



WHITESTONE
solar farm

WHITESTONE SOLAR FARM

Volume 6: Environmental Statement

6.13 Chapter 13: Traffic and Transport (Clean)

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ENVIRONMENTAL STATEMENT

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13.4	Road User and Pedestrian Safety – Collision Calculations

Glossary

Term	Meaning
<i>Cable Corridors</i>	Corridors within which the high voltage cables would be constructed.
<i>Draft Environmental Statement</i>	The Draft Environmental Statement which presented the preliminary environmental information relating to the Proposed Development. The Draft ES was prepared to present information for statutory consultation in accordance with current EIA regulation.
<i>Environmental Statement (ES)</i>	The Environmental Statement which presents the environmental information relating to the Proposed Development. The ES has been prepared to present information for formal consultation in accordance with current EIA regulation.
<i>Order Limits</i>	Maximum extent of the Proposed Development comprising the Site and Cable Corridors.
<i>The Applicant</i>	Whitestone Net Zero Ltd.
<i>The Application</i>	The Application to be submitted to the Secretary of State for a Development Consent Order.
<i>The Proposed Development</i>	The proposed Whitestone Solar Farm.
<i>The Site</i>	The land planned to be used for solar PV array and associated infrastructure, BESS, substations, and landscaping and habitat enhancement. The Site is split into W1, W2, and W3.
<i>Long Lane 400kV Substation</i>	The new 400 kilovolt National Grid substation proposed on land immediately east of Long Lane, Brinsworth, S60 4JJ.
<i>Whitestone 1 (W1)</i>	The northern parcels of the Whitestone Solar Farm.
<i>Whitestone 2 (W2)</i>	The middle parcels of the Whitestone Solar Farm.
<i>Whitestone 3 (W3)</i>	The southern parcels of the Whitestone Solar Farm.

Acronyms

Acronym	Meaning
AADT	Average Annual Daily Traffic

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Acronym	Meaning
AAWT	Average Annual Weekday Traffic
AIL	Abnormal Indivisible Load
ALV	Abnormal Loads Vehicle
ANPR	Automatic Number Plate Recognition
ATC	Automatic Traffic Counts
BESS	Battery Energy Storage System
BOAT	Byway Open to all Traffic
CDC	City of Doncaster Council
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
DfT	Department for Transport
DMMO	Definitive Map Modification Order
DMRB	Design Manual for Roads and Bridges
DMS	Delivery Management System
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESDAL	Electronic Service Delivery for Abnormal Loads
GPS	Global Positioning System
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicles
IEMA	Institute of Environmental Management and Assessment
ISEP	Institute of Sustainability and Environmental Professionals
LGV	Light Goods Vehicles
LRN	Local Road Network
MAVRIC	Mapping Application for Visualising Road Injury Casualties
NCN	National Cycle Network
NH	National Highways
NMU	Non-Motorised User
NPPF	National Planning Policy Framework
NRSWA	New Roads and Street Works Act
NPS	National Planning Statement
NSIP	Nationally Significant Infrastructure Project
oCEMP	Outline Construction Environmental Management Plan
oCTMP	Outline Construction Traffic Management Plan
oDEMP	Outline Decommissioning Environmental Management Plan
oPRoWMP	Outline Public Rights of Way Management Plan

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Acronym	Meaning
<i>PPE</i>	Personal Protective Equipment
<i>PRoW</i>	Public Rights of Way
<i>PRoWMP</i>	Public Right of Way Management Plan
<i>PV</i>	Photovoltaic
<i>RMBC</i>	Rotherham Metropolitan Borough Council
<i>RTC</i>	Road Traffic Collision
<i>RTS</i>	Region Transport Strategy
<i>SRN</i>	Strategic Road Network
<i>TA</i>	Transport Assessment
<i>TMMS</i>	Traffic Management and Monitoring System
<i>W1</i>	Whitestone 1
<i>W2</i>	Whitestone 2
<i>W3</i>	Whitestone 3

Units

Units	Meaning
<i>km</i>	kilometre
<i>kV</i>	Kilovolt
<i>m</i>	Metre
<i>mph</i>	miles per hour
<i>MW</i>	Megawatt

13 TRAFFIC AND TRANSPORT

13.1 Introduction

- 13.1.1 This Chapter of the Environmental Statement (ES) has been prepared on behalf of Whitestone Net Zero Ltd ('the Applicant') to evaluate the potential effects of the construction, operation and maintenance, and decommissioning of Whitestone Solar Farm (the Proposed Development) in relation to Traffic and Transport.

Order Limits

- 13.1.2 The extent of the Order Limits are described in **ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3]** and shown in **ES Volume 3, Figure 3.1: Order Limits**. The Proposed Development is described in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]** and shown spatially on the **Works Plans [EN0110020/APP/2.3.1]**.

The Proposed Development

- 13.1.3 The Proposed Development involves the construction, operation and maintenance, and decommissioning of more than 100 megawatts (MW) of solar photovoltaic (PV) array, Battery Energy Storage System (BESS), onsite substations and supporting infrastructure, and grid connection infrastructure. The grid connection infrastructure would connect the Proposed Development to the National Grid at the new 400 kilovolt (kV) National Grid substation proposed on land immediately east of Long Lane, Brinsworth, S60 4JJ (Long Lane 400kV Substation). National Grid has applied to Rotherham Metropolitan Borough Council (RMBC) for the development of this new substation which is intended by National Grid to be operational in time for the Proposed Development to connect in 2029. This substation is therefore not included in the Proposed Development and will be subject to a separate planning application taken forward by National Grid.
- 13.1.4 As the Proposed Development would have a generating capacity in excess of 100MW, it is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.
- 13.1.5 The Proposed Development would be located within the Order Limits. The Order Limits encompass the total area of the project comprising the Site and Cable Corridors. The Site is specifically the land that is planned to be used for Site array and associated infrastructure, BESS, substation, landscaping and habitat enhancement. The Site is split into Whitestone 1 (W1), Whitestone 2 (W2), and Whitestone 3 (W3).
- 13.1.6 Highway Works are sections of the highway network that will contain localised improvements, such as improvements to road edge where it is deteriorated, or temporary highway and traffic works required to safely accommodate the Abnormal Indivisible Load (AIL) deliveries. These areas will support the movement of construction vehicles on narrower sections of the local highway network within parts of the construction vehicle routes to the Site (as described in this Chapter).

- 13.1.7 This Chapter of the ES includes the following sections:
- Legislation, Policy, and Guidance
 - Consultation
 - Assessment Methodology
 - Baseline
 - Embedded Mitigation
 - Assessment of Effects
 - Additional Mitigation and Residual Effects; and
 - Cumulative Effects.
- 13.1.8 This Chapter is supported by the following figures in **ES Volume 3, Figures [EN0110020/APP/6.20]**:
- **Figure 13.1: Study Area**
 - **Figure 13.2: Proposed HGV Routing – Whitestone 1**
 - **Figure 13.3: Proposed HGV Routing – Whitestone 2 – East**
 - **Figure 13.4: Proposed HGV Routing – Whitestone 2 – Northwest**
 - **Figure 13.5: Proposed HGV Routing – Whitestone 2 – Southwest; and**
 - **Figure 13.6: Proposed HGV Routing – Whitestone 3.**
- 13.1.9 This Chapter is supported by the following appendices in **ES Volume 3, Appendices [EN0110020/APP/6.20]**:
- **Appendix 13.1: Legislation, Policy and Guidance**
 - **Appendix 13.2: Transport Statement**
 - **Appendix 13.3: Fear and Intimidation Calculations; and**
 - **Appendix 13.4: Road User and Pedestrian Safety – Collision Calculations.**

13.2 Legislation, Policy and Guidance

- 13.2.1 The legislation, policy, and guidance related to Traffic and Transport, as detailed in **ES Volume 3, Appendix 13.1: Legislation Policy and Guidance [EN0110020/APP/6.20]**, and relevant to the Proposed Development, are outlined below.

Legislation

- 13.2.2 Legislation that has been considered includes:
- Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, Regulation (5)(2)¹.

National Policy

- 13.2.3 National policy that has been considered includes:
- Overarching National Policy Statement (NPS) for Energy (EN-1) 2025²

- NPS for Renewable Energy Infrastructure Energy (EN-3) 2025³
- NPS for Electricity Networks Infrastructure (EN-5) 2025⁴; and
- National Planning Policy Framework (NPPF) (2024)⁵.

Local Policy

13.2.4 Local policy that has been considered includes:

- City of Doncaster Local Plan 2015-2035⁶
- Rotherham Metropolitan Borough Council Local Plan Core Strategy 2013-2028 (adopted 2014)⁷
- Rotherham Metropolitan Borough Council Transport Strategy 2016-2026⁸
- North-East Derbyshire District Council Local Plan 2014-2034⁹
- Derbyshire Local Transport Plan 3 (LTP3) 2011-2026¹⁰; and
- Sheffield City Region Transport Strategy (RTS)¹¹.

Guidance

13.2.5 Supporting guidance that has been considered includes:

- Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment (IEMA) ("ISEP 2023") Guidelines for the Environmental Assessment of Road Traffic¹²¹³
- Department for Transport (DfT) publication "Design Manual for Roads and Bridges" (DMRB)¹⁴
- Department for Transport (DfT) Circular 01/2022: The Strategic Road Network and the Delivery of Sustainable Development¹⁵; and
- Planning Practice Guidance on Travel Plans, Transport Assessments and Transport Statement¹⁶.

13.2.6 More detailed information regarding the above legislation, policy and guidance can be found in **ES Volume 3, Appendix 13.1: Legislation, Policy and Guidance [EN0110020/APP/6.20]**.

13.3 Consultation

13.3.1 This Section provides a summary of the consultation undertaken to date regarding the Proposed Development. Further detail on the consultation can also be found in **ES Volume 1, Chapter 2: EIA Methodology [EN0110020/APP/6.2.1]**.

EIA Scoping

13.3.2 A Scoping Opinion was sought from the Planning Inspectorate to determine the content of the assessment, as well as the approach and methods to be used. The outcomes of this exercise were documented in the Scoping Report (**ES Volume 3, Appendix 2.1: EIA Scoping Report [EN0110020/APP/6.20]**), which was submitted to the Planning Inspectorate on 23 April 2025. The Scoping Report captures the findings

of the scoping exercise and outlines the technical guidance, standards, best practices, and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Proposed Development on Traffic and Transport.

- 13.3.3 A Scoping Opinion was received from the Planning Inspectorate on 03 June 2025 (**ES Volume 3, Appendix 2.2: EIA Scoping Opinion [EN0110020/APP/6.20]**).
- 13.3.4 **Table 13.1** summarises how this Chapter of the ES addresses key points from the Environmental Impact Assessment (EIA) Scoping Opinion comments related to Traffic and Transport.

Table 13.1: Scoping Opinion Comments and How They Are Addressed in This ES

Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
Planning Inspectorate	ID 2.1.9, Access Routes: <i>“The ES should describe the proposed site entrance(s) and the routes to be used for all vehicular access during construction and operation of the Proposed Development and this information should be clearly presented on supporting plans within the ES. The ES should describe and assess the potential effects, where they are likely to be Significant, associated with any improvements/ changes to the access routes which are either required to facilitate construction of the Proposed Development or are required for restoration purposes on completion of the works. For the assessment of effects during construction, the ES should explain how the proposed access route(s) relate to sensitive receptors.”</i>	This Chapter of the ES considers any potential effects of increased traffic (worst case) on both Strategic and Local Road Networks (SRN and LRNs, respectively) and adjacent communities along the delivery routes in accordance with the ISEP 2023 Guidelines¹³ entitled Environmental Assessment of Traffic and Movement. A summary of the methodology used to define the Study Area is presented in this Chapter. A summary of the Heavy Goods Vehicle (HGV) routing and vehicular access strategy is also presented in this Chapter. Further detail on access strategy is included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	Section 13.7 in this Chapter. Section 13.4 in this Chapter. ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].
Planning Inspectorate	ID 3.8.1, The Scoping out of the Operation Phase: <i>“The Scoping Report proposes to scope out operational phase traffic and transport on the basis there will be low volumes of operational traffic associated with the Proposed Development. The Inspectorate agrees to scope this matter out, subject to the ES confirming the frequency and type of</i>	The operational phase will generate Negligible levels of traffic, limited to occasional maintenance visits by service vehicles. It is anticipated that maintenance visits during the operational phase will occur once per week on average to any one	Section 13.3 in this Chapter.

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>vehicles would remain are below appropriate threshold guidance levels and would not give rise to a Significant effect"</i>	area within the Site and be via van or other similarly sized vehicles. This level of traffic associated with this phase will be insufficient to trigger the threshold for assessment as set out in the ISEP 2023 Guidelines.	
Planning Inspectorate	ID 3.8.2, The Scoping out of the Decommissioning Phase: <i>"The Scoping Report proposes to scope out decommissioning phase traffic and transport on the basis that traffic will be similar to the construction phase. The Inspectorate notes that prior to decommissioning the Applicant proposes to undertake a traffic assessment due to the uncertainty around predicting traffic flows in the future. The Inspectorate is content to scope this matter out of further assessment on the basis that the ES secures the future traffic assessment prior to decommissioning through the Development Consent Order (DCO), demonstrating any relevant agreement with the consultation bodies".</i>	A Decommissioning Environmental Management Plan (DEMP) will be prepared at the cessation of operations at the Proposed Development. A Decommissioning Traffic Management Plan will be included in the DEMP. An outline Decommissioning Traffic Management Plan (oDEMP) [EN0110020/APP/5.11] has been submitted as part of the Application.	Section 13.6 in this Chapter.
Planning Inspectorate	ID 3.8.3, Study Area <i>"The Study Area has been defined as roads that are expected to be affected by increased traffic flows; these roads are listed in Scoping Report paragraph 14.3.10. However, it is not clear what methodology was used to include these roads into the assessment. The ES should justify how the Study Area has been identified and provide a figure</i>	A summary of the methodology used to define the Study Area is presented in this Chapter. Further detail is included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	Section 13.4 in this Chapter. ES Volume 3, Figures 13.1-13.6 [EN0110020/APP/6.19].

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>illustrating the extent of the Study Area and the expected route(s) of construction traffic with reference to relevant industry guidance, and any relevant agreement with consultation bodies"</i>		ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].
<i>The Planning Inspectorate</i>	ID 3.8.4, Access Points and Routes to the Proposed Development <i>"The Scoping Report states that access routes and arrangements are not yet known at this stage but that at least 25 access points would be required. The ES should provide a description of the proposed access routes along with any associated highways works and identify works/accesses and routing on a Figure and in the Construction Traffic Management Plan (CTMP). The ES should assess any associated Significant effects that may arise as a result of any highways works where they are likely to occur".</i>	A summary of the HGV routing and vehicular access strategy is presented in this Chapter with further detail included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. Access location and indicative designs have been provided as part of the Outline Construction Traffic Management Plan (oCTMP) [EN0110020/APP/5.12.1] submitted with the Application.	Section 13.4 in this Chapter. ES Volume 3, Figures 13.1-13.6 [EN0110020/APP/6.19]. ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].
<i>The Planning Inspectorate</i>	ID 3.8.5, Public Rights of Way – Baseline Use <i>"The Scoping Report states there are a number of PRow's which cross or pass close the proposed site boundary, and these are expected to be temporarily diverted or closed during construction. However, the Scoping Report does not explain how the baseline use of these PRow's will be established. The ES should explain the methodology for determining the baseline use of PRow's and provide any relevant agreement with consultation bodies.</i>	A proportionate assessment of Non-Motorised Users (NMUs) including the Public Rights of Way (PRow) network has been undertaken within this Chapter with further detail included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and ES Volume 2, Chapter 15:	Section 13.7 in this Chapter. ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. ES Volume 2, Chapter 15: Socioeconomics

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>For the avoidance of doubt the ES should assess the impacts to PRoW and on walking, cycling and horse-riding receptors from the Proposed Development where Significant effects are likely to occur."</i>	Socioeconomics and Land Use [EN0110020/APP/6.15]. A Public Rights of Way Management Plan would be produced prior to the commencement of construction activities. An outline Public Rights of Way Management Plan (oPRoWMP) [EN0110020/APP/5.14] is submitted with the Application.	and Land Use [EN0110020/APP/6.15].
National Highways	Appendix 1, Impact on Strategic Road Network (SRN): <i>"National Highways will need to understand the likely traffic impact of the proposals upon the SRN, namely the M1 and M18 and also the impacts on the cable crossings of the SRN"</i>	A Transport Statement (see ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]) has been produced which includes an assessment of temporary construction traffic impacts on the SRN.	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].
National Highways (NH)	Appendix 1, Site Access <i>"Site egress and access arrangements for each land parcel is not yet identified within the EIA Scoping Report. NH expect the Applicant to outline site access arrangements within a subsequent Transport Assessment (TA) and Construction Traffic Management Plan (CTMP). Any internal access roads to be constructed as part of the development,</i>	A summary of the HGV routing and vehicular access strategy is presented in this Chapter with further detail included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	Section 13.4 in this Chapter. ES Volume 3, Figures 13.1-13.6 [EN0110020/APP/6.19]. ES Volume 3, Appendix 13.2: Transport

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>in order to accommodate site traffic, should also be outlined within the TA and CTMP"</i>	An outline Construction Traffic Management Plan (oCTMP) [EN0110020/APP/5.12.1] is included with the Application. Internal access tracks are not required to form part of the assessment in this Chapter, but details of internal tracks are provided in ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]. Details on internal access track locations and construction are presented in ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5] and the Outline Design Parameters [EN0110020/APP/7.3]	Statement [EN0110020/APP/6.20.1]. oCTMP [EN0110020/APP/5.12.1].
National Highways	Appendix 1, Abnormal Loads <i>"It should be noted that any abnormal loads would need to be approved via Electronic Service Delivery for Abnormal Loads (EDSAL)."</i>	Noted As requested, the Applicant will apply for an Abnormal Loads Notification through the Electronic Service Delivery for Abnormal Loads (EDSAL) process prior to the commencement of deliveries, post consent. Details are provided in the oCTMP [EN0110020/APP/5.12.1] .	N/A
National Highways	Appendix 1, Transport Assessment (TA) <i>"National Highways considers the TA should be prepared in support of the development proposals and that the TA should be based on a 'first principles'</i>	A Transport Statement (see ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]) has been	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>approach for the construction, operation and decommissioning phases evidenced using the Applicant's / operator's experience on similar schemes to inform the TA. This is considered by NH to be the most accurate methodology to enable to understand and assess any peak hours impacts at the SRN. The TA accompanying the planning submission is expected to follow relevant guidance, notably the Department for Transport Circular 01/2022 to enable the impact of the assessment of the development proposals at the SRN to be assessed"</i>	produced which addresses these matters. The Transport Statement undertaken has adopted a first-principles approach for construction traffic drawing on evidence from comparable schemes and follows relevant guidance, including DfT Circular 01/2022.	
National Highways	Appendix 1, Subjects to be included within the TA. <i>"Traffic Generation and Distribution:</i> <i>• Trip Generation and Distribution for all phases of site development, including construction, operation and decommissioning;</i> <i>• Number of AIL movements;</i> <i>• Number of HGV movements;</i> <i>• Distribution of construction vehicles and staff / operational movements; and</i> <i>• Timings of vehicle movements including any movements between site parcels</i> <i>Geometric and operational constraints on proposed routes:</i> <i>• Geometry and visibility at access point(s) to / from the SRN; and</i> <i>• Collision record at access point(s) to / from the SRN"</i>	A Transport Statement (see ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]) has been produced which addresses these matters. It should be noted that The Proposed Development does not include any direct access to or from the SRN. Therefore, there are no SRN access points for which geometric design, visibility, or collision data require assessment.	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].
National Highways	Appendix 1, Construction Traffic Management Plan (CTMP)	An oCTMP [EN0110020/APP/5.12.1] which	Section 13.6 in this Chapter.

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	<i>“National Highways consider that a CTMP should inform the development proposals and should be aligned to the TA to ensure there is crossover and compliance between the two documents. The CTMP should demonstrate the likely impacts of the development on the SRN as well as on existing road users. The CTMP should identify the measures that can be put in place to minimise traffic and associated environmental impacts on the SRN and its adjacent receptors. The purpose of the CTMP is to ensure the safety of the public and the workforce”</i>	forms the basis of a detailed CTMP to be prepared pre-construction is submitted with the Application.	oCTMP [EN0110020/APP/5.12.1].
National Highways	Appendix 1, Subjects to be included within the CTMP. • <i>“Identification of the approved haul routes to site (including AIL routes) and identification of measures to prevent the use of any unauthorised routes;</i> • <i>Identification of the Site access strategy;</i> • <i>Details of the expected traffic generation associated with the construction, operation and decommissioning periods including maximum daily HGV trips;</i> • <i>Identification of the proposed works programme by construction task;</i> • <i>Identification of workforce numbers for the Site and details of workforce travel arrangements;</i> • <i>Details of site working hours and details of any exceptions;</i> • <i>Measures to minimise, wherever possible, the use of public roads during morning and evening peak hours;</i>	An oCTMP [EN0110020/APP/5.12.1] is submitted with the Application and contains measures and principles that address these matters. A detailed CTMP will be prepared in advance of construction, as required by Schedule 2 of the Draft DCO, and will be in general accordance with the oCTMP.	Section 13.6 in this Chapter. oCTMP [EN0110020/APP/5.12.1].

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	• <i>Details of measures to reduce the number of delivery trips to site such as a combination of consolidated ordering, rationalising suppliers and consolidated deliveries;</i> • <i>Details of measures to reduce on-site waste such as recycling and re-use of materials to minimise the number of collections from site;</i> • <i>Provision of wheel washing facilities (or mechanical rumble devices where mains water is not available) on all site exits;</i> • <i>Vehicles carrying soil and other dusty materials to be fully sheeted when travelling to or leaving site;</i> • <i>Use of an approved mechanical road sweeper to clean the surrounding road network of any mud or debris deposited by site vehicles. The road sweeper should be available whenever needed;</i> • <i>Details for the use of any traffic lights on public roads for safety. If used, traffic queues will require monitoring and sequences to reduce potential congestion;</i> • <i>Details for any temporary traffic management and warning signs;</i> • <i>Details for publicising the movement of AILs;</i> • <i>Details of a site liaison officer who will act as point of contact for the CTMP; and</i> • <i>Details regarding how the CTMP will be monitored”.</i>		
National Highways	Appendix 1, Operational Phase “NH consider it very important for the Applicant that the design of the development is undertaken in a way in which the	In terms of operational traffic, it is anticipated that maintenance visits during the operational phase will occur once per week on average to	Section 13.3 in this Chapter.

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>adjacency of the development does not directly interfere with the operation of the SRN.</i> <i>The Applicant should also state how vehicle access arrangements would be coordinated with existing site operations, notably surrounding substations and the Penny Hill Wind Farm.</i> <i>Notwithstanding the above, it is noted that the EIA Scoping Report states that the effect of operational traffic is expected to be negligible and so is proposed to be scoped out of the traffic and transport ES chapter. Whilst the principal of scoping out the impact of the operational phase traffic is generally considered acceptable, National Highways will require confirmation of typical daily and peak period movements associated with this phase of the development, before the assessment of the operational impacts can be discounted."</i>	any one area within the Site and be via van or other similarly sized vehicles. This level of traffic associated with this phase will be insufficient to trigger the threshold for assessment as set out in the ISEP 2023 Guidelines¹³ and therefore has been scoped out. It is not anticipated that operational traffic associated with the Proposed Development will cause any disruption to existing site operations of other projects. There will be no interference with the SRN.	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]
National Highways	Appendix 1, Decommissioning Phase <i>"It is stated that a legal requirement of the DCO process would be the completion of the decommissioning phase 60 years from the start of construction. Decommissioning will involve the removal of solar arrays and ancillary infrastructure. The Site would then revert back to its prior usage, such as for agricultural purposes. NH has already made reference to the fact that the decommissioning phase should be referenced within the TA, although it is considered that a Decommissioning Traffic Management Plan can also be secured via a suitably</i>	A Decommissioning Environmental Management Plan (DEMP) will be prepared at the cessation of operations at the Proposed Development. A Decommissioning Traffic Management Plan will be included in the DEMP. An oDEMP [EN0110020/APP/5.11] is included with the Application and is secured by a requirement in the	Section 13.6 in this Chapter. oDEMP [EN0110020/APP/5.11]

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>worded planning requirement, should planning permission for the development proposals be granted"</i>	Draft DCO [EN0110020/APP/3.1.1].	
Rotherham Metropolitan Borough Council (RMBC)	Appendix 1, Traffic and Transport Policy <i>"The Local Planning Policy section has not acknowledged policies in the Sites and Policies Document and SPD12: Transport Assessments, Travel Plans and Parking Standards (Adopted June 2021)"</i>	This has now been acknowledged and considered appropriately.	Section 13.2 in this Chapter. ES Volume 3, Appendix 13.1: Policy, Legislation and Guidance [EN0110020/APP/6.20].
RMBC	Appendix 1, Public Rights of Way (PRoW) <i>"Two DMMO claims fall within the Site boundaries as shown on Figure 3.11 in the report.</i> <i>PROW/C/66 (Appendix 3) - There is a claim to upgrade Ulley Bridleway No 6 to a byway open to all traffic (BOAT) located between Morthen Lane and Penny Hill Lane in Ulley</i> <i>PROW/C/67 (Appendix 4) – A claim to record a by way open to all traffic along Carr Lane in Ulley"</i>	The Applicant is aware of several Definitive Map Modification Orders (DMMOs) submitted to the local authorities in the vicinity of the Proposed Development. If any application orders are determined by LA, they will be managed during construction in a similar manner to the other PRoW. Given that these DMMOs are still under consideration and their outcomes are not yet determined, and with potential future applications unknown, it may be necessary to close and/or divert any new PRoW during construction where required to ensure the deliverability of the Proposed Development.	oPRoWMP [EN0110020/APP/5.15].

