, which warrant every effort being made to preserve them.

### **PLANNING POLICY**

#### **National**

- 8.3.5. National policy relevant to the potential effects on Cultural Heritage is outlined in **Table 8-2** below.

#### **Local**

- 8.3.6. Planning policy at the local level is informed by the following:

- a. Northumberland Consolidated Planning Policy Framework May 2019 (**Ref. 8.1**)
- b. Northumberland Local Plan – Draft Plan for Regulation 19 Consultation (**Ref. 8.2**)

- 8.3.7. Under the Northumberland Consolidated Planning Policy Framework, the following local plans are applicable to Part A:

- a. Alnwick District Local Development Framework Core Strategy Development Plan Document (2007) (**Ref. 8.3**)
- b. Castle Morpeth District Local Plan 1991-2006 (**Ref. 8.4**)

- 8.3.8. The relevant policies which relate to this assessment are summarised in **Table 8-3**.



**Table 8-2 - National Planning Policy Relevant to Cultural Heritage**

Policy	Relevant Policy Objectives	Significance of Part A on Policy Objective
<p>National Policy Statement for National Networks (NPS NN) (December 2014, <b>Ref. 8.5</b>)</p>	<p>The Historic Environment is referred to in paragraphs 5.120 to 5.142 of the NPS NN. It replicates the policies outlined in the National Planning Policy Framework (NPPF) (see below).</p> <p>The construction and operation of national networks infrastructure has the potential to result in adverse impacts on the historic environment (paragraph 5.120).</p> <p>Impacts on non-designated assets should be considered “on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets.” (paragraph 5.125).</p> <p>The applicant should “<i>undertake an assessment of any likely significant heritage impacts of the proposed project</i>” (paragraph 5.126) and describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance and no more than is sufficient to understand the potential impact of the proposal on their significance (paragraph 5.127).</p> <p>The “impact of a proposed development on the significance of a designated heritage asset, should consider the asset’s conservation. The more important the asset, the greater the weight should be, particularly as once lost, heritage assets cannot be replaced”. (paragraph 5.131)</p> <p>Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, consent should be refused unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits (paragraph 5.133).</p>	<p>The HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)), Geophysical Survey (Appendix 8.2, Volume 7 of this ES), and LiDAR Assessment (Appendix 8.3, Volume 7 of this ES) have indicated the potential for the presence of archaeological assets within the Order Limits.</p> <p>Within the Order Limits there are six designated heritage assets (Grade II Listed Mileposts, although two are recorded as being missing), nine non-designated and 15 areas identified as being of potential to contain further non-designated archaeological remains based on the <b>Geophysical Survey (Appendix 8.2, Volume 7 of this ES)</b> and <b>LiDAR Assessment (Appendix 8.3, Volume 7 of this ES)</b>.</p> <p>The Historic Landscape Characterisation (HLC) database records 71 historic landscape areas within the Order Limits and 50 areas of ridge and furrow cultivation (remains associated with medieval and post-medieval ploughing) were identified in the <b>LiDAR Assessment (Appendix 8.3, Volume 7 of this ES)</b>.</p> <p>An assessment of harm is expressed on a three-point scale: Minor Harm and Harm (both constitute “Less than Substantial Harm”) and Substantial Harm. Less than Substantial Harm corresponds to a moderate or less significant effect, and substantial harm large and very large significance of effect.</p> <p>One Grade II Listed Milepost would have to be temporarily moved from its current location prior to construction and replaced close to its original position once Part A is completed. This would result in Less than Substantial Harm (slight adverse (not-significant) effect).</p> <p>The assessment has identified seven designated assets would be subject to permanent impacts resulting in Less than Substantial Harm.</p> <p>Part A would not result in Substantial Harm to any designated heritage assets.</p> <p>The potential impacts on designated assets is presented in <b>Section 8.8</b> and the effects on designated assets are presented in <b>Section 8.10</b> of this chapter.</p>
<p>National Planning Policy Framework (NPPF) (February 2019, <b>Ref. 8.6</b>)</p>	<p>Section 16 of the NPPF addresses conserving and enhancing the historic environment.</p> <p>One of the core planning principles of the NPPF as prescribed in paragraph 184 is that the planning system should conserve heritage assets “<i>in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations</i>”.</p>	<p>The <b>HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b> considered the significance of heritage assets that Part A would impact upon.</p> <p>A <b>Geophysical Survey (Appendix 8.2, Volume 7 of this ES)</b>, and an archaeological assessment of LiDAR data (<b>Appendix 8.3: LiDAR Assessment, Volume 7 of this ES</b>) were undertaken in order to identify any currently unknown archaeological assets in the Order Limits. A programme of post development consent trial trench evaluation is outlined in a <b>WSI for an Archaeological Trial Trench Evaluation (Appendix 8.5, Volume 7 of this ES)</b>.</p>
<p>NPPF 2019</p>	<p>Paragraph 189 of the NPPF states that “applicants should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ value and</p>	<p><b>Section 8.7</b> of this chapter identifies the assets that would be affected by Part A and presents a description of the value of those heritage assets, including the contribution</p>

Policy	Relevant Policy Objectives	Significance of Part A on Policy Objective
	<p>no more than is sufficient to understand the potential impact of the proposal on their significance". The paragraph outlines that as a minimum, the relevant Historic Environment Record (HER) should be consulted, and heritage assets assessed using appropriate expertise, where necessary.</p>	<p>of their setting to that value. The judgement of value is based on the guidance set out in the Design Manual for Roads and Bridges (DMRB) and by Historic England.</p> <p>The HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)) and the Gazetteer of Cultural Heritage Assets (Appendix 8.4, Volume 7 of this ES) summarises the heritage assets assessed. These have been identified from Historic England's National Heritage List and the Northumberland HER.</p>
<p>NPPF 2019</p>	<p>Paragraphs 193 to 194 state that "proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be". The paragraph goes on to state that "substantial harm to or loss of a Grade II Listed Buildings, Park or Garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notable Scheduled Monuments, Protected Wreck Sites, Battlefields, Grade I and II* Listed Buildings, Grade I and I* Registered Parks and Gardens, and World Heritage Sites, should be wholly exceptional". Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets.</p>	<p>An assessment of harm is expressed on a three-point scale: Minor Harm and Harm (both constitute "Less than Substantial Harm") and Substantial Harm. Less than Substantial Harm corresponds to a moderate or less significant effect, and substantial harm large and very large significance of effect.</p> <p>No large or very large significant effects have been identified for designated cultural heritage assets (refer to <b>Section 8.10</b> of this chapter).</p>
<p>NPPF 2019</p>	<p>Paragraph 196 states that "where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use."</p>	<p>The assessment has identified seven designated assets (Grade II Listed Buildings of medium value) that would be subject to permanent impacts resulting in Less than Substantial Harm (slight adverse (not significant) effects).</p> <p>The potential impacts on designated assets is presented in <b>Section 8.8</b> and the effects on designated assets are presented in <b>Section 8.10</b> of this chapter.</p> <p>The public benefits of the Scheme as a whole are discussed in the <b>Case for the Scheme (Application Document Reference: TR010041/APP/7.1)</b>.</p>
<p>NPPF 2019</p>	<p>Paragraph 197 states that "The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset."</p>	<p>The assessment has identified non-designated below-ground assets in the Order Limits of negligible to medium value. There is low to moderate potential for currently unknown remains of Prehistoric to Late Medieval date of medium value, a high potential for currently unknown Post-Medieval remains of low value and a high potential for currently unknown Modern remains of negligible value. There is a low potential for currently unknown below ground heritage assets of Prehistoric to Post-Medieval date of high to very high value.</p> <p>The significance of effects on identified below ground assets would be slight adverse (not significant) to moderate adverse with mitigation. The significance of effect on currently unknown below ground assets would vary from negligible to very large, depending on their value.</p> <p>The assessment has also identified two non-designated built heritage assets of low value that would be impacted through a change in setting. The significance of effect would be slight adverse (not significant).</p>

Policy	Relevant Policy Objectives	Significance of Part A on Policy Objective
		The potential impacts on non-designated assets are presented in <b>Section 8.8</b> and the effects on non-designated assets are presented in <b>Section 8.10</b> of this chapter.
NPPF 2019	<p>Paragraphs 198 and 199 state Local Planning Authorities should not permit the loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.</p> <p>Local Planning Authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their value and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.</p>	<p>A programme of post development consent archaeological trial trenching is presented in a <b>WSI for an Archaeological Trial Trench Evaluation (Appendix 8.5, Volume 7</b> of this ES (<b>Application Document Reference: TR010041/APP/6.7</b>)). The aim of the trial trenching is to determine the presence, extent and value of the archaeological resource and to inform a subsequent programme of mitigation to be undertaken either before or during construction. The trial trenching would be secured through the implementation of the <b>Outline Construction Environment Management Plan (Outline CEMP) (Application Document Reference: TR010041/APP/7.3)</b> which accompanies the DCO application. The Outline CEMP would be developed into a CEMP by the main contractor.</p> <p>A programme of strip, map and record for the Advanced Works is presented in a separate <b>WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works) (Appendix 8.6, Volume 7</b> of this ES).</p> <p>The post development consent archaeological work is secured by the <b>draft DCO (Application Document Reference: TR010041/APP/3.1)</b>.</p>
NPPF 2019	Paragraph 200 states that “proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably.”	<p>The assessment has determined that the majority of the assets in the Outer Study Area would not be adversely impacted through a change in setting. The Study Areas are defined in <b>Section 8.6</b>.</p> <p>The assessment has identified seven designated assets (Grade II Listed Buildings of medium value) that would be permanently impacted by Part A. The result would be Less than Substantial Harm (slight adverse (not significant) effects).</p>

**Table 8-3 - Local Planning Policy Relevant to Cultural Heritage**

Document	Policy	Description	Significance of Part A on Policy Objective
Alnwick District Local Development Framework Core Strategy Development Plan Document, 2007 ( <b>Ref. 8.3</b> )	Policy S15 Protecting the built and historic environment	<p>The District Council will conserve and enhance a strong sense of place by conserving the district’s built and historic environment, in particular its Listed Buildings, Scheduled Monuments, Conservation Areas and the distinctive characters of Alnwick, Amble, Rothbury and the villages.</p> <p>All development involving built and historic assets, or their settings will be required to preserve, and where appropriate, enhance the asset for the future.</p>	<p>Part A would not have a direct physical impact on Scheduled Monuments or Conservation Areas, or their setting. Part A would have a direct, physical impact on one Grade II Listed Building, a milestone, however the asset would be removed before construction and repositioned once completed and there would be no significant effects.</p> <p>Part A would have a permanent impact on the setting of two designated built heritage assets of medium value and two non-designated built heritage assets of low value. The significance of effect would be slight adverse (not significant) (refer to <b>Section 8.10</b> of this chapter).</p>

Document	Policy	Description	Significance of Part A on Policy Objective
Castle Morpeth District Local Plan 2003 (Ref. 8.4)	C38 Protection of Listed Buildings and Buildings of Architectural Merit or Historic Interest	<p>Protection of Listed Buildings and Buildings of Architectural Merit or Historic Interest.</p> <p>It will be the policy of the council to protect Listed Buildings and buildings of architectural merit or historic interest, together with their setting, against unsuitable development.</p>	<p>Part A would have a direct, physical impact on one Grade II Listed Building, a milestone, however the asset would be removed before construction and repositioned once completed and there would be no significant effects.</p> <p>Part A would have a permanent impact on the setting of two designated built heritage assets of medium value and two non-designated built heritage assets of low value. The significance of effect would be slight adverse (not significant) (refer to <b>Section 8.10</b> of this chapter).</p>
Castle Morpeth District Local Plan 2003 (Ref. 8.4)	C39 Archaeological Remains	<p>The Council will seek the preservation and enhancement of Scheduled Ancient Monuments and other nationally important archaeological sites and their settings. Development proposals which would be detrimental to those sites and their settings will not be permitted.</p>	<p>No Scheduled Monuments would be impacted by Part A. No known non-designated heritage assets of potential high or very high (national) value have been identified and the assessment and <b>HEBDA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b> reports the potential for assets of this value to be low.</p>
Castle Morpeth District Local Plan 2003 (Ref. 8.4)	C40, C41 and C42 Archaeological Remains	<p>The Council will not permit development which would be detrimental to regionally or locally important archaeological sites or their settings unless the proposed development is of overriding regional importance and no alternative site is available.</p> <p>Where the impact of a development proposal on an archaeological site, or the relative importance of such a site is unclear, the Council will require the developer to provide further information in the form of an archaeological assessment and, where appropriate, an archaeological evaluation. Applications for planning permission will not be determined until adequate assessment of the impact of proposal on the archaeological site and its setting has been carried out.</p> <p>Where the Council decides to grant planning permission for development which will affect sites known to contain archaeological remains and preservation in situ is not appropriate, such permission may be subject to a condition or an agreement requiring the developer to make provision for the excavation and recording of the remains and publication of the findings.</p>	<p>The assessment has indicated the potential for the presence of archaeological assets within the Order Limits. The value of the assets identified range from negligible to medium (regional). The assessment has established a low potential for currently unknown remains of Prehistoric to Late Medieval date of medium (regional) value, a high potential for currently unknown Post-Medieval remains of low (local) value.</p> <p>A programme of post development consent archaeological trial trenching is presented in a <b>WSI for an Archaeological Trial Trench Evaluation (Appendix 8.5, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b>. The aim of the trial trenching is to determine the presence, extent and value of the archaeological resource and to inform a subsequent programme of mitigation to be undertaken either before or during construction.</p> <p>A programme of strip, map and record for the Advanced Works is presented in a separate <b>WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works) (Appendix 8.6, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b>.</p> <p>The post development consent archaeological work is secured by the <b>draft DCO (Application Document Reference: TR010041/APP/3.1)</b>.</p>
Draft Northumberland Local Plan (Ref. 8.2)	ENV 7 Historic environment and heritage assets	<p>Decisions affecting a heritage asset will be based on a sound understanding of the significance of that asset and the impact of any proposal upon that significance.</p>	<p>This chapter and the <b>HEBDA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b> present the value of the heritage assets and the significance of effects of Part</p>

