East Pye Solar

Environmental Statement

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11.1 Introduction

11.1.1 This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) of effects on Transport and Access as a result of the Scheme.

11.1.2 This chapter identifies and proposes measures to address the potential impacts and likely significant effects on Transport and Access, during the construction and decommissioning phases.

11.1.3 The chapter does not include an assessment of the impacts during the operation and maintenance phase, which are scoped out of this chapter on the basis that the effects are unlikely to be significant when compared to the construction and decommissioning phases, as presented later within this chapter and agreed with the Planning Inspectorate (PINS) during the scoping opinion at **ES: Appendix 2.2 East Pye EIA Scoping Opinion [EN0110014/APP/6.3.2.2]**.

11.1.4 The information presented within this chapter has been informed by the Scheme information provided in **ES: Chapter 4 The Scheme [EN0110014/APP/6.1.4]**.

11.1.5 The following aspects will be considered within the Transport and Access assessment process:

- An assessment of baseline conditions, existing traffic flows and proposed vehicle routeing and access during the construction and decommissioning phases;
- An assessment of highway link performance and percentage change in traffic flows as a result of traffic generated during the construction and decommissioning phases; and
- An assessment of potential effects on transport and access during the construction and decommissioning phases, which have the potential to result in temporary effects relating to severance of communities; non-motorised user (NMU) delay; NMU amenity; fear and intimidation on and by road users; road vehicle driver and passenger delay; road user and pedestrian safety and hazardous loads/large loads.

11.1.6 This Transport and Access chapter has been prepared by Stantec (see **ES: Appendix 1.2 Statement of Expertise [EN0110014/APP/6.3.1.2]**). It is supported by a Transport Assessment (TA) provided in **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** and should be read in conjunction with the **Outline Construction Traffic Management Plan (Outline CTMP) [EN0110014/APP/7.6]**, the **Outline Public Rights of Way and Permissive Paths Management Plan (Outline PRoW Plan)**

[EN0110014/APP/7.8] and the **Outline Operational Traffic Management Plan (Outline OTMP) [EN0110014/APP/7.7]** provided to support this DCO Application.

11.1.7 A glossary of abbreviations can be found in **ES: Chapter 0 Contents, Glossary and Abbreviations [EN0110014/APP/6.1.0].**

11.2 Consultation

11.2.1 The Scheme has been subject to consultation throughout the DCO preparation period. A request for an EIA Scoping Opinion was sought from the Secretary of State (SoS) through the Planning Inspectorate (PINS) in January 2025. A Scoping Opinion was adopted by PINS in February 2025 The EIA Scoping Opinion is provided in **ES: Appendix 2.2 EIA Scoping Opinion [EN0110014/APP/6.3.2.2]**.

11.2.2 The issues raised in the Scoping Opinion relating to transport and access are summarised and responded to within **Table 11.1** which demonstrates how the matters raised in the Scoping Opinion are addressed in this ES.

Table 11.1: Relevant Scoping Opinion Comments from Statutory Bodies relating to Transport and Access

Consultee and Date	Comment and Scoping Opinion ID No.	How has the comment been addressed in the ES chapter	Location of response in ES Chapter
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	2.1.4 The ES should indicate where the proposed access points are, including a figure displaying existing access tracks and any new proposed access tracks.	The ES considers Sub-Site access locations, construction compounds, access routes strategy and internal access routes for vehicles. The ES provides appropriate Figures showing this information.	**Section 11.5** Assessment Methodology **Section 11.6** Baseline Conditions **ES: Figure 4.2 Indicative Temporary Construction Compound Locations [EN0110014/APP/6.2.4.3]** **ES: Figure 11.2-11.8 Likely and Suitable Routes to the Scheme [EN0110014/APP/6.2.11.2 - 11.8]**
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	2.1.8, ES should describe potential scope and duration of maintenance works that would be required during operation, including vehicle movements and staffing. Details should also be provided on any monitoring to be undertaken.	The ES confirms the operational phase effects will be less than construction. An Outline OTMP has been produced to consider the operational phase including the replacement phase.	Section 11.5 Assessment Methodology and **Outline OTMP [EN0110014/APP/7.7]**
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	3.1.1, Information on fire risk associated with battery storage facilities and relevant mitigation should be set out in the Outline Battery Safety Management plan (OBSMP).	The ES considers the fire risk associated with the BESS and an Outline Battery Storage Management Plan (Outline BSMP) has been produced. This includes confirming emergency vehicles can safely access the BESS compound from the highway from two different locations and circulate around the internal road network within the BESS Site and compound.	**Outline BSMP [EN0110014/APP/7.5]**
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	3.17.1, Operational trips generated to be scoped out subject to provision of information regarding the type of maintenance visits and vehicles required, and confirmation that these would not exceed relevant thresholds of effects. Also take into account any cumulative effects.	Operational trips were agreed to be scoped out of the ES. The ES confirms the operational phase effects will be less than construction. An Outline OTMP has been produced to consider the operation and maintenance phase including the equipment replacement phase.	**Section 11.5** Assessment Methodology and **Outline OTMP [EN0110014/APP/7.7]**