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
		An oPRoWMP [EN0110020/APP/5.15] is included with the Application.	
RMBC	Appendix 1, Impact on Equestrian Routes “Routes for construction traffic should avoid passing along or across equestrian routes, including byways and bridleways. Where such use is unavoidable, provision of safe alternatives for the duration of the development, or protection of the equestrian access, should be in place. - Existing bridleways, byways or other highways across the land should be provided for at no less than 5m width between fences. - Inverter housing should be constructed to avoid sound transmission and sited away from bridleways and byways to ensure operational noise and maintenance is at a distance. - Additional opportunities for equestrian access should be considered.”	A proportionate assessment of NMUs including the PRoW network has been undertaken within this Chapter with further detail included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and ES Volume 2, Chapter 15: Socioeconomics and Land Use [EN0110020/APP/6.15]. A Public Rights of Way Management Plan would be provided prior to the commencement of construction activities in consultation with the relevant stakeholders). An oPRoWMP [EN0110020/APP/5.15] is included with the Application.	Section 13.7 in this Chapter. ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. ES Volume 2, Chapter 15: Socioeconomics and Land Use [EN0110020/APP/6.15]. oPRoWMP [EN0110020/APP/5.15].
RMBC	Appendix 1, Temporary Closures of PRoW “Due process allows the developer to request temporary closures of rights of way for up to 6 months, RMBC can extend these closures for up to a	The Applicant or appointed contractor will take this into account in the preparation of the detailed PRoWMP to be prepared pre-	oPRoWMP [EN0110020/APP/5.15].

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>further 12 months but beyond that further requests to extend temporary closures are referred to the Secretary of State who may refuse to extend the closures. We would look to the developer to provide alternative routes wherever possible for such temporary closures”.</i>	construction and which is secured by a requirement in the Draft DCO EN0110020/APP/3.1.1] . An oPRoWMP [EN0110020/APP/5.15] is included with the Application.	
RMBC	Appendix 1, Diversion of PRoW <i>“Our advice in relation to any development is to seek to incorporate (and if feasible improve) existing rights of way, however, the developer will be aware that facilities exist to apply for public path diversion orders using due process. Such diversions are open to public consultation and objection and, if the council receives objections it cannot resolve, must forward the order to the Secretary of State to determine if a public inquiry is necessary. We are aware that the waiting time for such inquiries can go into a number of years and seek to avoid this necessity if we can. Our advice to developers is to involve the rights of way team and we will involve local relevant parties in discussions. Quite often meetings to explain what is proposed and to listen to local concerns and suggestions are of very considerable benefit and we would be delighted to facilitate such an approach if any orders are deemed necessary. Due processes have fees attached”.</i>	The Applicant or appointed contractor will take this into account in the preparation of the detailed PRoWMP to be prepared pre-construction and which is secured by a requirement in the Draft DCO [EN0110020/APP/3.1.1] . An oPRoWMP [EN0110020/APP/5.15] is included with the Application.	oPRoWMP [EN0110020/APP/5.15] .
RMBC	Appendix 1, Operational Phase <i>“Once operational, Solar Farms generate very little traffic on the local road network, with the main vehicular movements being associated with</i>	This supports the scoping out of operational impacts on traffic and transport.	Section 13.3 in this Chapter.

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Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	<i>infrequent maintenance visits. On this basis, the principle of the solar farm use would not raise any concerns over road safety"</i>		
RMBC	Appendix 1, Construction Phase <i>"The main trips associated with the Site would occur during the construction phase. Therefore, a Transport Statement / Construction Management Plan would need to be provided to show how the impact of construction traffic would be mitigated against on the local road network. In addition, details of any proposed site access would be required for assessment to ensure it is safe and suitable and comply with industry standards".</i>	A Transport Statement has been produced which addresses these matters. An oCTMP [EN0110020/APP/5.12.1] is included with the Application.	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. oCTMP [EN0110020/APP/5.12.1].

Issues Scoped Out

13.3.5 Following the scoping exercise, some elements were scoped out of assessment in this ES. **Table 13.2** presents the issues scoped out of this assessment.

Table 13.2: Issues Scoped Out of the EIA

Potential Effect / Topic	Development Phase	Rationale
Operational Phase	Operation and maintenance	Traffic associated with the operational phase of the Proposed Development will comprise of activities associated with inspection, monitoring, and general Site up-keep. The operational phase will generate negligible levels of traffic, limited to occasional maintenance visits by service vehicles. It is anticipated that such visits will occur once per week on average to any one area within the Site and be via van or other similarly sized vehicles. This level of traffic associated with this phase will be insufficient to trigger the threshold for assessment as set out in the ISEP 2023 Guidelines¹³ and therefore has been scoped out of this assessment.
Decommissioning Phase	Decommissioning	It is not possible to accurately forecast baseline environment including traffic flow levels 60 years into the future. For this reason, prior to decommissioning of the Proposed Development, a traffic assessment will be undertaken, and appropriate traffic management procedures agreed with the relevant authorities at the time. A DEMP will be prepared at the cessation of operations at the Proposed Development. A Decommissioning Traffic Management Plan will be included in the DEMP. An oDEMP [EN0110020/APP/5.11] which will form the basis of the full DEMP has been submitted as part of the Application.

Potential Effect / Topic	Development Phase	Rationale
Air Quality	Construction, Operation and maintenance, and decommissioning	Potential effects to be assessed in ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12] .
Noise and Vibration	Construction, Operation and maintenance, and decommissioning	Potential effects to be assessed in ES Volume 2, Chapter 14: Noise and Vibration [EN0110020/APP/6.14.1] .

Statutory Consultation

- 13.3.6 A Statutory Consultation period was held between 16 September and 28 October 2025 in line with Section 47 of the Planning Act 2008. Feedback was sought from the local community and a range of consultee bodies based on the preliminary information and assessments presented in the Draft Environmental Statement (Draft ES).
- 13.3.7 **Table 13.3** presents feedback from statutory consultees given at Statutory Consultation, and how this is addressed in this ES.

Table 13.3: Statutory Consultation Feedback from the Statutory Consultation Period

Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
National Highways	<i>"Paragraph 1.1.155 of the TS states that the trip generation for construction workers has been calculated based on the total number of workers expected at each compound location for W1, W2 (West and East) and W3, with modal splits applied to reflect anticipated travel behaviour. Whilst JSJV consider the mode split assumptions described in paragraphs 1.1.156 and 1.1.157 to be reasonable, it is not clear how the reduction in car trips associated with the 20% minibus use feeds through to trip distribution assessments presented within subsequent sections of the TS or Chapter 13 of the Draft ES (particularly how the usage of the minibus impacts on car trips at the SRN). Further information identifying the potential minibus pick-up/drop off locations is requested, so that any reduction in car trips at the SRN can be appropriately identified and assessed."</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1] . Details on how consultation specific to trip generation, routeing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] .	The assessment presented in Section 13.7 uses the trip generation detail provided in the Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outline in the oCTMP [EN0110020/APP/5.12.1] .
National Highways	<i>"Paragraphs 1.1.160 and 1.1.161 of the TS identify that the trip generation for construction-related HGVs was calculated using a combination of unit-based and volume-based delivery estimates across each compound area. Figures were then aggregated to produce total HGV movements per location, over the entire construction phase. Variability in construction activity, delivery schedules and site logistics has been accounted for by applying a contingency factor of 25% to the total HGV estimates. JSJV consider the approach to HGV trip generation is in line with previous requests for the calculations to be based on 'first principles'. The trip generation totals presented in tables</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1] . Details on how consultation specific to trip generation,	The assessment presented in Section 13.7 uses the trip generation detail provided in Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outlined in the oCTMP

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	<i>2-11 and 2-12 of the TS are therefore considered appropriate for use in subsequent trip distribution and assignment assessments."</i>	routing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] .	[EN0110020/APP/5.1 2.1] .
National Highways	<i>National Highways will expect the traffic impact of the construction HGV traffic, staff movements and AIL deliveries to be controlled through the production of a Construction Traffic Management Plan (CTMP) and Construction Staff Travel Plan (the production of which are committed to within the Draft ES). Nevertheless, the information presented in the Draft ES is not sufficient to confirm at this stage whether the impact of the development at the SRN during the peak traffic periods can be controlled through a CTMP and Decommissioning Traffic Management Plan (DTMP), or whether further capacity and/or safety assessments will be required. Subsequent iterations of the ES and Outline CTMP (when produced) should clearly identify the cumulative construction impact at the SRN junctions during the SRN network peak periods</i>	An oCTMP [EN0110020/APP/5.12.1] is submitted with the Application and is secured by a requirement in the Draft DCO [EN0110020/APP/3.1.1]. Cumulative assessment of traffic and transport effects is provided in Section 13.9. A DEMP will be prepared at the cessation of operations at the Proposed Development and secured by a requirement in the Draft DCO [EN0110020/APP/3.1.1]. A Decommissioning Traffic	Cumulative assessment of traffic and transport effects is provided in Section 13.9.

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		Management Plan will be included in the DEMP. An oDEMP [EN0110020/APP/5.11] which will form the basis of the full DEMP has been submitted as part of the Application.	
National Highways	<i>"National Highways will need to understand the number of development trips generated by the construction phase in the SRN peak hours, in line with guidance set out in Circular 01/22. It should therefore be noted that the constraints to vehicle arrivals and departures (outlined above) may not be sufficient to minimise movements through the SRN junctions, during the SRN network peak hours. The SRN peak hours should be identified for each of the junctions listed in paragraph 4.5 above."</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1]. Details on how consultation specific to trip generation, routing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. SRN junction assessments will be finalised as detailed	The assessment presented in Section 13.7 uses the trip generation detail provided in Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outlined in the oCTMP [EN0110020/APP/5.12.1].

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		design progresses, as required by National Highways considering the proposed vehicle volumes.	
National Highways	<i>"JSJV has reviewed the Cable Corridor Options shown within the Draft ES submissions and note that there are several locations which identify routing across the SRN. Some of these crossing points appear to be at locations where there are no existing structures passing over or under the SRN.</i> <i>It is advised by JSJV that any works carried out in, on, over, or under National Highways' land will need to be agreed in writing between the undertaker and National Highways, in order to ensure that National Highways can exercise all the statutory functions."</i>	This is noted.	N/A
National Highways	<i>"Furthermore, JSJV notes that for any form of Horizontal Directional Drilling (HDD) cable route under the SRN, a condition survey and regime of monitoring of any National Highways assets or structures that National Highways considers will be affected by the specified works, will need to be reviewed and agreed in writing by National Highways, and a form of security put in place to protect National Highways against any financial loss."</i>	This is noted.	N/A
National Highways	<i>"Additionally, JSJV states that for any proposed works to the SRN, all drawings, specifications, and calculations would be required for review by National Highways and must meet current standards with the correct certification. The undertaker must comply with National Highways' road space booking procedures, prior to and during the carrying out of the specified works."</i>	This is noted.	N/A

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
National Highways	<i>"JSJV would note that the routing of power cables through or attached to existing overbridges is not likely to be acceptable to National Highways. The required submissions of information relating to any such routing requests should be confirmed by National Highways."</i>	This is noted.	N/A
National Highways	<i>"National Highways will require further information with regards to the specifics of the physical site boundaries and how these will be implemented in relation to the existing land under National Highways' ownership. Further information is also required in relation to how access to this boundary will be obtained throughout development construction and maintenance, whilst noting that highway land cannot be used for these purposes. Moreover, confirmation should be provided as to the extent of the land under the ownership of the Applicant, up to the point where this land meets the National Highways boundary."</i>	National Highways have been consulted regarding access routes to Site. Furthermore, protection for statutory undertakers' assets is included within the protective provisions in the Draft DCO [EN0110020/APP/3.1.1] .	N/A
National Highways	<i>"National Highways will require confirmation from the Applicant that any existing embankments to the boundaries of the Site, adjacent to the SRN, can safely accommodate the development proposals. In addition, it is noted that there is potential for cables to be routed under the M1 and/or M18, and information needs to be provided by the Applicant on this matter."</i>	National Highways have been consulted regarding access routes to Site. Furthermore, protection for statutory undertakers' assets is included within the protective provisions in the Draft DCO [EN0110020/APP/3.1.1] .	N/A
National Highways	<i>"National Highways will require further information with regards to the specific construction safeguards that will be implemented by the Applicant to ensure that the construction of the development at the Site's boundaries does not impact the SRN in any way. It is noted that the Draft ES commits to an oCEMP</i>	Mitigation measures in relation to management of construction traffic are provided in the oCTMP [EN0110020/APP/5.12.1] .	The assessment presented in Section 13.7 uses detail provided in the ES Volume 3, Appendix

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	<i>being produced as part of the Application submission and National Highways will need to review the contents of this document once provided."</i>	Mitigation in relation to construction are included in the oCEMP [EN0110020/APP/5.9]	13.2: Transport Statement [EN0110020/APP/6.2 0.1] and the mitigation measures outlined in the oCTMP [EN0110020/APP/5.1 2.1]. oCEMP [EN0110020/APP/5.9]
National Highways	<i>"The Draft ES identifies that operational activities will be limited to occasional maintenance visits by service vehicles such as small vans or trucks. Vehicle movements associated with maintenance are expected to be infrequent, involving only a few vehicles. JSJV is therefore satisfied that traffic movements during the operational phase will not have a material impact at the SRN."</i>	This level of traffic associated with the operational phase will be insufficient to trigger the threshold for assessment as set out in the ISEP 2023 Guidelines ¹³ and therefore has been scoped out of this assessment.	Table 13.2 confirms that operational phase impacts are scoped out.
National Highways	<i>Decommissioning will involve the removal of solar arrays and ancillary infrastructure. The Site would then revert back to its prior usage, such as for agricultural purposes. Given that the typical lifespan of a solar farm exceeds 25 years, it is accepted that it would be most appropriate to assess the impact of the Decommissioning Phase upon the SRN at that time, through a DTMP. National Highways have previously identified that a DTMP can be secured via a suitably worded planning</i>	A DEMP will be prepared at the cessation of operations at the Proposed Development and secured by a requirement of the Draft DCO [EN0110020/APP/3.1.1]. A Decommissioning Traffic Management Plan will be included in the DEMP.	Table 13.2 confirms that decommissioning phase impacts are scoped out and will be considered at the time of decommissioning.

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	<i>requirement, should planning permission for the development proposals be granted.</i>	An oDEMP [EN0110020/APP/5.11] which will form the basis of the DEMP has been submitted as part of the Application.	
City of Doncaster Council (CDC)	<i>"Figure 13.2 Proposed HGV Routing for Whitestone 1 sets out the proposed routing to the two proposed access points into the Site (SR-01 & BL-03). The fact that only two access points are being proposed from the adopted highway, being 'SR-01' from the A630 Sheffield Road at Conisbrough and 'BL-03' from Beacon Lane, Clifton, in order to access to the whole of the development, means these access/junctions will be carrying a Significant number of vehicles, which overall is a key concern, and further demonstrates the unsuitability of Whitestone 1 overall for the Proposed Development."</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1]. Details on how consultation specific to trip generation, routing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	The assessment presented in Section 13.7 uses the trip generation detail provided in the Transport Statement and the mitigation measures outline in the oCTMP [EN0110020/APP/5.12.1].
City of Doncaster Council	<i>"The constrained nature of the Site here means that it is only feasible in highway terms to utilise these two access points. However, in practical terms this means that an extensive network of internal access tracks will be required to facilitate the</i>	The potential impacts of internal access tracks are considered in the Landscape and Visual	ES Volume 2, Chapter 7: Landscape and Visual Impact

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	<i>construction phase. Whilst these tracks will only be required for the duration of the construction phase, this is a prolonged period, and the character of the landscape will mean they are highly visible and will cause detriment throughout the construction phase. This is particularly pertinent when considered from a highway perspective, there will be a need for those construction routes to be of a sufficient size to allow for appropriate tracking for the largest vehicles that might be utilising them, and for them to pass each other. This is further demonstration that Whitestone 1 cannot suitably accommodate the development as proposed."</i>	Impact Assessment, Water Resources and Flood Risk, and Biodiversity and Nature Conservation assessments.	Assessment [EN0110020/APP/6.7] , Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.1 0.1], and Chapter 6: Biodiversity and Nature Conservation [EN0110020/APP/6.6. 1].
City of Doncaster Council	<i>"In terms of technical highway matters, the intensity and frequency of the use of these two access points will mean that the detailed design will need to be carefully considered to ensure the existing highway network is not adversely affected. There is not sufficient detail provided at this stage to comment further on this aspect of the development. However, CDC can advise that it expects Stage 1 and Stage 2 Road Safety Audits to be undertaken on the preliminary and detailed design proposals, with a Stage 3 Audit to be carried out upon completion."</i>	This is noted. Access location and indicative designs have been provided as part of the oCTMP [EN0110020/APP/5.12.1] submitted with the Application. In terms of the Road Safety Audits, the Applicant or appointed contractor will take this into account during the detailed design stage post-consent and secured by a requirement in the Draft DCO [EN0110020/APP/3.1.1].	oCTMP [EN0110020/APP/5.1 2.1]

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
City of Doncaster Council	<i>"Furthermore, no information has been provided at this stage as to where any site compounds will be located, or what size they might be. It is not known whether they will include welfare facilities for construction workers, as well as parking, storage and unloading areas to be accounted for. These aspects all have important implications for how impacts will be assessed in highway terms."</i>	Details of the construction compounds are provided in ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5], Works Plans [EN0110020/APP/2.3.1], and ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]. Mitigation measures in relation to construction traffic arrival and access to construction compounds are provided in the oCTMP [EN0110020/APP/5.12.1].	The assessment presented in Section 13.7 uses the trip generation detail provided in the Transport Statement and the mitigation measures outline in the oCTMP.
City of Doncaster Council	<i>"Additionally, in terms of construction traffic management plans, CDC would expect the following to be included:</i> <i>• Road conditions surveys, and provision for any necessary repairs to be undertaken via dilapidation surveys; and</i> <i>• Provision of wheel washing facilities which are of a sufficient standard and type to suitably account for the specific land conditions of the rural locality of Whitestone 1."</i>	Mitigation measures, including information on wheel washing, compounds are provided in the oCTMP [EN0110020/APP/5.12.1].	The assessment presented in Section 13.7 uses the trip generation detail provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.2 0.1] and the mitigation measures outline in

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
			the oCTMP [EN0110020/APP/5.1 2.1].
City of Doncaster Council	<i>"In respect of the Transport Statement (EN0110020), the following detailed comments are provided.</i> <i>Paragraph 1.1.155 (Construction Worker Trip Generation) as drafted sets out the morning peak hour as being 08:00-09:00 and the evening peak as being 17:00-18:00. The Applicant should be aware that the Doncaster Traffic Sensitive peak periods are defined as being between 0730hrs and 0930hrs (AM peak) and 1530hrs and 19:00 (PM peak) (subject to the 16 specific location this may be reduced to 1830hrs). This approach is supported by traffic flow data for the A630. The final ES should be updated to reflect this.</i> <i>Paragraph 1.1.155 onwards (Construction Worker Trip Generation) sets out assumptions concerning the number of workers who would use sustainable modes of transport and an indication that 20% of workers would be transported by shared minibuses. CDC would question how this would be secured through the detailed documents and would require further information that sets out how this would be ensured and enshrined through any consent given."</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1]. Details on how consultation specific to trip generation, routing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. It should be noted that the working hours and delivery hours have been chosen based on reasonable site requirements and as a result of previous experience from developing other DCO solar farm schemes in the	The assessment presented in Section 13.7 uses the trip generation detail provided in Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outline in the oCTMP [EN0110020/APP/5.1 2.1].

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		UK. The Applicant or appointed contractor will review peak traffic period for the main project related access locations prior to the commencement of construction and adjust timings if required.	
City of Doncaster Council	<i>"It is important to understand that any routing of cables in the highway must be referred to the Council's Network Compliance Team. In normal circumstances, a Statutory Undertaker would install and maintain all apparatus in the highway. However, if this is not the case in respect of the Proposed Development, a license will be required under Section 50 of the New Roads and Street Works Act 1991 (NRSWA). In providing such a license, special conditions would be applied to indemnify the Council as Highways Authority for the duration of the licence (the lifetime of the project). This could include the requirement for a deposit or bond to ensure compliance with the license."</i>	Noted.	N/A
City of Doncaster Council	<i>"Any works on or adjacent to the highway will be subject to a Permit to Work that applies to any contractor, and for most schemes is applied for and road space booked electronically. However, for these types of developments, this is managed via the Council's Project Design and Technical Services Department, which ensures there are no conflicts with other works nearby and the appropriate permissions have been granted. Road space booking forms must be used to authorise the use of temporary traffic signals and the erection of any signs on the highway for the duration of the works."</i>	Noted.	N/A

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
City of Doncaster Council	<i>"In the above respects, CDC would like to draw the Applicant's attention to its specific expectations as to how any Development Consent Order (DCO) should be drafted to account for our highway network management requirements. The draft DCO in respect of the Fenwick Solar Farm Project gives a clear indication of these expectations and the content of this should be reflected in any put forward by the Applicant."</i>	Noted.	N/A
City of Doncaster Council	<i>"There is a general concern that the consultation has not sought to differentiate between the different categories of public rights of way. The assessment focuses on walkers and cyclists and does not pay enough attention to equestrian users of the network. This is an altogether narrow approach to the assessment and undermines its efficacy in seeking to identify impacts."</i>	Details on all PRoWs users, including equestrian use is presented in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] , summarised in Section 13.5 of this Chapter, and assessed in Section 13.7. An oPRoWMP [EN0110020/APP/5.14] is submitted with the Application.	Section 13.5 and Section 13.7 of this Chapter.
City of Doncaster Council	<i>"Paragraph 13.6.9 of the Draft ES incorrectly cites Park Lane as being part of the local road network. In fact, this is a public bridleway for use by pedestrians, equestrians and cyclists. This error is more fundamental than simply applying an incorrect assumption, in fact it betrays a complete misunderstanding of the area comprising Whitestone 1. The fact that the area is not served by a local road network does not appear to have been properly understood by the Applicant, and this is another telling</i>	During the evolution of the Proposed Development since Draft ES, certain Automatic Traffic Counts (ATCs) that were initially included within the Study Area (that could potentially be used as construction	Park Lane not considered further.

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	<i>example of the lack of meaningful understanding of the Site, its constraints and its special character."</i>	access routes) were removed. Park Lane is no longer being used as a route for construction traffic and is not referenced further in the ES or ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] .	
City of Doncaster Council	<i>"Detailed comments in respect of PROW are provided as follows:</i> <i>• Proposed buffers between panels and public rights of way are minimal and overall, woefully inadequate, creating little to no visual relief from panels for users, to the detriment of their enjoyment of the countryside and valued landscape;</i> <i>• Park Lane should not be used by development traffic whatsoever;</i> <i>• Any temporary closures of public rights of way should be for the minimum time possible, and alternative routes should be provided whenever possible do so;</i> <i>• A question is raised as to why permissive paths would not be available for use by equestrians. This should be further explored by the Applicant;</i> <i>• Would welcome the opportunity to further discuss the route and extent of permissive paths proposed. Whilst these are welcomed, CDC would submit that more could be achieved in these respects, not only by including use by equestrians but also to further contribute to the network and accessibility;</i>	Details on all PROWs users, including equestrian use is presented in the ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1], summarised in Section 13.5 of this Chapter, and assessed in Section 13.7. These are also outlined in the Streets, Rights of Way, and Access Plans [EN0110020/APP/2.4]. An oPROWMP [EN0110020/APP/5.14] is submitted with the Application.	Section 13.5 and Section 13.7 of this Chapter.