Document	Policy	Description	Significance of Part A on Policy Objective
			A, based on the methodologies set out in the DMRB and the NPPF (refer to <b>Tables 8-6</b> and <b>8-7</b> ).
Draft Northumberland Local Plan ( <b>Ref. 8.2</b> )	ENV 7 Historic environment and heritage assets	Development proposals, which will affect a site of archaeological interest, or a site which has the potential to be of archaeological interest, will require an appropriate desk-based assessment and, where necessary, a field evaluation	This chapter is supported by the <b>HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b> and an archaeological assessment of <b>LiDAR Assessment (Appendix 8.3, Volume 7 of this ES)</b> . Field evaluation in the form of <b>Geophysical Survey (Appendix 8.2, Volume 7 of this ES)</b> has also been completed.
Draft Northumberland Local Plan ( <b>Ref. 8.2</b> )	ENV 7 Historic environment and heritage assets	Development proposals that would result in substantial harm to or total loss of the significance of designated heritage assets will not be supported unless substantial public benefits would outweigh that harm or loss.	There would be no substantial harm (or large or very adverse effects) on any designated heritage assets as a result of Part A (refer to <b>Section 8.10</b> of this chapter).
Draft Northumberland Local Plan ( <b>Ref. 8.2</b> )	ENV 7 Historic environment and heritage assets	Where development proposals would cause less than substantial harm to the significance of designated heritage asset, this will be weighed against the public benefits of the proposal, including securing the optimum use that is viable and justifiable	There would be less than substantial harm (slight to moderate adverse effects) to seven designated heritage assets due to a change in setting as a result of Part A. The public benefits of the Scheme as a whole are discussed in the <b>Case for the Scheme (Application Document Reference: TR010041/APP/7.1)</b> .
Draft Northumberland Local Plan ( <b>Ref. 8.2</b> )	ENV 7 Historic environment and heritage assets	<p>Development proposals that affect non-designated heritage assets shall require a balanced judgement, taking into account the scale of any harm or loss and the significance of the heritage asset. Where, in the case of a non-designated heritage asset of archaeological interest, the significance is equivalent to that of a Scheduled Monument, the policy approach for designated heritage assets will be applied.</p> <p>If, following the above assessment, a decision is made that will result in the loss of all or any part of a heritage asset, or a reduction in its significance, developers will be required to record and advance understanding of the asset through appropriate compensatory measures. The results of such measures should be made publicly accessible through appropriate archiving and publication. The ability to create full records in this way should not, in itself, be a factor in deciding whether such loss should be supported.</p>	<p>The assessment has indicated the potential for the presence of archaeological assets within the Order Limits. The value of the assets identified range from negligible to medium (regional). The assessment has established a low potential for currently unknown remains of Prehistoric to Late Medieval date of medium (regional) value, a high potential for currently unknown Post-Medieval remains of low (local) value.</p> <p>There is a low potential for currently unknown below ground heritage assets of Prehistoric to Post-Medieval date of equivalent value to a Scheduled Monument (high/national to very high/ international value).</p> <p>A programme of post development consent archaeological trial trenching is presented in a <b>WSI for an Archaeological Trial Trench Evaluation (Appendix 8.5, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))</b>. The aim of the trial trenching is to determine the presence, extent and value of the archaeological resource and to inform a subsequent programme of mitigation to be undertaken either before or during construction. The mitigation could include strip, map and record, open area excavation or watching brief. The trial trenching and the programme of mitigation would be secured through the <b>Outline CEMP (Application Document Reference: TR010041/APP/7.3)</b> which would be developed into a CEMP by the main contractor. Following the</p>

Document	Policy	Description	Significance of Part A on Policy Objective
			<p>completion of the trial trenching, a programme of mitigation may be required</p> <p>A programme of strip, map and record for the Advanced Works is presented in a separate <b>WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works) (Appendix 8.6, Volume 7</b> of this ES (Application Document Reference: <b>TR010041/APP/6.7</b>)).</p> <p>The post development consent archaeological work is secured by the <b>draft DCO (Application Document Reference: TR010041/APP/3.1)</b>.</p>

## 8.4. ASSESSMENT METHODOLOGY

### SCOPE OF ASSESSMENT

- 8.4.1. As set out within DMRB (Volume 11, Section 3, Part 2; Reference; HA 208/07 (**Ref. 8.7**)), Cultural Heritage comprises World Heritage Sites, Scheduled Monuments, Listed Buildings (all grades), Conservation Areas, Registered Parks and Gardens, Registered Battlefields, the Historic Landscape and non-statutory designated heritage assets including below-ground and earthwork archaeological remains.
- 8.4.2. Assets that have been scoped in within the **Scoping Report (Application Document Reference: TR010041/APP/6.10)** for Part A comprise Listed Buildings, Conservation Areas, the Historic Landscape and non-statutory designated heritage assets including below-ground and earthwork archaeological remains for construction and operational effects. Scheduled Monuments were initially scoped out of the assessment in the **Scoping Report** as none were located within the Study Area. However, following a change in the Order Limits, one Scheduled Monument (Felton Old Bridge, NHL 1020745) required scoping into the assessment as it is located within the 1 km Outer Study Area.
- 8.4.3. There are no World Heritage Sites, Registered Parks and Gardens or Registered Battlefields within the Study Area and, therefore, these groups of assets are scoped out of the assessment. This approach was set out in **Scoping Report (Application Document Reference: TR010041/APP/6.10)** for Part A and confirmed in the **Scoping Opinion (Application Document Reference: TR010041/APP/6.12)** for Part A.
- 8.4.4. Part A includes a permanent easement along an existing track which passes Felton Park and through Parkwood subway. The permanent easement would be required to undertake maintenance works associated with Part A and the buried geocellular drainage tank (T21) (refer to **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**)) once Part A is operational. No construction traffic would use this easement as there would be no access for construction traffic through the village of Felton, as set out in the **Construction Traffic Management Plan (CTMP) (Application Document Reference: TR010041/APP/7.4)**. Potential effects associated with this easement are therefore scoped out of this assessment as the impacts are considered to be No Change on the setting of the designated assets situated alongside it (one Grade II\* Listed Building (NHL 1154561), and four Grade II Listed (NHL 1371126, 1303774, 1041874 and 1303719)).

### CONSULTATION

- 8.4.5. **Table 8-4** below presents a summary of the consultation undertaken in support of the preparation of this chapter. Refer to **Appendix 4.2: Environmental Consultation, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). Further details on the consultation responses received in both the statutory and non-statutory stages of consultation are presented in the **Consultation Report (Application Document Reference: TR010041/APP/5.1)**.

**Table 8-4 – Consultation Undertaken in Relation to Cultural Heritage**

Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
NCC, Assistant County Archaeologist	29 March 2018 Meeting via telephone.	Matters discussed comprised: <ul style="list-style-type: none"> <li>- Scope of the ES</li> <li>- Current timetable for the EIA</li> <li>- Review of preliminary geophysical survey results</li> <li>- Discussion of any immediate key issues</li> </ul>	The following was agreed <ul style="list-style-type: none"> <li>- The ES will be informed by a desk-based assessment, walkover survey and geophysical survey</li> <li>- A pragmatic approach to be taken for the requirement to do additional geophysical survey following any changes in the area for assessment, based on the size of the area and the quality of the results in the immediate area</li> <li>- Due to limitation of land access for intrusive works, trial trench evaluations are not included within the scope for the ES chapter</li> <li>- Agreement made to explore further non-intrusive survey techniques (e.g. fieldwalking, LiDAR survey) to support the assessment.</li> </ul>
NCC, Buildings Conservation Team	10 May 2018 Email exchange	Email exchange to confirm any heritage related viewpoints and any additional built heritage assets (non-designated) that require assessment.  Of the 65 listed heritage assets identified within the 1 km Outer Study Area, only 13 were identified as being potentially impacted from a change in settings, and the list of these was agreed as: One Grade II* Listed Building (Greenhouse 120 Metres East of Felton Park (NHLE 1154561)) and 12 Grade II Listed Buildings (Garden wall to east Felton Park (NHLE 1041874), Longfield Cottage (NHLE 1041875), Old Farmhouse at Hemelspeth with Yard Walls and Outhouses on North (NHLE 1042133), Church of St Cuthbert (NHLE 1153555), West Shield Hill Farmhouse (NHLE 1153573), Ha-Ha Wall to South of Causey Park (NHLE 1154074), Farmbuildings at Hemelspeth (NHLE 1156133), Thirston New Houses Farmhouse (NHLE 156136), Felton Park (NHLE 1303774), Causey Park House (NHLE 1370647), Bockenfield Farmhouse (NHLE 1371020), and Roman Catholic Church of St Mary (NHLE 1371126)).	It was agreed that all designated assets would be reviewed, where possible, in the site walkover, but particular attention would be paid to these 13. In addition, two non-designated built heritage assets were identified as potentially sensitive receptors; High Highlaws Farm and New Houses Farm. It was agreed that these would be included for assessment.
Historic England, Inspector of Ancient Monuments NCC, Buildings Conservation Team NCC, County Archaeologist	22 August 2018 Meeting in Northumberland County Hall, Morpeth.	Purpose of the meeting was to review the potentially sensitive receptors identified in the draft Historic Environment desk-based assessment (including geophysical survey and LiDAR assessment) and in the PEIR.	The conclusions of the Historic Environment desk-based assessment were reviewed and approved. No further assessment work would be undertaken prior to DCO submission. Refer to <b>Appendix 4.2: Environmental Consultation, Volume 1</b> of this ES ( <b>Application Document Reference: TR010041/APP/6.1</b> ).
NCC, County Archaeologist	6 June 2019 Email exchange.	Scope of post-determination trial trenching and archaeological mitigation for advanced works as set out in two draft (at the time) WSIs. Refer to <b>WSI for an Archaeological Trial Trench Evaluation (Appendix 8.5, Volume 7</b> of this ES ( <b>Application Document Reference: TR010041/APP/6.7</b> )) and <b>WSI for an Archaeological Strip, Map and</b>	The following updates were required and completed for the WSI for post-determination trial trenching:  Modern farming practices have impacted on the survival of later prehistoric date so that they rarely represented by upstanding earthworks in this area and



Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
		<p><b>Sample Excavation (National Grid Diversion Works) (Appendix 8.6, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)).</b></p>	<p>geophysical survey can produce variable results due to the shallow nature of some of the features and/or presence of ridge and furrow. In addition, early medieval sites have been revealed by trial trenching rather than geophysical survey at both Shotton to the south of Morpeth, and to the north of Felton: near but not on the site of the later medieval settlement. This needs to be identified in the archaeological background as it needs to be considered as part of the trenching strategy.</p> <p>RESPONSE – Reference to the reliability of geophysical survey for identifying prehistoric remains has been added to the archaeological background. Reference to medieval settlement remains at Shotton and Felton also added.</p> <p>4.3.3 bullet point 3 refers to "other linear and discrete features: all stake-holes, post-holes, pits, ring ditches, kilns, and other structural/funerary/industrial features will be 50% excavated in the first instance, recorded in section, and then fully excavated." which is a little contrary to the final bullet point of this section. A bit of clarification would be appreciated.</p> <p>RESPONSE – The “fully excavated” reference has been removed.</p> <p>4.4.4 - unless associated with industrial activity which requires post-excavation analysis of the full sample</p> <p>RESPONSE – This has been added as a separate paragraph.</p> <p>6.1.1 The museum for archiving is the Great North Museum in Newcastle with digital archives going to ADS in York</p> <p>RESPONSE: The archiving section has been updated to include this clarification.</p> <p>Figure 2 - I'd prefer to see the trenches a little more staggered rather than in rows in order to provide greater coverage of the area and avoid the potential for linear being present in the gaps.</p> <p>RESPONSE: Proposed trench locations have been reviewed, and where possible, moved and/or rotated to provide a more staggered approach.</p> <p>Figure 2 4th from the south - could the trench to the south of Blackwood Hall, north of the side road be moved further west to intersect with the geophysical anomaly (unless this anomaly can clearly be demonstrated to be modern).</p> <p>RESPONSE: Trench has been relocated as requested.</p>

Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
			<p>The following updates were required and completed for the WSI for mitigation for the advanced works:</p> <p>4.2.3 do you know whether the soil will be stored and does this need to be monitored archaeologically, particularly where soil needs to be stripped for the storage of plough and/or subsoil.                      RESPONSE: No information on specific location but will be within the application boundary. WSI states that all ground works in application boundary will be monitored.</p> <p>4.2.8, can we include Historic England's Regional Science Advisor in these discussions, where necessary?                      RESPONSE: Added to WSI.</p> <p>Table 4.1, I'd prefer all pits to be excavated to 50%, irrespective of size unless agreed with the NCA.                      RESPONSE: Table updated as requested.</p> <p>4.3.4 as with the other WSI - unless associated with industrial activity which requires post-excavation analysis of the full sample.                      RESPONSE: Added to methodology.</p> <p>Sampling: There is the potential that this site could be Iron Age or potentially multi-period in date. The need for multiple radio carbon dates is a requirement for Neolithic to Romano-British periods as identified in the North East Regional Research Framework (NERRF). The Resource Assessments, Research Agendas and Strategies for these periods clearly identify the importance of understanding the relationship between settlement and landscape and the importance of more accurate dating on sites. NERRF identifies the use of multiple radiocarbon dating as standard combined with the use of Bayesian calibration of dates. These research priorities are also reflected in other agendas relating to the Iron Age such as Haselgrove et al 2001. Understanding the British Iron Age: an agenda for action. A report for the Iron Age Research Seminar and the Council of the Prehistoric Society, Trust for Wessex Archaeology, Salisbury.                      RESPONSE: Sampling strategy reviewed and updated in response to this information.</p>

Consultee	Date and Type of Consultation	Summary of Consultation Response	Action
			<p>I would also like to flag up at this point that the Historic England Regional Science Adviser has identified that particularly on mitigation sites, 100% of environmental samples need to be processed unless clearly justified by the on site contractor.                      RESPONSE: Methodology updated to include this.</p> <p>6.1.5 As with the other WSI the museum for archiving is the Great North Museum in Newcastle with digital archives going to ADS in York                      RESPONSE: Archive section updated.</p> <p>Figure 2 - for clarification I would advise that the Strip, map and record area is marked and annotated in the key.                      RESPONSE: Figure updated.</p>

## METHODOLOGY

8.4.6. The assessment of impacts on cultural heritage has been undertaken in accordance with the methodologies described in the following guidance documents:

- a. Historic Environment Good Practice Advice in Planning Policy Note 3 managing significance and setting (**Ref. 8.8**)
- b. DMRB, Volume 11, Section 3, Part 2 (DMRB: HA 208/07) (**Ref. 8.7**)
- c. Highways Agency (now Highways England) Scheme Assessment Reporting Volume 5, Section 1, Part 2 (TA 37/93) (**Ref. 8.9**)
- d. Chartered Institute for Archaeologists standards and guidance documents (**Refs. 8.10 and 8.11**)

8.4.7. The assessment has been carried out in accordance with the requirements of the NPS NN (**Ref. 8.5**) and NPPF (**Ref. 8.6**) (refer to **Tables 8-2 and 8-3** above) and to standards specified by the Chartered Institute for Archaeologists (**Refs. 8.10 and 8.11**) and Historic England's Guidance on Setting (**Ref. 8.8**).

8.4.8. The assessment is supported by the HEDBA (**Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)), the results of the Geophysical Survey (**Appendix 8.2: Geophysical Survey, Volume 7** of this ES) and an archaeological assessment of the available LiDAR data for (**Appendix 8.3: LiDAR Assessment, Volume 7** of this ES).

### Updated DMRB Guidance

8.4.9. Since the assessments reported in this ES were completed, a number of DMRB guidance documents have been superseded and updated with revised guidance. For Cultural Heritage the following guidance document, which was used in the preparation of this assessment, has been superseded:

- a. DMRB, Volume 11, Section 3, Part 2 (DMRB: HA 208/07) (**Ref. 8.7**).

8.4.10. This guidance document has been replaced by DMRB LA 104 Environmental assessment and monitoring (**Ref. 8.12**) and DMRB LA 106 Cultural Heritage Assessment (**Ref. 8.13**).

8.4.11. The updates to the guidance pertinent to this assessment and their implications to the assessment are as follows:

- a. Study Areas: LA 106 does not provide any recommendation on the size of a Study Area as these must now be defined according to the sensitivity of the receiving environment and agreed with the overseeing organisation.
- b. Value of Grade II Listed Buildings: The value/sensitivity of designated assets may be either high or medium and assessment of their value needs to look further than their designation. This update in guidance applies in particular to Grade II Listed Buildings which under the previous guidance were assigned as being of medium value.

8.4.12. In order to determine the implications of the updated guidance to the conclusions of the ES, a sensitivity test has been undertaken to identify key changes in the assessment methodology and determine whether there would be changes to the significant effects reported in this ES if the updated guidance had been used for the assessment.

8.4.13. The findings of the sensitivity test are presented in **Appendix 4.5: DMRB Sensitivity Test, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) and are

summarised in **Section 8.10** below. The sensitivity test has determined that the application of the updated guidance would not change the significant effects reported in this ES.