Consultee and Date	Comment and Scoping Opinion ID No.	How has the comment been addressed in the ES chapter	Location of response in ES Chapter
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	3.17.2, The ES should justify how the study area has been identified for assessment with reference to relevant industry guidance, sensitive receptors and agreement with relevant highway authorities. A plan illustrating the extent of the study area, the expected route(s) of construction traffic, and anticipated numbers of vehicle movements (including vehicle type, peak hour and daily movements) should be included in the ES.	The ES confirms the extent of the transport and access Study Area that was agreed with NCC as Local Highway Authority. A plan illustrating the extent of the Study Area is included within the ES along with a plan identifying the expected vehicle routes and anticipated vehicle forecasts.	**Section 11.5** Assessment Methodology, **Section 11.8** Assessment of Likely Effects, **Section 11.11** Cumulative Effects Assessment and **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** **ES: Figure 11.1 Indicative Transport and Access Study Area [EN0110014/APP/6.2.11.1]** **ES: Figure 11.2-11.8 Likely and Suitable Routes to the Scheme [EN0110014/APP/6.2.11.2 – 11.8]**
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	3.17.3, Impacts of safety from the delivery of AILs should be assessed within the ES where significant effects are likely to arise. Appropriate measures to ensure safe transportation should be included within AIL report.	The ES has considered AILs in all phases of the Scheme and identified appropriate management and mitigation measures.	**Section 11.8** Assessment of Likely Effects **Section 11.11** Cumulative Effects Assessment **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]**
The Planning Inspectorate, EIA Scoping Opinion Response, February 2025	3.21.2 The Applicant should seek to agree its lists of cumulative schemes with the relevant local planning authorities.	A list of cumulative schemes was agreed with NCC. The ES has considered the impact of the Scheme on the LRN including cumulative effects.	**Section 11.5** Assessment Methodology, **Section 11.11** Cumulative Effects Assessment
Anglian Water, Scoping Response, February 2025	There are existing Anglian Water assets including water mains within the project area. Appropriate mitigation measures need to be agreed with Anglian Water.	The ES has considered construction vehicle routeing and access proposals, alongside proposed management and mitigation measures.	**Section 11.6** Baseline Conditions; **Section 11.7** Embedded Mitigation; and **Section 11.9** Additional Mitigation Measures
Anglian Water, Scoping Response, February 2025	The TA and OCTMP should address the need to maintain access to Hempnall-Fritton Road Water Recycling Centre (WRC).	The ES has considered construction vehicle routeing and access proposals, alongside proposed management and mitigation measures.	**Section 11.6** Baseline Conditions; **Section 11.7** Embedded Mitigation; and **Section 11.9** Additional Mitigation Measures

Consultee and Date	Comment and Scoping Opinion ID No.	How has the comment been addressed in the ES chapter	Location of response in ES Chapter
Norfolk County Council, Scoping Response, February 2025	Cable routes will need to comprise Horizontal Directional Drilling (HDD) with regards to A140 corridor.	The use of HDD for road crossings has been considered and reported within the ES.	**ES: Chapter 4 The Scheme [EN0110014/APP/6.1.4]** **Outline CTMP [EN0110014/APP/7.6]**
Norfolk County Council, Scoping Response, February 2025	Consideration of the accumulative traffic impact with the Norwich to Tilbury scheme is required.	An assessment of cumulative effects, including the Norwich to Tilbury line has been assessed in the ES.	**Section 11.11** Cumulative Effects Assessment
Norfolk County Council, Scoping Response, February 2025	Consideration must be given for replacement and upgrades to solar panels and supporting infrastructure over the project lifetime.	Commentary has been included within the ES on forecast traffic activity during panel replacement. The assessment of effects has been scoped out, as confirmed by the Scoping Opinion.	**Outline OTMP [EN0110014/APP/7.7]**
Norfolk County Council, Scoping Response, February 2025	Consideration must be given for decommissioning and the effect on local highways.	Commentary has been provided on the decommissioning aspects of the Scheme. The effects are asserted to be less significant than the construction period.	**Section 11.8** Assessment of Likely Significant Effects
Norfolk County Council, Scoping Response, February 2025	EIA scope will need to relate to examining increases in traffic volumes, in particular percentage increases.	Changes in traffic volumes and percentages for the construction phase have been forecast and assessed for the significance of effects in line with IEMA Guidance thresholds. Other phases of the development – operational and maintenance - have been scoped out for traffic effects as agreed in the Scoping Opinion. Decommissioning is deemed to have a less significant effect than the construction period and such commentary is provided within the ES and TA.	**Section 11.6** Baseline Conditions; and **Section 11.8** Assessment of Likely Significant Effects
Norfolk County Council, Scoping Response, February 2025	Vehicle routes through narrow / constricted roads needs to be considered within the CTMP.	Vehicle routes have been considered within the ES with appropriate management and mitigation measures proposed.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures

Consultee and Date	Comment and Scoping Opinion ID No.	How has the comment been addressed in the ES chapter	Location of response in ES Chapter
Brooke Parish Council (and other parish councils), Scoping Response, February 2025	Inadequate public transport provision to reach site locations.	Shuttle buses, car sharing and integration with public transport has been considered within the ES.	**Section 11.5** Baseline Conditions **Section 11.7** Embedded Mitigation **Outline CTMP [EN0110014/7.6]**
Brooke Parish Council (and other parish councils), Scoping Response, February 2025	Some rural roads are not suitable for construction traffic	Vehicle routes have been considered within the ES with appropriate management and mitigation measures proposed.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures
Bergh Apton Parish Council, Scoping Response, February 2025	Residents and users of villages and their amenities will be detrimentally impacted by the construction and HGVs will increase traffic.	Vehicle routes have been considered within the ES with appropriate management and mitigation measures proposed.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures
Bergh Apton Parish Council, Scoping Response, February 2025	Concerns regarding to damage to roads including private verges and driveways.	Vehicle routeing has been designed to seek to avoid residential areas where practicable. Appropriate mitigation and management measures have been provided in the ES to accommodate this.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures
Bergh Apton Parish Council, Scoping Response, February 2025	Safety concerns to walkers, children walking to school, horse riders and dog walkers from increase in HGVs on rural roads.	Vehicle routes will avoid sensitive receptors such as schools where practicable. Appropriate management and mitigation measures have been proposed in the ES.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures
National Highways, Scoping Response, January 2025	AILs would need to be scoped in and considered at EIA stage.	An assessment of AIL routes has been undertaken, involving liaising with National Highways (NH.) Outcomes have been reported in the ES. Suitable management and mitigation measures have also been identified.	**Section 11.8** Assessment of Likely Significant Effects
National Highways, Scoping Response, January 2025	If the proposals generate an increase of 30 two-way movements or more on any junctions on the Strategic Road Network (SRN) within the peak period, we expect a capacity assessment to	The ES has considered trip generation on the SRN including A47 and A11. Analysis has concluded that percentage impact on these links is well below IEMA Guidance thresholds (30%) and is therefore not	**ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]**

Consultee and Date	Comment and Scoping Opinion ID No.	How has the comment been addressed in the ES chapter	Location of response in ES Chapter
	be undertaken to assess the impact of the proposed trips on the affected junctions and provide mitigations, if required	considered significant. NH have been engaged with on construction vehicle routeing and trip generation / distribution on the SRN as part of the ES.	
Cadent Gas and National Gas Transmission, Scoping Response, February 2024	Where existing roads cannot be used, construction traffic should only cross the pipeline at agreed locations.	Vehicle routes have been considered within the ES with appropriate management and mitigation measures proposed.	**Section 11.6** Baseline Conditions **Section 11.7** Embedded Mitigation **Section 11.9** Additional Mitigation Measures

Statutory Consultation and Preliminary Environmental Information Report (PEIR)

11.2.3 Statutory consultation was held between 18th June 2025, and 6th August 2025. Relevant responses to the PEIR relating to Transport and Access and how these have been addressed through the ES are set out within **Consultation Report Appendix 10 Section 47 Applicant Response Table [EN0110014/APP/5.11]** and **Consultation Report Appendix 11 Section 42 Applicant Response Table [EN0110014/APP/5.12]**.