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
	- Concern is raised about the proximity of a potential cable route corridor to Bridleway Number 4. This is an important access route to the network of public rights of way in the area and therefore must remain open at all times; - Would welcome more detail regarding path improvements across the Order Limits, along with an explanation regarding how these would be maintained and by whom; and - Further information is also required about what would happen to additional widths of paths and hedges at the decommissioning stage."		
South Yorkshire Fire and Rescue	"Where access is over 20m from the access road, a turning circle, hammerhead or other point at which a vehicle can turn should be provided. Road / hard standing should be suitable to accommodate fire service vehicles in all weather conditions."	Noted. Appropriate vehicle turning provision will be incorporated within the access/internal design, where required, to enable safe manoeuvring of emergency service vehicles. Access arrangements will be developed in accordance with guidance published by South Yorkshire Fire & Rescue and relevant national best practice guidance, including fire service access requirements issued by the National Fire Chiefs Council.	N/A

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
Rotherham Metropolitan Borough Council (RMBC)	<i>"The Council are broadly in agreement with the principles set out in the Statements but would caution that how the detailed practical arrangements are addressed will be key to the successful implementation of the strategies."</i>	Mitigation measures in relation to management of construction traffic are provided in the oCTMP [EN0110020/APP/5.12.1] .	The assessment presented in Section 13.7 uses detail provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outlined in the oCTMP [EN0110020/APP/5.12.1] .
Rotherham Metropolitan Borough Council	<i>"Traffic generation – The Council's confirm the general approach is acceptable and that the assumptions made are reasonable, but the issue of individual junction impact will need to be addressed."</i>	Details on trip generation, including construction worker transport, are provided in both ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and oCTMP [EN0110020/APP/5.12.1]. Details on how consultation specific to trip generation, routing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	The assessment presented in Section 13.7 uses the trip generation detail provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] and the mitigation measures outlined in the oCTMP [EN0110020/APP/5.12.1] .

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
Rotherham Metropolitan Borough Council	<i>“Access – Whilst the proposed access locations are indicated, detailed information will be required to assess the locations. As previously stated, all accesses should comply with industry standards and both tracking exercises and Road Safety Audits will be required in support. It is worthy of note that the proposed access on Sheffield Road which is the former trunk road and is the A57 main link between the M1 and A1 should be relocated and served from an alternative highway.”</i>	Preliminary vehicle tracking and visibility splay assessments in accordance with the relevant design guidance have been undertaken to inform the development of the proposed access strategy and to confirm that the accesses are capable of accommodating the anticipated construction vehicles. Detailed access proposals will be developed and be supported, where appropriate, by Road Safety Audits undertaken at the detailed design stage following consent via a requirement imposed upon the DCO. Further detail on access strategy is included in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1].	ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]. oCTMP [EN0110020/APP/5.12.1]

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		Mitigation measures in relation to management of construction traffic are provided in the oCTMP [EN0110020/APP/5.12.1] .	
Rotherham Metropolitan Borough Council	<i>"Routing – tracking exercises demonstrating two HGV's passing may be required in certain locations."</i>	Mitigation measures in relation to management of construction traffic are provided in the oCTMP [EN0110020/APP/5.12.1] .	The assessment presented in Section 13.7 uses detail provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.2 0.1] and the mitigation measures outlined in the oCTMP [EN0110020/APP/5.1 2.1] .
Rotherham Metropolitan Borough Council	<i>"Dilapidation Survey – Prior to the commencement of works a dilapidation survey should be agreed with RMBC."</i>	Dilapidation surveys will be undertaken on the access routes used during the construction phase. This will be undertaken prior to the start of the construction phase, and the survey area and methodology will be discussed with the	Mitigation measures in relation to management of construction traffic are provided in the oCTMP [EN0110020/APP/5.1 2.1] .

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		relevant highway authority including RMBC.	
Rotherham Metropolitan Borough Council	<i>"The Council wish to be involved in the discussions around detailed design / routing / timings etc."</i>	Noted. Per the requirements contained in Schedule 2 to the Draft DCO [EN0110020/APP/3.1.1] no part of the authorised development will be able to commence until the detailed design for that part has been submitted to and approved by the relevant planning authority. Furthermore, mitigation measures in relation to management of construction traffic including details of the outline junction design are provided in the oCTMP [EN0110020/APP/5.12.1] . The Applicant is committed to engaging the relevant authority in the process of producing the CTMP prior to construction as required in Schedule 2 of the draft DCO. That notwithstanding, details on	The assessment presented in Section 13.7 uses the trip generation detail provided in the ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.2 0.1] and the mitigation measures outline in the oCTMP [EN0110020/APP/5.1 2.1] .

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		how consultation specific to trip generation, routeing and calculations are provided in ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1] .	
Rotherham Metropolitan Borough Council	<i>"Having regard to the wider Public Right of Way network, it is noted in this Chapter at paragraph 13.8.1362 states:</i> <i>During the construction phase, the presence of plant and equipment in work areas adjacent to the PRoW network may temporarily reduce the amenity value of the paths, however, the effects would be temporary and short-term. Appropriate construction traffic management measures (within the oCTMP) will be put in place to manage these effects. This would include, for example, solid fencing / barriers in areas where dust is generated together with appropriate signage to caution passers-by of construction. It is acknowledged that temporary diversions and management measures may be required for some of the paths within the Site. An Outline PRoW Management Plan will also be prepared to support the development proposals and will include details of specific routes that may be affected and also set out any proposed mitigation required to mitigate the impacts of the potential interactions between construction traffic and the users of the PRoW network.</i> <i>RMBC would welcome sight of the Outline PROW Management Plan once prepared."</i>	Details on all PRoWs users, including equestrian use is presented in the ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1], summarised in Section 13.5 of this Chapter, and assessed in Section 13.7. An oPRoWMP [EN0110020/APP/5.14] is submitted with the Application.	Section 13.6 and Section 13.7 of this Chapter.

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
Rotherham Metropolitan Borough Council	<i>"Additional and like many local authorities, Rotherham Council has a standing Local Access Forum who are a statutory, independent public consultee for matters relating to Countryside Access and we will involve them in feedback and comments from that Management Plan. It would be welcome to see the future proposals take account of the guidance issued by the British Horse Society on solar developments in this plan, as this offers some very sensible and practical advice that is applicable to all users. In particular it would be beneficial to embrace the guidance on construction within the advice, and also note the concerns riders have about noise issues and how this can be alleviated."</i>	Noted.	N/A
Rotherham Metropolitan Borough Council	<i>"The Council understand the need to protect public safety during development and would, as in many other developments across the borough, be happy to collaboratively to ensure public safety whilst retaining (and potentially enhancing) access during the construction phase."</i>	Noted.	N/A
Rotherham Metropolitan Borough Council	<i>"Rotherham Council are, like other highway authorities, in receipt of a number of claims for public rights on paths used by the public and which are not shown on our Definitive Map of rights of way presently. The attached maps show these routes, which are denoted by red lines."</i>	Noted.	N/A
Rotherham Metropolitan Borough Council	<i>"Finally, the Council would welcome the opportunity to work with the Applicant and the Local Access Forum to explore options for permissive path dedication for the duration of the development, and trust that an offer to work with the local community on such proposals is embraced as part of the PROW Management Plan. Enhancing public access alongside this development would be of great benefit to users for a number of years."</i>	Details on permissive paths proposed by the Proposed Development are included on ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19] .	The assessment presented in Section 13.7 uses the mitigation measures outlined in the oCTMP [EN0110020/APP/5.1 2.1] and oPRoWMP

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Consultee	Consultee Feedback	How This is Addressed	Where This is addressed in the ES
		The Applicant or appointed contractor is committed to engaging with the Local Access Forum and the Council in the preparation of the detailed PRowMP to be prepared pre-construction. An oPRowMP [EN0110020/APP/5.14] is submitted with the Application.	[EN0110020/APP/5.14].

Targeted Consultation

- 13.3.8 A Targeted Consultation period was held between 4 March and 3 April 2026 on proposed changes to the Order Limits. This included notifying relevant prescribed consultees. Feedback from this Targeted Consultation and the Applicant's response is included in the **Consultation Report [EN0110020/APP/5.1]**.
- 13.3.9 A second Targeted Consultation was held for any individuals that had been identified as land interests after the Statutory Consultation.
- 13.3.10 No comments were provided by statutory consultees through the Targeted Consultation period in relation to Traffic and Transport.

Other Consultation

- 13.3.11 Details of consultation to date undertaken outside the scoping exercise and Statutory Consultation are included in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**.

13.4 Assessment Methodology and Significance Criteria

- 13.4.1 This section sets out the scope and methodology for the assessment of the impacts of the Proposed Development on traffic and transport from the construction phase.

The Study Area

- 13.4.2 The Study Area (**ES Volume 3, Figure 13.1: Study Area [EN0110020/APP/6.19]**) has been defined by the public road network that is expected to experience an increase in traffic flows associated with the construction of the Proposed Development.
- 13.4.3 These roads have been identified by reviewing the local and SRN in order to identify suitable origin and destination routes for both general construction and AIL vehicles. The strategy for identifying roads involves routing traffic from the SRN and then using the hierarchy of roads to reach access points identified for the Proposed Development as summarised below:
- Junction 36 of the A1 (M) will be utilised to provide SRN routing onto the local highway network for W1
 - Junction 1 of the M18 motorway will be utilised to provide SRN routing onto the local highway network for W1 and W2
 - Junction 31 of the M1 motorway will be utilised to provide SRN routing onto the local highway network for W2 and W3; and
 - Junction 33 of the M1 will also provide routing to W2.
- 13.4.4 All proposed vehicle routing on the local road network, as well as the proposed access points, are shown in **ES Volume 3, Figures 13.2 -13.6: HGV Routing [EN0110020/APP/6.19]** and outlined below.
- **Figure 13.2 – Proposed HGV Routing – Whitestone 1**

- **Figure 13.3 - Proposed HGV Routing – Whitestone 2 – East**
- **Figure 13.4 - Proposed HGV Routing – Whitestone 2 – Northwest**
- **Figure 13.5 - Proposed HGV Routing – Whitestone 2 – Southwest;** and
- **Figure 13.6 - Proposed HGV Routing – Whitestone 3.**

13.4.5 All construction access points have been informed through consultation with the relevant Local Highway Authorities and National Highways, taking into account feedback received during the consultation process.

13.4.6 The primary routes of the road network included in the Study Area is summarised below:

- W1 - This section of the Study Area involves the use of the following roads: A630, Hellaby Lane, and B6093
- W2 - This section of the Study Area involves the use of the following roads: A57, A631, Flash Lane, Long Lane, A618, Guilthwaite Common Lane, Reservoir Road, Main Street, Penny Hill Lane, Brampton Lane, Common Lane, Long Road, Todwick Road, and Pocket Handkerchief Lane; and
- W3 - This section of the Study Area involves the use of the following roads: A57, A618, Kiveton Lane, Woodall Lane, Killamarsh Lane, and Walseker Lane.

13.4.7 The Study Area is illustrated on **ES Volume 3, Figure 13.1: Study Area [EN0110020/APP/6.19]**. Full detail regarding the access and routing to the Sites and the extent of the Study Area is presented in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**.

Identifying Receptors and Receptor Sensitivity

13.4.8 The sensitivity of the baseline receptors to impacts, together with the value (or importance) of environmental features on, or near to, the Study Area, has been assessed in line with professional judgement, best practice guidance (ISEP 2023 Guidelines)¹³, legislation, and statutory designations.

13.4.9 The framework used to assign an overall sensitivity to each of the baseline receptors is indicated in **Table 13.4** below.

Table 13.4: Framework for Determining Sensitivity of Receptors

Sensitivity	Description
Very High	The receptor has no ability to absorb change without profoundly altering its present character, is of high strategic value, or of national importance, would include receptors such as populated areas where existing traffic levels are high and there is no capacity to absorb additional traffic flow on adjacent routes; and strategic nationally important routes with no capacity to absorb additional traffic flow.
High	The receptor has little ability to absorb change without fundamentally altering its present character, is of high strategic value, or of national importance. These would include receptors such as populated areas where existing traffic levels are high and there is little capacity to absorb additional traffic flows on adjacent routes. Accident hotspots would also be considered and locations where pedestrian crossing facilities are informal and where a significant change in traffic flow level might induce significant pedestrian

Sensitivity	Description
	crossing delay also where children/elderly people might regularly cross an informal or priority crossing.
Medium	Areas where the transport network has moderate capacity to change, without significantly altering its state. These would include routes with existing moderate traffic levels which have some additional traffic flow capacity, receptors such as populated areas where existing traffic levels are moderate and there is some capacity to absorb additional traffic flow on adjacent routes, slight accident hotspots where an increase in traffic flow may increase the likelihood or severity of accidents and location where pedestrian crossing facilities are informal or substandard and where a significant change in traffic flow level might induce a moderate pedestrian crossing delay.
Low	Areas where the transport network is tolerant to change without detriment to its state. These would include routes with existing low traffic levels which have additional traffic flow capacity, areas such as trunk road or A class roads constructed to accommodate significant HGV volumes receptors such as populated areas where existing traffic levels are low and there is capacity to absorb additional traffic flow on adjacent routes, routes with a low level of historical accident data where a change in traffic flow or composition would have a low effect on the likelihood or severity of accidents and locations where pedestrian crossing facilities are formal but priority, or pedestrian flows are sufficiently low that changes to traffic flow or composition are unlikely to cause a significant pedestrian delay.
Negligible	Areas where the transport network is highly tolerant to change without detriment to its state. These would include routes with existing very low traffic levels which have a lot of additional traffic flow capacity, receptors such as populated areas where existing traffic levels are very low and there is a lot of capacity to absorb additional traffic flow on adjacent routes, routes with a very low level of historical accident data where a change in traffic flow or composition would have a negligible effect on the likelihood or severity of accidents and locations where pedestrian crossing facilities are formal and controlled, or pedestrian flows are negligible (i.e., where there are no footways) such that changes to traffic flow would not result in a change to pedestrian delay. Would also refer to receptors that are sufficiently distant from the affected roads and junctions.

Methodology for the Assessment of Effects

Assessment Criteria

Construction

- 13.4.10 The proposed methodology for Traffic and Transport assessment is structured around the potential environmental effects outlined in the ISEP 2023 Guidelines¹³ and includes severance, non – motorised user delay and amenity; fear and intimidation on and by road users (collectively referred to Community Effects); road vehicle driver and passenger delay; road user and pedestrian safety; and hazardous and large loads. Any potential Significant environmental

effects relating to visual effects, air quality and noise and vibration due to traffic associated with the construction of the Proposed Development are considered in **ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]**, **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]** and **ES Volume 2, Chapter 14: Noise and Vibration [EN0110020/APP/6.14.1]** respectively.

- 13.4.11 An initial screening was undertaken to identify construction traffic routes where an effect could potentially occur. The ISEP 2023 Guidelines¹³ suggest two broad principles:
- Rule 1 – include highway links where traffic flows are predicted to increase by more than 30% (or where the number of heavy goods vehicles is predicted to increase by more than 30%); and
 - Rule 2 – include highway links of high sensitivity where traffic flows are predicted to increase by 10% or more.
- 13.4.12 Where the predicted increase in traffic flow is lower than these thresholds, the significance of effects can be considered low or Not Significant with no further detailed assessment warranted. Where the predicted increase in traffic flow is greater than these thresholds, the potential effects are considered to be potentially Significant and are assessed in greater detail. The magnitude of potential impacts will be identified through consideration of receptor sensitivity against the degree of predicted change to baseline conditions, the duration and reversibility of this change and professional judgement.
- 13.4.13 The ISEP 2023 Guidelines¹³ however notes that the Rule 1 and Rule 2 criteria process is not appropriate for some impacts, and it is generally accepted by regulators and practitioners that it should not be applied to assessment of road user and pedestrian safety as well as road vehicle driver and passenger delay. These impacts can be potentially Significant for lower changes in traffic flow when high baseline traffic flows are evident. Full details of the methodology to be adopted for these effects are set out later in **Table 13.5**.
- 13.4.14 Rules 1 and 2 are used as a screening tool to determine whether or not a full assessment of effects on routes within the Study Area is required as a result of the intensification of road traffic. Therefore, it should be noted that an increase in total traffic or HGV levels of more than 30% (or 10% depending on the sensitivity of the area) does not necessarily equate to a Significant effect in terms of the EIA Regulations. Where existing traffic levels are generally low (e.g., rural roads and some unclassified roads), any increase in traffic flow may result in a predicted increase that would be higher than the ISEP 2023 Guideline¹³ thresholds. In these situations, it is important to consider any increase in terms of overall traffic flow in relation to the capacity of the road, before making a conclusion on whether the effect is Significant as defined under the EIA Regulations.

Significance Criteria

Magnitude of Change

- 13.4.15 The magnitude of potential change is a function of the existing volumes of traffic, the percentage increase and the degree of change to baseline conditions predicted as a result of the Proposed Development, the duration and reversibility of an effect. This will be undertaken in line with professional judgement and best

practice guidance (ISEP Guidelines, 2023¹³) and relevant legislation. The criteria for assessing the magnitude of change is presented in **Table 13.5**.

Table 13.5: Framework for Determining the Magnitude of Change

Type of Impact	Magnitude of Change			
	Negligible	Small	Medium	Large
Severance of Communities	Change in total traffic flow of <30%	Change in total traffic flow of 31% to 60%	Change in total traffic flow of 61% to 90%	Change in total traffic flow of >91%
Non-Motorised User Amenity	Change in traffic flow (or HGV component) <50%	Change in traffic flow (or HGV component) of 51% to 100%	Change in traffic flow (or HGV component) of 101% to 150%	Change in traffic flow (or HGV component) of >151%
Non-Motorised User Delay	Change in total traffic flow of <30%	Change in total traffic flow of 31% to 60%	Change in total traffic flow of 61% to 90%	Change in total traffic flow of >91%
Fear and Intimidation	No change in step changes	One step change in level, with <400 vehicles increase in average 18hr AV two-way all vehicle flow; and/or <500 HGV increase in total 18hr HGV flow.	One step change in level, but with >400 vehicles increase in average 18hr AV two-way all vehicle flow; and/or >500 HGV increase in total 18hr HGV flow.	Two step changes in level
Road User and Pedestrian Safety	Magnitude of impact derived using professional judgment informed by the frequency and severity of collisions within the Study Area and the forecast increase in traffic.			
Road Vehicle Driver and Passenger Delay	Magnitude of impact derived in conjunction with a Transport Statement, consultation with the highway authority and professional judgment informed by the increase in vehicle delay and whether a junction or highway link is at, or close to capacity, particularly on the weekday peak hour periods when baseline traffic flows are at their highest.			

Type of Impact	Magnitude of Change			
	Negligible	Small	Medium	Large
Abnormal Loads	Defined by an assessment of the suitability of the access routes to accommodate abnormal load vehicles.			

Defining the Significance of Effect

- 13.4.16 Effects predicted to be of Major or Moderate significance are considered 'Significant' in the context of the EIA Regulations. Minor and Negligible effects are considered to be 'Not Significant'. **Table 13.6** provides a matrix for how significance is determined.

Table 13.6: Significance of Effect

Magnitude of Change	Sensitivity of Receptor				
	Very High	High	Medium	Low	Negligible
Large	Major	Major	Moderate	Moderate	Minor
Medium	Major	Moderate	Moderate	Minor	Negligible
Small	Moderate	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Minor	Negligible	Negligible	Negligible

Basis of the Assessment

- 13.4.17 **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]** presents a summary of the current available design information for the Proposed Development. It has been used to inform this assessment alongside other information set out in the following subsections.

Construction

- 13.4.18 Potential impacts on traffic and transport during construction of the Proposed Development are expected to arise from:
- Construction traffic - temporary increase in HGV associated with the need to bring to the Proposed Development general construction materials and the export of waste, drilling waste and other construction materials by road. The characteristics of this form of traffic is a temporary intensification of HGV traffic on the public road network. This intensification varies depending on the scale of the development and the stage of construction
 - Construction staff movements - temporary increases in cars / Light Goods Vehicles (LGV) traffic associated with construction staff movements. The characteristics of this form of traffic is a temporary intensification of cars / LGV traffic on the road network in particular during the network peak commuting peak hours; and
 - AILs – there is also the need to deliver larger components such as transformers to the Site. These will be delivered to an appropriate Port of Entry and then transported as abnormal loads to the Site via the public road network. All large vehicles and other Abnormal Loads Vehicle (ALVs) will be

required to follow the routing agreed with the Local Highways Authority when travelling to / from the Proposed Development. The mitigation measures will be secured through the implementation of the CTMP, which is secured in the **Draft DCO [EN0110020/APP/3.1.1]**.

Programme and Phasing

- 13.4.19 The construction phase for the Proposed Development is expected to span 24 to 36 months. While the exact timeline will depend on various factors, including the submission and determination of the DCO, the current plan is to commence construction in 2027 and conclude by 2029. However, construction activity, and therefore peak construction traffic, will only occur in any one location for a limited portion of this overall 24–36 month period, as works will progress sequentially across the Proposed Development.
- 13.4.20 The worst-case traffic is currently expected to be during the peak construction period between mid-2028 and mid-2029. Therefore, for the purposes of this assessment, it has been assumed that 2028 is the peak construction year to allow for delays that may occur.

Assumptions, Exclusions and Limitations

- 13.4.21 As detailed in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**, the assessment has followed a Rochdale Envelope approach, to ensure that a worst-case assessment of potential environmental effects is presented. The different design parameters of the Proposed Development that are yet to be fixed, and the use of these precautionary, worst-case assumptions, means that, in reality, effects are likely to be less than reported.
- 13.4.22 The impact assessment is based on the estimated construction trip generation included in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]** and based on programme information available at the time of the assessment.

13.5 Baseline

Data Sources

Existing Baseline Data Sources

- 13.5.1 Existing traffic and transport conditions within the Study Area have been defined and identified via a desk-based assessment using a number of approaches and sources, including:
- Google Maps
 - Sustrans' National Cycle Network (NCN) Map
 - Open Street Cycle Map
 - Department for Transport Mapping Application for Visualising Road Injury Casualties
 - Travel South Yorkshire website
 - City of Doncaster Public Rights of Way Map; and

- Rotherham Metropolitan Borough Council Public Rights of Way Map.

13.5.2 Baseline traffic flows in the form of ATCs were undertaken in June 2025 for a duration of 7 days (24-hours per day).

Future Baseline Data Sources

13.5.3 Future baseline traffic and transport conditions within the Study Area, have also been defined by considering the following:

- Climate Change Projection
- Desktop assessment of the City of Doncaster and Rotherham Metropolitan Borough Councils Planning Portals to identify development planning schemes likely to alter the current baseline traffic conditions; and
- Traffic Growth Factors from Department for Transport Trip End Presentation Program.

Existing Baseline Conditions

Existing Highway Network

13.5.4 This Section provides a broad overview of the baseline characteristics of the road network forming the Study Area. Details of the baseline conditions including details of the local and strategic highway network providing access to the Proposed Development are set out in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]** and summarised in the subsection below.

Strategic Road Network

13.5.5 In terms of vehicle routing, these roads will be the origins of trips to the Proposed Development.

A1

13.5.6 The A1 spans approximately 410 miles (660km) from London to Edinburgh, passing through major towns and cities such as Peterborough, Doncaster, Newcastle-upon-Tyne, and Berwick-upon-Tweed. The A1 includes sections that are designated as A1(M), which are upgraded to motorway standards.

13.5.7 Junction 36 of the A1(M) will be utilised to provide SRN routing onto the local highway network for W1.

M18

13.5.8 The M18 motorway is a key route in Yorkshire, stretching approximately 26 miles (42km) from the east of Rotherham to Goole in a south-west to north-east direction. It connects several major motorways, including the M1, A1(M), M180, and M62.

13.5.9 Junction 1 of the M18 motorway will be utilised to provide SRN routing onto the local highway network for W1 and W2.

M1

- 13.5.10 The M1 motorway connects London to Leeds and spans approximately 193 miles (311km). The motorway passes through several counties, including Greater London, Hertfordshire, Bedfordshire, Buckinghamshire, Northamptonshire, Leicestershire, Nottinghamshire, Derbyshire, and Yorkshire. It also intersects with other major motorways such as the M25, M6, M69, M18, M62, and M62.
- 13.5.11 Junction 31 of the M1 motorway will be utilised to provide SRN routing onto the local highway network for W2 and W3. Junction 33 will also provide routing to W2.

Local Road Network

- 13.5.12 Once vehicles have left the SRN, they will be routed via the local road network, which is set out in **Table 13.7** for W1-3 and shown in **ES Volume 3, Figures 13.2-13.6: HGV Routing [EN0110020/APP/6.19]**.