### Historic Environment Desk-Based Assessment

- 8.4.14. The **HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))** was compiled to fulfil the requirements of a DMRB detailed assessment. The assessment is supported by the results of **Geophysical Survey (Appendix 8.2, Volume 7 of this ES)**. Following the completion of the HEDBA, there have been changes to the Order Limits to accommodate design changes, however the HEDBA considered a wider area than is now set out in the Order Limits.
- 8.4.15. The aim of the **HEBDA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))** was to assess the impact of Part A on cultural heritage. This aim is achieved through five objectives as follows:
- a. To identify the presence of any known or potential heritage assets that may be affected by the proposals
  - b. To describe the significance of such assets taking into account factors which may have compromised asset survival
  - c. To determine the contribution to which setting makes to the importance of any sensitive heritage assets (i.e. designated assets and non-designated assets situated in close proximity to Part A).
  - d. To assess the likely impacts upon the value of the assets arising from the proposals
  - e. To assess the impact of Part A on how heritage assets are understood and experienced through changes to their setting
- 8.4.16. A broad range of standard documentary and cartographic sources, including results from nearby archaeological investigations, were examined in order to determine the full historic environment potential of Part A. This includes the likely nature, extent, preservation and value of any known or possible below ground heritage assets that may be present within or adjacent to the Order Limits.
- 8.4.17. **Table 8-5** below provides a summary of the key data sources used to identify the historic environment potential of Part A for the **HEBDA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**.

**Table 8-5 - Summary of Data Sources**

Source	Data	Comment
Historic England	National Heritage List (NHL) with information on statutorily designated heritage assets ( <b>Ref. 8.14</b> )	Statutory designations (Scheduled Monuments; statutorily listed buildings; registered parks and gardens; Registered battlefields) can provide a significant constraint to development.
NCC	HER HLC Conservation Areas	Primary repository of archaeological information. Includes information from past investigations, local knowledge, find spots, and documentary and

Source	Data	Comment
	Consultation	cartographic sources. It also contains the HLC data for the county.
British Geological Survey (BGS)	Solid and drift geology digital map; online BGS geological borehole record data ( <b>Ref. 8.15</b> ).	Subsurface deposition, including buried geology and topography, can provide an indication of potential for early human settlement, and potential depth of archaeological remains.
Northumberland County Council Record Office	Historic maps (e.g. Tithe, enclosure, estate), published journals and local history sources.	Baseline information on the historic environment.
Milestone Society Repository	Milestone Society Data ( <b>Ref. 8.16</b> ).	Extracts of the Milestone Society's records of milestones, boundary markers, fingerposts, crosses, AA Signs and tollhouses throughout the UK.

8.4.18. A walkover survey of the proposed offline sections of Part A was undertaken in May 2018 to assess its character, identify any visible heritage assets and assess possible factors which may affect the survival or condition of known or potential assets. The online section of Part A was assessed by undertaking a drive through due to limited pedestrian access along the existing A1. The Outer Study Area (1 km, refer to **Section 8.6**) was assessed at the same time for potential direct impacts on the significance of the settings of designated heritage assets. The general topography was noted, as was the presence of any large areas of open land, and building complexes such as housing estates, industrial plant etc, along with other factors which may have affected the survival of below ground heritage assets. The Zone of Theoretical Visibility (ZTV) Model (refer to **Figure 7.3: Zone of Theoretical Visibility, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)) was used to assist in identifying potential sensitive receptors due to potential intervisibility between heritage assets and Part A.

8.4.19. The desk-based assessment includes an assessment for the potential for hedgerows of historic importance based on a review of the historic mapping and the Northumberland HLC data. Under the Hedgerow Regulations Act 1997, a hedgerow is deemed to be important if it is at least 30 years old and meets at least one of a number of other criteria (**Ref. 8.17**). The criteria relevant for this assessment are:

- a. Marks all or part of a parish boundary that existed before 1850
- b. Contains an archaeological feature such as a Scheduled Monument
- c. Completely or partly in or next to an archaeological site listed on a Historic Environment Record

- d. Marks the boundary of an estate or manor or looks to be related to any building or other feature that is part of the estate or manor that existed before 1600
- e. Associated with the field system that existed before the Inclosure Acts (that is before 1845)

8.4.20. In practice, the assessment of hedgerows to establish if they meet the criteria for being Important on historic grounds is based on establishing if the boundary is present on mapping pre-1845 and based on the information provided in the HLC. The desk-based assessment includes an assessment of the potential for hedgerows of historic importance based on a review of historic mapping and the HLC data.

### Geophysical Survey

8.4.21. Geophysical Surveys are a non-intrusive technique and are recommended in the DMRB to inform the assessment by evaluating the land for the presence of below ground archaeological remains (**Ref. 8.7**).

8.4.22. Data from geophysical surveys of the area were available from studies undertaken in 2006, 2017 and 2018. The aim of the Geophysical Survey was to identify the presence of below ground anomalies that could be of archaeological origin. Within the geophysical survey area, approximately 125 ha were identified as being potentially viable for survey. This comprised approximately 48 ha of road corridor and 77 ha of compounds and works areas. Approximately 33 ha of the proposed road corridor had already been surveyed in 2006. No highly significant archaeological sites or remains were identified in the 2006 surveys. The 2006 data were reviewed and deemed adequate for the current assessment and no additional surveys of the area were required. The geophysical surveys were able to obtain data from 119 ha of the 125 ha area.

8.4.23. The survey deployed two types of geomagnetic instrument: Bartington Grad 601-2 dual fluxgate gradiometers and Sensys Magento MX V3 multi-sensor magnetometer survey system, towed by a quad bike. Since the Geophysical Survey was prepared in 2018, changes to the Order Limits have been made to accommodate design changes. Although there are gaps where the geophysical survey does not cover the proposed Order Limits, it is considered (and as agreed with NCC) that sufficient data was available to inform robust assumptions for the assessment. The surveys and reporting were conducted in accordance with guidelines provided by Chartered Institute for Archaeologists (CIfA) (**Refs. 8.18 and Ref. 8.19**). A full description of the survey methodology and guidance is presented in Section 5 of the **Geophysical Survey Report (Appendix 8.2, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**.

### LiDAR Archaeological Assessment

8.4.24. A LiDAR assessment was undertaken as agreed with NCC to support the Environmental Impact Assessment (EIA). A detailed description of the assessment methodology for the **LiDAR Assessment** is presented in **Section 3 of Appendix 8.3, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)** and is summarised below.

8.4.25. The assessment used Environment Agency Digital Terrain Model (DTM) LiDAR data. Of the total approximate 12.6 km of the main alignment, data exist for a 2.5 km stretch from Fenrother Junction to Causey Park and a 5 km section from Helm to the northern end of Part A (totalling 241 ha, refer to **Figure 1 of Appendix 8.3: LiDAR Assessment, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)**). The data were

acquired in ASCII raster format with a 1 m horizontal resolution and a vertical accuracy of  $\pm 5$  cm. The DTM data are pre-filtered, with vegetation and buildings removed, resulting in a 'bare earth' model of the terrain.

- 8.4.26. The Relief Visualization Toolbox 1.3 (**Ref. 8.20** and **Ref. 8.21**) was used to provide additional outputs, including a Local Relief Model (LRM) which helps to enhance features of potential archaeological interest. ArcGIS 10.5 Advanced was used to both display and analyse the survey datasets, and to record features of archaeological and historical interest. The LRM was displayed in ArcMap 10.5 Advanced using the recommended style settings for flat terrain and undulating (**Ref. 8.22**), with features tending towards banks visible as high values and those tending towards ditches visible as low values.
- 8.4.27. Point cloud (LAS) data were downloaded from the Environment Agency data portal in order to produce a LiDAR intensity dataset. The dataset displays the return strength of the laser pulse and is useful for detecting changes in the soil (**Ref. 8.23**).
- 8.4.28. The datasets described above were used to digitise features of archaeological and historical interest using ArcMap 10.5; the features were mapped in accordance with guidance developed by the National Mapping Programme (NMP) (**Ref. 8.24**). The features were recorded in a geodatabase that uses standard NMP forms and corresponding symbology.

**SENSITIVITY OF RESOURCES AND RECEPTORS**

- 8.4.29. The assessment of the value of cultural heritage assets involved consideration of the heritage interest of the asset to this and future generations. That interest may be archaeological, architectural, artistic or historic, and may derive not only from the asset's physical presence, but also from its setting, and from individual or group qualities, either directly or potentially (as outlined in NPS NN (**Ref. 8.5**) and NPPF (**Ref. 8.6**)). These are professional judgements using knowledge and experience of similar schemes and each heritage asset is assessed on an individual basis on its own merits, taking into account regional variations and surroundings. They are also guided by legislation, national policies, acknowledged standards, designation criteria and priorities.
- 8.4.30. The DMRB recommends the adoption of six ratings for value in relation to archaeological remains, built heritage and historic landscapes: very high; high; medium; low; negligible; and unknown. Definitions for each rating are outlined in DMRB, Volume 11 Section 3 Part 2 HA 208/07 Annex 5 (Table 5.1), Annex 6 (Table 6.1) and Annex 7 (Table 7.1) and are summarised in **Table 8-6** below.

**Table 8-6 - Criteria for Establishing the Value (Sensitivity) of Heritage Assets**

Value (Sensitivity)	Example
Very High	Archaeological Remains <ul style="list-style-type: none"> <li>- World Heritage Sites (including nominated sites)</li> <li>- Assets of acknowledged international importance</li> <li>- Assets that can contribute significantly to acknowledged international research objectives</li> </ul>



<b>Value (Sensitivity)</b>	<b>Example</b>
	<p>Built Heritage</p> <ul style="list-style-type: none"> <li>- Structures inscribed as of universal importance as World Heritage Sites</li> <li>- Other buildings of recognised international importance</li> </ul> <p>Historic Landscapes</p> <ul style="list-style-type: none"> <li>- World Heritage Sites inscribed for their historic landscape qualities</li> <li>- Historic landscapes of international value, whether designated or not</li> <li>- Extremely well-preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s)</li> </ul>
High	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Scheduled Monuments (including proposed sites)</li> <li>- Non-designated assets of schedulable quality and importance</li> <li>- Assets that can contribute significantly to acknowledged national research objectives</li> </ul> <p>Built Heritage</p> <ul style="list-style-type: none"> <li>- Scheduled Monuments with standing remains</li> <li>- Grade I and Grade II* Listed Buildings</li> <li>- Other Listed Buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade</li> <li>- Conservation Areas containing very important buildings</li> <li>- Non-designated structures of clear national importance</li> </ul> <p>Historic Landscapes</p> <ul style="list-style-type: none"> <li>- Designated historic landscapes of outstanding interest</li> <li>- Non-designated landscapes of outstanding interest</li> <li>- Non-designated landscapes of high quality and importance, and of demonstrable national value</li> <li>- Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s)</li> <li>- Scheduled Monuments with standing remains</li> </ul>
Medium	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Designated or non-designated assets that contribute to regional research objectives</li> </ul>

<b>Value (Sensitivity)</b>	<b>Example</b>
	<p><b>Built Heritage</b></p> <ul style="list-style-type: none"> <li>- Grade II Listed Buildings</li> <li>- Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations</li> <li>- Conservation Areas containing buildings that contribute significantly to its historic character</li> <li>- Historic Townscape or built-up areas with important historic integrity in their buildings or built settings (e.g. including street furniture and other structures)</li> </ul> <p><b>Historic Landscapes</b></p> <ul style="list-style-type: none"> <li>- Designated special historic landscapes</li> <li>- Non-designated historic landscapes that would justify special historic landscape designation, landscapes of regional value</li> <li>- Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s)</li> </ul>
Low	<p><b>Archaeological Remains</b></p> <ul style="list-style-type: none"> <li>- Designated and non-designated assets of local importance</li> <li>- Assets compromised by poor preservation and/or poor survival of contextual associations</li> <li>- Assets of limited value, but with potential to contribute to local research objectives</li> </ul> <p><b>Built Heritage</b></p> <ul style="list-style-type: none"> <li>- Locally Listed Buildings</li> <li>- Historic (unlisted) buildings of modest quality in their fabric or historical association</li> <li>- Historic Townscape or built-up areas of limited historic integrity in their buildings or built settings (e.g. including street furniture and other structures)</li> </ul> <p><b>Historic Landscapes</b></p> <ul style="list-style-type: none"> <li>- Robust non-designated historic landscapes</li> <li>- Historic landscapes with importance to local interest groups</li> <li>- Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations</li> </ul>
Negligible	<p><b>Archaeological Remains</b></p> <ul style="list-style-type: none"> <li>- Assets with very little or no surviving heritage interest</li> </ul>

Value (Sensitivity)	Example
	Built Heritage <ul style="list-style-type: none"> <li>- Buildings of no architectural or historical note</li> <li>- Buildings of an intrusive character</li> </ul> Historic Landscapes <ul style="list-style-type: none"> <li>- Landscapes with little or no significant historical interest</li> </ul>
Unknown	Archaeological Remains <ul style="list-style-type: none"> <li>- The importance of the resource has not been ascertained</li> </ul> Built Heritage <ul style="list-style-type: none"> <li>- Buildings with some hidden (i.e. inaccessible) potential for historic significance</li> </ul> Historic Landscape <ul style="list-style-type: none"> <li>- N/A</li> </ul>

**Assessing the Contribution of Setting to the Value of Heritage Assets**

8.4.31. The definition of setting is taken from the NPPF Annex 2: Glossary (Ref. 8.6) as “the surroundings in which an asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral”. Historic England’s guidance (Ref. 8.8) considers that the importance of setting lies in what it contributes to the significance of the heritage asset. This depends on a wide range of physical elements within, as well as perceptual and associational attributes pertaining to, the heritage asset’s surroundings.

8.4.32. Historic England sets out several other general considerations including cumulative change; change over time; appreciating setting; buried assets and setting; designated settings; setting and urban design; and setting and economic and social viability and has provided a stepped approach to the assessment and value of setting to heritage assets. The guidance has been used to adopt a stepped approach for settings assessment, which is summarised below and presented in detail in the HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)):

- a. **Step 1: Asset identification.** Only the setting of the most sensitive heritage assets (i.e. designated and non-designated in immediate proximity to Order Limits and therefore at risk from moderate to major impacts) are considered in this assessment. This is in line with the NPPF (Ref. 8.6) and NPS NN (Ref. 8.5), which require an approach that is proportionate to the significance of the asset. A scoping exercise filters out those assets which would be unaffected, typically where there are no views to/from the site.
- b. **Step 2: Assess the contribution of setting.** This stage assesses how setting contributes to the overall significance of a designated asset.

- c. Step 3: Assess change.** This considers the effect of the proposals on asset significance. It is noted however that it can be difficult to quantify such change to the overall significance of a designated heritage asset (for example, significance would rarely be downgraded from ‘high’ to ‘medium’ due to changes in setting). For this reason, the impact is reported in this assessment in terms of the extent to which the proposals would change how the asset is understood and experienced (i.e. substantial harm, less than substantial harm).
- d. Step 4: Mitigation.** This explores the way to maximise enhancement and avoid or minimise harm. This is typically considered at the design stage (i.e. embedded design mitigation).
- e. Step 5: Reporting.** Making and documenting decisions and outcomes. This reports the assessment of effects.

8.4.33. In assessing whether, how and to what degree the settings contribute to the cultural heritage significance of the heritage assets, a number of potential attributes of a setting are considered. These attributes are outlined in the Setting Assessment Attribute Tables contained in Appendix B of the HEDBA (**Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)).

8.4.34. The attributes of setting contribute to its sensitivity and its contribution to the significance of the asset. Examples of the attributes which can contribute to the sensitivity of the setting of heritage assets is presented in **Table 8-7** below, however, this list is not exhaustive. This table is derived from Historic England, The Setting of Heritage Assets 2017 (**Ref. 8.8**).