Table 13.7: Local Road Network

Site	Road Network
W1	A630 and Hellaby Lane.
W2	A57, A631, A618, Flash Lane, Long Lane, Guilthwaite Common Lane, Reservoir Road, Main Street, Penny Hill Lane, Brampton Lane, Common Lane, Long Road, Todwick Road, Pocket Handkerchief Lane.
W3	A57, A618, Kiveton Lane, Woodall Lane, Killamarsh Lane, Walseker Lane

Baseline Traffic Flows

- 13.5.13 Baseline traffic flows in the form ATCs were undertaken in June 2025 for a duration of 7 days (24-hours per day). The dates and duration agreed with the City of Doncaster and Rotherham Metropolitan Borough Council highway authorities respectively fall outside of school and public holiday periods and are therefore considered to provide data that is representative of average daily traffic levels. Section 3 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]** contains the results of the ATC data and traffic count locations.

Road Traffic Collision Assessment

- 13.5.14 To understand whether the Proposed Development will have a Significant road safety impact, it is necessary to establish a road safety baseline and identify any inherent road safety issues. Road collision data for the most recent five-year period (2020-2024) at the time of writing this report has been obtained from the DfT Mapping Application for Visualising Road Injury Casualties (MAVRIC) platform. It should be noted the data shows the number of collisions on the relevant roads in the Study Area.
- 13.5.15 From the analysis undertaken in Section 3.5 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**, a total of 354 collisions occurred over the five years within the Study Area. These collisions are categorised according to the severity of injuries sustained by those involved.

- A slight collision is where at least one person has been slightly injured
- A serious collision is where at least one person has been seriously injured which result in hospitalisation: and
- A fatal collision is where at least one person has been killed at the scene or within 30 days of the incident.

13.5.16 **Table 13.8** presents the number of collisions and the level of severity for each year within the Study Area. Data for 2025 is not currently available. The greatest number of incidents occurred during 2022, with a total of 82 collisions recorded, with one of these accidents classed as fatal.

Table 13.8: Summary of Incident Data by Year (2020-2024)

Year	Slight	Serious	Fatal	Total
2020	35	18	2	55
2021	50	20	4	74
2022	62	19	1	82
2023	41	28	5	74
2024	46	22	1	60
Total	234	107	13	354

Source: DfT

13.5.17 Further details are set out in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]** including locations of the collisions for key junctions along the routes within the Study Area.

13.5.18 In summary, the roads with higher numbers of recorded collisions tend to be the busier, higher-speed routes. In contrast, the less trafficked roads closer to the Site's access points show no clear pattern of incidents, with some recording no collisions over the study period.

Sustainable Transport Provision

13.5.19 There are opportunities for construction workers to travel to and from the Proposed Development via sustainable transport modes. These are discussed below.

Walking

13.5.20 It is acknowledged that while the urban roads within the Study Area generally include pedestrian footways, the roads providing access to the Proposed Development are predominantly rural in nature, with limited or no footways and street lighting. As a result, opportunities for travelling to the Proposed Development on foot are very limited.

Cycling

- 13.5.21 A review of Sustrans' NCN map indicates that a short section of the NCN Route 6 passes through the Proposed Development near Ulley and Woodall. It is also noted that the bridleways listed in **Table 13.9** can also provide routing for cyclists.
- 13.5.22 It is acknowledged that whilst there are a fair number of properties within a good cycling distance, e.g. for Whitestone 1 there is Conisbrough - ~15 minutes / Bramley ~20 minutes / New Edlington - ~20 minutes - 30 minutes, in general, cycling to the Proposed Development is not likely to be very popular due to the distance from the location of the Proposed Development that they will be accessing, the carrying and transfer of specialised equipment, tools, and personal protective equipment (PPE); and the working hours which often involve starting or finishing work outside of standard office or working hours.

Public Transport

- 13.5.23 The area surrounding the Proposed Development is served by scheduled bus and rail services. Examples of the buses and rail services that serve the Site including the timetables are outlined in Section 3.6 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**.
- 13.5.24 Based on the information provided, travel by rail and bus may be a feasible option for some workers. However, this will be dependent on the access point that the workers are travelling to and from within the Proposed Development.

Summary of Sustainable Transport Provision

- 13.5.25 In summary, there are opportunities for construction workers to travel to and from the Proposed Development via sustainable transport modes. However, the viability of these transport options will be dependent on the location of the Proposed Development that they will be accessing.
- 13.5.26 For some of the Proposed Development areas, opportunities to support sustainable travel are mostly related to car sharing and the potential for the contractor to operate a worker minibus.
- 13.5.27 Therefore, to ensure a robust assessment, it will be assumed for assessment purposes that 80% of staff working on-site will predominantly travel by private vehicles (sole occupancy or car sharing).

Public Rights of Way (PRoW) Network

- 13.5.28 As illustrated in **ES Volume 3, Figure 15.7: Public Rights of Way and Country Parks [EN0110020/APP/6.19]**, there are several PRoWs which either cross or pass close to the Proposed Development as outlined in **Table 13.9** below. The location of PRoWs crossing the Order Limits is described in **ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3]**.

Table 13.9: Public Right of Way

Type of PRoW	
PRoW Footpath	Anston Footpath no.5, Anston Footpath no.6, Aston Footpath no.16, Aston Footpath no.17, Aston Footpath no.20, Bramley

Type of PRow	
	Footpath no.6, Bramley Footpath no.7, Conisbrough Parks Footpath No.3, Conisbrough Parks Footpath No.5; Conisbrough Parks Footpath No.8; Conisbrough Parks Footpath No.14; Conisbrough Parks Footpath No.16; Harthill Footpath No. 30, Harthill Footpath No. 5, Harthill Footpath no.15, Harthill Footpath no.17, Harthill Footpath no.20, Thurcroft Footpath no.10, Thurcroft Footpath no.8, Todwick Footpath no.6, Treeton Footpath no.4, Ulley Footpath no.4, Ulley Footpath no.5, Whiston Footpath no.10, Whiston Footpath no.12, Whiston Footpath no.13, Whiston Footpath no.14, Whiston Footpath no.15, Whiston Footpath no.16, Whiston Footpath no.19, Whiston Footpath no.21, Whiston Footpath no.23, Whiston Footpath no.24, Whiston Footpath no.6, Whiston Footpath no.7, Wickersley Footpath no.8B, Wickersley Footpath no.9
PRoW Bridleway	Anston Bridleway no.7, Anston Bridleway no.8, Aston Bridleway no.18, Conisbrough Parks Bridleway no.2, Harthill Bridleway no.16, Harthill Bridleway no.29, Harthill Bridleway No.4, Thurcroft Bridleway no.9, Ulley Bridleway no.6, Whiston Bridleway No 27, Whiston Bridleway no.20.
Equestrians	Bridleways are designated paths in the UK countryside that legally permit equestrian use, allowing horse riders to travel safely off-road. Therefore, the bridleways listed can provide routing for equestrian users.

- 13.5.29 None of these routes will require permanent closure as a result of the construction, operation (and maintenance), or decommissioning of the Proposed Development. However, some temporary diversions and user management may be required to ensure the safe and uninterrupted usage of these routes throughout the construction phase. This is assessed in Section 13.7.

Sensitive Receptors

- 13.5.30 As per the ISEP 2023 Guidelines¹³, particular groups of locations which may be sensitive to changes in traffic conditions should be identified. The ISEP 2023 Guidelines¹³ suggest that people at home, people at work, schools, and the elderly may be sensitive to changes in traffic conditions.
- 13.5.31 The sensitivity of the baseline conditions, including the importance of environmental features on or near to the Order Limits or the sensitivity of potentially affected receptors, have been assessed in line with best practice guidance, legislation, statutory designations and professional judgement.
- 13.5.32 A desktop exercise has been carried out to classify the sensitivity of road links within the Study Area. Each proposed ATC location has been considered, with the link location identified and described and given a sensitivity rating, presented in
- 13.5.33 **Table 13.10** below. It should be noted that during the evolution of the Proposed Development since Draft ES, certain ATCs that were initially included within the Study Area (that could potentially be used as construction access routes) were

removed. Following removal, the numbering of ATCs has been kept the same for consistency, explaining the missing ATC numbers in tables in the remaining sections of this Chapter.

Table 13.10: Sensitive Receptors

Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 1: A630 High Road	Located between the Doncaster Bypass and Sheffield Road Crossroads	Settlement of Warmsworth	Medium	Primarily single carriageway road. There are footways, signalised crossing points, and bus stops provided. There are sections of the link where residential housing fronts onto the road, as well as car parking, which may make road users sensitive to an increase in HGV traffic.
ATC 2: A630 Sheffield Road	Located between Edlington Lane and Low Road	Road users	Medium	Primarily single carriageway road, with active travel provision along the northern boundary of the road for pedestrians and cyclists, as well as access to bus stops. The road also passes an access to The Dolomite Quarry, suggesting the area is accustomed to increases in HGV traffic.
ATC 12: Common Lane	Located east of Moor Lane and Braithwell Road	Road Users	Medium	Single carriageway road with minimal settlements on this portion of the road and no footway provisions available. Road signs indicate that a bridge on Common Lane is unsuitable for vehicles over 7.5 tonnes. The road is national speed limit, changing to a 30mph speed limit when entering the settlement of Ravenfield.
ATC 13: Hellaby Lane	Located between Moor Lane and Hellaby	Hellaby	Medium	Single carriageway road providing access to various commercial and industrial land uses. There is street lighting, a bus stop, and footpath provisions throughout the more populated areas of the road.
ATC 14: B6093	Located north of Braithwell Road and south of Ravenfield	Ravenfield Primary School, settlement of Ravenfield	High	Single carriageway road passing Ravenfield Primary School. There is a 20mph zone outside the primary school. Additionally, there is residential housing along the road, street lighting, bus stops, and footpaths provided.
ATC 15: A630 Doncaster Road	Located between Old Road and B6093	St. John's Church, settlement of Hooton Roberts	High	Single carriageway road, with a section of 2+1. The road passes St. John's Church in Hooton Roberts, whilst residential housing fronts onto the road, with footways on both sides of the road, bus stops and street lighting available for pedestrians.
ATC 16: A630 Sheffield Road	Located between Holywell Lane and Conisbrough Cemetery	Road users	Medium	Single carriageway road providing access to both residential and retail land uses. There is street lighting available, as well as signalised pedestrian crossings.
ATC 17: A631	Located between the M18 at Bramley Roundabout and Flash Lane	Settlement of Bramley	Medium	Dual carriageway road, providing access to residential housing as well as retail and commercial land uses via signalised junctions. There are signalised crossing points for pedestrians, as well as footways on both sides of the road.
ATC 18: Moor Lane South	Located between Bramley and Hollings Lane	St. Francis' Church, settlement of Woodlaithes	High	Single carriageway road connecting Ravenfield and Bramley, hosting a pedestrian footway on the western edge of the road. St. Francis' Church has a frontage onto road. There are on-street parking facilities along the road.
ATC 19: Flash Lane	Located between the A631 to the north and Sandy Lane to the south	Youth centre, settlement of Bramley	High	Single carriageway road, providing access to several other residential streets via priority junctions. There is a Youth Centre and children's playpark located on Flash Lane. Additionally, there are footways and street lighting available for pedestrian use.
ATC 20: A631	Located between Flash Lane to the east and B6060	Wickersley School, settlement of Wickersley	High	Dual carriageway road. Wickersley School and Sports College is located on the southern edge of the road. Additionally, there are multiple bus stops located along the A631, bus lanes, and signalized crossings for pedestrian use.

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Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 21: A631	Located between B6060 and A6123	Listerdale Junior Academy, Wickersley Nursery, settlement of Wickersley	High	Dual carriageway road, providing access to Listerdale Junior Academy and Wickersley Nursery among other retail and residential land uses. Additionally, there are bus stops, signalised crossings and footways available for pedestrian use.
ATC 22: A631	Located between A6123 and A618	Newman School, settlement of Whiston	High	Dual carriageway road providing access to Newman School. There are active travel facilities along the road, bus stops and signalised crossing points for pedestrians.
ATC 23: A631	Located between A618 and Long Lane	Road users	Medium	Dual carriageway road in a residential area with active travel facilities, bus stops and signalised crossing points for pedestrian use.
ATC 24: Long Lane	Located south of the A631 towards Treeton	Non-motorised road users	High	Rural single carriageway road providing access to the settlement of Treeton. The road provides access to adjacent farmland and public footpaths, but the road itself has no active travel facilities, which suggests pedestrians may be using the road. It is indicated by road signs that equestrians also may use the road. The road is also listed as a local cycle route.
ATC 25: A630 Rotherway	Located between M1 J33 and Rotherway Roundabout	Road users	Low	Dual carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. Street lighting along both sides of road. No active travel provision along section of road.
ATC 26: A618	Located between A631 and Guilthwaite Common Lane	Non-motorised road users	Medium	Single carriageway road with 2+1 section, passing through the settlement of Whiston. There are active travel provisions along the road, including bus stops. The road provides access to the Trans Pennine Trail also.
ATC 27: Guilthwaite Common Lane	Located to the east off the A618 connecting to Morthen Lane	Non-motorised road users	High	Single carriageway road, which makes up part of the Trans Pennine Trail so may be used by pedestrians, cyclists and equestrians. No frontage to residential or commercial land uses. Road signs indicate there is a 7.5 tonne vehicle weight limit, with an exception for access.
ATC 28: Reservoir Road	Located to the east of A618	Non-motorised road users	High	This road is part of the of Sustrans' National Cycle Network (NCN), map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. The road is single track, with limited passing places available. There is also a bus stop available on the road.
ATC 29: A618	Between Reservoir Road and Treeton Lane	Non-motorised road users	High	Single carriageway road, which provides access to Ulley Country Park. This section of road is also designated as part of the local cycle network. There are also footways located alongside the road.
ATC 31: Main Street (Ulley)	Located between Reservoir Road and Pennyhill Lane	Ulley Parish Church, Ulley Village Hall, settlement of Ulley	High	This road is part of the of Sustrans' National Cycle Network (NCN), map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Ulley Parish Church and Ulley Village Centre front onto the road. There are also footways, and bus stops available for pedestrian use.
ATC 32: Penny Hill Lane	Located West of the M1, connecting to Ulley	Non-motorised road users	High	Rural single carriageway road with a restricted width, providing access to farmland. There are no active travel facilities on the road, despite making up a section of the local cycle network, and provides access to a public bridleway, indicating the road may be used by pedestrians and equestrians.

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Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 33: Penny Hill Lane (East of M1)	Located east of the M1, connecting to Common Lane South	Non-motorised road users	High	Rural single carriageway road with a restricted width, which makes up part of the local cycle network despite having no active travel facilities. The road also provides access to a public footpath, and local stables indicating that the road may be used by equestrians.
ATC 34: Brampton Lane	Located north of Penny Hill Lane, and crosses the M1	Non-motorised road users	High	Single track rural road with limited passing places. This section of road is designated as part of the local cycle network, but there are no active travel provisions on the road.
ATC 35: Common Lane (South)	Located north of Penny Hill Lane	Non-motorised users	High	Single carriageway rural road, which makes up part of the local cycle network. The road also provides access to a local footpath, but the road itself does not have active travel facilities.
ATC 36: Long Road	Located south of Penny Hill Lane and north of Common Road	Non-motorised road users	Medium	Single carriageway rural road, which provides access to a limited number of residential settlements. This section of road is designated as part of the local cycle network despite not having any active travel facilities on the road itself.
ATC 40: Todwick Road	Located between Pocket Handkerchief Lane and the A57	Non-motorised road users	Medium	Single carriageway road, with footways on one side of the road. This section of road is designated as part of the local cycle network.
ATC 41: Pocket Handkerchief Lane	Located between Todwick Road and Common Road	Non-motorised road users	Medium	Single carriageway rural road with no footways available. This section of road is designated as part of the local cycle network.
ATC 44: A57 (Near Greenscene Side Farm)	Located east of B6463	Road users	Low	Single carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There is a footway provided along the south edge of the road for a short section.
ATC 45: A57 (West of Mill Lane)	Located west of South Anston	Settlement of South Anston	Medium	Single carriageway road. There are residential houses with frontage onto the road, with footways, street lighting and bus stops available.
ATC 46: A57 (between Todwick Road and M1)	Located between M1 and B6463	Road users	Low	Dual carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. Street lighting and active travel facilities along both sides of road. Local cycle route designated along shared use footways.
ATC 47: Kiveton Lane	Located between A57 and Todwick	Todwick Primary School, settlement of Todwick	High	Single carriageway road providing access to both residential and retail land uses, with street lighting and footways on both sides of the road provided. Todwick Primary School has frontage onto the road. Bus stops are located along the road, whilst the road is also designated as a local cycle route.
ATC 48: A57 (between M1 and A618)	Located between M1 and A618	Road users	Low	Single carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 52: B6060 (North of Second Lane)	Located between A631 and Second Lane	Morthen Road Surgery, Settlement of Wickersley	High	Single carriageway road. Morthen Road Doctor's Surgery is accessed from this section of road. There are residential houses with frontage onto the road, with footways, street lighting and bus stops available.
ATC 53: B6060 (South of Second Lane)	Located between Second Lane and B6410	Settlement of Wickersley	Medium	Single carriageway road. There are residential houses with frontage onto the road, with footways, street lighting and bus stops available for pedestrian use.

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Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 54: Field Lane	Located between Morthen and B6410	Settlement of Morthen	Medium	Rural single carriageway road with restricted width. The road provides frontage to residential properties of Morthen, and is also designated as a local cycle route.
ATC 55: A618 (North of B6059)	Located between A57 and B6059	Road users	Medium	Single carriageway road providing access to both residential and commercial land uses, with street lighting and footways on both sides of the road provided. Bus stops are located along the road, and there is a height restricted railway bridge along the route.
ATC 56: A618 (South of B6059)	Located between B6059 and B6058	Non-motorised road users	High	This road is part of the of Sustrans' NCN, map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Single carriageway road providing access to both residential and retail land uses, with street lighting and footways on both sides of the road provided.
ATC 59: Kiveton Lane	Located between Kiveton Park and Todwick	Settlements of Kiveton Park and Todwick	Medium	Single carriageway road providing access to both residential and retail land uses, with street lighting and footways on both sides of the road provided. Bus stops are located along the road, whilst the road is also designated as a local cycle route.
ATC 60: Hard Lane (North)	Located south of B6059	Road users	Medium	Single carriageway road with restricted width on sections with on-street parking, providing access to both residential and retail land uses. The road provides access to Kiveton Waters public park area, with road signs warning of pedestrians crossing. There is street lighting available and footways on both sides of the road.
ATC 61: Hard Lane (South)	Located north of Harthill	All Hallows' Church, settlement of Harthill	Medium	This road is part of the of Sustrans' NCN, map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Single carriageway road with restricted width, passing by All Hallows' Church and providing access to both residential and retail land uses.
ATC 62: Woodall Lane	Located between Woodall and Harthill	Settlements of Woodall and Harthill	High	This road is part of the of Sustrans' NCN, map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Single carriageway road with a restricted width, providing access to Harthill Doctor Surgery and frontage access to residential properties.
ATC 66: A618 (North)	Located between B6058 and Hut Lane	Road users, settlement of High Moor	Medium	Single carriageway road providing access to both residential and retail land uses through High Moor. There is street lighting available, as well as footways on both sides of road.
ATC 67: A618 (South)	Located east of Hut Lane	Road users	Low	Rural single-carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 68: Loverose Way	Located between A618 and Woodall Services	Non-motorised road users	Low	Single carriageway road, which is currently restricted to authorised vehicles only, and provides access to public footpaths. No frontage to residential or commercial properties.
ATC 69: A630	Located between Conisbrough Cemetery and Old Road	Road users	Medium	Single carriageway road providing access to both residential and retail land uses. There is street lighting available, as well as signalised pedestrian crossings.
ATC 72: Slacks Lane	Located south of Flash Lane	Road users	High	Single-track rural road, with limited passing places available. The road provides access to a farmyard area, fishing area and public footpath, with no active travel provisions or street lighting available.
ATC 73: Morthen Lane	Located between Guilthwaite and Morthen	Non-motorised road users, settlement of Upper Whiston	High	This road is part of the of Sustrans' NCN, map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Rural single carriageway road with few junctions and passes through settlement of Upper Whiston.
ATC 74: Ulley Lane	Located between village of Ulley and B6067 Aughton Lane	Non-motorised road users	High	This road is part of the of Sustrans' NCN, map indicates that a section of the NCN Route 6 (London to Carlisle) travels along this road. Single carriageway with a restricted width, with limited passing places and no direct frontage.

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Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 75: Common Lane (North)	Located south of Brampton en-le Morthen	Non-motorised road users	Medium	Rural single-carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route, although the road is designated as a local cycle route.
ATC 76: Hawk Hill Lane (West)	Located east of Common Lane / Long Road junction	Road users	Low	Rural single-carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 77: Hawk Hill Lane (East)	Located south of B6060	Road users	Low	Rural single-carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 78: Killamarsh Lane	Located between A618 and village of Woodall	Road users	Low	Rural single-carriageway road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 80: Lidget Lane	Located south of Common Lane and north of Wickersley	Road Users	Low	Single carriage way rural road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.
ATC 81: Long Lane	Located between the A631 and M1	Non-motorised road users	Medium	Single carriageway rural road with passing places available and limited or no direct frontage to nearby commercial or residential properties. There are no active travel facilities along this section of the route, although the road provides access to public footpaths, and is designated as part of the local cycling network.
ATC 82: Pleasley Road	Located between the M1 and A631 at Whiston	Non-motorised road users, settlement of Whiston	Medium	Single carriageway road with 2+1 section, passing through the settlement of Whiston. There are footways along this section of road, and it is designated as part of the local cycling network.
ATC 83: B6060 Morthen Road	Located between Woodhouse Green and Morthen Lane	Non-motorised road users	High	Single carriageway road with footways and bus stops present, with residential and commercial properties with frontage onto the road. This section of road is designated as part of the local cycling network.
ATC 84: Sandy Lane	Located between Kingsforth Lane and Flash Lane	Non-motorised road users, Settlement of Bramley	High	Single carriageway road with footways and bus stops present. The road provides access to residential properties via priority junctions at the settlement of Bramley.
ATC 85: Newhall Lane	Located between Kingsforth Lane and West Lane	Non-motorised road users	High	Singletrack rural road with limited passing places available, and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route, but the road is designated as part of the local cycling network.
ATC 86: A634	Located between Bramley Roundabout and B6093	Settlement of Bramley	Medium	Dual carriageway road running through the settlement of Bramley with footway provisions. The road provides access to commercial and residential land uses.
ATC 87: Cumwell Lane	Located between Kingsforth Lane and A631	Non-motorised road users	High	Single carriageway road with footway provisions available throughout sections of the road. The road provides access to residential and commercial land uses.
ATC 89: Bramley Lane	Located between Lidget Lane and Common Lane	Road users	Low	Single carriageway rural road with few junctions and very limited or no direct frontage of nearby commercial and residential properties. There are no active travel facilities along this section of the route.

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Count Location/Link ID	Link Location	Sensitive Receptor	Sensitivity Rating	Description
ATC 90: Common Lane	Located between Moor Lane and Bramley Lane	Road users	Medium	Single carriageway road with minimal settlements on this portion of the road and no footway provisions available.

Future Baseline Conditions

- 13.5.34 **ES Volume 2, Chapter 11: Climate Change and Greenhouse Gas Assessment [EN0110020/APP/6.11]** provides details of the climate change projections for the Proposed Development. Operation of the Proposed Development is anticipated to start in 2029 and operate for 60 years. When the operational period of the Proposed Development is likely to end, the projections highlight that summer and winter temperatures are likely to be greater than the current baseline (greater for summer), with winter rainfall increasing and summer rainfall decreasing.
- 13.5.35 It is therefore considered that the climate change projection scenario for the Proposed Development, will not have a discernible impact on the baseline conditions for traffic and transport within the timescales of the Proposed Development.
- 13.5.36 Background traffic growth will occur on the surrounding road network irrespective of whether or not the Proposed Development is constructed. It is currently anticipated that (subject to the necessary consents being granted) construction will begin in 2027, with peak traffic for construction in 2028.
- 13.5.37 Details on traffic growth factors calculated for the relevant geographic area and applied to the baseline traffic flow are provided in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**. **Table 13.11** summarises the projected baseline traffic flow at each road link for the anticipated year of construction.