**Table 8-7 - Definitions of Value for the Settings of Heritage Assets**

Examples of Setting	Contribution to Value of the Heritage Asset
A defined setting that is contemporary with and historically and functionally linked with the heritage asset, may contain other heritage assets of international or national value, has a very high degree of intervisibility with the asset and makes a very substantial contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.	Very high
Contemporary with and historically and functionally linked with the heritage asset, with minor alterations (in extent and/or character), has a high degree of intervisibility with the asset and which makes a substantial contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.	High
Contemporary with and/or historically and/or functionally linked with the heritage asset but with alterations which may detract from the understanding of the heritage asset, and/or with a moderate degree of intervisibility with the asset and/or which makes a moderate contribution to the significance of the heritage asset and/or a	Medium

<b>Examples of Setting</b>	<b>Contribution to Value of the Heritage Asset</b>
moderate contribution to the understanding and appreciation of the significance of the asset.	
Largely altered so that there is very little evidence of contemporaneous and/or historic and/or functional links with the heritage asset, and/or with a low degree of intervisibility with the asset and/or which makes a minor contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.	Low

8.4.35. Having assessed the contribution of the setting to the cultural heritage significance of the asset, the effect of a proposed development on the setting can be determined by consideration of the potential attributes of a proposed development affecting setting. These attributes, as taken from Historic England 2017 (**Ref. 8.8**) are presented in **Table 8-8** below.

**Table 8-8 - Potential Attributes of Settings**

<b>Potential Attributes / Factors to Consider</b>
<p>The asset's physical surroundings:</p> <ul style="list-style-type: none"> <li>- Topography</li> <li>- Aspect</li> <li>- Other heritage assets (archaeological remains, buildings, structures, landscapes, areas of archaeological remains)</li> <li>- Definition, scale and 'grain' of surrounding streetscape, landscape and spaces</li> <li>- Formal design e.g. hierarchy, layout</li> <li>- Orientation and aspect</li> <li>- Historic materials and surfaces</li> <li>- Openness, enclosure and boundaries; functional relationships and communications</li> <li>- Green spaces, trees and vegetation</li> <li>- History and degree of change over time</li> </ul>
<p>Experience of the asset:</p> <ul style="list-style-type: none"> <li>- Surrounding landscape and town character</li> <li>- Views from, towards, through and across, including the asset</li> <li>- Visual dominance, prominence or role as focal point</li> <li>- Intentional intervisibility with other historic and natural features</li> <li>- Noise, vibration and other pollutants and nuisances</li> <li>- Tranquillity, remoteness, 'wildness'</li> <li>- Busyness, bustle, movement and activity</li> </ul>

**Potential Attributes / Factors to Consider**

- Scents and smells
- Diurnal changes
- Sense of enclosure, seclusion, intimacy or privacy
- Land use
- Dynamism and activity
- Accessibility, permeability and patterns of movement
- Degree of interpretation or promotion to the public
- The rarity of comparable survivals of setting
- Cultural associations
- Celebrated artistic representations
- Traditions

8.4.36. Once the sensitivity and contribution of the setting to the value of the heritage asset has been determined and the potential attributes of a proposed development identified, the level of adverse or beneficial impacts of a proposed development on the asset through a change in setting needs to be evaluated. The judgement for the magnitude of impacts on the setting is based on professional judgement, experience on similar schemes and developments, and takes into regard the policies set out in NPS NN (Ref. 8.5) and NPPF (Ref. 8.6) and the guidance provided by Historic England (Ref. 8.8). The criteria developed for assessing the level of impacts on the setting of heritage assets (adverse or beneficial) in this ES are presented in **Table 8-9** below which is based on Tables 5.3, 6.3, 7.3 in the DMRB (Ref. 8.7). This presents definitions of varying scales of harm or benefit to the contribution of the setting.

**Table 8-9 - Criteria for Assessing the Impact or Benefit of a scheme to a Setting**

<b>Level of Impact or Benefit (Magnitude of Impact)</b>	<b>Guideline Criteria</b>
Major Beneficial	The contribution of setting to the cultural heritage asset’s significance is considerably enhanced as a result of the development; a lost relationship between the asset and its setting is restored, or the legibility of the relationship is greatly enhanced. Elements of the surroundings that detract from the asset’s cultural heritage significance or the appreciation of that significance are removed.

<b>Level of Impact or Benefit (Magnitude of Impact)</b>	<b>Guideline Criteria</b>
Moderate Beneficial	The contribution of setting to the cultural heritage asset's significance is enhanced to a clearly appreciable extent as a result of the development; the relationship between the asset and its setting is rendered more readily apparent. The negative effect of elements of the surroundings that detract from the asset's cultural heritage significance or the appreciation of that significance is appreciably reduced.
Minor Beneficial	The setting of the cultural heritage asset is slightly improved as a result of the development, slightly improving the degree to which the setting's relationship with the asset can be appreciated.
Negligible	The setting of the cultural heritage asset is changed by the development in ways that do not alter the contribution of setting to the asset's significance.
Minor Adverse	The contribution of the setting of the cultural heritage asset to its significance is slightly degraded as a result of the development, but without adversely affecting the interpretability of the asset and its setting; characteristics of historic value can still be appreciated, the changes do not strongly conflict with the character of the site, and could be easily reversed to the approximate pre-development conditions.
Moderate Adverse	The contribution of the setting of the cultural heritage asset to its significance is reduced appreciably as a result of the development. Relevant setting characteristics can still be appreciated but less readily.
Major Adverse	The contribution of the setting of the cultural heritage asset to its significance is effectively lost or substantially reduced as a result of the development, the relationship between the asset and its setting is no longer readily appreciable.

8.4.37. Changes may occur to the settings of an asset that neither affect their contribution to the cultural heritage significance of the asset, nor the extent to which its cultural heritage significance can be experienced. In such instances it would be considered that there is no impact upon setting.

## SIGNIFICANCE OF EFFECTS

### Magnitude of Impact

- 8.4.38. The ClfA 'Standard and Guidance for Historic Environment Desk-based Assessment' (**Ref. 8.10**), NPS NN (**Ref. 8.5**) and NPPF (**Ref. 8.6**) consider that an assessment of the value of heritage assets should identify the potential impact of proposed or predicted changes on the value of the asset and the opportunities for reducing that impact.
- 8.4.39. Determination of the magnitude of impact has been informed by reference to Tables 5.3, 6.3 and 7.3 in Annexes 5, 6 and 7 of HA 208/07 (**Ref. 8.7**). The annexes recommend the adoption of five ratings for magnitude of impact in relation to archaeological and built heritage assets and suggest criteria to help determine which of the ratings should apply. The ratings and criteria are replicated in **Table 8-10** below.

**Table 8-10 – Factors for Assessing the Magnitude of Impacts**

Magnitude of Impact	Criteria
Major Adverse	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Change to most or all key archaeological materials, such that the resource is totally altered</li> <li>- Comprehensive changes to setting</li> </ul> <p>Built Heritage</p> <ul style="list-style-type: none"> <li>- Change to key historic building elements, such that the resource is totally altered</li> <li>- Comprehensive changes to the setting</li> </ul> <p>Historic Landscape</p> <ul style="list-style-type: none"> <li>- Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit</li> </ul>
Moderate Adverse	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Changes to many key archaeological materials, such that the resource is clearly modified</li> <li>- Considerable changes to setting that affect the character of the asset</li> </ul> <p>Built Heritage</p> <ul style="list-style-type: none"> <li>- Change to many key historic building elements, such that the resource is significantly modified</li> <li>- Changes to the setting of an historic building, such that it is significantly modified</li> </ul>



<b>Magnitude of Impact</b>	<b>Criteria</b>
	<ul style="list-style-type: none"> <li>- Relevant setting characteristics can still be appreciated but less readily</li> </ul> <p>Historic Landscapes</p> <ul style="list-style-type: none"> <li>- Changes to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character</li> </ul>
Minor Adverse	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Changes to key archaeological materials, such that the asset is slightly altered</li> <li>- Slight change to setting</li> </ul> <p>Historic Buildings</p> <ul style="list-style-type: none"> <li>- Change to key historic building elements, such that the asset is slightly different</li> <li>- Change to setting of an historic building, such that it is noticeably changed</li> </ul> <p>Historic Landscapes</p> <ul style="list-style-type: none"> <li>- Changes to few key historic landscape elements, parcels or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality, slight changes to use or access; resulting in limited changes to historic landscape character</li> </ul>
Negligible	<p>Archaeological Remains</p> <ul style="list-style-type: none"> <li>- Very minor changes to archaeological materials or setting</li> </ul> <p>Historic Buildings</p> <ul style="list-style-type: none"> <li>- Slight changes to historic buildings elements or setting that hardly affect it</li> </ul> <p>Historic Landscapes</p> <ul style="list-style-type: none"> <li>- Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character</li> </ul>
No Change	Archaeological Remains

Magnitude of Impact	Criteria
	<ul style="list-style-type: none"> <li>- No change</li> </ul> Historic Buildings <ul style="list-style-type: none"> <li>- No change to fabric or setting</li> </ul> Historic Landscapes <ul style="list-style-type: none"> <li>- No change to elements, parcels or components; no visual or audible changes; no changes arising from amenity or community factors</li> </ul>

### Assessment of Significance

- 8.4.40. The interaction between the value of the heritage asset in **Table 8-6** above and the potential magnitude of impact as set out in **Table 8-9** and **Table 8-10** above produces the overall significance of effect. This has been determined using the matrix shown in **Table 4-8** in **Chapter 4: Environmental Assessment Methodology, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**).
- 8.4.41. Those effects of moderate significance or above are considered significant in terms of the EIA Regulations. Mitigation measures as appropriate for each heritage asset affected are presented in **Section 8.9**.

### 8.5. ASSESSMENT ASSUMPTIONS AND LIMITATIONS

- 8.5.1. The assessment is based on the details of Part A as presented at the time of compiling this ES. Refer to **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**) for a detailed description of the Scheme.
- 8.5.2. The information presented in this chapter has been drawn from data obtained from a variety of sources and includes secondary information. It is assumed that this information is accurate.
- 8.5.3. The assessment of the value of currently unknown below ground remains has been undertaken using professional judgement of the baseline information available and is based on a reasonable worst-case scenario.
- 8.5.4. The **HEDBA (Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)) and **Geophysical Survey (Appendix 8.2, Volume 7** of this ES) were based on earlier, working versions of the Order Limits and have not been updated in line with the final Order Limits. The **HEDBA (Appendix 8.1, Volume 7** of this ES) considers a wider Order Limits than is now proposed. Although there are gaps where the geophysical survey does not cover the proposed Order Limits, it is considered (and as agreed with NCC, refer to **Table 8-4**) that sufficient data was available to inform robust assumptions for the assessment.
- 8.5.5. There is only partial coverage of Part A by the LiDAR data (refer to **Appendix 8.3, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)) and therefore the assessment has been limited to the areas covered by the available data.

- 8.5.6. The assessment of the setting of private properties potentially impacted by Part A was undertaken from Public Rights of Way (PRoW) only and no properties were accessed for the purposes of this assessment. Access to some fields around Causey Park through which Part A would pass was also limited due to the presence of livestock.
- 8.5.7. The online section of Part A has been assessed from a drive through due to limited pedestrian access.
- 8.5.8. No intrusive field investigations have been undertaken to inform this assessment.
- 8.5.9. The data provided by HERs is not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. There is the potential for the presence of further, unrecorded, heritage assets and components of the historic environment.
- 8.5.10. A programme of trial trenching would be undertaken to confirm the presence or absence of currently unknown below-ground remains within the Order Limits. The evaluation would be undertaken after the DCO has been consented and before construction commences. It would be secured by the **Outline CEMP (Application Document Reference: TR010041/APP/7.3)** which would be developed into a CEMP by the main contractor.

## 8.6. STUDY AREA

- 8.6.1. The Study Areas are based on guidance outlined in DMRB Volume 11 Section 3 Part 2 HA 208/07 Cultural Heritage (**Ref. 8.7**) and agreed in consultation with NCC.
- 8.6.2. An Inner Study Area of 500 m extending out from the Order Limits was applied for the identification of all types of heritage assets (designated, non-designated, potential archaeological remains and historic landscapes) to establish the known historic environment context and the potential for hitherto unknown below-ground archaeological remains (refer to **Figure 8.2: Non-Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)). The quantity of data obtained within the Inner Study Area was judged to be appropriate, based on professional judgement, best practice, and experience gained from similar schemes and assessments, to inform the baseline and to adequately determine the potential for additional currently unknown assets within the Order Limits based on those found in the surrounding environment.
- 8.6.3. An Outer Study Area was applied for the assessment of settings of designated heritage assets and Conservation Areas, and this extends up to 1 km from the Order Limits (refer to **Figure 8.1: Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)). The extent of the Outer Study Area was reviewed against the ZTV Model (**Figure 7.3: Zone of Theoretical Visibility, Volume 5** of this ES) and during the site walk over survey. It was judged, based on professional experience, best practice, and experience gained from similar schemes and assessments, that due to the topography in the wider area, the distance and all the intervening visual barriers, no designated assets beyond the Outer Study Area would be adversely impacted through a change in setting.

## 8.7. BASELINE CONDITIONS

- 8.7.1. A total of 149 heritage assets are present within the Study Areas. They are listed in **Appendix 8.4: Gazetteer of Cultural Heritage Assets, Volume 7** of this ES (**Application Document Reference TR010041/APP/6.7**)). Of these, 66 are recorded as designated

heritage assets and are shown on **Figure 8.1: Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**). One asset, 'Old Felton Bridge over River Coquet' appears twice in the Historic England's database as a Grade II\* Listed Building and is also designated as a Scheduled Monument. For the purposes of this assessment, the Old Felton Bridge over River Coquet is assessed as a Scheduled Monument. Therefore, in taking the duplicate records into account, there are 64 designated heritage assets consisting of:

- a. 61 Listed Buildings (excluding the two Grade II\* entries for Old Felton Bridge)
- b. One Scheduled Monument (including the two Grade II\* entries for Old Felton Bridge)
- c. Two Conservation Areas

8.7.2. There are 85 non-designated heritage assets recorded in the Inner Study Area (**Figure 8.2: Non-Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**) and **Table 2 of Appendix 8.4: Gazetteer of Cultural Heritage Assets, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)); 83 of these have been identified from the HER and two have been identified during the assessment (New Houses Farm and High Highlaws Farm).

8.7.3. Within the Order Limits there are 6 designated assets, nine non-designated and 15 areas identified as being of potential to contain further non-designated remains based on the Geophysical Survey (refer to **Figure 8.4: Geophysical Survey, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)) and **LiDAR Assessment (Appendix 8.3, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)). The HLC records 71 landscape areas within Part A (**Figure 8.3: Historic Landscapes, Volume 5** of this ES). There are also potentially historic hedgerows and 50 areas of ridge and furrow cultivation as identified in the LiDAR assessment (**Figure 8.5: Areas of Extant Ridge and Furrow, Volume 5** of this ES).

8.7.4. Information about the archaeological and historic background of the Study Area is provided in the **HEDBA (Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)).

#### **BELOW GROUND ARCHAEOLOGICAL REMAINS**

8.7.5. Below ground remains have been identified from the **HEDBA (Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)), **Geophysical Survey (Appendix 8.2, Volume 7** of this ES) and **LiDAR Assessment (Appendix 8.3, Volume 7** of this ES). They comprise:

- a. Nine non-designated heritage assets identified in the **HEDBA (Appendix 8.1, Volume 7** of this ES)
- b. Fifteen areas containing geophysical anomalies of potential archaeological origin

8.7.6. Fifty areas of ridge and furrow cultivation identified through the **LiDAR Assessment (Appendix 8.3, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)). A summary of below ground archaeological remains in the Order Limits and their value are shown in **Table 8-11** below.