Table 13.11: Projected Baseline Traffic Flows (2028)

ATC No. / Road Link	Daily Vehicles	Daily HGVs	% HGV
ATC 1: A630 High Road	27183	576	2%
ATC 2: A630 Sheffield Road	15681	332	2%
ATC 12: Common Lane	5318	42	1%
ATC 13: Hellaby Lane	5555	137	3%
ATC 14: B6093	7056	25	0%
ATC 15: A630 Doncaster Road	13802	184	1%
ATC 16: A630 Sheffield Road	11783	171	1%
ATC 17: A631	30430	918	3%
ATC 18: Moor Lane South	11841	63	1%
ATC 19: Flash Lane	7767	135	2%
ATC 20: A631	27348	687	3%
ATC 21: A631	31314	689	2%
ATC 22: A631	27652	560	2%
ATC 23: A631	32082	758	2%
ATC 24: Long Lane	1514	11	1%
ATC 25: A630 Rotherway	35689	2,736	8%
ATC 26: A618	13778	70	1%

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ATC No. / Road Link	Daily Vehicles	Daily HGVs	% HGV
ATC 27: Guilthwaite Common Lane	978	7	1%
ATC 28: Reservoir Road	946	4	0%
ATC 29: A618	14565	109	1%
ATC 31: Main Street (Ulley)	1766	42	2%
ATC 32: Penny Hill Lane	2102	21	1%
ATC 33: Penny Hill Lane (East of M1)	1449	3	0%
ATC 34: Brampton Lane	559	2	0%
ATC 35: Common Lane (South)	2911	17	1%
ATC 36: Long Road	3778	21	1%
ATC 40: Todwick Road	16848	347	2%
ATC 41: Pocket Handkerchief Lane	2188	34	2%
ATC 44: A57 (Near Greenscene Side Farm)	26148	988	4%
ATC 45: A57 (West of Mill Lane)	26031	974	4%
ATC 46: A57 (between Todwick Road and M1)	39341	3,260	9%
ATC 47: Kiveton Lane	6651	62	1%
ATC 48: A57 (between M1 and A618)	25117	685	3%
ATC 52: B6060 (North of Second Lane)	9731	67	1%
ATC 53: B6060 (South of Second Lane)	6522	39	1%
ATC 54: Field Lane	1407	15	1%
ATC 55: A618 (North of B6059)	16484	228	1%
ATC 56: A618 (South of B6059)	12300	203	2%
ATC 59: Kiveton Lane	6371	45	1%
ATC 60: Hard Lane (North)	4706	18	0%
ATC 61: Hard Lane (South)	4568	18	0%
ATC 62: Woodall Lane	2027	5	0%
ATC 66: A618 (North)	7413	88	1%
ATC 67: A618 (South)	4977	53	1%
ATC 68: Loverose Way	424	9	2%
ATC 69: A630	8808	166	2%
ATC 72: Slacks Lane	28	0	2%
ATC 73: Morthen Lane	1158	5	0%

ATC No. / Road Link	Daily Vehicles	Daily HGVs	% HGV
ATC 74: Ulley Lane	377	1	0%
ATC 75: Common Lane (North)	2905	11	0%
ATC 76: Hawk Hill Lane (West)	1503	4	0%
ATC 77: Hawk Hill Lane (East)	1539	28	2%
ATC 78: Killamarsh Lane	2190	7	0%
ATC 80: Lidget Lane	3017	13	0%
ATC 81: Long Lane	1515	9	1%
ATC 82: Pleasley Road	13559	126	1%
ATC 83: B6060 Morthen Road	12199	77	1%
ATC 84: Sandy Lane	3449	6	0%
ATC 85: Newhall Lane	583	15	3%
ATC 86: A634	30745	999	3%
ATC 87: Cumwell Lane	6289	190	3%
ATC 89: Bramley Lane	1897	12	1%
ATC 90: Common Lane	6838	198	3%

13.6 Embedded Mitigation

- 13.6.1 The following specific mitigation measures relevant to traffic and transport have been identified and have been considered as part of the assessment. A Commitments Register has been included with the ES (see **ES Volume 3, Appendix 2.3: Commitments Register [EN0110020/APP/6.20]**).

Construction

- 13.6.2 Mitigation measures will be implemented during the construction phase to minimise disruption and manage the adverse effects of the construction activities.
- 13.6.3 The Applicant has submitted an **oCTMP [EN0110020/APP/5.12.1]** and **oPRoWMP [EN0110020/APP/5.14]** with the Application. These documents will form the basis of the CTMP and the Public Rights of Way Management Plan (PRoWMP) which will be provided prior to the commencement of construction works. Full details of embedded mitigation measures are presented in Section 4 and Section 5 of the oCTMP and include:
- Designing entry / exit points onto the road network in accordance with national road design standards and in consultation with the local highway authority to ensure safety
 - Managing interactions with the public road network through visibility splays, signage, and traffic controls, with construction traffic yielding to other road users
 - Distributing details of vehicle routes to workers to reduce peak-time congestion in sensitive areas

- Scheduling HGV movements outside of peak traffic hours to avoid additional congestion
 - Implementing a delivery management system to regulate HGV arrival times and monitor compliance with routing and scheduling
 - Monitoring HGV routes and delivery times to ensure adherence to agreed protocols and address any non-compliance; and
 - Employing specialised haulage services for abnormal loads, including necessary permits and coordination with relevant authorities.
- 13.6.4 A Delivery Management System (DMS) would be implemented as part of the CTMP to control bookings of HGV deliveries from the start of the construction phase. This will be used to regulate the arrival times of HGVs via timed delivery slots, as well to monitor compliance of proposed HGV routing. In addition, adequate space will be made available within the Site at access junctions to ensure no queuing back onto the surrounding road network occurs.
- 13.6.5 A Traffic Management and Monitoring System (TMMS) will be considered for implementation as part of the CTMP to provide details of the technologies and other means employed to monitor HGVs to/from the Compounds (e.g. Global Positioning System (GPS) and Automatic Number Plate Recognition (ANPR)). This will enable the Applicant to monitor the following:
- Compliance with the HGV routes
 - Compliance with the number of HGV limits in terms of the number of deliveries arriving and departing at any one time and over the course of the day; and
 - Compliance with the timing restrictions.
- 13.6.6 Arrival and departure times will be managed to minimise the number of HGVs travelling to the Proposed Development during the network peak hours for the local highway network. The timing restrictions, considered likely to be implemented within the CTMP are:
- Avoiding arrivals or departures on a weekday during the network peak hours (08:00–09:00 and 17:00–18:00)
 - Limiting deliveries to between the hours of 09:00 and 16:00
 - No arrivals or departures on Saturday before 08:00 or after 13:00; and
 - No arrivals or departures on Sundays or public holidays.
- 13.6.7 HGVs will be required to follow the approved designated routes and where possible, the re-use of HGVs such as backloading will be encouraged where practical; The use of a traffic marshalls will be considered to improve the safety and efficiency of HGVs near the proposed access points.
- 13.6.8 Arrangements will be in place for regular road maintenance and cleaning, e.g. road sweeping in the vicinity of access points as necessary, and wheel washing of HGVs.
- 13.6.9 All fuel will be transported by suitably qualified contractors, and all regulations for the transportation and storage of hazardous substances will be observed.
- 13.6.10 Worker movements will be managed through the implementation of the following measures:
- Implementation of a Worker Travel Plan

- Worker arrival and departure times
- Limited and allocated car parking
- Car sharing; and
- Minibus service.

Decommissioning

- 13.6.11 A DEMP will be prepared at the cessation of operations of the Proposed Development. A Decommissioning Traffic Management Plan will be included in the DEMP. An **oDEMP [EN0110020/APP/5.11]** has been submitted with the Application. The traffic management mitigation measures contained in the Decommissioning Traffic Management Plan will likely include the measures that are set out in the **oCTMP [EN0110020/APP/5.12.1]** as they will be applicable to the decommissioning of the Proposed Development.

13.7 Assessment of Effects

Construction Trip Generation

- 13.7.1 The identification of the traffic and transport environmental impacts requires an assessment of the volume of traffic associated with construction activities and the significance of this additional traffic. The traffic associated with the construction phase of the Proposed Development will comprise construction HGVs/LGVs carrying construction materials, personnel and plant, and ALV carrying large electrical components. Details of the construction trip generation are set out in Section 5 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]** and summarised below. Where total trip numbers are presented, these numbers can be altered due to rounding during calculations. This assessment considers the trip generation of both the Site and Cable Corridor elements of the Proposed Development.
- 13.7.2 The Cable Corridor works are linear and will be delivered in phases, meaning that traffic demand will be spread out both spatially and temporally. This phased approach further reduces the likelihood of any concentrated traffic impact at any one location or time. Additionally, the nature of the works, primarily involving cable laying and associated minor civil works, means that vehicle types and volumes will be consistent with those already considered in the wider construction traffic assessment.
- 13.7.3 For the purposes of this assessment, in order to consider a worse case scenario, it will be assumed that the peak periods of trip generation of both the Site and Cable Corridor of the Proposed Development will coincide with each other, however this is unlikely to be the case in reality.

Construction Related HGV Trip Generation – Site

- 13.7.4 For the purposes of this assessment, W2 has been split into two parts “west” and “east” due to the location of the construction compounds, resulting in the Site being made up of four distinct areas.; W1, W2 East, W2 West and W3.
- 13.7.5 **Table 13.12** indicates the anticipated number of HGVs to be generated across the full construction programme, and daily HGVs during the peak construction

month of the Proposed Development specifically, attributed to each of the four identified Sites.

Table 13.12: Delivery Traffic Estimates (HGV) – Site

Site	Total Construction Programme – HGV Trips to be Generated	Peak Month – Daily HGV Trips to be Generated	Peak Month – Daily Two-way HGV Movements
W1	6,953	34	68
W2 (West)	5,200	26	52
W2 (East)	5,200	26	52
W3	3,218	16	32
Total Development (Site)	20,573	102	204

13.7.6 As indicated by **Table 13.12**, the number of HGVs required to undertake deliveries using the identified routes within the Study Area for the Site during the peak month of construction is anticipated to be a maximum of approximately 102 one-way trips (204 two-way daily HGV movements). Of this total, it is estimated that:

- 34 HGVs (or 68 two-way daily movements) will access W1
- 26 HGVs (or 52 two-way daily movements) will access W2 West and East respectively; and
- 16 HGVs (or 32 two-way daily movements) will access W3.

Construction Related Worker Trip Generation – Site

13.7.7 The trip generation for construction workers has been calculated based on the total number of workers expected at each Site area with modal splits applied to reflect anticipated travel behaviour. A daily total of 600 construction staff is expected across the Site during the peak construction periods.

13.7.8 It was assumed that 20% of workers would travel by sustainable modes while another 20% would be transported via shared minibuses. The remaining 60% of workers would be assumed to travel by car. Further detail on the modal split methodology can be found in Section 5.2 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**.

13.7.9 **Table 13.13** indicates the number of workers assigned to each Site location, and the number of vehicle trips anticipated to be generated by these construction staff.

Table 13.13: Construction Worker Daily Trip Generation – Site

Site	Total Workers	Workers Using Minibus (20%)	Workers by Car (60%)	Daily Vehicles	Daily Two-way Vehicles
W1	180	36	108	95	190

Site	Total Worker s	Workers Using Minibus (20%)	Workers by Car (60%)	Daily Vehicles	Daily Two-way Vehicles
W2 (West)	162	32	97	85	170
W2 (East)	162	32	97	85	170
W3	96	19	58	50	100
Total Development (Site)	600	120	360	315	630

13.7.10 As indicated by **Table 13.13**, a daily total of 630 two-way vehicles are expected to be generated by the Proposed Development, in respect of the construction staff of the Site during peak construction periods.

Construction Related HGV Trip Generation – Cable Corridor

13.7.11 **Table 13.14** indicates the anticipated daily number of HGVs to be generated during the peak period of construction of the Cable Corridor of the Proposed Development. This trip generation follows the same methodology as that of the Site.

13.7.12 Further detail on the trip generation of the Cable Corridors can be found in Section 5.4 of **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**.

Table 13.14: Construction Phase Daily Peak HGV – Cable Corridor

Daily HGVs	Daily Two-way HGV Movements
188	376

Construction Related Worker Trip Generation – Cable Corridor

13.7.13 **Table 13.15** indicates the anticipated daily number of vehicle trips to be generated during the peak period of construction by workers of the Cable Corridor of the Proposed Development. Similarly, this trip generation also follows the same methodology as that of the Site.

Table 13.15: Construction Worker Daily Peak Trip Generation – Cable Corridor

Daily Vehicle	Daily Two-way Vehicle Movements
282	564

Summary

13.7.14 The total daily two-way vehicle movements expected to be generated by the construction of the Proposed Development during peak construction periods are indicated by **Table 13.16**.

Table 13.16: Total Construction Peak Daily Vehicle Trips

Site	HGV Two-Way Vehicles	Construction Workers Two-Way Vehicles (Car/LGV)	Total Two-way Vehicle Trips
W1	68	190	258
W2 (West)	52	170	222
W2 (East)	52	170	222
W3	32	100	132
Cable Corridor	376	564	940
Total Development	580	1,194	1,774

Proposed Development Construction Traffic

- 13.7.15 Proposed Development construction traffic is provided in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**. Section 7 of the **Transport Statement** contains details of how construction traffic is assigned to each surveyed ATC location within the Study Area.
- 13.7.16 The origins of construction HGVs are currently unknown therefore it has been assumed that HGVs would approach the local road network around each Site access point from the key SRN corridors, reflecting typical freight movement and regional connectivity. Where possible, routes have been planned to avoid road links with weight, height or width restrictions, as well as environmentally sensitive areas such as schools, active travel links and PRoWs.
- 13.7.17 Trip distribution for construction workers has been established using a gravity-based approach which considers the populations of surrounding settlements, and their respective distances to the Proposed Development. Routing between settlements and access points have been assigned based on digital mapping tools which identify the most efficient and appropriate path to travel along.
- 13.7.18 **Table 13.17** summarises the Proposed Development traffic assigned to the Study Area.

Table 13.17: Proposed Development Traffic

ATC No. / Road Link	Daily Two-way Construction HGVs	Daily Two-way Construction Worker Vehicles	Daily Two-way Total Vehicles
ATC 1: A630 High Road	69	17	86
ATC 2: A630 Sheffield Road	69	17	86
ATC 12: Common Lane	0	33	33
ATC 13: Hellaby Lane	70	38	108
ATC 14: B6093	0	5	5
ATC 15: A630 Doncaster Road	0	172	172
ATC 16: A630 Sheffield Road	69	0	69
ATC 17: A631	113	58	172

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ATC No. / Road Link	Daily Two-way Construction HGVs	Daily Two-way Construction Worker Vehicles	Daily Two-way Total Vehicles
ATC 18: Moor Lane South	0	5	5
ATC 19: Flash Lane	39	48	88
ATC 20: A631	74	27	101
ATC 21: A631	0	27	27
ATC 22: A631	0	121	121
ATC 23: A631	68	277	345
ATC 24: Long Lane	6	19	24
ATC 25: A630 Rotherway	84	248	333
ATC 26: A618	62	140	203
ATC 27: Guilthwaite Common Lane	15	34	49
ATC 28: Reservoir Road	0	48	48
ATC 29: A618	6	9	14
ATC 31: Main Street (Ulley)	0	48	48
ATC 32: Penny Hill Lane	15	54	69
ATC 33: Penny Hill Lane (East of M1)	15	0	15
ATC 34: Brampton Lane	0	5	5
ATC 35: Common Lane (South)	21	64	85
ATC 36: Long Road	72	146	217
ATC 40: Todwick Road	84	167	251
ATC 41: Pocket Handkerchief Lane	84	169	253
ATC 44: A57 (Near Greenscene Side Farm)	60	101	162
ATC 45: A57 (West of Mill Lane)	36	54	90
ATC 46: A57 (between Todwick Road and M1)	215	384	599
ATC 47: Kiveton Lane	71	116	187
ATC 48: A57 (between M1 and A618)	27	62	89
ATC 52: B6060 (North of Second Lane)	74	0	74
ATC 53: B6060 (South of Second Lane)	74	20	94
ATC 54: Field Lane	0	3	3

ATC No. / Road Link	Daily Two-way Construction HGVs	Daily Two-way Construction Worker Vehicles	Daily Two-way Total Vehicles
ATC 55: A618 (North of B6059)	27	74	101
ATC 56: A618 (South of B6059)	27	74	101
ATC 59: Kiveton Lane	71	116	187
ATC 60: Hard Lane (North)	71	120	191
ATC 61: Hard Lane (South)	44	70	114
ATC 62: Woodall Lane	0	6	6
ATC 66: A618 (North)	27	74	101
ATC 67: A618 (South)	27	75	101
ATC 68: Loverose Way	14	36	50
ATC 69: A630	69	189	258
ATC 72: Slacks Lane	25	48	73
ATC 73: Morthen Lane	0	3	3
ATC 74: Ulley Lane	0	1	1
ATC 75: Common Lane (North)	6	35	42
ATC 76: Hawk Hill Lane (West)	19	64	83
ATC 77: Hawk Hill Lane (East)	6	21	28
ATC 78: Killamarsh Lane	0	6	6
ATC 80: Lidget Lane	24	36	60
ATC 81: Long Lane	16	43	60
ATC 82: Pleasley Road	68	108	176
ATC 83: B6060 Morthen Road	0	11	11
ATC 84: Sandy Lane	14	22	36
ATC 85: Newhall Lane	0	0	0
ATC 86: A634	113	58	172
ATC 87: Cumwell Lane	0	55	55
ATC 89: Bramley Lane	38	24	62
ATC 90: Common Lane	70	11	81

Construction Traffic Impact Screening

- 13.7.19 As detailed in the assessment methodology (Section 13.4), a screening exercise has been undertaken to determine which ATCs warrant detailed assessment of effects in relation to an increase in traffic flows associated with the construction of the Proposed Development.
- 13.7.20 The ISEP 2023 Guidelines¹³ Rules 1 and 2 are used as thresholds to determine the need for detailed assessment of effects such as severance, non- motorised delay and amenity including fear and intimidation (collectively referred as

'Community Effects') arising from increase in traffic flows associated with the construction of the Proposed Development. Further consideration is also given to road user and pedestrian safety as well as driver delay effects even if these thresholds are not exceeded and this is considered in the subsequent sections.

- 13.7.21 The lower threshold of significance (10% - Rule 2) has been applied to road links that were identified as featuring sensitive receptors and therefore assigned a sensitivity rating of "High" in **Table 13.10**.
- 13.7.22 The upper threshold of significance (30% - Rule 1) was considered appropriate for all other count locations (Low/Medium sensitivity) in the Study Area.
- 13.7.23 **Table 13.18** details the results of the screening exercise, indicating the percentage increase in daily traffic generated by the Proposed Development above the predicted baseline at each ATC within the Study Area, during the peak month of construction.

Table 13.18: Predicted Daily Impact – Peak Month

ATC No. / Road Link	Sensitivity Rating	Total Vehicle % Increase	HGV % Increase	Further Assessment Required?
ATC 1: A630 High Road	Medium	0.3%	12.0%	No
ATC 2: A630 Sheffield Road	Medium	0.5%	20.8%	No
ATC 12: Common Lane	Medium	0.6%	0.0%	No
ATC 13: Hellaby Lane	Medium	1.9%	51.1%	Yes
ATC 14: B6093	High	0.1%	0.0%	No
ATC 15: A630 Doncaster Road	High	1.2%	0.0%	No
ATC 16: A630 Sheffield Road	Medium	0.6%	40.3%	Yes
ATC 17: A631	Medium	0.5%	10.8%	No
ATC 18: Moor Lane South	High	0.0%	0.0%	No
ATC 19: Flash Lane	High	0.9%	18.8%	Yes
ATC 20: A631	High	0.4%	10.8%	Yes
ATC 21: A631	High	0.1%	0.0%	No
ATC 22: A631	High	0.4%	0.0%	No
ATC 23: A631	Medium	1.1%	9.0%	No
ATC 24: Long Lane	High	1.6%	51.3%	Yes
ATC 24*: Treeton Lane	High	1.6%	51.3%	Yes
ATC 25: A630 Rotherway	Low	0.9%	3.1%	No
ATC 26: A618	Medium	1.5%	88.6%	Yes
ATC 27: Guilthwaite Common Lane	High	5.0%	224.8%	Yes
ATC 28: Reservoir Road	High	5.1%	0.0%	No
ATC 29: A618	High	0.1%	5.1%	No
ATC 31: Main Street (Ulley)	High	2.7%	0.0%	No

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ATC No. / Road Link	Sensitivity Rating	Total Vehicle % Increase	HGV % Increase	Further Assessment Required?
ATC 32: Penny Hill Lane	High	3.3%	72.7%	Yes
ATC 33: Penny Hill Lane (East of M1)	High	1.1%	573.2%	Yes
ATC 34: Brampton Lane	High	0.9%	0.0%	No
ATC 35: Common Lane (South)	High	2.9%	121.0%	Yes
ATC 36: Long Road	Medium	5.8%	335.8%	Yes
ATC 40: Todwick Road	Medium	1.5%	24.2%	No
ATC 41: Pocket Handkerchief Lane	Medium	11.6%	247.7%	Yes
ATC 44: A57 (Near Greenscene Side Farm)	Low	0.6%	6.1%	No
ATC 45: A57 (West of Mill Lane)	Medium	0.3%	3.7%	No
ATC 46: A57 (between Todwick Road and M1)	Low	1.5%	6.6%	No
ATC 47: Kiveton Lane	High	2.8%	114.9%	Yes
ATC 48: A57 (between M1 and A618)	Low	0.4%	3.9%	No
ATC 52: B6060 (North of Second Lane)	High	0.8%	110.5%	Yes
ATC 53: B6060 (South of Second Lane)	Medium	1.4%	188.8%	Yes
ATC 54: Field Lane	Medium	0.2%	0.0%	No
ATC 55: A618 (North of B6059)	Medium	0.6%	11.8%	No
ATC 56: A618 (South of B6059)	High	0.8%	13.2%	Yes
ATC 59: Kiveton Lane	Medium	2.9%	156.8%	Yes
ATC 60: Hard Lane (North)	Medium	4.1%	401.2%	Yes
ATC 61: Hard Lane (South)	Medium	2.5%	243.9%	Yes
ATC 62: Woodall Lane	High	0.3%	0.0%	No
ATC 66: A618 (North)	Medium	1.4%	30.5%	Yes
ATC 67: A618 (South)	Low	2.0%	50.9%	Yes
ATC 68: Loverose Way	Low	11.8%	150.8%	Yes
ATC 69: A630	Medium	2.9%	41.5%	Yes
ATC 72: Slacks Lane	High	258.6%	5693.3%	Yes
ATC 73: Morthen Lane	High	0.3%	0.0%	No

ATC No. / Road Link	Sensitivity Rating	Total Vehicle % Increase	HGV % Increase	Further Assessment Required?
ATC 74: Ulley Lane	High	0.3%	0.0%	No
ATC 75: Common Lane (North)	Medium	1.4%	60.7%	Yes
ATC 76: Hawk Hill Lane (West)	Low	5.5%	445.9%	Yes
ATC 77: Hawk Hill Lane (East)	Low	1.8%	22.7%	No
ATC 78: Killamarsh Lane	Low	0.3%	0.0%	No
ATC 80: Lidget Lane	Low	2.0%	182.3%	Yes
ATC 81: Long Lane	Medium	3.9%	189.3%	Yes
ATC 82: Pleasley Road	Medium	1.3%	54.2%	Yes
ATC 83: B6060 Morthen Road	High	0.1%	0.0%	No
ATC 84: Sandy Lane	High	1.0%	225.4%	Yes
ATC 85: Newhall Lane	High	0.0%	0.0%	No
ATC 86: A634	Medium	0.5%	9.9%	No
ATC 87: Cumwell Lane	High	1.1%	7.4%	No
ATC 89: Bramley Lane	Low	3.2%	325.2%	Yes
ATC 90: Common Lane	Medium	1.2%	35.3%	Yes

13.7.24 As indicated by **Table 13.18**, the relevant thresholds for percentage increases in traffic flows have been exceeded at 33 count locations and these locations will therefore undergo a full assessment presented below.

13.7.25 With respect to ATC 24* Treeton Lane, construction vehicles will require to access location WL-02 via Treeton Lane and Wood Lane (south of Treeton). No traffic count data is available for this link, and it has therefore not been assessed as a standalone link within this Chapter. However, given that the ATC 24 is located north of Treeton, the characteristics of the link are considered comparable in terms of road classification, carriageway condition and the nature of the residential areas served. On this basis, ATC 24 has been used as a reasonable proxy for assessing the environmental effects associated with construction traffic on ATC24* Treeton Lane. However, no construction vehicles will travel through the settlement of Treeton.

13.7.26 It should also be noted that the volume of construction traffic forecast to use this access route is equivalent to that predicted for Long Lane and has therefore been assessed on a consistent basis within the assessment.

Environmental Effects

Severance

13.7.27 The ISEP 2023 Guidance¹³ identifies severance as the “*perceived division that can occur within a community when it becomes separated by major transport*”

traffic artery". As an example, a road that passes through a community such as a town or village, where amenities may be located on one side of the road and residential properties are located on the other side, causes severance to the movements between those places. Severance may be caused by a physical barrier created by a development or by the difficulty of crossing roads due to an increase in traffic flow.