**Table 8-11 - Summary of Value and Sensitivity of Below Ground Heritage Assets Assessed**

<b>Value</b>	<b>Below Ground Assets</b>
Very High	None identified
High	None identified
Medium	Mesolithic Flints recovered at West Moor Farm, Thirston (HER 11356) Chapel or Hermitage at Helm (HER 11347)
Low	Medieval pottery found at boundary of Bockenfield township (HER 11362) Site of Building at Tile Kiln Rush (HER 17065) Route of Morpeth North Turnpike (HER 18226) Remains of ridge and furrow cultivation
Negligible	A sub-rectangular shaped enclosure at Causey Park Lodge Wood Enclosure (HER 11371) Site of Well near Causey Park Bridge (HER 17379) Site of Well (HER 18214)
Unknown	Rectilinear Enclosure, Causey Park Hag (HER 11367) Geophysical anomalies of potential archaeological origin LiDAR features of potential archaeological origin Potential remains of prehistoric to post-medieval date

8.7.7. Of the nine heritage assets identified in the HEDBA (**Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**), there is just one of Prehistoric date: a scatter of Mesolithic flint (HER 11356). The position of the Mesolithic site is not precisely recorded; however, it appears to be located at the proposed West Moor Junction overbridge. The discovery of the lithic assemblage as surface finds suggests that there may be below ground archaeological remains here relating to early Prehistoric settlement activity which is predicted to be of **medium** value based on the available evidence. The geophysical survey did not identify any clear anomalies of potential archaeological origin; however, early Prehistoric remains are often not susceptible to geophysical survey. The Mesolithic period is not well represented in the archaeological record as the hunter-gatherer lifestyle adopted by largely mobile populations left little trace. Therefore, any remains found would be, as a minimum, of **medium** value as they would contribute to the understanding of early Prehistoric activity in the region.

8.7.8. The location of the Chapel or Hermitage at Helm (HER 11347) is shown immediately outside the Order Limits. The recorded location of the asset is not precise, and it is possible

that potential remains of the asset may extend into the Order Limits. The Chapel or Hermitage at Helm (HER 11347) and the site of a medieval pottery assemblage at Bockenfield township (HER 11362) are located 50 m apart from each other, in the offline section of Part A between Burgham and Causey Park. The evidence for the chapel is drawn largely from documentary evidence for a 13th century chapel and reports from a farmer on the discovery of stone building foundations in the early 20th century. No geophysical anomalies were, however, identified in this area consistent with either a buried structure, or with evidence of the robbing out of remains. The geophysical survey did identify linear trends consistent with ridge and furrow cultivation and it is possible that the pottery assemblage recovered, comprising of approximately 100 sherds of probable early 13th to 14th century date (HER 11362), are a result of manuring activity, although this cannot be confirmed at this stage.

- 8.7.9. The value of the chapel or hermitage at Helm would be **medium** as it would contribute to the understanding of the development and use of ecclesiastical buildings in the region, and any structural remains identified would have historic, architectural and archaeological value. There is also a potential for the presence of burials, which are of historic and archaeological value. The value of the pottery scatter is drawn from its archaeological value, providing information about settlement patterns and is of **low** value.
- 8.7.10. The assessment has identified fifty areas which contain remains of ridge and furrow cultivation. The majority have been recorded using the LiDAR data and are not readily discernible as earthworks at ground level. Some areas are visible as upstanding earthworks, however. The remains assist in the understanding the morphology of the medieval and post-medieval agricultural landscape and are of **low** value, based on their historical and archaeological interest.
- 8.7.11. The route of the existing A1 follows the route of the Morpeth North Turnpike Road (HER 18226), which was established in the 18th century in order to improve transport links through the county. The potential for the presence of buried remains associated with the heritage asset within the Order Limits of Part A is judged to be low as all traces are likely to have been lost with the construction of the current carriageway. Where present, however, the remains would be of **low** value as they would provide information about the development and use the local transport network in the Post-Medieval period.
- 8.7.12. The site of the Building at Tile Kiln Rush (HER 17065) is located on the edge of the Order Limits on the west side of the existing carriageway, north of the River Coquet. The building is recorded on mid to late 19th century Ordnance Survey mapping and is no longer extant. Any surviving remains would be of **low** value as they would provide information about local, low status buildings.
- 8.7.13. The site of a former 19th century well is located in the offline section of Part A by Causey Park Bridge (HER 17379), while a second 19th century well is recorded in the online widening, north of Warreners House interchange (HER 18214). Both are of negligible value as they provide limited archaeological, historical or architectural information.
- 8.7.14. The location of the Post-Medieval Causey Park Lodge Wood Enclosure (HER 11371) is shown in the offline section of Part A, north of the Causey Park overbridge. The asset was identified from 19th century mapping and from an aerial photograph from 1947. However, no above ground trace of the asset was identified during the walkover and the geophysical survey. The asset is of **negligible** value as it provides little archaeological, historical or architectural information.

8.7.15. A cropmark of a rectilinear enclosure (HER 11367) is located south of the Causey Park overbridge, in the area of the National Grid Diversion. Potential traces of this enclosure were identified in the LiDAR data (WA 37) and four geophysical anomalies in the form of short linear features are also recorded in this location. The value of the heritage asset is currently unknown, however it has the potential to be up to **medium** value, depending on its date.

### Geophysical Survey Results

8.7.16. A total of 119 ha of Part A was subject to geophysical survey in 2006, 2017 and 2018. The results are presented in full in the **Geophysical Survey (Appendix 8.2, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)) and are summarised here.

8.7.17. The geophysical survey identified buried anomalies of potential archaeological origin across the length of Part A. Many of the features identified correspond to features shown on early Ordnance Survey maps, including former field boundaries, a former quarry and the former course of the road which later became the A1. Areas of former ridge and furrow cultivation were also identified. The survey also identified areas containing land drains and existing services.

8.7.18. Anomalies of potential archaeological origin comprise mainly linear features, possibly ditches, and isolated features which could be pits. Notably, there is a line of regularly spaced anomalies in Survey Phase 1 Area 34 which could be the remains of pit alignment in the area north of Helm (**Figure 11 of Appendix 8.2: Geophysical Survey, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**) and **Figure 8.4: Geophysical Survey, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)). There is also a group of linear features in Phase 1 Area 27, in the location of the cropmark in enclosure near Causey Park overbridge (**Figures 12 to 14 of Appendix 8.2: Geophysical Survey, Volume 7** of this ES and **Figure 8.4: Geophysical Survey, Volume 5** of this ES). The findings of the geophysical survey are summarised in **Table 8-12** below.

**Table 8-12 – Summary of Geophysical Anomalies of Potential Archaeological Origin**

<b>Geophysical Survey Area*</b>	<b>Location of Anomaly</b>	<b>Anomaly Description</b>
Phase 2 Area 6	NZ 18313 88717	A small positive magnetic anomaly detected which could be a soil-filled feature
Phase 1 Area 3	NZ 18263 89535	Linear anomalies which could be the remains of former ditches
Phase 2 Area 9	NZ 18472 89746	A north-east/south-west aligned feature, possibly the remains of a ditch
Phase 1 Area 7	NZ 18432 89996	Anomalies identified which could be former pits or ditches
Phase 1 Area 10	NZ 18484 91587	Anomalies identified which could be former pits or ditches

<b>Geophysical Survey Area*</b>	<b>Location of Anomaly</b>	<b>Anomaly Description</b>
Phase 1 Areas 20	NZ 18474 93733	Discrete positive magnetic anomalies have been detected across these areas. They could represent the remains of pits or large postholes
Phase 1 Area 22	NZ 18569 93996	Discrete positive magnetic anomalies have been detected across these areas. They could represent the remains of pits or large postholes
Phase 1 Area 23	NZ 18588 94123	Discrete positive magnetic anomalies have been detected across these areas. They could represent the remains of pits or large postholes
Phase 1 Areas 27	NZ 18836 95023	Several linear and curvilinear positive magnetic anomalies. Some are irregular, but some could be ditches or other archaeological features
Phase 1 Area 28	NZ 18599 94755	Several linear and curvilinear positive magnetic anomalies. Some are irregular but some could be ditches or other archaeological features
Phase 1 Area 34	NZ 18379 96627	North-east/south-west aligned sequence of regularly spaced positive magnetic anomalies, they may be a pit alignment. Other diffuse, positive magnetic anomalies were identified, these may be possible soil-filled features
Phase 1 Area 42	NZ 17480 97926	Two small irregular positive magnetic anomalies which may be soil-filled features
Phase 1 Area 50	NZ 17526 98775	A concentration of strong dipolar magnetic anomalies has been detected across the central part of the area. Anomalies correspond to hardstanding, perhaps associated with the RAF airfield
Phase 1 Area 53	NZ 17449 99020	Potential soil-filled ditch running north-west/south-east
Phase 1 Area 55	NZ 17535 99639	A broad and diffuse curvilinear positive magnetic anomaly detected in the north of the area. This is a potential soil-filled ditch

\*Area numbers as shown in **Geophysical Survey (Appendix 8.2, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**.



## LiDAR Assessment

- 8.7.19. The LiDAR assessment was undertaken using Environment Agency Digital Terrain Model data, which covered two sections of Part A. The archaeological assessment of the LiDAR data has identified 71 separate features (**Figures 3 to 9 of Appendix 8.3: LiDAR Assessment, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7)**). The features identified in the assessment are prefixed with “WA” and a full list of these features is presented in **Appendix 8.3: LiDAR Assessment, Volume 7 of this ES**.
- 8.7.20. Ridge and furrow is the dominant feature type, with concentrations in the areas around Earsdon Mill, Causey Park Bridge and south of the River Coquet. Most examples display straight and narrow sets of ridges, although a small number displaying a very shallow ‘S’-shape. The ridge-and-furrow remains are of **low value** as they provide evidence for Medieval and Post-Medieval settlement and agricultural patterns.
- 8.7.21. The **LiDAR Assessment (Appendix 8.3, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))** has identified features of potential archaeological origin, however without further investigation the value of these features is unknown. They include an enclosure earthwork (WA37) covering 2.2 ha which corresponds well with the location of a cropmark of a rectilinear enclosure (HER 11367). The enclosure is sub-rectangular in form and is largely formed of two sections of ditch, approximately 0.5 m in depth in places, but generally shallower. A trace of a bank is just visible on the western side. Other LiDAR faint features of potential archaeological origin are located around WA37 (WA35, WA36, WA38 and WA39), however, these could be of more recent origin and possibly associated with modern agricultural activity.
- 8.7.22. Groups of possible earthwork ditches and banks are located north of Burgham Park Road (WA41) and east of Thirston New Houses (WA58). They are located in an area where ridge and furrow cultivation has been identified as well as possible remnants of former field boundaries or plough headlands.
- 8.7.23. The remainder of the features identified can be attributed to recent activity (e.g. drainage systems and trackways) and, therefore, not heritage assets.

## Currently Unknown Below Ground Archaeological Remains

- 8.7.24. The **HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**, **Geophysical Survey (Appendix 8.2, Volume 7 of this ES)** and **LiDAR Assessment (Appendix 8.3, Volume 7 of this ES)** have established the potential for the presence of previously unrecorded below ground archaeological remains within the Order Limits. Confirmation of the presence and value of the currently unknown below ground archaeological remains can only be confirmed through archaeological investigation, which is outlined in the **WSIs (Appendix 8.5: WSI for an Archaeological Trial Trench Evaluation and Appendix 8.6: WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works), Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**.
- 8.7.25. The following section outlines the potential for further below ground heritage assets by period within the Order Limits. The potential value of the below ground remains is also presented based on professional judgement and a reasonable worst-case scenario. Unless otherwise stated, the value of the asset would be drawn from its archaeological value.

- 8.7.26. Based on the evidence from the Inner Study Area, there is a low to moderate potential for remains dating from the Prehistoric, Roman, Early Medieval and Late Medieval period to be present within the Order Limits. Where present, they are most likely to be of **medium value**. There is a high potential for currently unknown below ground heritage assets from the Post-Medieval and Modern within the Order Limits, likely to be associated with agricultural activity. Below ground remains from the Post-Medieval date are predicted to be of **low value**. Remains of Modern date would be of **negligible value**.
- 8.7.27. There is a potential for the presence of currently unknown below ground archaeological remains of **high** or **very high value**, ranging from the Prehistoric to the Post-Medieval period. However, based on the available evidence from the Inner Study Area the likelihood of the presence of remains of these values is judged to be low.
- 8.7.28. Based on the available evidence, the survival of any below ground archaeological remains is judged to be good as the land is primarily agricultural and the absence of previous development throughout the Order Limits. There is potential that below ground assets may have been impacted through ploughing and woodland planting which may have truncated remains, and also from quarrying and installation of utilities which may have completely removed below ground assets present.

#### **BUILT HERITAGE ASSETS**

- 8.7.29. Built Heritage Assets have been identified from the HEDBA (**Appendix 8.1, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)) and presented in **Appendix 8.4: Gazetteer of Cultural Heritage Assets, Volume 7** of this ES. The locations are shown in **Figures 8.1: Designated Heritage Assets** and **Figure 8.2: Non-Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**). They consist of Listed Buildings (prefixed with a National Heritage List (NHL) number), areas designated as Conservation Areas and non-designated buildings.

#### **Built Heritage Assets in the Order Limits**

- 8.7.30. Within the Order Limits, there are six designated built heritage assets consisting of Grade II Listed Mileposts (NHL 1371039, 1371021, 1370646, 1303996, 1153544 and 1042132). From 1767, mileposts (and milestones) were compulsory along all Turnpike Roads for reasons including informing travellers of distance and direction. During World War II many were removed or hidden for fear of the Germans, and their spies, finding out key locations. After the war, many were placed back in-situ, however, over time many have been lost through demolition due to road widening, collision or other damaging factors.
- 8.7.31. It was not possible to locate two of the mileposts (NHL 1370646 and 1371021) during the site walkover survey and both are recorded on the Milestone Society online repository as being lost (**Ref. 8.16**). It is assumed, therefore, that these two mileposts have been removed. One milepost was located during the walkover survey (NHL 1303996) and one was observed from a vehicle from the existing A1 (NHL 1153544). The remainder occupy locations with no safe access due to their proximity to the carriageway and they could not be located from the vehicle. As they are Grade II Listed, the mileposts are of **medium value**, based on their architectural and historic interest, and their contribution to our understanding of the development and use of regional transport routes.

8.7.32. The non-designated Priest’s Bridge (HER 17397) is also located in the section of the existing carriageway which would be de-trunked following the completion of the construction phase. The asset is of **low value** as it has little architectural or historic interest.

**Built Heritage Assets in the Outer Study Area**

8.7.33. Built heritage assets in the Outer Study Area are presented in **Appendix 8.4: Gazetteer of Cultural Heritage Assets, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**) and summarised, with their value, in **Table 8-13** below.

**Table 8-13 - Summary of the Value of Built Heritage Assets in 1 km Study Area**

<b>Value</b>	<b>Built Heritage Assets</b>
Very High	None identified
High	<ul style="list-style-type: none"> <li>- Felton Old Bridge (Scheduled Monument 1020745, Grade II* Listed Building NHL 1041879/1302949)</li> <li>- Church of St. Michael’s and all Angels (Grade I NHL 1041881)</li> <li>- Greenhouse (Grade II* NHL 1154561)</li> <li>- Bockenfield Farmhouse (Grade II* NHL 1371020)</li> </ul>
Medium	<ul style="list-style-type: none"> <li>- Felton Conservation Area</li> <li>- West Thirston Conservation Area</li> <li>- 58 Grade II Listed Buildings</li> </ul>
Low	<ul style="list-style-type: none"> <li>- High Highlaws Farm</li> <li>- New Houses Farm</li> <li>- Priest Bridge (HER 17397)</li> </ul>
Negligible	None Identified
Unknown	None identified

8.7.34. The assessment has identified 64 built heritage assets or designated areas within the Outer Study Area, refer to **Appendix 8.4: Gazetteer of Cultural Heritage Assets, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**), which could be temporarily or permanently impacted by Part A through change in setting during construction and operation. This would be based on their proximity and intervisibility with Part A, and the potential for impacts through changes in sound and lighting levels. This was undertaken through a review of the ZTV Model (**Figure 7.3: Zone of Theoretical Visibility, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)) and the completion of a walkover survey. The following 20 built heritage assets have been identified as being potential sensitive receptors due to an anticipated change to the setting and, therefore, required additional assessment to establish the contribution of the setting to the significance of the asset or asset group:

- a. Felton Park (non-designated park) and the associated designated heritage assets located within it (Grade II listed house NHL 1303774, Grade II\* listed greenhouse NHL 1154561 and Grade II listed Roman Catholic Church of St Mary NHL 1371126)
- b. Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876)
- c. Thirston New Houses (NHL 1156136)
- d. Causey Park House (NHL 1370647) and the associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074)
- e. Church of St Cuthbert, Hebron (NHL 1153555)
- f. Six Grade II Listed Mileposts (NHL 1371039, 1371021, 1370646, 1303996, 1153544 and 1042132)
- g. High Highlaws Farm (non-designated)
- h. New Houses Farm (non-designated)

8.7.35. The review of the ZTV Model (**Figure 7.3: ZTV, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**) and site walkover established that there would be no potential impacts and no effects on the Scheduled Monument, 41 Listed Buildings and the two Conservation Areas as the construction and operation of Part A would not result in any change in their setting. They are, therefore, not considered further in this assessment.