- 13.7.28 **Table 13.19** indicates the corresponding significance of the severance effect on each of the count locations taken forward in the full assessment, when the respective magnitudes (as defined in **Table 13.5**) and sensitivity ratings are combined.

Table 13.19: Severance Impact and Significance

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	Severance Magnitude	Sensitivity Rating	Significance
ATC 13: Hellaby Lane	2%	51%	Small	Medium	Minor
ATC 16: A630 Sheffield Road	1%	40%	Small	Medium	Minor
ATC 19: Flash Lane	1%	19%	Negligible	High	Minor
ATC 20: A631	0%	11%	Negligible	High	Minor
ATC 24: Long Lane	2%	51%	Small	High	Moderate
ATC 24*: Treeton Lane	2%	51%	Small	High	Moderate
ATC 26: A618	1%	89%	Medium	Medium	Moderate
ATC 27: Guilthwaite Common Lane	5%	225%	Large	High	Major
ATC 32: Penny Hill Lane	3%	73%	Medium	High	Moderate
ATC 33: Penny Hill Lane (East of M1)	1%	573%	Large	High	Major
ATC 35: Common Lane South	3%	121%	Large	High	Major
ATC 36: Long Road	6%	336%	Large	Medium	Moderate
ATC 41: Pocket Handkerchief Lane	12%	248%	Large	Medium	Moderate
ATC 47: Kiveton Lane	3%	115%	Large	High	Major
ATC 52: B6060 (North of Second Lane)	1%	110%	Large	High	Major
ATC 53: B6060 (South of Second Lane)	1%	189%	Large	Medium	Moderate
ATC 56: A618 (South of B6059)	1%	13%	Negligible	High	Minor
ATC 59: Kiveton Lane	3%	157%	Large	Medium	Moderate
ATC 60: Hard Lane (North)	4%	401%	Large	Medium	Moderate
ATC 61: Hard Lane (South)	3%	244%	Large	Medium	Moderate

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	Severance Magnitude	Sensitivity Rating	Significance
ATC 66: A618 (North)	1%	30%	Small	Medium	Minor
ATC 67: A618 (South)	2%	51%	Small	Low	Negligible
ATC 68: Loverose Way	12%	151%	Large	Low	Moderate
ATC 69: A630	3%	41%	Small	Medium	Minor
ATC 72: Slacks Lane	259%	5693%	Large	High	Major
ATC 75: Common Lane (North)	1%	61%	Medium	Medium	Moderate
ATC 76: Hawk Hill Lane (West)	6%	446%	Large	Low	Moderate
ATC 80: Lidget Lane	2%	182%	Large	Low	Moderate
ATC 81: Long Lane	4%	189%	Large	Medium	Moderate
ATC 82: Pleasley Road	1%	54%	Small	Medium	Minor
ATC 84: Sandy Lane	1%	225%	Large	High	Major
ATC 89: Bramley Lane	3%	325%	Large	Low	Moderate
ATC 90: Common Lane	1%	35%	Small	Medium	Minor

13.7.29 As indicated by **Table 13.19**, the increased traffic is predicted to result in a moderate or major effect on severance at 23 of the 33 assessed count locations, prior to the implementation of embedded mitigation. However, professional judgement must be applied, including consideration of embedded mitigation and each of these count locations will be considered further in the following sections.

ATC 24 – Long Lane

- 13.7.30 The percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction with no construction related HGVs associated with the Cable Corridor of the Proposed Development using this route. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.31 In addition to the low absolute increase in HGVs on this road link, traffic calming measures and appropriate crossing points including dropped kerbs with tactile paving and reserve islands are provided along the road in the urban environment of Treeton and allow for safe crossing opportunities. Outwith Treeton, there are limited sections of footway along the road, and no presence of communities or local facilities that need to be accessed.
- 13.7.32 The proposed HGV routing along Long Lane indicates that HGVs will only be travelling along the north section of the road and will not travel through the settlement of Treeton.

- 13.7.33 To effectively minimise any potential adverse effect on severance at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.
- 13.7.34 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on severance at ATC 24 on Long Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on severance at count location 24 is **Minor** and **Not Significant**.

ATC 24* – Treeton Lane

- 13.7.35 The percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction with no construction related HGVs associated with the Cable Corridor of the Proposed Development using this route. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.36 In addition to the low absolute increase in HGVs on this road link, this section of the route passes through a short section of the village of Aughton and has a number of residential properties including pedestrian footways which front directly onto it. All services are restricted to the south of Treeton Lane, with no development in the north and therefore no real need to cross this stretch of the road.
- 13.7.37 The proposed HGV routing along Treeton Lane indicates that HGVs will only be travelling along the south section of the road and will not travel through the settlement of Treeton.
- 13.7.38 That notwithstanding, to effectively minimise any potential adverse effect on severance at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.
- 13.7.39 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on severance at ATC 24 on Treeton Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on severance at count location 24 (Treeton Lane) is **Minor** and **Not Significant**.

ATC 26 – A618 (Between Upper Whiston Ln and Guilthwaite Common Ln)

- 13.7.40 The percentage increase in HGV traffic on this link is primarily due to the low baseline flows (70 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms (an additional 62 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction. The majority of construction related HGVs that will travel along this route will be associated with the Cable Corridor of the Proposed Development however, as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. The change in HGV traffic is

temporary, fully reversible and would only occur during peak month of construction.

- 13.7.41 In addition to the low absolute increase in HGVs on this road link, the A618 at this location is wide single-carriageway road with few junctions and isolated residential properties and no local facilities taking access off this road. While it is acknowledged that the A618 provides access to Guilthwaite Nurseries Garden centre, short-term increases in HGV movements associated with servicing and delivery activity to this facility are an established and typical feature of traffic conditions along this section of the route. Given the nature of the facility and its out-of-town location, the majority of trips to and from the garden centre are expected to be undertaken by private car, including those associated with nearby isolated residential properties.
- 13.7.42 That notwithstanding, to effectively minimise any potential adverse effect on severance at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.
- 13.7.43 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on severance at ATC 26 on the A618 results in a negligible magnitude of change on a receptor of medium sensitivity. Thus, the effect of increased traffic on severance at count location 26 is **Negligible** and **Not Significant**.

ATCs 27, 32, 33, 35, 36, 41, 68, 72, 75, 76, 80, 81, 84 & 89

- 13.7.44 These ATCs have been grouped together as there is no presence of existing communities served by these road links or pedestrian activity due to lack of footways and local facilities that need to be accessed in the vicinity, and therefore no potential to be affected by severance.
- 13.7.45 The percentage increase in HGV traffic on these links are primarily due to the low baseline flows (between 7 and 34 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms ranging from approximately 6 to 84 additional HGVs per day above baseline levels.
- 13.7.46 While the predicted increase in HGV traffic during the peak construction month could be considered Significant, the absence of existing communities and/or local facilities means that the potential for severance effects is inherently limited. In practical terms, the predicted increase in HGVs does not materially change the existing user experience along links where baseline activity is already low and receptors are sparse. Thus, the sensitivity rating for the respective count locations to an increased severance effect can be considered to be **Negligible**.
- 13.7.47 Therefore, when considering the link sensitivity to severance and magnitude of change, the effect of construction traffic on severance across the respective count locations results in a medium to large magnitude of change on receptors of negligible sensitivity. Thus, the effect of increased traffic on severance for the respective count locations is **Negligible to Minor** and **Not Significant**.

ATCs 47, 59, 60 & 61

- 13.7.48 These ATCs have been grouped together due to their proximity and location north and south of Kiveton Park.

- 13.7.49 The percentage increase in HGV traffic along these links is primarily due to the low baseline flows (between 18 and 62 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms ranging from approximately 44 to 71 additional HGVs per day above baseline levels. It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction. The majority of construction related HGVs that will travel along this route will be associated with the Cable Corridor of the Proposed Development, however as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.50 In addition to the relatively low absolute increase in HGVs on these road links, appropriate crossing points including dropped kerbs with tactile paving are provided along the road in the urban environment of Kiveton Park and Todwick and allow safe crossing for non-motorised users. South of Kiveton Park, access is provided to the Kiveton Community Woodland area which is located to the west of Hard Lane. A continuous footway (with tactile paving crossings across local accesses) is provided along the west side of Hard Lane from the settlement of Kiveton Park, with limited presence of communities or local facilities on the opposite side of the road which could be affected by severance.
- 13.7.51 To effectively minimise any potential adverse effect on severance at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.
- 13.7.52 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on severance at the respective count locations surrounding Kiveton Park results in a negligible magnitude of change on receptors of medium to high sensitivity. Thus, the effect of increased traffic on severance at the respective count locations is **Negligible to Minor and Not Significant**.

ATCs 52 & 53

- 13.7.53 These ATCs have been grouped together due to their proximity and location along the B6060 in the south of Wickersley.
- 13.7.54 The percentage increase in HGV traffic on these links is primarily due to the low baseline flows (39 to 67 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms (an additional 74 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction and only construction related HGVs associated with the Cable Corridor of the Proposed Development will travel along this route. It should also be noted that the construction of the Cable Corridor is progressive rather than static, with works and associated vehicle activity moving sequentially along the Cable Corridor. Therefore, the change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction at that these locations on the route.
- 13.7.55 In addition to the relatively low absolute increase in HGVs on these road links, appropriate crossing points including dropped kerbs with tactile paving are provided along the road in the urban environment of Wickersley and allow safe crossing for non-motorised users. Footways are provided along both sides of the road, with residential areas to both sides as well as St. Albans Primary School

located to the north of the section of the road link. Outwith Wickersley, there are limited sections of footway along the road, and no presence of communities or local facilities that need to be accessed.

- 13.7.56 To effectively minimise any potential adverse effect on severance at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count locations.
- 13.7.57 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on severance at the respective count locations in the south of Wickersley results in a negligible magnitude of change on receptor of medium to high sensitivity. Thus, the effect of increased traffic on severance at the respective count locations is **Negligible to Minor** and **Not Significant**.

Non-motorised User Amenity

- 13.7.58 NMU Amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition, pavement width and separation between vehicles and pedestrians or cyclists. Guidance set out in **Table 13.5** of this Chapter identifies that doubling or halving of the total traffic or HGV traffic volumes could lead to a perceptible change upon pedestrian or cyclist amenity.
- 13.7.59 **Table 13.20** indicates the corresponding significance of the NMU amenity effect on each of the count locations screened in for assessment, when the respective magnitudes (as defined in **Table 13.5**) and sensitivity ratings are combined.

Table 13.20: Non-Motorised User Amenity Impact and Significance

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	NMU Amenity Magnitude	Sensitivity Rating	Significance
ATC 13: Hellaby Lane	2%	51%	Small	Medium	Minor
ATC 16: A630 Sheffield Road	1%	40%	Negligible	Medium	Negligible
ATC 19: Flash Lane	1%	19%	Negligible	High	Minor
ATC 20: A631	0%	11%	Negligible	High	Minor
ATC 24: Long Lane	2%	51%	Small	High	Moderate
ATC 24*: Treeton Lane	2%	51%	Small	High	Moderate
ATC 26: A618	1%	89%	Small	Medium	Minor
ATC 27: Guilthwaite Common Lane	5%	225%	Large	High	Major
ATC 32: Penny Hill Lane	3%	73%	Small	High	Moderate
ATC 33: Penny Hill Lane (East of M1)	1%	573%	Large	High	Major
ATC 35: Common Lane South	3%	121%	Medium	High	Moderate
ATC 36: Long Road	6%	336%	Large	Medium	Moderate

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	NMU Amenity Magnitude	Sensitivity Rating	Significance
ATC 41: Pocket Handkerchief Lane	12%	248%	Large	Medium	Moderate
ATC 47: Kiveton Lane	3%	115%	Medium	High	Moderate
ATC 52: B6060 (North of Second Lane)	1%	110%	Medium	High	Moderate
ATC 53: B6060 (South of Second Lane)	1%	189%	Large	Medium	Moderate
ATC 56: A618 (South of B6059)	1%	13%	Negligible	High	Minor
ATC 59: Kiveton Lane	3%	157%	Large	Medium	Moderate
ATC 60: Hard Lane (North)	4%	401%	Large	Medium	Moderate
ATC 61: Hard Lane (South)	3%	244%	Large	Medium	Moderate
ATC 66: A618 (North)	1%	30%	Negligible	Medium	Negligible
ATC 67: A618 (South)	2%	51%	Small	Low	Negligible
ATC 68: Loverose Way	12%	151%	Large	Low	Moderate
ATC 69: A630	3%	41%	Negligible	Medium	Negligible
ATC 72: Slacks Lane	259%	5693%	Large	High	Major
ATC 75: Common Lane (North)	1%	61%	Small	Medium	Minor
ATC 76: Hawk Hill Lane (West)	6%	446%	Large	Low	Moderate
ATC 80: Lidget Lane	2%	182%	Large	Low	Moderate
ATC 81: Long Lane	4%	189%	Large	Medium	Moderate
ATC 82: Pleasley Road	1%	54%	Small	Medium	Minor
ATC 84: Sandy Lane	1%	225%	Large	High	Major
ATC 89: Bramley Lane	3%	325%	Large	Low	Moderate
ATC 90: Common Lane	1%	35%	Negligible	Medium	Negligible

13.7.60 As indicated by **Table 13.20**, the increased traffic is predicted to result in a moderate or major effect on NMU amenity at 21 of the 33 assessed count locations in the absence of embedded mitigation. However, professional judgement must be applied, including consideration of embedded mitigation, and each of these count locations will be considered further in the following sections.

ATC 24 – Long Lane

13.7.61 As indicated in

13.7.62 **Table 13.10**, a section of Long Lane makes up part of the local cycle network, and feature evidence of equestrian use and will therefore be sensitive to an increase in HGV traffic. However, the percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the

magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.

- 13.7.63 The proposed HGV routing along Long Lane indicates that HGVs will only be travelling along the north section of the road and will not travel through the settlement of Treeton.
- 13.7.64 That notwithstanding, to effectively minimise any potential adverse effect on NMU amenity at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.65 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.
- 13.7.66 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU amenity at count location 24 on Long Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on NMU amenity at count location 24 is **Minor** and **Not Significant**.

ATC 24*: Treeton Lane

- 13.7.67 As discussed under severance effects, it is acknowledged that whilst there are no local facilities to generate any notable demand that need to be accessed in the vicinity to these road links, relatively good standard footways are provided to facilitate pedestrian movements, It is also noted that this section does not make up part of the local cycle network, and does not feature evidence of equestrian use and will unlikely be sensitive to an increase in HGV traffic.
- 13.7.68 However, the percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction with no construction related HGVs associated with the Cable Corridor of the Proposed Development using this route The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.69 The proposed HGV routing along Treeton Lane indicates that HGVs will only be travelling along the south section of the road and will not travel through the settlement of Treeton.
- 13.7.70 That notwithstanding, to effectively minimise any potential adverse effect on NMU amenity at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.71 Considering the above, the overall magnitude of change can be reduced to **Negligible** for this location.
- 13.7.72 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU amenity at count location 24 on Treeton Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on NMU amenity at count location 24 (Treeton Lane) is **Minor** and **Not Significant**.

ATCs 27, 32, 33, 35, 36, 41, 68, 72, 76, 80, 81, 84 & 89

- 13.7.73 As discussed under severance effects, it is acknowledged that whilst there are no existing communities or local facilities to generate any notable demand that need to be accessed in the vicinity to these road links, and no footways or formal crossing points are provided, as indicated in
- 13.7.74 **Table 13.10**, most of these road links (other than ATCs 68, 72, 76, 80, 84 and 89) make up part of the local cycle network, and feature evidence of equestrian use and will therefore be sensitive to an increase in HGV traffic. Therefore, these ATCs have been grouped together.
- 13.7.75 The percentage increases in HGV traffic on these links are primarily due to the low baseline flows (between 7 and 34 HGVs per day), whilst the magnitude of the predicted increases is relatively low in absolute terms ranging from approximately 6 to 84 additional HGVs per day above baseline levels. It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction however as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. Therefore, the change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.76 That notwithstanding, to effectively minimise any potential adverse effect on NMU amenity at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.77 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.
- 13.7.78 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU amenity across the respective count locations results in a negligible magnitude of change on receptors of low to high sensitivity. Thus, the effect of increased traffic on NMU amenity for the respective count locations is **Negligible to Minor** and **Not Significant**.

ATCs 47, 59, 60 & 61

- 13.7.79 These ATCs have been grouped together due to their proximity and location north and south of Kiveton Park. As indicated in
- 13.7.80 **Table 13.10**, these road links make up part of both the national and local cycle network and will therefore be sensitive to an increase in HGV traffic. It is acknowledged that the section of the route through urban environment of Kiveton Park and Todwick is subject to a 30mph speed restriction with relatively good standard continuous footways and crossing facilities available to enable NMUs to cross the road.
- 13.7.81 The percentage increase in HGV traffic along these links is primarily due to the low baseline flows (between 18 and 62 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms ranging from approximately 44 to 71 additional HGVs per day above baseline levels. It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction however, as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. The majority of construction related HGVs that will travel along this route will be associated with the Cable Corridor of

the Proposed Development. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.

- 13.7.82 That notwithstanding, to effectively minimise any potential adverse effect on NMU amenity at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.83 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.
- 13.7.84 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU amenity at the respective count locations results in a negligible magnitude of change on receptor of medium to high sensitivity. Thus, the effect of increased traffic on NMU amenity at the respective count locations is **Negligible to Minor** and **Not Significant**.

ATCs 52 & 53

- 13.7.85 These ATCs have been grouped together due to their proximity and location along the B6060 in the south of Wickersley. It is acknowledged that the section of the route through the urban environment of Wickersley is subject to a 30mph speed restriction with relatively good standard continuous footways and crossing facilities available to enable NMUs to cross the road.
- 13.7.86 The percentage increase in HGV traffic on these links is primarily due to the low baseline flows (39 to 67 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms (an additional 74 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction and only construction related HGVs associated with the Cable Corridor of the Proposed Development will travel along this route. It should also be noted that the construction of the Cable Corridor is progressive rather than static, with works and associated vehicle activity moving sequentially along the Cable Corridor. Therefore, the change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction at these locations on the route.
- 13.7.87 That notwithstanding, to effectively minimise any potential adverse effect on NMU amenity at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.88 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.
- 13.7.89 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU amenity at the respective count locations results in a negligible magnitude of change on receptor of medium to high sensitivity. Thus, the effect of increased traffic on NMU amenity at the respective count locations is **Negligible to Minor** and **Not Significant**.

Non-motorised User Delay

- 13.7.90 The ISEP (2023) Guidelines¹³ note that *“the assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads”*. Pedestrian delay and severance are closely related effects, and changes in the volume, composition or speed of traffic may affect the ability of people to cross existing roads. In general, increases in traffic levels are likely to lead to an increase in delays. Delays will also depend on the

general level of pedestrian activity, visibility, and the general physical conditions of the road network around the Proposed Development.

- 13.7.91 **Table 13.21** indicates the corresponding significance of the NMU delay effect on each of the count locations taken forward in the full assessment, when the respective magnitudes (as defined in **Table 13.5**) and sensitivity ratings are combined.

Table 13.21: Non-Motorised User Delay Impact and Significance

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	NMU Delay Magnitude	Sensitivity Rating	Significance
ATC 13: Hellaby Lane	2%	51%	Small	Medium	Minor
ATC 16: A630 Sheffield Road	1%	40%	Small	Medium	Minor
ATC 19: Flash Lane	1%	19%	Negligible	High	Minor
ATC 20: A631	0%	11%	Negligible	High	Minor
ATC 24: Long Lane	2%	51%	Small	High	Moderate
ATC 24*: Long Lane	2%	51%	Small	High	Moderate
ATC 26: A618	1%	89%	Medium	Medium	Moderate
ATC 27: Guilthwaite Common Lane	5%	225%	Large	High	Major
ATC 32: Penny Hill Lane	3%	73%	Medium	High	Moderate
ATC 33: Penny Hill Lane (East of M1)	1%	573%	Large	High	Major
ATC 35: Common Lane South	3%	121%	Large	High	Major
ATC 36: Long Road	6%	336%	Large	Medium	Moderate
ATC 41: Pocket Handkerchief Lane	12%	248%	Large	Medium	Moderate
ATC 47: Kiveton Lane	3%	115%	Large	High	Major
ATC 52: B6060 (North of Second Lane)	1%	110%	Large	High	Major
ATC 53: B6060 (South of Second Lane)	1%	189%	Large	Medium	Moderate
ATC 56: A618 (South of B6059)	1%	13%	Negligible	High	Minor
ATC 59: Kiveton Lane	3%	157%	Large	Medium	Moderate
ATC 60: Hard Lane (North)	4%	401%	Large	Medium	Moderate
ATC 61: Hard Lane (South)	3%	244%	Large	Medium	Moderate
ATC 66: A618 (North)	1%	30%	Small	Medium	Minor
ATC 67: A618 (South)	2%	51%	Small	Low	Negligible
ATC 68: Loverose Way	12%	151%	Large	Low	Moderate

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	NMU Delay Magnitude	Sensitivity Rating	Significance
ATC 69: A630	3%	41%	Small	Medium	Minor
ATC 72: Slacks Lane	259%	5693%	Large	High	Major
ATC 75: Common Lane (North)	1%	61%	Medium	Medium	Moderate
ATC 76: Hawk Hill Lane (West)	6%	446%	Large	Low	Moderate
ATC 80: Lidget Lane	2%	182%	Large	Low	Moderate
ATC 81: Long Lane	4%	189%	Large	Medium	Moderate
ATC 82: Pleasley Road	1%	54%	Small	Medium	Minor
ATC 84: Sandy Lane	1%	225%	Large	High	Major
ATC 89: Bramley Lane	3%	325%	Large	Low	Moderate
ATC 90: Common Lane	1%	35%	Small	Medium	Minor

13.7.92 As indicated by **Table 13.21**, the increased traffic is predicted to result in a moderate or major effect on NMU delay at 13 of the 27 assessed count locations in the absence of embedded mitigation. However, professional judgement must be applied, including consideration of embedded mitigation, and each of these count locations will be considered further in the following sections.

ATC 24 – Long Lane

- 13.7.93 The percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction with no construction related HGVs associated with the Cable Corridor of the Proposed Development using this route. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.94 In addition to the low absolute increase in HGVs on this road link, traffic calming measures and appropriate crossing points including dropped kerbs with tactile paving and reserve islands are provided along the road in the urban environment of Treeton and allow for safe crossing opportunities. Outwith Treeton, there are limited sections of footway along the road, and no presence of communities or local facilities that need to be accessed.
- 13.7.95 The proposed HGV routing along Long Lane indicates that HGVs will only be travelling along the north section of the road and will not travel through the settlement of Treeton.
- 13.7.96 That notwithstanding, to effectively minimise any potential adverse effect on NMU delay at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**. Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.

- 13.7.97 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay at count location 24 on Long Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on NMU delay at count location 24 is **Minor** and **Not Significant**.

ATC 24*: Treeton Lane

- 13.7.98 As discussed under severance and the NMU amenity effects, it is acknowledged that whilst there are no local facilities to generate any notable demand that need to be accessed in the vicinity to these road links, relatively good standard footways are provided to facilitate pedestrian movements. It is also noted that this section does not make up part of the local cycle network, and does not feature evidence of equestrian use and will unlikely be sensitive to an increase in HGV traffic.
- 13.7.99 However, the percentage increase in HGV traffic on this link is primarily due to the low baseline flows (11 HGVs per day), whilst the magnitude of the predicted increase is low in absolute terms (an additional 6 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction with no construction related HGVs associated with the Cable Corridor of the Proposed Development using this route. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.100 That notwithstanding, to effectively minimise any potential adverse effect on NMU delay at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.101 Considering the above, the overall magnitude of change can be reduced to **Negligible** for this location.
- 13.7.102 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay at count location 24 on Treeton Lane results in a negligible magnitude of change on a receptor of high sensitivity. Thus, the effect of increased traffic on NMU delay at count location 24 (Treeton Lane) is **Minor** and **Not Significant**.

ATC 26 – A618 (Upper Whiston Ln and Guilthwaite Common Ln)

- 13.7.103 The percentage increase in HGV traffic on this link is primarily due to the low baseline flows (70 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms (an additional 62 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction. The majority of construction related HGVs that will travel along this route will be associated with the Cable Corridor of the Proposed Development, however, as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.104 As discussed in the severance effects, the potential for NMUs movements along this section of the A618 is considered to be inherently low due to the limited presence of NMU receptors and the absence of local facilities that would typically generate regular crossing movements. As such, the temporary increase in

construction-related HGV traffic would be unlikely to materially affect NMU movement or introduce noticeable additional delay.

13.7.105 That notwithstanding, to effectively minimise any potential adverse effect on NMU delay at this location, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.