8.7.36. The following section describes the 20 built heritage assets impacted and outlines their value. together with a description of the setting of the heritage asset and its contribution to its value.

### Felton Park

8.7.37. Felton Park comprises several heritage assets situated within the non-designated park (HER 24276). The park includes the main Grade II Listed Building (NHL 1303774), a Grade II\* Greenhouse (NHL 1154561), the Grade II Listed Roman Catholic Church of St Mary (NHL 1371126) and World War II remains comprising a Military Camp (HER 26889) and Tank Turning Circle (HER 27238).

8.7.38. The main Grade II Listed house was built in 1732 for Edward Horsley Widdrington, a name which is still seen within the landscape as it is the name of a nearby village. The estate was inherited by Thomas Riddell through his marriage to Edward Widdrington's daughter. In 1799 it was remodelled for Ralph Riddell. The name "Riddell" is also still seen within the landscape due to the area known as Riddell Quarter. The house and associated gardens are mentioned within texts from the period including one in 1769 where it was described as a "*handsome modern structure*" and the surroundings included "*the gardens to the east; the River Coquet taking its course between two hanging banks of wood at a small distance to the south*" (**Ref. 8.25**). The 19th century saw the construction of a church on the site and the growth of horticultural activity which gained awards and acknowledgement throughout England. The Grade II Listed Roman Catholic Church of St Mary's was constructed in 1857 by Gilvery Blount for Thomas Riddell and his family (NHL 1371126). In 2013 it was converted into a house.

8.7.39. In the 18th century, Felton Park became famous for growing pineapples within the Grade II\* Listed Greenhouse (NHL 1154561). The greenhouse was restored in 2015. The greenhouse is a particularly early and well-preserved example of a curvilinear metallic greenhouse, built in two phases (**Ref. 8.25**). The greenhouse is situated against the Grade II Listed Garden Wall (NHL 1041874). It is known that in the 20th century, Felton Park was

used as a World War II tank depot, which included a Military Camp (HER 26886) and Turning Circle and Track (HER 27238). In 1951, Felton Hall was partially demolished due to it falling into disrepair, however, the Georgian east wing was retained and has since been restored.

- 8.7.40. Due to the rarity of the architectural form of the greenhouse and the historical value associated with the region, the asset group is assessed as being of **high value**. The setting of the asset group contributes greatly to the value of the assets. This is due to the presence of surviving built heritage and the legibility of the park's historic landscape in the immediate vicinity.
- 8.7.41. A private trackway runs to the north of Felton Park leading from Felton Village. The group of assets appear to be enclosed and private due to the presence of the tall, Listed Garden Wall (NHL 1041874) and woodland to the north. On the approach to the house and church, however, the wall is much lower and instead the area has a feeling of openness. The A1 can be heard from Felton Park although the level of noise varies for each asset, dependent on its distance from the carriageway. The existing A1 cannot be seen from the grounds due to the wooded bank bordering the carriageway.

#### **Longfield Cottage NHL 1041875 and Boundary Stones NHL 1041876**

- 8.7.42. Longfield Cottage (NHL 1041875) is a Grade II Listed Building located on the west side of the A1, next to Felton Park. It was constructed in the early 19th century as a shelter shed with accommodation for a groom provided on the first floor. It is assumed to have been built for the Riddell family, who held the Felton Park estate as grazing land for their racehorses. It was converted into a domestic dwelling in the 20th century. Longfield Cottage is of **medium value**, largely drawn from its architectural value and historic value, due to its relationship with the Felton Park estate.
- 8.7.43. The Boundary stones (NHL 1041876) lie 100 m south of Longfield Cottage and are also Grade II Listed. They consist of two stones positioned to mark the boundary of Felton Park in the late 18th to early 19th century, they are between 0.35 m to 0.5 m high. Both are inscribed with the letter 'R' for the Riddell family. They are of **medium value**. Their value is drawn from their historic value as they relate directly to Felton Park, and architectural value as boundary features.
- 8.7.44. Both assets are located in a large area of pasture surrounded by woodland; Park Wood and Duke's Bank Wood. The existing A1 is located 120 m to the east of the assets on a section of viaduct approximately 10 m above ground level. A review of the late 19th century Ordnance Survey maps show the assets occupying part of the larger Felton Park estate, which has changed little except for the introduction of the existing A1. The setting does, therefore, contribute to the value of the assets as they are both associated with the designed landscape of Felton Park. The existing A1 currently has a negative effect on the setting, as it presents a visual barrier across the park, splits the park in two and has introduced additional light, noise and pollution from vehicles using the carriageway.

#### **Thirston New Houses NHL 1156136**

- 8.7.45. Thirston New Houses (NHL 1156136) is a Grade II Listed Farmhouse of 18th century construction. The asset is located on Felton Road, which runs from the A1 to West Thirston and Felton. The farmhouse has been designated for its architectural and historical value, although alterations have taken place in the 19th and 20th centuries. The property is set

back from Felton Road and is accessed along a private driveway; during the site visit the building was assessed from the end of the driveway.

8.7.46. The property is situated to the south-west of West Thirston, and occupies an isolated location surrounded by open agricultural land. The property has tree cover to the west and south with the north and east providing open views across fields. At the time of the site visit, the trees were in full leaf and provided screening between the heritage asset and the existing carriageway. The screening provides a great deal of privacy to the property during the summer months, although in the winter the property would appear more exposed and open. The driveway is tree lined, which provides it with a feeling of seclusion. The area was quiet and had far-ranging views, which were key to the setting of the farmhouse.

8.7.47. The farmhouse itself is of **medium value**, with most of its value drawn from its architectural value. The setting contributes, in part, to the value of the asset as it was deliberately placed within the area of agricultural land and is deliberately screened to provide a separation between the property and the surrounding farmland.

**Causey Park House (NHL 1370647) and associated heritage assets (Grade II listed Garden Walls to West and South-West of Causey Park House NHL 1042880, Garden Walls East and South-East of Causey Park NHL 1304007, Sundial NHL 1042881 and Ha-Ha Wall to South of Causey Park NHL 1154074)**

8.7.48. Causey Park House is Grade II Listed (NHL 1370647) and incorporates a tower house built in 1589 for James Ogle. The house was remodelled in the late 18th century before being restored in 1870. Fifty metres to the south of the house lies a Sundial (NHL1042881) which is dated 1703 and is inscribed 'William Ogle 1703', thus demonstrating a long term association with the Ogle family. The house is partially enclosed by Listed Garden Walls, to the west and south-west (NHL 1042880) and to the east and south-east (NHL 1304007), which likely limit the views out from the asset. There are also the remains of a Ha-Ha (NHL 1154074). Due to the architectural value of the house and its historical value based on the ongoing lineage of the owners, the heritage asset is considered to be of **medium value**. Heritage assets of this type are not rare within the region; however, the named and dated sundial is more of a rarity.

8.7.49. Causey Park House lies to the west of the existing A1 route along an unnamed road. The house occupies an elevated position relative to the A1 and is surrounded by agricultural land. Currently, the assets experience low-level background noise from the A1. The unnamed road in front of Causey Park House appears to be for local traffic only. The property is in a largely agricultural setting on a natural rise, which provides views across the surrounding landscape. The road to the house is tree lined, which conceals it from some views. The setting is judged to contribute to the value of the assets due to the rural context in which they sit and the limited alteration to the landscape since the assets were created.

**Church of St Cuthbert, Hebron (NHL 1153555)**

8.7.50. The Church of St Cuthbert is Grade II Listed and lies to the east of the A1 in the village of Hebron. It is of medium value due its historical and architectural value. The chancel walls likely date to the 12th century and the structure was added to in the 14th and 15th centuries. The church was remodelled in 1793 and an organ chamber and vestry were added in the late 19th century. The Grade II Listed Stobbs Headstone 4 Metres West of the Path from Churchyard Gate (NHL 1371040) is located approximately 20m to the south, in the church

yard. The church is located in a slightly elevated position at the northern limit of the village and it is approached from the south via a footpath and footbridge over a small burn which runs east/west. The church is flanked by trees along the northern, western and eastern boundary of the church grounds although there are views towards the A1 from the south-western limit of the grounds. The church is still in use and well maintained, especially on the southern side where there is no tree screening resulting in open views to and from the village.

- 8.7.51. Overall, the setting of the church is tranquil, quiet and feels peaceful and, therefore, contributes to the importance of the asset. It should be noted, however, that there is the occasional intrusion from the neighbouring lorry depot to the south of the church, and lorries were observed leaving and entering the depot during the site visit. The setting of this asset contributes to its value.

**Grade II Listed Mileposts (NHL 1371039, 1371021, 1370646, 1303996, 1153544, 1042132 and 1041877)**

- 8.7.52. Six mileposts are located within the Order Limits and one lies within the 1 km Study Area (NHL 1041877). All seven mileposts are cast iron and have been listed for historical value. The majority of the mileposts could not be reached safely due to their locations close to the A1 carriageway and two are recorded by the Milestone Society as missing (NHL 1370646 and 1371021, **Ref. 8.13**).

- 8.7.53. The mileposts were positioned in locations where they could be easily seen by travellers, and, therefore, their locations on the existing A1 is in keeping within their purpose. The milepost locations and their settings contribute to their **medium value**.

**High Highlaws Farm (Non-Designated)**

- 8.7.54. High Highlaws Farm is a non-designated asset which is not present on the Northumberland HER data but has been included in the assessment following consultation with NCC. The farm appears on the 1st Edition Ordnance Survey map of 1860 and is, therefore, of at least mid-19th century date. The asset has some historic and possibly archaeological value. Overall, the importance of the asset is of **low value**.

- 8.7.55. The farm is situated on High Highlaws Road which runs east/west from the A1 to the A697. The topography surrounding the farm is relatively flat, which provides clear views to both roads. The topography and roads results in a sense of openness, accessibility and shows movement within the landscape. The setting provides some contribution to the value of the buildings, however, the existing A1 does have an adverse impact on setting due to noise.

**New Houses Farm (Non-Designated)**

- 8.7.56. New Houses Farm is located to the west of the existing A1 carriageway and is currently screened by a strip of woodland. The asset could not be accessed at the time of the assessment, however, the views from the A1 back to the asset were assessed. The existing A1 slopes down towards the woodland and the asset, thus causing the asset to be hidden from view. The farm is of Post-Medieval or 19<sup>th</sup> century date and appears to be in a good condition. The asset is of **low value**. The topography around the asset is described as being level, and the existing A1 being audible but not visible. The rural setting of the farm does contribute to its significance as it allows its primary context as an agricultural property to be understood. The lack of views to the existing A1 is also a contributing factor to the significance of the setting.

## HISTORIC LANDSCAPES

- 8.7.57. The Northumberland HLC defines the local landscape as being a plateau of upland fringe forming a transitional area between the Pennine upland to the west and the low-lying coastal plain to the east (**Ref. 8.26**). The landscape is largely agricultural with arable and cattle farming on lower lands and sheep farming on higher. Areas of settlement comprise frequent country houses, villages and medieval market towns. Woodland cover is characteristically varied with well-wooded river valleys, including the River Coquet, ornamental woodlands and small coniferous blocks.
- 8.7.58. The Historic Landscape Character of land within the Order Limits and the immediate surrounding area, dates from the 17th to the 20th centuries. The fieldscapes from the 17th to mid-18th centuries are irregular, the mid-18th to the 19th centuries produced more regular fields and the 19th and 20th centuries resulted in more modern field types. The landscape consists of lowland and eastern upland blocks. This type runs through the region from north/south and links the Tweed Basin to the English Midlands. It is one of the most extensive drumlin zones in Britain with the resulting landscape being considered difficult to farm, until the advent of more modern techniques in the 18th and 19th centuries.
- 8.7.59. 71 historic landscape types (as recorded on the Northumberland HLC database as part of the HER) are located within the Order Limits and shown on **Figure 8.3: Historic Landscapes, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**). A summary of these and their value is presented in **Table 8-14 - Summary of the Value of Historic Landscape Character Types in the Order Limits** below.

**Table 8-14 - Summary of the Value of Historic Landscape Character Types in the Order Limits**

Value	Historic Landscape Character Types
Very High	None identified
High	None identified
Medium	<ul style="list-style-type: none"> <li>- Designed Landscape: Parkland landscape created from the 17th century onwards</li> </ul>
Low	<ul style="list-style-type: none"> <li>- Ancient semi-natural woodland: 17th to mid-18th century</li> <li>- Other irregular fields: 17th to mid-18th century</li> <li>- Piecemeal enclosure: 17th to mid-18th century</li> <li>- Surveyed enclosure (erratic edged, straight edged and wavy-edged): Mid-18th to 19th century</li> <li>- Reorganised piecemeal enclosure: Pre-1860</li> <li>- Settlement: Pre-1860</li> <li>- Woodland: Pre-1860</li> <li>- Scrub: Pre-1860</li> <li>- Road: Pre-1860</li> <li>- Late 19th century fields</li> <li>- Late 19th century woodland</li> </ul>



Value	Historic Landscape Character Types
Negligible	<ul style="list-style-type: none"> <li>- Other 20th century fields</li> <li>- 20th century settlement</li> <li>- 20th century woodland</li> <li>- Airfield: still active</li> <li>- Golf course: 20th century</li> <li>- River</li> </ul>
Unknown	None identified

### Historic Hedgerows

- 8.7.60. The Northumberland HLC assessment has identified landscape areas which retain elements of 17th, 18th and 19th century date, including fields which are a product of piecemeal and irregular enclosure, throughout the offline section of Part A (refer to **Figure 8.3: Historic Landscapes, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)). All, therefore, have the potential to be of historic importance, as set out in The Hedgerow Regulations Act 1997 (**Ref. 8.17**). There are also hedgerows aligning the route of the existing A1 and the boundaries are contemporary with the development of the former turnpike road in the 18th century. These may also meet the criteria (**Ref. 8.17**). Where present, they would be of **low value** as heritage assets.

### FUTURE BASELINE

- 8.7.61. The assessment has not identified any committed developments which would impact on the historic environment and alter the baseline prior to the construction period.

## 8.8. POTENTIAL IMPACTS

### RECEPTORS SCOPED OUT

- 8.8.1. During the construction phase, no direct physical impacts (either temporary or permanent) are anticipated on five of the six Grade II listed mileposts (NHL 1371039, 1371021, 1370646, 1303996, and 1042132) of medium value (if present) located within the Order Limits, and therefore associated impacts on them are not discussed further in this chapter. Potential impacts on the setting of the assets are discussed below.
- 8.8.2. There are two non-designated assets located within the Order Limits which would not be impacted: The site of the Building at Tile Kiln Rush (HER 17065) and Priest Bridge (HER 17397). Tile Kiln Rush is located on the edge of the Order Limits on the west side of the existing carriageway, north of the River Coquet. The route of the carriageway in this section is elevated as it bridges the River Coquet. The works in this section comprise the extension of the existing carriageway to the east, but no ground disturbance is anticipated to the west towards the asset. Priest Bridge (HER 17397) is located in the section of the existing carriageway which would be de-trunked following the completion of the construction phase.
- 8.8.3. The operation phase would not impact on the setting of six Grade II Listed mileposts of medium value located within the Order Limits (NHL 1153544, 1371039, 1371021, 1370646, 1303996, and 1042132). The position of all the milestones alongside the carriageway and

their relationship with the existing A1 would not be altered by Part A, and therefore no impacts on their setting are anticipated. Two of the mileposts could not be located during the assessment and are recorded by the Milestone Society as missing (NHL 1370646 and 1371021; **Ref. 8.13**).

- 8.8.4. There would be no impact on the Historic Landscapes during the operation phase as the impacts would occur in the construction phase.

## CONSTRUCTION

### Below Ground Archaeological Remains

- 8.8.5. All direct impacts on below-ground heritage assets within the Order Limits would be permanent and irreversible as the asset would be partially and completely removed. Works that have the potential to impact upon any remains present include ground levelling, topsoil stripping, the removal of existing road surfaces, construction of temporary construction compounds and haulage roads, along with the installation of infrastructure items such as manholes, culverts, utilities cables (including the proposed National Grid advanced works), drainage pipes, and detention basins. Any form of landscape planting also has the potential to disturb below ground archaeological remains.
- 8.8.6. The construction activities would have a permanent direct adverse impact on any below ground archaeological remains located in areas of ground associated with the findspots of Mesolithic flint (HER 11356) and the Chapel or Hermitage at Helm (HER 11347), both of which are of medium value, and medieval pottery assemblage at Bockenfield township (HER 11362), and areas of ridge and furrow cultivation (refer to **Figure 8.5: Areas Of Extant Ridge And Furrow, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)), which are of low value. Permanent direct adverse impacts are also predicted on two 19th century wells (HER 17379 and HER 18214) and Post-Medieval Causey Park Lodge Wood Enclosure (HER 11371), all of which have **negligible value**.
- 8.8.7. The route of the existing A1 follows the route of the Morpeth North Turnpike Road (HER 18226), established in the 18th century. The potential for the presence of below ground remains associated with the heritage asset within the Order Limits is judged to be low as all traces are likely to have been lost during the construction of the current carriageway. If present, however, there would be permanent direct adverse impacts at the northern and southern sections of Part A where the existing carriageway would be upgraded. There would be no impact in the central section where the carriageway would be retained and de-trunked.
- 8.8.8. There is also a potential for permanent direct adverse impacts on currently unconfirmed below ground heritage assets and earthworks indicated by the cropmark evidence, geophysical survey and LiDAR assessment, including the rectilinear enclosure (HER 11367) located south of the Causey Park overbridge. There is also a potential for adverse impacts on unidentified below ground assets ranging in date from the Prehistoric period through to the Modern era. The value of the currently confirmed assets is unknown but is judged to likely range from **medium to negligible value**.

### Built Heritage Assets

- 8.8.9. There is a potential for direct, physical impacts on built heritage assets located within the Order Limits through the demolition and alteration of historic fabric, and indirect impacts from vibration (e.g. piling), dust and noise. There is also a potential for impacts on built

heritage assets through temporary changes in setting as a result of construction activity, including temporary visual intrusion, and an increase in noise, lighting and vibration from construction related vehicles, along with an increase in dust and pollution. Impacts would result in changes in the landscape around the asset, which could reduce the contribution of the setting to the value of the assets.

- 8.8.10. Milepost NHL 1153544 is the only built heritage asset that would be physically and permanently directly affected by Part A. It is of **medium value**. It would be moved from its current position during construction and repositioned as close to the original position as possible once Part A is operational.

### Settings

- 8.8.11. The construction phase would have a temporary adverse impact on setting due to noise and visual disturbance from construction activities on the following assets (refer to **Figures 8.1: Designated Heritage Assets** and **8.2: Non-Designated Heritage Assets, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**):

- a. Felton Park (non-designated park) and the associated designated heritage assets located within it (NHL 1303774, 1154561 and 1371126)
- b. Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876)
- c. Thirston New Houses (NHL 1156136)
- d. Causey Park House (NHL 1370647) and associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074)
- e. Church of St Cuthbert, Hebron (NHL 1153555)
- f. Six Grade II Listed Mileposts (NHL 1371039, 1371021, 1370646, 1303996, 1153544 and 1042132)
- g. High Highlaws Farm (non-designated)
- h. New Houses Farm (non-designated)

### Felton Park

- 8.8.12. The Order Limits include a triangular field on the edge of Felton Park, which is currently used for pasture. This is required to access the upper ground level, above the existing cutting, during the construction phase. The asset group within Felton Park are judged to have a **high** group value. The Grade II Listed Roman Catholic Church of St Mary (NHL 1371126) and Grade II Listed House (NHL 1303774) can be seen clearly from this field and, therefore, the setting would be temporarily moderately adversely impacted (**Image 8-1**) as a result of the construction works. The temporary work is assumed to include vehicles, road works and an increase in people. A temporary direct adverse impact is therefore predicted on the asset group's setting due to an increase in noise, air pollution from emissions and dust, in addition to the visual impact.



**Image 8-1 - View from Part A towards Felton Park**

**Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876)**

- 8.8.13. Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876) are **medium value** and are located to the west of Felton Park, approximately 70 m west of the Order Limits. There would also be temporary direct adverse impacts during construction due to changes in the setting for the assets of Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876). The majority of the construction work would be on the eastern side of the existing carriageway and the existing elevated section of the road would minimise the visual impacts. There would, however, still be intrusion within the setting due to an increase in noise, light and construction traffic.



**Image 8-2 - View from Part A towards Longfield Cottage (NHL 1041875)**

### **Thirston New Houses (NHL 1156136)**

- 8.8.14. Thirston New Houses (NHL 1156136) is of **medium value** and is located approximately 300 m east of the proposed Main Compound and 700 m from West Moor Junction. The Main Compound would be visible from the asset, due to the flat topography, however the heritage asset appears to have trees to the west so in the spring and summer months the view may be lessened (**Image 8-3**). Access to this area would be via Felton Road, so the Main Compound would temporarily increase activity on this route. It would also cause a temporary change to the landscape with a loss of an area of agricultural land. The construction of the proposed West Moor Junction is likely to introduce considerable noise, dust, pollution and an increase of construction traffic, resulting in temporary direct adverse impact.



**Image 8-3 - View from Grade II Thirston New Houses (NHL 1156136) towards the existing A1 and Main Compound**

**Causey Park House (NHL 1370647) and associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074)**

- 8.8.15. Causey Park House (NHL 1370647) and nearby assets have **medium value** and lie approximately 350 m west of Part A. Their location is elevated and would afford views over Part A. As the assets are all private property and were not accessible during the walkover survey, the views from assets have not been assessed. Access to the fields through which Part A would pass closest to the assets was also limited due to the presence of livestock. The assets, however, are currently screened to the east and partially to the south by planting. The existing planting to the east extends along the north and south sides of Causey Park Road and is expected to screen the assets from visual intrusion during the construction of Causey Park Overbridge, although a temporary increase in noise is anticipated. The asset would have some views of the construction of Part A, although these would be long distance and would be interrupted by the existing screening. The impacts would be temporary direct adverse.



**Image 8-4 - View from Part A towards Causey Park House (NHL 1370647)**

**Church of St Cuthbert, Hebron (NHL 1153555)**

- 8.8.16. There is a potential for temporary direct adverse impacts on the Church of St Cuthbert (NHL 153555) of **medium value** from the construction of the Highlaws Junction as there would be some level of visual intrusion during construction, along with a temporary increase in noise, lighting and traffic (**Image 8-5**). These potential impacts would be limited by the existing screening around the church, which reduces the visibility of Part A, and the distance between Part A and the asset (approximately 800 m) which would limit any impacts associated with noise or vehicle lighting.



**Image 8-5 -View from the Church of St Cuthbert (NHL 153555) towards the existing A1**

**Six Grade II Listed Mileposts (NHL 1371039, 1371021, 1370646, 1303996, 1153544 and 1042132)**

- 8.8.17. During the construction phase, the Grade II mileposts (NHL 1371039, 1371021, 1370646, 1303996, and 1042132) of **medium value** may not be visible to the public and travellers, thus affecting their setting (and purpose). A temporary increase in noise, light and air pollution during the construction works (at times) would also impact the milepost's setting. This would result in a temporary direct adverse impact. Two of the mileposts are recorded by the Milestone Society as missing (NHL 1370646 and 1371021; **Ref. 8.13**) and therefore, if their absence is confirmed, there would be no impact on them.

**High Highlaws Farm (non-designated)**

- 8.8.18. The non-designated built heritage asset High Highlaws Farm is **low value** and is located immediately to the west of the proposed Highlaws Junction. Due to the close proximity of the asset to Part A, the construction of the new junction would result in a temporary direct adverse impact, due to comprehensive changes to the setting (**Image 8-6**). The impacts would arise from the change in views to and from the asset, and the increase in noise, dust and pollution levels.





**Image 8-6 - View from High Highlaws Road to the existing A1 and the area of proposed works for Highlaws Junction**

### **New Houses Farm (non-designated)**

- 8.8.19. New Houses Farm (non-designated) is located approximately 200 m to the west of the offline section of Part A and is of **low value**. The property is screened from Part A by existing woodland and, therefore, the visual intrusion of the construction phase would be minimal, especially in the summer months. However, there would be temporary direct adverse impacts from an increase in noise, dust and lighting from the construction works.

### **Historic Landscapes**

- 8.8.20. Works that have the potential to impact upon the HLC during construction include ground levelling, topsoil stripping, the removal of existing road surfaces, construction of temporary construction compounds and haulage roads, and the installation of infrastructure items such as lighting columns, manholes, culverts, utilities, cables, drainage pipes and detention basins. Any form of landscaping also has the potential to impact on historic landscapes through a change in use of the land.

- 8.8.21. There would be permanent direct impacts on the HLC within the offline section of Part A as the land would see a change in use. The land likely to experience potential impacts is currently in agricultural use and the HLC records show the majority to be a product of 17th, 18th and 19th century enclosure and of **low value**. The construction of Part A would result in the loss of historic landscape features and would alter the field pattern in the immediate vicinity.
- 8.8.22. The HLC at the proposed Highlaws Junction and West Moor Junction comprises fields of 17th to 19th century (**low value**) and 20th century date (**negligible value**). The construction of the junctions would permanently alter the landscape character of the land within and immediately around the junctions, resulting in the loss of historic landscape components. The impacts would be permanent direct.
- 8.8.23. There would also be permanent direct adverse impacts on the historic landscape during construction of the online section of Part A, with a loss of land adjacent to the existing carriageway of **low to negligible value**. This would result in a partial loss of landscape character, although the legibility of the landscape would still be visible, and the magnitude of impacts would be less compared to the offline section and junction locations.
- 8.8.24. The Main Compound proposed adjacent to West Moor Junction would result in the temporary loss of agricultural land of mid-18th to 19th century date enclosure of **low value**. The field boundaries would be maintained, and the field returned to its original use following the completion of construction. The impacts would therefore be temporary direct adverse.
- 8.8.25. The construction phase would result in the removal of 12.5 ha of hedgerow in total of low value (refer to **Appendix 7.5: Arboricultural Report, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**) and **Figure 7.9: Vegetation Clearance Plans, Volume 5** of this ES (**Application Document Reference: TR010041/APP/6.5**)). Based on the HLC data, all the hedgerows to be removed have the potential to meet the criteria for being categorised as being of historic importance (as set out in The Hedgerow Regulations Act 1997 (**Ref. 8.17**)).

## **OPERATION**

### **Below Ground Archaeological Remains**

- 8.8.26. The majority of potential permanent direct adverse impacts on the below ground archaeological remains would occur during construction. The only potential impact during operation could arise from a change in hydrology and sub-surface water levels in and around Part A, resulting in a loss of below ground assets outside of the Order Limits from compaction, desiccation or waterlogging of below ground remains. Where this occurs, the potential impacts would be direct and permanent, and irreversible. There is also potential for currently unknown archaeological assets throughout this landscape to experience these potential impacts.

### **Built Heritage Assets**

- 8.8.27. Direct physical impacts on built heritage assets would occur during construction only.

### **Settings**

- 8.8.28. There is a potential for impacts on the setting of the above ground heritage assets during operation. Impacts would result from a change in the landscape around the relevant asset, which could reduce the contribution of the setting to the value of the asset. Impacts could

arise from the visual intrusion of Part A, which would change views towards and away from the asset. Impacts could also occur from a perceptible increase in noise, lighting, vibration and pollution from the vehicles using Part A, which would change the way the asset is experienced.

8.8.29. The assessment has established the potential for impacts on the setting of the following above ground heritage assets located in the Part A Outer Study Area during operation:

- a. Causey Park House (NHL 1370647) and the associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074)
- b. Church of St Cuthbert (NHL 1153555)
- c. Thirston New Houses (NHL 1156136)
- d. High Highlaws Farm (non-designated)
- e. New Houses Farm (non-designated)

**Causey Park House (NHL 1370647) and the associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074)**

8.8.30. The main alignment would move approximately 350 m west, bringing it into closer proximity to the Causey Park House asset group, of **medium** value. The asset group is situated in an elevated position in comparison to Part A, which would increase the visibility of Part A from the asset. The asset group is, however, currently well screened and therefore there are unlikely to be views from them to the Causey Park Overbridge, and only limited, interrupted views to the main Scheme alignment, minimising the magnitude of impact from Part A. The views would be most prominent in the winter months and the magnitude of impact higher at this time. There would also be potential permanent adverse impacts upon the setting as a result of an increase in noise, lighting and pollution from increased operational traffic from Part A.

**Church of St Cuthbert (NHL 1153555) and Thirston New Houses (NHL 1156136)**

8.8.31. There would be permanent direct adverse impacts on the Church of St Cuthbert and Thirston New Houses (both **medium** value) during operation due to a slight increase in light from traffic using the proposed Highlaws and West Moor Junctions. The visual impact and impacts associated with noise and pollution are predicted to be minimal, however, due to the distance between the assets and Part A.

**High Highlaws Farm (non-designated)**

8.8.32. The land to the east of High Highlaws Farm, of **low** value, is likely to experience permanent direct adverse impacts as a result of the widening of the existing carriageway, the introduction of the Highlaws Junction and the re-routing of the road immediately adjacent to the asset to form a slip road. This would alter the views to and from the asset and remove elements of the immediate setting that contributes to the value of the asset. There would also be impacts due to an increase in noise and the imposition of vehicle lights from those using the junction.

**New Houses Farm (non-designated)**

8.8.33. New Houses Farm is of **low** value. The proximity of Part A would likely result in a direct permanent adverse impact on New Houses Farm due to an increase in noise from vehicles using Part A, from pollution and vehicle lights. The impacts due to a change in views,

however, would be reduced by the existing woodland screening which would reduce any potential visual impacts substantially.

### Historic Landscapes

- 8.8.34. All impacts on historic landscapes would occur in the construction phase of Part A and there are none in the operation stage.

## 8.9. DESIGN, MITIGATION AND ENHANCEMENT MEASURES

### DESIGN

#### Below Ground Archaeological Remains

- 8.9.1. Any potential impacts on below ground remains resulting from a change in hydrology would be mitigated by a robust surface water drainage system which forms part of the design of Part A, as set out in **Chapter 10: Road Drainage and the Water Environment** of this ES.

#### Built Heritage Assets

- 8.9.2. The potential impacts on setting would occur mostly during the construction phase of Part A and would be temporary in nature, with only permanent adverse impacts predicted from the operation phase. During the construction phase, any work undertaken around a designated heritage asset would be undertaken in adherence to the measures contained within the Construction Environmental Management Plan (CEMP), which would be developed from the **Outline CEMP (Application Document Reference: TR010041/APP/7.3)**, to ensure any adverse impacts are minimised. These measures would include highlighting the location of the Grade II listed milepost to the construction team and in the **CTMP (Application Document Reference: TR010041/APP/7.4)** to ensure they are suitably protected from accidental damage through collision during the course of the construction phase.