13.7.106 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.

13.7.107 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay at count location 26 on the A618 results in a negligible magnitude of change on a receptor of medium sensitivity. Thus, the effect of increased traffic on NMU delay at count location 26 is **Negligible and Not Significant**.

ATCs 27, 32, 33, 35, 36, 41, 68, 72, 75, 76, 80, 81, 84 & 89

13.7.108 As discussed under severance effects, it is acknowledged that whilst there are no existing communities or local facilities to generate any notable demand that need to be accessed in the vicinity to these road links, and no footways or formal crossing points are provided, as indicated in

13.7.109 **Table 13.10**, most of these road links (other than ATCs 68, 72, 76, 80, 84 and 89) make up part of the local cycle network, and feature evidence of equestrian use and will therefore be sensitive to an increase in HGV traffic. Therefore, these ATCs have been grouped together.

13.7.110 The percentage increase in HGV traffic on these links are primarily due to the low baseline flows (between 7 and 34 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms ranging from approximately 6 to 84 additional HGVs per day above baseline levels. It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction however as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.

13.7.111 That notwithstanding, to effectively minimise any potential adverse effect on NMU delay at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.

13.7.112 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.

13.7.113 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay across the respective count locations results in a negligible magnitude of change on receptors of low to high sensitivity. Thus, the effect of increased traffic on NMU delay for the respective count locations is **Negligible to Minor and Not Significant**.

ATCs 47, 59, 60 & 61

13.7.114 These ATCs have been grouped together due to their proximity and location north and south of Kiveton Park.

13.7.115 The percentage increase in HGV traffic along these links is primarily due to the low baseline flows (between 18 and 62 HGVs per day), whilst the magnitude of

the predicted increase is relatively low in absolute terms ranging from approximately 44 to 71 additional HGVs per day above baseline levels. It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction. The majority of construction related HGVs that will travel along this route will be associated with the Cable Corridor of the Proposed Development, however, as suggested earlier in Section 13.6, it is unlikely that the peak periods of the Site and Cable Corridor of the Proposed Development will coincide. Therefore, the change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.

- 13.7.116 In addition to the relatively low absolute increase in HGVs on these road links, appropriate crossing points including dropped kerbs with tactile paving are provided along the road in the urban environment of Kiveton Park and Todwick and allow safe crossing for non-motorised users. South of Kiveton Park, access is provided to the Kiveton Community Woodland area which is located to the west of Hard Lane. A continuous footway (with tactile paving crossings across local accesses) is provided along the west side of Hard Lane from the settlement of Kiveton Park, with limited presence of communities or local facilities on the opposite side of the road which could be affected by NMU delay.
- 13.7.117 That notwithstanding to effectively minimise any potential adverse effect on NMU delay at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.
- 13.7.118 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the respective count locations.
- 13.7.119 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay at the respective count locations surrounding Kiveton Park results in a negligible magnitude of change on receptors of medium to high sensitivity. Thus, the effect of increased traffic on NMU delay at the respective count locations is **Negligible to Minor and Not Significant**.

ATCs 52 & 53

- 13.7.120 These ATCs have been grouped together due to their proximity and location along the B6060 in the south of Wickersley.
- 13.7.121 The percentage increase in HGV traffic on these links is primarily due to the low baseline flows (39 to 67 HGVs per day), whilst the magnitude of the predicted increase is relatively low in absolute terms (an additional 74 HGVs per day over the baseline). It should be noted that the increases in HGV traffic indicated in **Table 13.20** would only occur during the peak month of construction and only construction related HGVs associated with the Cable Corridor of the Proposed Development will travel along this route. It should also be noted that the construction of the Cable Corridor is progressive rather than static, with works and associated vehicle activity moving sequentially along the Cable Corridor. The change in HGV traffic is temporary, fully reversible and would only occur during peak month of construction.
- 13.7.122 In addition to the relatively low absolute increase in HGVs on these road links, appropriate crossing points including dropped kerbs with tactile paving are provided along the road in the urban environment of Wickersley and allow safe crossing for non-motorised users. Footways are provided along both sides of the road, with residential areas to both sides as well as St. Albans Primary School located to the north of the section of the road link.

13.7.123 That notwithstanding, to effectively minimise any potential adverse effect on NMU delay at these locations, a number of measures are proposed in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.

13.7.124 Considering the above, the overall magnitude of change can be reduced to **Negligible** for the count location.

13.7.125 Therefore, when considering the link sensitivity and magnitude of change, the effect of construction traffic on NMU delay at the respective count locations results in a negligible magnitude of change on receptor of medium to high sensitivity. Thus, the effect of increased traffic on NMU delay at the respective count locations is **Negligible to Minor** and **Not Significant**.

Fear and Intimidation

13.7.126 The ISEP 2023 Guidelines¹³ states that “a further environmental impact that affects people is the fear and intimidation created by all moving objects, with the extent of fear and intimidation dependent on the total volume of traffic, the heavy vehicle composition, speed these vehicles are passing, proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, and a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles”.

13.7.127 The environmental impact of fear and intimidation can be quantified by using the weighting system provided in the ISEP 2023 Guidelines¹³, whereby the degree of hazard to pedestrians is assessed with reference to the established thresholds, and a score provided for each combination on a highway link under consideration.

13.7.128 It should be noted that this assessment uses average annual weekday traffic (AAWT) data which covers an 18 hour period (6am – Midnight) during weekdays only, and as such the future baseline traffic data for each count location will differ slightly from what has been presented in **Table 13.11**, which indicates 24 hour Average Annual Weekday Traffic (AADT) data.

13.7.129 Measures to minimise any potential effects of fear and intimidation will be included in the **oCTMP [EN0110020/APP/5.12.1]** and are described in Section 13.6. **Table 13.22** indicates a summary of the fear and intimidation levels assessed for both the baseline and forecast (including Proposed Development construction traffic) traffic scenarios, the corresponding significance of the fear and intimidation effect on each of the count locations taken forward in the full assessment, when the respective magnitudes (as defined in **Table 13.5**) and sensitivity ratings are combined.

13.7.130 Full calculations relating to the fear and intimidation index of each count location are included in **ES Volume 3, Appendix 13.3: Fear and Intimidation on and by Road Users Data [EN0110020/APP/6.20]**.

Table 13.22: Fear and Intimidation Impact and Significance

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	F&I Magnitude	Sensitivity Rating	Significance
ATC 13: Hellaby Lane	2%	51%	Negligible	Medium	Negligible
ATC 16: A630 Sheffield Road	1%	40%	Negligible	Medium	Negligible

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ATC No. / Road Link	Total Veh % Increase	HGV % Increase	F&I Magnitude	Sensitivity Rating	Significance
ATC 19: Flash Lane	1%	19%	Negligible	High	Minor
ATC 20: A631	0%	11%	Negligible	High	Minor
ATC 24: Long Lane	2%	51%	Negligible	High	Minor
ATC 24* Long Lane	2%	51%	Negligible	High	Minor
ATC 26: A618	1%	89%	Negligible	Medium	Negligible
ATC 27: Guilthwaite Common Lane	5%	225%	Negligible	High	Minor
ATC 32: Penny Hill Lane	3%	73%	Negligible	High	Minor
ATC 33: Penny Hill Lane (East of M1)	1%	573%	Negligible	High	Minor
ATC 35: Common Lane South	3%	121%	Negligible	High	Minor
ATC 36: Long Road	6%	336%	Negligible	Medium	Negligible
ATC 41: Pocket Handkerchief Lane	12%	248%	Negligible	Medium	Negligible
ATC 47: Kiveton Lane	3%	115%	Negligible	High	Minor
ATC 52: B6060 (North of Second Lane)	1%	110%	Negligible	High	Minor
ATC 53: B6060 (South of Second Lane)	1%	189%	Negligible	Medium	Negligible
ATC 56: A618 (South of B6059)	1%	13%	Negligible	High	Minor
ATC 59: Kiveton Lane	3%	157%	Negligible	Medium	Negligible
ATC 60: Hard Lane (North)	4%	401%	Negligible	Medium	Negligible
ATC 61: Hard Lane (South)	3%	244%	Negligible	Medium	Negligible
ATC 66: A618 (North)	1%	30%	Negligible	Medium	Negligible
ATC 67: A618 (South)	2%	51%	Negligible	Low	Negligible
ATC 68: Loverose Way	12%	151%	Negligible	Low	Negligible
ATC 69: A630	3%	41%	Negligible	Medium	Negligible
ATC 72: Slacks Lane	259%	5693%	Negligible	High	Minor
ATC 75: Common Lane (North)	1%	61%	Negligible	Medium	Negligible
ATC 76: Hawk Hill Lane (West)	6%	446%	Negligible	Low	Negligible
ATC 80: Lidget Lane	2%	182%	Negligible	Low	Negligible
ATC 81: Long Lane	4%	189%	Negligible	Medium	Negligible
ATC 82: Pleasley Road	1%	54%	Negligible	Medium	Negligible

ATC No. / Road Link	Total Veh % Increase	HGV % Increase	F&I Magnitude	Sensitivity Rating	Significance
ATC 84: Sandy Lane	1%	225%	Negligible	High	Minor
ATC 89: Bramley Lane	3%	325%	Negligible	Low	Negligible
ATC 90: Common Lane	1%	35%	Negligible	Medium	Negligible

13.7.131 As indicated by **Table 13.22**, no count locations within the Study Area are expected to experience an increase in fear and intimidation, with no step change in levels of fear and intimidation identified.

Fear and Intimidation Summary

13.7.132 Guidance set out in Section 13.4 of this Chapter identifies that no step change results in a negligible impact upon fear and intimidation. Therefore, when considering the sensitivity of the receptors and the magnitude of change, the effect of increased traffic on fear and intimidation results in a negligible magnitude of change on receptors of low to high sensitivity. Thus, the effect of increased traffic on fear and intimidation is **Negligible to Minor** and **Not Significant** for all count locations considered within the Study Area.

Road User and Pedestrian Safety

13.7.133 For the assessment of effects on accidents and highway safety, the receptor is the safety of the road network. Highway safety is assessed by the frequency and severity of injury accidents that are attended by the police and recorded in official accident statistics. An increase in traffic (or changes in traffic composition) on any particular route theoretically has the potential to increase the risk of accidents occurring.

13.7.134 To assess the effects on road safety, an initial review of the existing road safety baseline has been undertaken to select areas where there are concentrations of collisions (known as collision clusters) and links with collision rates higher than the national average which may be sensitive to changes in traffic flows. For the purposes of this assessment, the observed collision rate for each road link for over the latest five-year period (as presented in Section 13.5), has been compared against the national average collision rate¹⁷ per similar road type. The full result of the assessment is shown in **ES Volume 3, Appendix 13.4: Road User and Pedestrian Safety Data [EN0110020/APP/6.20]**. A summary of the comparison between the two collision rates for those links where the number of observed collisions on each road link exceeds the national average is presented in **Table 13.23**. Embedded mitigation measures to minimise any potential effects on road user and pedestrian safety will be included in the **oCTMP [EN0110020/APP/5.12.1]** and are described in Section 13.6.

Table 13.23: Road User and Pedestrian Safety Review

ATC No. / Link Road	Observed Data (Previous 5 Years)			National Average Rate
	All Collisions	5yr Veh Mn km	Collision Rate	
ATC 29: A618	10	43.33	0.2308	0.1987

ATC No. / Link Road	Observed Data (Previous 5 Years)			National Average Rate
	All Collisions	5yr Veh Mn km	Collision Rate	
ATC 30: Ulley Lane	1	1.92	0.5204	0.3274
ATC 31: Main Street (Ulley)	1	2.03	0.4926	0.3274
ATC 32: Penny Hill Lane	1	2.65	0.3778	0.3274
ATC 36: Long Road	6	12.00	0.5001	0.3274
ATC 38: Common Road	7	2.04	3.4274	0.3274
ATC 40: Todwick Road	9	13.22	0.6807	0.3274
ATC 81: Long Lane	3	2.05	1.4663	0.3274
ATC 90: Common Lane	10	9.36	1.0684	0.3274

13.7.135 The observed collision rate over the last five years is greater than the national average by assigned road type on 9 of the 94 assessed count locations within the Study Area and discussed below.

ATC 29 – A618 (Between Reservoir Road and Treeton Lane)

13.7.136 Throughout the five-year study period, a total of 10 Road Traffic Collisions (RTCs) have been recorded along the A618, on the approximate 1.6km section of road between Guilthwaite Common Lane and Aston Lane, of which three were classed as slight, six were classed as serious, and one was classed as fatal. A cluster of collisions is observed at the priority crossroads junction of A618 / B6067 Treeton Lane / Ulley Lane, with two serious and three slight collisions occurring at this location.

13.7.137 The fatal collision occurred in 2021 approximately 150m south of the vehicular entrance to Ulley Country Park and was a head-on collision between two vehicles during daytime with wet or damp road conditions. No other collisions have been reported in the vicinity during the five-year period assessed.

13.7.138 Regarding the cluster of collisions observed at the A618 / B6067 junction, the collisions comprised of four failures to give way or general lack of awareness, and one rear-end style shunt. All collisions occurred during dry road conditions, with the exception of the rear-end shunt which occurred during wet or damp road conditions.

13.7.139 It can therefore be concluded that it appears that driver error, poor weather conditions and lack of awareness of other road users is the common contributory factor in the RTCs assessed on this road link, and that there does not appear to be anything in relation to the existing highway layout that contributes to a road safety concern.

13.7.140 The proposed HGV routing for the construction of the Proposed Development indicates that a maximum of an additional six daily two-way HGVs will travel

along this link during peak construction period. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent approximately one HGV movement every 1–2 hours per day.

- 13.7.141 It is envisaged that general construction traffic (workers) for the Proposed Development will increase the total traffic observed on this link is less than 1.0% during peak construction period.
- 13.7.142 It is therefore assessed that the construction of the Proposed Development will result in a **Negligible** impact on road user and pedestrian safety at count location 29 on the A618.
- 13.7.143 Therefore, when considering the sensitivity of the receptor and magnitude of impact, the effect of construction on road user and pedestrian safety results in a Negligible magnitude of change on a link of high sensitivity. Thus, the effect of increased traffic on road user and pedestrian safety at this location is **Minor** and **Not Significant**.

ATCs 30, 31, 32, 36, 38 & 40 – South of Thurcroft

- 13.7.144 The respective count locations have been considered together due to their proximity and similar environments. Throughout the five-year study period, a total of 25 RTCs have been recorded along the respective roads, on an approximate length of 4.7km of road, of which 18 were classed as slight, four were classed as serious, and three were classed as fatal.
- 13.7.145 The first fatal collision occurred on Long Road approximately 600m south of the crossroads junction with Penny Hill Lane / Hawk Hill Lane in February 2020. It was a single vehicle collision with a pedestrian during nighttime and wet or damp road conditions along a section of the road with no footways provided.
- 13.7.146 The second fatal collision occurred on Long Road approximately 1km south of the aforementioned crossroads junction in February 2021. It was a single vehicle collision involving a motorcycle during daytime in wet or damp road conditions.
- 13.7.147 Although both observed fatal collisions on Long Road occurred within 400m of each other, the circumstances of each of the collisions are independent and no common cause can be assigned.
- 13.7.148 The third fatal collision occurred on Penny Hill Lane approximately 200m east of the junction with Brampton Lane in November 2023. It was a single vehicle collision during nighttime in wet or damp road conditions. No other collisions have been reported in the vicinity during the five-year period assessed.
- 13.7.149 Although there have been three fatal collisions in the five-year period assessed, the review has concluded there is no common cause or reason shared amongst the collisions.
- 13.7.150 Two clusters of collisions are observed along the respective road links;
- Cluster 1 – Two serious and two slight collisions recorded at the priority crossroads junction of Common Lane / Long Road / Penny Hill Lane / Hawk Hill Lane; and
 - Cluster 2 – Two serious and five slight collisions at the priority crossroads of B6463 Todwick Road / Common Road.
- 13.7.151 Regarding Cluster 1, the collisions comprised of three failures to give way or general lack of awareness, and one rear-end style shunt. All collisions occurred during dry road conditions.

- 13.7.152 Regarding Cluster 2, the collisions comprised of six failures to give way or general lack of awareness, and one rear-end style shunt. Five of the collisions occurred during dry road conditions, whilst two occurred during wet or damp road conditions.
- 13.7.153 It can therefore be concluded that it appears that driver error, poor weather conditions and lack of awareness of other road users is the common contributory factor in the RTCs assessed on this road link, and that there does not appear to be anything in relation to the existing highway layout that contributes to a road safety concern.
- 13.7.154 The proposed HGV routing for the construction of the Proposed Development indicates that a maximum of an additional 58 daily two-way HGVs will travel along the respective road links (Todwick Road) during peak construction periods. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to approximately six two-way HGV movements (three inbound and three outbound) per hour.
- 13.7.155 It is therefore assessed that the construction of the Proposed Development will result in a **Negligible** magnitude of impact on road user and pedestrian safety at the respective count locations south of Thurcroft.
- 13.7.156 Therefore, when considering the sensitivity of the receptor and magnitude of impact, the effect of construction on road user and pedestrian safety results in a negligible magnitude of change on road links of low to high sensitivity. Thus, the effect of increased traffic on road user and pedestrian safety at these locations is **Negligible to Minor** and **Not Significant**.

ATC 81 – Long Lane

- 13.7.157 This road link has primarily exceeded the national average collision rate due to the relatively low level of daily traffic observed along the section of road. Throughout the five-year study period, three RTCs have been recorded along Long Lane, on the approximate 0.7km section of road between the A631 and M1 underpass, two of which were serious and one was slight.
- 13.7.158 The first serious collision occurred in 2020 and was located approximately 250m north of the M1 underpass and involved one vehicle travelling normally along the carriageway then losing control and leaving the road, resulting in a serious injury to a passenger of the vehicle.
- 13.7.159 The second serious collision occurred between two cars in December 2024, located approximately 200m south of the A361 with one vehicle attempting to overtake in darkness, resulting in a serious injury to the driver of the overtaking car, who was also reported to be under the age of 20.
- 13.7.160 The slight collision occurred in September 2024 located at the M1 underpass involving a car and a Goods Vehicle. The collision occurred in wet weather conditions during daylight hours. The car reportedly collided with the side of the underpass and did not impact the goods vehicle.
- 13.7.161 The proposed HGV routing for the construction of the Proposed Development indicates that a maximum of an additional five daily two-way HGVs will travel along Long Lane during peak construction periods. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to less than one two-way HGV movements (0.25 inbound and 0.25 outbound) per hour.

- 13.7.162 It is envisaged that general construction traffic (workers) for the Proposed Development will increase the total traffic observed on Long Lane by approximately 1.5% during peak construction periods.
- 13.7.163 It is therefore assessed that the construction of the Proposed Development will result in a **Negligible** magnitude of impact on road user and pedestrian safety at count location 81 on Long Lane.
- 13.7.164 Therefore, when considering the sensitivity of the receptor and magnitude of impact, the effect of construction on road user and pedestrian safety results in a negligible magnitude of change on a link of medium sensitivity. Thus, the effect of increased traffic on road user and pedestrian safety at this location is **Negligible** and **Not Significant**.

ATC 90 – Common Lane (East of Ravenfield)

- 13.7.165 Throughout the five-year study period, a total of 10 RTCs have been recorded along Common Lane, on the approximate 0.8km section of road between Park Lane and Moor Lane, of which seven were classed as slight, and three were classed as serious. No fatal RTCs have been recorded along this section of road in the assessed five-year period.
- 13.7.166 A cluster of collisions is observed between the staggered crossroad junctions with Hellaby Lane and Greaves Sike Lane, with two serious and four slight collisions occurring at this location.
- 13.7.167 Regarding this cluster, the collisions comprised of five failures to give way or general lack of awareness, and one rear-end style shunt. Four collisions occurred during dry road conditions, whilst two occurred during wet or damp road conditions.
- 13.7.168 The proposed HGV routing for the construction of the Proposed Development indicates that no HGV traffic will travel along this section of the Common Lane. For the purposes of this assessment, it is also envisaged that a limited number of construction workers will travel along this section of the Common Lane to access the Proposed Development, resulting in an approximately 0.3% increase in total daily traffic during peak construction periods.
- 13.7.169 It is therefore assessed that the construction of the Proposed Development will result in a **Negligible** magnitude of impact on road user and pedestrian safety at count location 90 on Common Lane.
- 13.7.170 Therefore, when considering the sensitivity of the receptor and magnitude of impact, the effect of construction on road user and pedestrian safety results in a negligible magnitude of change on road link of medium sensitivity. Thus, the effect of increased traffic on road user and pedestrian safety at this location **Minor** and **Not Significant**.

Road Vehicle Driver and Passenger Delay

- 13.7.171 The ISEP 2023 Guidelines¹³ advise that “*delays are only likely to be significant when traffic on the network surrounding the Site is already at, or close to, the capacity of the system*”. Delays may also occur at junctions that operate close to capacity due to an increase in traffic flows particularly during peak month or the passage of slower moving vehicles such as HGVs.
- 13.7.172 No sensitive junctions in terms of capacity constraints or areas of Significant congestion have been identified within the Study Area following a review of the

baseline traffic flows nor raised by the highway authority. The roads within the Study Area are also operating below capacity and are predicted to continue to do so during construction of the Proposed Development.

13.7.173 In regard to the daily HGV trip generation of each Site:

- A maximum of 68 daily two-way HGV trips is expected to be generated by W1 during the peak construction periods, and the proposed HGV routing passes through junctions located within settlements of Warmsworth, New Edlington, and Conisbrough, which may experience congestion. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to approximately 7 two-way HGV movements (3.5 inbound and 3.5 outbound) per hour
- A maximum of 104 daily two-way HGV trips is expected to be generated by W2 during the peak construction periods, and the proposed HGV routing passes through junctions located within settlements of Wickersley, Bramley and Whiston, which may experience congestion. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to approximately 10 two-way HGV movements (5 inbound and 5 outbound) per hour; and
- A maximum of 32 daily two-way HGV trips is expected to be generated by W3 during the peak construction periods, and the proposed HGV routing passes through junctions located within settlements of Killamarsh, Todwick, Kiveton Park, which may experience congestion. Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to approximately 3 two-way HGV movements (1.5 inbound and 1.5 outbound) per hour.

13.7.174 When the proposed routings of each Site and Cable Corridor are combined, a maximum of 215 daily two-way HGVs are expected on a single road within the Study Area (A57) as a worst-case scenario (both peak periods occurring at the same time). Over a 10-hour delivery window, the worst-case construction related HGV trips would be equivalent to approximately 22 two-way movements (11 inbound and 11 outbound) per hour.

13.7.175 The routing of HGVs between the Proposed Development and the local road network will be controlled through the implementation of a CTMP which will include an HGV routing plan, and the majority of HGV movements will be restricted to outside peak hours. Therefore, when background traffic flows are at their highest and most sensitive to change, there is unlikely to be any HGV movements being generated to and from the Proposed Development.

13.7.176 Similarly, the short-term peak in construction staff movements is expected to occur outside of the highway network's peak period, as working hours will typically commence earlier than working hours. Staff travel to the Proposed Development will be managed through the implementation of travel planning measures as part of the CTMP to ensure controlled and sustainable access arrangements.

13.7.177 Consequently, as the peak number of construction trips is expected to occur over a short timescale, the temporary increase in traffic is considered unlikely to result in Significant congestion on key routes within the Study Area.

13.7.178 Therefore, the effect of increase in traffic on road vehicle and passenger delay results in a negligible magnitude of change on road links of low to high

sensitivity. Thus, the effect of increased traffic on road vehicle and passenger delay is likely to **Negligible to Minor** and **Not Significant**.

13.7.179 It should be noted that as part of the wider HGV routing (**ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**) construction-related HGVs will be prohibited from using single-track roads and those generally unsuitable for HGV traffic wherever practicable. However, of the 94 count locations within the Study Area, construction-related non-HGV traffic is anticipated at six locations associated with single-track roads. Some driver and passenger delays are therefore expected at these locations:

- ATC 28: Reservoir Road
- ATC 34: Brampton Lane
- ATC 68: Loverose Way
- ATC 72: Slacks Lane; and
- ATC 74: Ulley Lane.

13.7.180 These effects are expected to be temporary and manageable through the mitigation measures outlined in Section 13.6 as part of the **oCTMP [EN0110020/APP/5.12.1]**.

13.7.181 Some road vehicle driver and passenger delay can be expected to occur on routes due to the slow movement of abnormal load vehicles between the port of delivery and the Site and there would be an increased potential for delay if the swept path of such vehicles were not adequately accommodated. However, swept path analysis undertaken (details included in the **oCTMP [EN0110020/APP/5.12.1]**) has confirmed that the required vehicle manoeuvres can be accommodated. In addition, abnormal loads will be delivered to Site outside of peak hours and under escort, and this will minimise driver delay to some degree.

13.7.182 Due to the overall limited number of loads across the construction programme and the short-term nature of this stage of works, which will be managed with communication with the local community which is to form part of the CTMP as best practice, the anticipated effect of abnormal loads on road vehicle driver and passenger delay results in a negligible magnitude of change on road links of low to high sensitivity within the Study Area. Thus, the effect of abnormal loads on road vehicle driver and passenger delay is **Negligible to Minor** and **Not Significant**.

Hazardous and Large Loads

13.7.183 A small number of abnormal load vehicles associated with the delivery of components are anticipated.

13.7.184 An initial Abnormal Load Route Feasibility Study has been undertaken to identify and assess potential routes to the Site and to demonstrate the viability of delivering abnormal loads associated with the Proposed Development. The study has considered both the local and strategic highway network, identifying suitable origin and destination routes for construction traffic, including abnormal indivisible loads required for the delivery of key infrastructure. This assessment has informed the preliminary access strategy and confirmed that appropriate routes are available, subject to agreement with the relevant highway authorities.

- 13.7.185 The assessment has also identified locations along the network where localised highway interventions may be required to facilitate safe and efficient passage of construction and abnormal load vehicles. These findings will form the basis for ongoing engagement with the relevant highway authorities, including RMBC, CDC, DCC and National Highways, to agree the nature and extent of any required works, ensuring that the network can safely accommodate construction traffic while maintaining appropriate levels of service and safety for existing users.
- 13.7.186 The routing assessment has considered the swept path requirements of typical construction vehicles, including maximum legal articulated vehicles, to inform the design of site access arrangements. In parallel, a range of potential abnormal load vehicle parameters has been assessed to reflect a realistic worst-case scenario, recognising that the final vehicle specifications will be determined by the detailed design.
- 13.7.187 Further details will be secured and implemented through the Construction Traffic Management Plan and associated control documents.
- 13.7.188 Due to the overall limited number of loads across the construction programme and the short-term nature of this stage of works, which will be managed with communication with the local community which is to form part of the CTMP as best practice, the anticipated effect of abnormal loads results in a negligible magnitude of change on road links of low to high sensitivity within the Study Area. Thus, the effect of abnormal loads is **Negligible to Minor and Not Significant**.
- 13.7.189 Fuel will be regularly transported to the Proposed Development over the duration of the construction period. All fuel will be transported by suitably qualified contractors, and all regulations for the transportation and storage of hazardous substances will be observed. No other hazardous substances in significant quantities are expected to be transported to Site, and it is considered unlikely there will be material construction traffic whose loads would fall within the current classifications for carriage of dangerous goods (Class 1-9). Therefore, the effect of the transportation of hazardous substances is considered to result in a negligible magnitude of change on road links of low to high sensitivity. Thus, the effect of hazardous load is **Negligible to and Not Significant**.

PRoW Network

- 13.7.190 During the construction phase, the presence of plant and equipment in work areas adjacent to the PRoW network may temporarily reduce the amenity value of the paths, however, the effects would be temporary and short-term. Appropriate construction traffic management measures (within the **oCTMP [EN0110020/APP/5.12.1]**) will be put in place to manage these effects. This would include, for example, solid fencing / barriers in areas together with appropriate signage to caution passers-by of construction. It is acknowledged that temporary diversions and management measures may be required for some of the paths within the Site. An **oPRoWMP [EN0110020/APP/5.14]** has been submitted with the Application and includes details of specific routes that may be affected and also sets out any proposed mitigation required to mitigate the impacts of the potential interactions between construction traffic and the users of the PRoW network.
- 13.7.191 Therefore, the negligible magnitude of impact related to identified paths of medium sensitivity (due to their local and regional importance, see **ES Volume**

2, Chapter 15: Socio-economics, Tourism and Recreation and Land Use [EN0110020/APP/6.15]) within the Study Area are **Negligible**, and **Not Significant** in the context of EIA Regulations. Further consideration of effects on users of PRow can be found in **ES Volume 2, Chapter 15: Socio-economics, Tourism and Recreation, and Land Use**.

13.8 Additional Mitigation Measures and Residual Effects

Additional Mitigation

- 13.8.1 No additional mitigation is proposed for traffic and transport impacts.

Residual Effects

- 13.8.2 A summary of the potential Traffic and Transport effects is presented in **Table 13.24**.

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Table 13.24 Summary of Residual Effects

Receptor	Potential Effect	Embedded Mitigation	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Significance of Residual Effect
Settlements along construction delivery route	Severance of Communities	oCTMP [EN0110020/APP/5.12.1]	Low to High	Small to Large	Not Significant	N/A	Not Significant
Non-motorised users	Non-motorised user amenity	oCTMP [EN0110020/APP/5.12.1]	Low to High	Small to Large	Not Significant	N/A	Not Significant
Non-motorised users	Non-motorised user delay	oCTMP [EN0110020/APP/5.12.1]	Low to High	Small to Large	Not Significant	N/A	Not Significant
Non-motorised users	Fear and intimidation	oCTMP [EN0110020/APP/5.12.1]	Low to High	Negligible	Not Significant	N/A	Not Significant
Road network	Road user and pedestrian safety	oCTMP [EN0110020/APP/5.12.1]	Low to High	Negligible	Not Significant	N/A	Not Significant
Road network	Road vehicle driver and passenger delay	oCTMP [EN0110020/APP/5.12.1]	Low to High	Negligible	Not Significant	N/A	Not Significant
Settlements along construction delivery route (abnormal loads)	Hazardous and large loads	oCTMP [EN0110020/APP/5.12.1]	Low to High	Negligible	Not Significant	N/A	Not Significant

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Receptor	Potential Effect	Embedded Mitigation	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Significance of Residual Effect
Public Right of Way Network	Non-motorised users	oPRoWMP [EN0110020/APP/5.14]; oCTMP [EN0110020/APP/5.12.1]	Medium	Negligible	Not Significant	N/A	Not Significant

13.9 Cumulative Effects

- 13.9.1 This Section assesses the potential cumulative Traffic and Transport effects of the Proposed Development. The methodology of this assessment is presented in **ES Volume 1, Chapter 2: EIA Methodology [EN0110020/APP/6.2.1]**.

Intra-Cumulative Effects

- 13.9.2 Intra-cumulative impacts can be defined as those that occur where a single receptor is affected by more than one type of effect arising from different aspects of the project.
- 13.9.3 Intra-cumulative Traffic and Transport impacts arising from overlapping construction activities (Site and Cable Corridor) have been assessed inherently within the assessment of construction traffic by considering a reasonable worst-case program. Therefore, intra-cumulative Traffic and Transport effects during construction are not expected to exceed those already reported for the main construction traffic assessment.
- 13.9.4 In addition to the intra-cumulative assessment undertaken within this Chapter, the potential for combined effects on human health arising from construction phase Traffic and Transport impacts in combination with other relevant topics (including Noise and Vibration, Air Quality, Biodiversity and Nature conservation, and Socioeconomics and Land Use) is considered within **ES Volume 2, Chapter 17: Cumulative Effects [EN0110020/APP/6.17]**.
- 13.9.5 Construction traffic-related effects on individual environmental receptors are assessed within the relevant topic-specific chapters of **ES Volume 2 [EN0110020/APP/6.6-6.17]** (including Noise and Vibration, Air Quality, Biodiversity and Nature Conservation, and Socioeconomics and Land Use).

Inter-Cumulative Effects

- 13.9.6 Inter-cumulative effects refer to the impacts that arise from other existing, in planning and, or approved development within reasonable proximity of the Proposed Development, which individually might not be Significant, but when considered together could create a Significant cumulative effect on a shared receptor.
- 13.9.7 The maximum spatial extent of potential cumulative effects on Traffic and Transport as identified within this Chapter are determined by developments where their construction phase overlaps with the construction phase of the Proposed Development and may utilise the same sections of the road network for construction traffic. Areas beyond this range are unlikely to experience any measurable change.
- 13.9.8 An initial screening exercise was carried out based on the long list of cumulative developments is presented in **ES Volume 3, Appendix 17.2: Cumulative Long List [EN0110020/APP/6.20]** and the developments which have the potential to result in cumulative traffic and transport effects are discussed in **Table 13.25**. Any project only at the EIA Screening Request stage was not included as there is insufficient information traffic routes to enable cumulative assessment.

Table 13.25: Potential Cumulative Effects

Development / Planning Ref	Status	Comment
Moat Lane BESS Newton Energi – RB/2024/0063	Approved on Appeal	Construction traffic associated with this development would access the site via the M18, A631, Kingsforth Lane, B6060 Morthen Road, Green Lane and Moat Lane, with only a limited number of links shared with the Proposed Development (Links 83 and 87). The supporting Transport Statement indicates that construction activity would generate up to 12 two-way HGV movements (6 in / 6 out) per day during the peak construction phase, equating to approximately one movement every 1–2 hours over a typical 10-hour working day. This represents a very low level of additional HGV activity in absolute terms. Furthermore, the construction start date is currently unknown and the programme is anticipated to extend over approximately 11 months, meaning there is no certainty that peak construction traffic would coincide with peak activity associated with the Proposed Development. On this basis, given the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared sections of the highway network is considered to be low. Any interaction would be appropriately managed through the implementation of project-specific CTMPs.
Moat Lane BESS Harmony Energy – RB/2024/0321	Approved on Appeal	Construction traffic associated with this development would access the site via the M18, A631, Kingsforth Lane, B6060 Morthen Road, Green Lane and Moat Lane, with only a limited number of links shared with the Proposed Development (Links 83 and 87). The supporting Transport Statement indicates that construction activity would generate up to 10 two-way HGV movements (5 in / 5 out) per day during the peak construction phase, equating to approximately one movement every 1–2 hours over a typical 10-hour working day. This represents a very low level of additional HGV activity in absolute terms.

Development / Planning Ref	Status	Comment
		Furthermore, the construction start date is currently unknown and the programme is anticipated to extend over approximately 11 months, meaning there is no certainty that peak construction traffic would coincide with peak activity associated with the Proposed Development. On this basis, given the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared sections of the highway network is considered to be low. Any interaction would be appropriately managed through the implementation of project-specific CTMPs.
Ground-mounted Site arrays, including battery storage (BESS) - RB2025/0029	In planning, awaiting decision	Construction traffic associated with this development would access the site via the M1, A57, B6463 (Todwick Road), Pocket Handkerchief Lane, Long Road, Main Street/ Penny Hill Lane and Carr Lane, with a number of links shared with the Proposed Development (Links 31, 32, 33, 36, 37, 40, 41 and 46). The supporting Transport Statement indicates that construction activity would generate up to 28 two-way HGV movements (14 in / 14 out) per day during the peak construction phase, equating to approximately 2 movements every hour over a typical 10-hour working day. This represents a very low level of additional HGV activity in absolute terms. Furthermore, the construction start date is currently unknown and the programme is anticipated to extend over approximately 11 months, meaning there is no certainty that peak construction traffic would coincide with peak activity associated with the Proposed Development. On this basis, given the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared sections of the highway network is considered to be low. Any interaction would

Development / Planning Ref	Status	Comment
		be appropriately managed through the implementation of project-specific CTMPs.
Kiveton Park BESS, Hard Lane - RB2025/0240	In planning, awaiting decision	Construction traffic associated with this development would access the site via the M1, Kiveton Lane and Hard Lane, with only a limited number of links shared with the Proposed Development (Links 46, 47, 59 and 60). The supporting Transport Statement indicates that construction activity would generate up to 8 two-way HGV movements (4 in / 4 out) per day during the peak construction phase, equating to approximately one movement every 1–2 hours over a typical 10-hour working day. This represents a very low level of additional HGV activity in absolute terms. Furthermore, the construction start date is currently unknown and the programme is anticipated to extend over approximately 12 months, meaning there is no certainty that peak construction traffic would coincide with peak activity associated with the Proposed Development. On this basis, given the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared sections of the highway network is considered to be low. Any interaction would be appropriately managed through the implementation of project-specific CTMPs.
Outline application for residential development including details of appearance, landscaping, layout and scale - RB2025/0599	In planning, awaiting decision	This application is submitted in outline form and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Reserved matters application in relation to outline permission RB2019/0552 for the erection of 450	In planning, awaiting decision	This reserve matter application is in relation to a consented in outline application and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to

Development / Planning Ref	Status	Comment
dwelling houses - RB2024/0104		enable a robust assessment of potential cumulative construction traffic effects.
Construction, operation, and subsequent decommissioning of a renewable energy park, comprising ground mounted solar PV - RB2025/0714	In planning, awaiting decision	Construction traffic associated with the development would access the southern parcel of the site via the M18, A631, Kingsforth Lane and B6060 Morthern Road and Morthern Hall Lane, and the northern and central parcels via the M1, A630, A631, B6410 Worrygoose Lane and Pinch Mill Lane. A number of these routes are common with those identified for the Proposed Development (Links 22, 23, 25, 83 and 87). However, the supporting Transport Statement indicates that construction activity would generate up to 21 two-way HGV movements per day during the peak construction phase, equating to approximately two HGV movements per hour across a typical 10-hour working day. This represents a relatively low level of additional HGV activity in absolute terms. Furthermore, the construction programme is currently unknown, although works are anticipated to be undertaken over an approximately six-month period. As such, there is no certainty that peak construction activity would coincide with the peak construction phase of the Proposed Development. On this basis, taking account of the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared highway links is considered to be low. Any interaction between would be appropriately managed through the implementation of project-specific CTMPs.
Outline application for residential development of up to 349 dwellings including details of the access - RB2025/0979	In planning, awaiting decision	This application is submitted in outline form and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Outline planning application for the	In planning, awaiting decision	This application is submitted in outline form and, at this stage, no CTMP or Transport

Development / Planning Ref	Status	Comment
construction of up to 170 dwellings with ancillary infrastructure - RB2025/1420		Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
National Grid Substation, Long Lane (Long Lane 400kV Substation) - RB2025/1468	In planning, awaiting decision	Construction traffic associated with the development would access the site via the M1, A630, A631 West Bawtry Road and Long Lane, with limited shared links with the Proposed Development (Links 23, 25 and 81). The supporting Transport Statement indicates that up to 130 two-way HGV movements per day (65 in / 65 out) could be generated during the peak construction phase. Whilst this represents a notable level of construction traffic in isolation, the Proposed Development is intended to connect to the Long Lane 400kV Substation, which would need to be completed or at an advanced stage prior to energisation of the Proposed Development. Peak HGV movements are likely to occur in the earlier stage of construction of Long Lane 400kV Substation, and is likely to be well before the peak construction phase for the Proposed Development. As such, it is unlikely that the peak construction phases of Long Lane Substation and the Proposed Development would coincide, or that there would be substantial overlap between their respective construction programmes. On this basis, the potential for overlapping peak construction traffic flows on the shared highway links is considered limited and, therefore, Significant cumulative construction traffic effects are unlikely. Any residual interaction between would be appropriately managed through the implementation of project-specific CTMPs.
Erection of new Substation, Houghton Road North Anston Trading Estate North Anston – RB2025/1648	Approved	As noted in the planning documents in terms of the highway authority's response, there is no requirement for a CTMP for works associated this development. Given the scale of development and the absence of a CTMP requirement, construction activities are expected to only generate negligible amounts of daily traffic, and therefore the development is not

Development / Planning Ref	Status	Comment
		anticipated to give rise to any Significant cumulative traffic effects.
Outline application for residential development with main points of access, all other matters reserved - RB2025/1233	In planning, awaiting decision	This reserve matter application is in relation to a consented outline application and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Installation of 2 replacement terminal single poles - RB2025/1674	Approved	As noted in the planning documents in terms of the highway authority's response, there is no requirement for a CTMP for works associated with this development. Given the scale of development and the absence of a CTMP requirement, construction activities are expected to only generate negligible amounts of daily traffic, and therefore the development is not anticipated to give rise to any Significant cumulative traffic effects.
Proposed residential development with public open space, access, landscaping and associated infrastructure - 24/01404/FULM	Approved	Whilst this is a full planning application, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Installation and operation of a solar energy park and associated infrastructure - RB2022/1203	Approved	Construction traffic associated with the development would access the site via the M1, A57, A6463 Todwick Road, Pocket Handkerchief Lane and Long Road, with limited shared links with the Proposed Development (Links 38, 40, 41 and 46). The supporting Transport Statement indicates that construction activity would generate up to 32 two-way HGV movements (16 in / 16 out) per day during the peak construction phase, equating to approximately two HGV movements per hour across a typical 10-hour working day. This represents a relatively low level of additional HGV activity in absolute terms on the surrounding highway network.

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		Construction of the development is underway with a nine-month expected construction period therefore it will not overlap with construction of the Proposed Development. On this basis, the potential for Significant cumulative construction traffic effects on the shared highway links is considered to be none. Any interaction between would be appropriately managed through the implementation of project-specific CTMPs.
Outline application for the erection of up to 217 dwellinghouses including details of access - RB2022/0017	Approved	This application is submitted in outline form and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Outline planning application, with all matters reserved except means of access, comprising up to 185 dwellings etc - RB2022/1638	Approved	This application is submitted in outline form and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Reclamation of quarry and creation of development platforms for employment use - RB2024/1700	In planning, awaiting decision	Construction traffic associated with the scheme would access the site via the M1 and the A631 Tickhill Road (eastbound). The supporting Transport Statement indicates that up to 128 two-way HGV movements (64 in / 64 out) could be generated per day during the peak construction phase. However, based on the proposed HGV routing strategy, no construction traffic associated with this development would travel through the Study Area defined for the Proposed Development. As such, there would be no overlap in construction traffic movements on the assessed highway links and therefore Significant cumulative construction traffic effects are not anticipated.
Proposed Flood Alleviation Scheme - RB2025/0534	Approved	As noted in the planning documents in terms of the highway authority response, there is no requirement for a CTMP for works associated

Development / Planning Ref	Status	Comment
		this development. Given the scale of development and the absence of a CTMP requirement, construction activities are expected to only generate negligible amounts of daily traffic, and therefore the development is not anticipated to give rise to any Significant cumulative traffic effects.
Application to vary condition 02 (approved plans) imposed by the original application ref. 2016/1492 - RB2025/0434	In planning, awaiting decision	This is an application to vary a condition in relation to a consented in outline application and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Change of use from storage/warehouse use (Use Class B8) to Padel courts with ancillary café/bar, gym, studio and sauna/steam and ice bathroom (Use Class E(d)) with external storage containers to side elevation to form toilets and changing facilities - RB2026/0041	In planning, awaiting decision	As noted in the planning documents in terms of the highway authority response, there is no requirement for a CTMP for works associated this development. Given the scale of development and the absence of a CTMP requirement, construction activities are expected to only generate negligible amounts of daily traffic, and therefore the development is not anticipated to give rise to any Significant cumulative traffic effects.
Redevelopment of Rowena House to provide a new 65-bedroom two storey care home - 25/02346/FULM	In planning, awaiting decision	Whiles this is a full application, no CTMP or Transport Assessment has been submitted at this stage to define the anticipated construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
New leisure resort (sui generis) incorporating Water Park, adventure park, hotel, conferencing facilities, restaurants and staff	In planning, awaiting decision	Construction traffic routing indicates HGVs will access the site via the M1, A616, and A619. A review of the supporting Transport Statement indicates that up to 68 two-way HGV movements (32 in / 32 out) will be generated per day on the surrounding road network during the peak construction phase.

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accommodation with associated access, parking and landscaping. Application accompanied by an Environmental Statement - 26/00020/FUL		Based on the proposed HGV routing strategy, no construction vehicle movements associated with this development are expected to travel through the Study Area of the Proposed Development. Therefore, no Significant cumulative traffic effects are anticipated.
Killamarsh Lane Substation – RB2026/0228	In planning, awaiting decision	Construction traffic associated with this development would access the site via the M1, A57, A618 (Mansfield Road) and Killamarsh Lane, with a number of links shared with the Proposed Development (Links 48, 55, 56, 66 and 78). The supporting Transport Statement indicates that construction activity would generate up to 18 two-way HGV movements (9 in / 9 out) per day during the peak construction phase, equating to approximately 2 movements every hour over a typical 10-hour working day. This represents a very low level of additional HGV activity in absolute terms. Furthermore, the construction start date is currently unknown and the programme is anticipated to extend over approximately 9 months, meaning there is no certainty that peak construction traffic would coincide with peak activity associated with the Proposed Development. On this basis, given the limited scale of additional HGV movements and the uncertainty regarding programme overlap, the potential for Significant cumulative construction traffic effects on the shared sections of the highway network is considered to be low. Any interaction would be appropriately managed through the implementation of project-specific CTMPs.
Green Lane BESS Newton Energi – RB/2022/1767	Approved	Whilst this is a full planning application, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.

Development / Planning Ref	Status	Comment
		Notwithstanding this, as noted in the planning documents and in the highway authority's response, the proposal relates to an extension to an existing BESS facility, and no objection has been raised given the scale of the development and the absence of supporting documentation. Construction activities are therefore expected to generate only negligible levels of daily traffic, and as such, the development is not anticipated to give rise to any Significant cumulative traffic effects.
Conversion of existing stable block to form 2 No. dwellings with demolition of walls to entrance and erection of bin store and 2.4m high fencing adjacent to highway - RB2025/1478	In planning, awaiting decision	This application is in the early stages of the planning process and, at this stage, no CTMP or Transport Assessment is available that defines the likely construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.
Prior Notification for the Installation of Solar PV equipment - RB2026/0495	Approved	As noted in the planning documents in terms of the highway authority response, there is no requirement for a CTMP for works associated with this development. Given the scale of development and the absence of a CTMP requirement, construction activities are expected to only generate negligible amounts of daily traffic, and therefore the development is not anticipated to give rise to any Significant cumulative traffic effects.
Erection of 189 residential dwellings, public open space, pumping station and associated works - RB2026/0526	In planning, awaiting decision	While this is a full application, no CTMP has been submitted at this stage to define the anticipated construction traffic generation or routing arrangements. As such, sufficient detail is not currently available to enable a robust assessment of potential cumulative construction traffic effects.

13.9.9 As outlined in **Table 13.25** above, it is unlikely that the peak construction period associated with the other developments in the Study Area will overlap with the peak construction period of the Proposed Development as the applications are at different stages in the planning process and each development has varying lengths of construction period. It should also be noted that the construction

phase is transitory in nature, with peak construction activities occurring over a relatively short period when considered in the context of the overall construction programme.

- 13.9.10 Where some overlap in construction activity could occur, the magnitude of cumulative traffic increases across the assessed highway network would remain low in absolute terms. Percentage increases may appear notable on certain links, however, this reflects the very low baseline traffic flows recorded on parts of the local road network rather than substantial increases in actual vehicle numbers.
- 13.9.11 As identified within the Proposed Development assessment (Section 13.7), the majority of links where higher percentage changes were reported are characterised by very low baseline flows, and the corresponding absolute increases in traffic movements remained small. Therefore, the addition of cumulative construction traffic would not materially alter the conclusions of this assessment.
- 13.9.12 Effects identified for the Proposed Development would not be materially worsened beyond those already reported and the embedded mitigation measures identified for the Proposed Development would remain appropriate and effective in managing cumulative effects.
- 13.9.13 In the unlikely event that the identified cumulative developments are scheduled to be constructed simultaneously, it is anticipated that in line with good practice and the application of standard planning conditions, the implementation of a CTMP for each development would ensure that appropriate mitigation is adopted by each development and that there are open lines of communication with RMBC, CDC, and other stakeholders, and developers of nearby developments. This would monitor the progress of the construction phases and ensure that adequate steps are taken to reduce potential disruption on the surrounding road network.
- 13.9.14 It is therefore considered that the cumulative effect of the Proposed Development and other developments in the area would not lead to any changes in the significance of effects predicted for the Proposed Development following the implementation of embedded mitigation measures, as outlined in Section 13.7.

13.10 Summary

Statement of Significance

- 13.10.1 This Chapter considers the potential traffic and transport effects associated with the construction of the Proposed Development on the surrounding public road network and sensitive receptors. The additional traffic due to the construction of the Proposed Development would result in temporary increases of traffic flows, including HGVs, on the surrounding highway network.
- 13.10.2 A full assessment of the potential environmental effects concludes that the significance of impacts relating to the effect of severance, NMU amenity and delay, fear and intimidation, road user and pedestrian safety, road vehicle driver and passenger delay, and hazardous and large loads are all **Negligible or Minor**. As such, based on the significance criteria outlined in Section 13.4 the effects of the temporary traffic generated by the construction of the Proposed Development on all road links and junctions are considered to be **Not**

Significant. Cumulative impacts with nearby developments are also considered
Not Significant in terms of EIA Regulations.

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- ¹⁴ Standards for Highway, Design Manual for Roads and Bridges (DMRB). (Online) Available at: [Accessed: March 2026]
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