### MITIGATION

#### Below-Ground Archaeological Remains

- 8.9.3. A programme of trial trenching evaluation following the consent of the DCO and before construction is required to establish whether potential features identified from the **HEDBA (Appendix 8.1, Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**, **Geophysical Survey (Appendix 8.2, Volume 7 of this ES)** and **LiDAR Assessment (Appendix 8.3, Volume 7 of this ES)** are present, and to confirm the presence or absence of currently unknown below-ground remains in the Order Limits. The post development consent archaeological work is secured by Requirement 9 in Schedule 2 of the **draft DCO (Application Document Reference: TR010041/APP/3.1)**. The evaluation would be undertaken post-consent and prior to any ground disturbance. The aim of the evaluation would be to determine the value, extent, date, level of survival of the assets, and to inform a mitigation strategy which would be implemented either prior to or during the construction phase. The programme of mitigation would also include measures to reduce effects on areas of ridge and furrow earthworks and potentially historic hedgerows.
- 8.9.4. Preservation in-situ typically would require adjustments in the design of Part A and is only usually applied where either such amendments are minor, or for assets of high or very high value. Current legislation draws a distinction between archaeological remains of national or international value and other remains considered to be of lesser value. Any below-ground archaeological remains identified either during the evaluation or subsequent mitigation

phase which are judged to be of very high or high value may require preservation in situ, whilst those of lesser value may undergo archive recording, where they are of regional to county or local to borough value.

8.9.5. Where any below-ground archaeological remains are identified which require preservation in-situ, a detailed method statement would be required to set out how the remains would be protected during the construction phase, in line with Historic England's Preserving Archaeological Remains (**Ref. 8.27**). The method statement would be produced in consultation with NCC and potentially Historic England (depending on the nature of the assets) and could include such measures such as avoidance through redesign, diversion (within the Order Limits), or reburial and protection. The mitigation measures adopted would be dependent on the nature and material of heritage assets identified. This would be secured through the **Outline CEMP (Application Document Reference: TR010041/APP/7.3)** which would be developed into a CEMP by the main contractor.

8.9.6. The detailed design and methodology for archaeological evaluation and mitigation is presented in **WSIs (Appendix 8.5: WSI for an Archaeological Trial Trench Evaluation and Appendix 8.6: WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works), Volume 7 of this ES (Application Document Reference: TR010041/APP/6.7))**. The WSIs outline the approach to post development consent excavation assessment, reporting, dissemination of the results of the work and archiving. The WSIs have been produced in consultation with the NCC County Archaeologist. The WSIs include a requirement for the production of detailed method statements, which would supersede the draft WSIs, as Part A progresses. Further work, as recommended by the outcome of the evaluation, would be implemented by the main contractor during construction.

### **Built Heritage Assets**

8.9.7. It is proposed that the Grade II Listed milestone, which may be removed as a result of Part A, be subject to a Level 1 Survey would in accordance with Historic England's 2016 guide, titled 'Understanding Historic Buildings. A Guide to Good Recording Practice' (**Ref. 8.28**) prior to the start of construction to create a permanent record of its existing setting. This would be followed by the careful removal of the asset and its safe storage during construction. On completion of construction, the milestone should be reinstated as close as possible to its original location to maintain its relationship with the route. Any mitigation would be devised in consultation with Historic England, NCC and the Milestone Society and set out in a method statement.

8.9.8. Impacts on built heritage assets during operation would be minimised through the use of visual or acoustic screening (such as landscape planting or noise barriers). The addition of screening through woodland planting at Highlaws Junction would screen the junction from the non-designated High Highlaws Farm and thus reduce visual impacts and reduce intrusion of noise and lights from vehicles. However, while pockets and strips of woodland planting are an existing feature in this landscape, there are none present currently to the east of the asset, and the introduction of them would result in an increased sense of detachment and isolation of the asset from wider, surrounding landscape. So, while the addition of woodland at Highlaws Junction would reduce impacts due to change in setting, it would not completely remove the impacts on High Highlaws Farm.

- 8.9.9. The introduction of the screening around Highlaws Junction would reduce the visual impact of Part A from the Grade II Listed Church of St Cuthbert by making Part A less visible. Screening in the form of woodland planting is also proposed along the section of Part A by Causey Park and New Houses Farm, which would further reduce visual disturbance during the operation of Part A.

### Historic Landscapes

- 8.9.10. As detailed in the **Outline CEMP (Application Document Reference: TR010041/APP/7.3)**, mitigation measures for the removal of any sections of field boundaries identified as being of historic significance, in accordance with Hedgerow Regulations Act (**Ref. 8.17**), would be devised in consultation with NCC.

### ENHANCEMENT

- 8.9.11. There are no enhancement measures proposed.

## 8.10. ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

- 8.10.1. This assessment of likely significant effects assumes the adoption of mitigation measures detailed above (unless otherwise stated). Where a below-ground asset is preserved in-situ, the impacts would be completely avoided, and therefore amount to no change and the effects neutral. The adoption of mitigation through preservation by record and archive would not avoid a permanent direct adverse impact on below ground assets as it would still be destroyed, however the magnitude of the change would be less. For the purposes of the assessment below, it is assumed that mitigation is through preservation by record and archive.

### CONSTRUCTION

#### Below Ground Archaeologic Remains

- 8.10.2. There is a potential for the presence of additional below ground remains associated with findspot of Mesolithic flint (HER 11356) around West Moor Farm and buried remains associated with The Chapel or Hermitage at Helm (HER 11347). Both are judged to be of medium value. If present, they would be subject to permanent, direct impacts as they would be destroyed by ground disturbance work. The magnitude of impact after preservation in record would be moderate adverse and there would be a permanent **moderate adverse** effect.
- 8.10.3. Any additional remains associated with the Medieval pottery found at the boundary of Bockenfield township (HER 11362) and Morpeth North Turnpike Road (HER 18226) exposed within the Order Limits are predicted to be of low value. If present, they would be subject to permanent, direct impacts as they would be destroyed by ground disturbance work during construction. The magnitude of impact after preservation by record would be moderate adverse and there would be a permanent **slight adverse (not significant)** effect.
- 8.10.4. Permanent direct adverse impacts are also predicted on two 19th century wells (HER 17379 and HER 18214) and Post-Medieval Causey Park Lodge Wood Enclosure (HER 11371), all of which have negligible value. The magnitude of impact after preservation by record would be moderate adverse and due to the value of the assets, there would be a **neutral effect (not significant)**.

- 8.10.5. There are areas associated with medieval or post-medieval ridge and furrow cultivation within the Order Limits which are considered to be low value. Where ground works are required in these locations, it would result in the permanent destruction of the assets. The magnitude of impact after preservation in record would be moderate adverse and the effects would therefore be **slight adverse (not significant)**.
- 8.10.6. The value of Cropmark of rectilinear enclosure (HER 11367), the unconfirmed archaeological assets indicated by cropmark evidence, Geophysical Survey (refer to **Appendix 8.2, Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)) and **LiDAR Assessment (Appendix 8.3, Volume 7** of this ES) and currently unknown below ground archaeological remains are at present unknown.
- 8.10.7. Based on the available evidence, there is a low potential for currently unconfirmed below ground archaeological remains to be of Prehistoric, Roman, Early Medieval and Late Medieval date of medium value. Where present, the magnitude of impact after preservation in record would be moderate adverse and the effects would therefore be **moderate adverse**.
- 8.10.8. There is a high potential for currently unknown below-ground heritage assets to be of Post-medieval date and of low value. Where present, the magnitude of impact after preservation in record would be moderate adverse and the effects would therefore be **slight adverse (not significant)**.
- 8.10.9. There is a high potential for currently unknown below-ground heritage assets to be of Modern date and of negligible value. Where present, the magnitude of impact after preservation in record would be moderate adverse and due to the value of the assets, there would be a neutral effect (**not significant**).
- 8.10.10. There is low likelihood for the presence of currently unknown below ground heritage assets of high or very high value within the Order Limits, ranging from the Prehistoric to the Post-Medieval period. Where present, the magnitude of impact after preservation by record would be moderate adverse and the effects would therefore be **large adverse** for high value assets and **very large adverse** for very high value assets.

### **Built Heritage Assets**

- 8.10.11. The construction phase would have a permanent direct impact on one built heritage asset; a Grade II Listed Milepost (NHL 1153544). The Milepost is of medium value, and there would be a minor adverse magnitude of impact on it due its need to be removed from its current location and relocated once construction is complete. This would result in a **slight adverse effect (not significant)**.

### **Settings**

- 8.10.12. The value of the of non-designated park and designated assets within Felton Park (NHL 1303774, 1154561 and 1371126) are high and the magnitude of impact to the setting of the asset group would be moderate adverse during construction due to visual intrusion on views, and an increase in noise, lighting, dust and construction traffic. This would result in a temporary **moderate adverse** effect.
- 8.10.13. The Grade II Listed Longfield Cottage (NHL 1041875) and Boundary Stones (NHL 1041876) are medium value and the magnitude of impact to the setting of the asset group would be moderate adverse during construction due to intrusion on views, and increase in

noise, lighting, dust and construction traffic. This would result in a temporary **moderate adverse** effect.

- 8.10.14. The Grade II Listed Thirston New Houses (NHL 1041875) is of medium value and the magnitude of impact to the setting of the asset would be minor adverse during construction due to its proximity to the proposed Main Compound resulting in an intrusion on views, and increase in noise, lighting, dust and construction traffic. This would result in a temporary **slight adverse** effect (**not significant**).
- 8.10.15. Causey Park Farm (NHL 1370647) and the associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074) which are of medium value. There would be temporary minor adverse magnitude of impacts on the setting due to intrusion on views, noise, lighting, dust and construction traffic. This would result in a temporary **slight adverse** effect (**not significant**).
- 8.10.16. There are five Grade II Listed Mileposts (NHL:1371039, 1371021, 1370646, 1303996, 1042132 and 1041877), which are of medium value. There would be temporary minor adverse magnitude of impacts on the setting due to intrusion of construction related traffic of resulting in a **slight adverse** effect (**not significant**).
- 8.10.17. The non-designated High Highlaws Farm and New Houses Farm are both of low value. There would be temporary major adverse magnitude of impacts on the setting due to intrusion on views, noise, lighting, dust and construction traffic and there would be temporary **slight adverse** effect (**not significant**).

### Historic Landscapes

- 8.10.18. The historic landscape types within the offline section of Part A are of low value. The magnitude of impact would be moderate adverse due to the permanent loss of all or part of components of the historic landscape types. There would be a **slight adverse** effect (**not significant**).
- 8.10.19. The historic landscape types within the online section of Part A are **low** value and the magnitude of change would be **minor adverse** as there would be a permanent partial loss of the historic landscape types. There would be a **slight adverse** effect (**not significant**).
- 8.10.20. There are hedgerows within Part A which could meet the criteria of historic importance based on the hedgerow regulation (**Ref. 8.17**) and would be of low value. The magnitude of impact on those which would be permanently entirely removed would be major adverse and a **slight adverse** effect (**not significant**). The magnitude of impact on those which would be permanently partially removed would be moderate adverse and a **slight adverse** effect (**not significant**).

### OPERATION

#### Below Ground Archaeological Remains

- 8.10.21. There is potential for below ground archaeological remains of unknown value outside of the Order Limits to be adversely impacted through changes in the local hydrology, resulting in the compaction, desiccation or waterlogging of buried remains. However, mitigation in the form of a robust drainage system provided by Part A would result in no change to the local hydrology. The magnitude of impact would be **no change** with a **neutral** effect (**not significant**).



### Built Heritage Assets

- 8.10.22. Grade II Causey Park Farm (NHL 1370647) and the associated heritage assets (NHL 1042880, 1304007, 1042881 and 1154074) are of medium value. There would be permanent moderate adverse magnitude of impacts on the setting of these assets during operation due to the proximity of Part A and the visual intrusion it would result in, along with the increase in noise, vehicle lighting and pollution, with **slight adverse** effects (**not significant**).
- 8.10.23. Grade II Thirston New Houses (NHL 1156136) and The Grade II Church of St Cuthbert (NLE 1153555) are both of medium value. Due to the distance between these assets and Part A, there would be a permanent minor adverse magnitude of impact due to a low-level visual intrusion of traffic using Part A. There would a **slight adverse** effect (**not significant**).
- 8.10.24. The non-designated High Highlaws Farm is of low value. The magnitude of impact would be major adverse due to the comprehensive permanent change in the asset's immediate setting, which is judged to contribute to the value of the asset. Due to the low value of the asset, the degree which the setting contributes to this value, it is judged that there would be a **slight adverse** effect (**not significant**).
- 8.10.25. The non-designated New Houses Farm is of low value. The magnitude of impact in the setting would be moderate adverse due to the proximity of Part A and an increase in vehicle noise anticipated, with a **slight adverse** effect (**not significant**).

### ASSESSMENT PARAMETERS

- 8.10.26. The Assessment Parameters are presented in **Section 2.12 of Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**).
- 8.10.27. Parameters 1, 2, 6, 7, 8, 9, 10 and 12 require the addition or repositioning of design aspects within the Order Limits, within an area where below ground assets are already assessed as being directly impacted during construction. As the parameters do not require additional land take, no additional heritage assets would be affected beyond those identified in this assessment
- 8.10.28. Parameters 3, 4, and 11 require alterations to the heights of design aspects (up to 1.5m) while Parameter 5 provides for the additional earth bunds up to 2 m in height in 5 locations. The change in height would not generate additional effects on the setting of heritage assets with the inclusion of the elements within these parameters.

### UPDATED DMRB GUIDANCE

- 8.10.29. The DMRB sensitivity test as described in **Section 8.4** has determined that the application of the updated guidance (**Ref. 8.12** and **Ref. 8.13**) would not change the likely significance of effects. As described in **paragraph 8.4.11** the updated guidance primarily relates to recommendations regarding the agreement of Study Areas and Value of Grade II Listed Buildings. The Study Areas used for the assessment in this chapter have already been agreed at the scoping stage with the relevant overseeing organisations (Historic England and NCC) and therefore the updated guidance does not change the approach to the assessment.
- 8.10.30. A review of the Grade II Listed Buildings likely to be impacted by Part A has not identified any grounds for increasing their value from medium to high as all are of regional

significance, associated predominantly with agricultural activity. The Significance Matrix Table has not changed (**Ref. 8.12**, Table 3.8.1). High value heritage assets with Minor impacts would have a Slight or Moderate effect, and Moderate Impacts would result in Moderate or Large effect. Medium value heritage assets with Minor impacts would have a Slight effect, and Moderate Impacts a Moderate effect. Therefore, it is considered that even if the value of Grade II Listed Buildings were increased from Medium to High value under the updated guidance (**Ref. 8.13**), based on assessment of the magnitude of impact on assets from Part A, the resultant significance of effect would remain the same based on the Table 3.8.1. Therefore, the conclusions of the assessment would remain unchanged.

## **8.11. MONITORING**

- 8.11.1. A programme of post development consent investigations is set out in the WSIs (**Appendix 8.5: WSI for an Archaeological Trial Trench Evaluation**, and **Appendix 8.6: WSI for an Archaeological Strip, Map and Sample Excavation (National Grid Diversion Works)**, **Volume 7** of this ES (**Application Document Reference: TR010041/APP/6.7**)), which will inform a suitable mitigation, and where necessary monitoring, strategy for any hitherto unknown archaeological remains. A suitable mitigation, and any necessary monitoring, strategy would be devised in consultation with NCC and set out in a WSI and/or a conservation management plan. This would set out how the monitoring, where required, would be undertaken. This is secured in **Requirement 9** of the draft DCO (**Application Document Reference: TR010041/APP/3.1**).

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