Further Engagement

11.2.4 Further engagement has been undertaken as part of stakeholder engagement specific to Transport and Access, as detailed within **Table 11.2.**

Table 11.2: Summary of Further Engagement Undertaken

Consultee and Date	Summary of Matter	Response
South Norfolk Council, Public Rights of Way (October 2025)	The council has expressed a preference for minimising the closure and diversion of Public Rights of Way (PRoW) wherever practicable. While acknowledging the need to maintain safe and secure construction environments, the council encourages a balance of public safety with maintaining access to PRoW routes. This is particularly important for the Boudicca Way promoted cycle route, which is identified as a priority and should remain accessible as far as reasonably possible throughout the development period.	Construction vehicle movements over PRoW will be managed through the **Outline PRoW Plan [EN0110014//APP/7.17].** The aim of the document is to ensure that the effect of the construction phase on PRoW is minimised, including along the Cable Route Corridor

Targeted Consultation

11.2.5 A further round of targeted consultation was undertaken between 22nd October 2025 and 26th November 2025 following changes to the development boundary area of the Scheme presented in the PEIR and during Stage Two Statutory Consultation. All the changes are documented in full in the **Consultation Report [EN0110014/APP/5.1].** These changes did not give rise to any materially new or different likely significant environmental effects compared to those reported in the PEIR. How these have been addressed through the ES are set out within **Consultation Report Appendix 10 Section 47 Applicant Response Table [EN0110014/APP/5.11]** and **Consultation Report Appendix 11 Section 42 Applicant Response Table [EN0110014/APP/5.12].**

11.3 Legislation, Planning Policy and Guidance

11.3.1 A summary of applicable legislation, planning policy and other guidance documents against which the Scheme has been considered relating to Transport and Access is set out in **ES: Appendix 2.3 Legislation, Planning Policy and Guidance [EN0110014/APP/6.3.2.3]**.

11.3.2 An overview of the legislation, planning policy and guidance against which the Scheme has been considered for the Transport and Access assessment is set out below.

Legislation and Regulations

11.3.3 There are several key legislative and regulatory frameworks that inform the consideration of traffic and transport impacts associated with the Scheme proposals. These include, but are not limited to:

- Highways Act 1980 (Ref 11-1);
- Road Traffic Regulation Act 1984 (Ref 11-2);
- Road Vehicles (Construction and Use) Regulations 1986 (Ref 11-3);
- New Roads and Street Works Act 1991 (NRSWA) (Ref 11-4);
- Traffic Management Act 2004 (Ref 11-5);
- Construction (Design and Management) Regulations 2015 (CDM) (Ref 11-6);
- Traffic Signs Regulations and General Directions 2016, and associated Traffic Signs Manuals (Ref 11-7); and
- Design Manual for Roads and Bridges (DMRB), particularly standards CD109 (Ref 11-8) and CD123 (Ref 11-9).

11.3.4 These documents collectively provide the legislative and technical basis for assessing traffic and transport considerations in relation to the Scheme.

Planning Policy

National Policy Statements

11.3.5 National Policy Statements (NPS) are a suite of documents issued by the SoS for Energy Security and Net Zero, setting out the government's policy for the delivery of major energy infrastructure and represent the primary policy tests against which the application for a DCO for the Scheme will be considered pursuant to section 104 of the Planning Act 2008. Listed below are the details of the elements of the NPS considered relevant to the Transport and Access assessment.:

- Overarching National Policy Statement (NPS) for Energy (EN-1) 2025 (Ref 11-10), notably paragraphs 5.14.5, 5.14.7, 5.14.8, 5.14.12, 5.14.14, 5.4.15, 5.4.16, and 5.14.22.
- NPS for Renewable Energy Infrastructure (EN-3) 2025 (Ref 11-11), notably paragraphs 2.12.23 to 2.12.28, 2.12.107 to 2.12.113, and 2.10.131 to 2.10.136.
- NPS for Electricity Networks Infrastructure (EN-5) 2025 (Ref 11-12), notably paragraph 2.9.19.

National Planning Policy Framework 2024 (NPPF) (Ref 11-13)

11.3.6 The National Planning Policy Framework (NPPF) as revised in February 2025 sets out national planning policies that reflect priorities of the government for the operation of the planning system and the economic, social, and environmental aspects of the development and use of land. The NPPF is not directly associated with the governance regime of the Planning Act 2008, however, has a strong emphasis on sustainable development, with a presumption in favour of such development. The NPPF has the potential to be considered important and relevant to the SoS consideration of the Scheme. Paragraphs 116 and 118 are of relevance to this chapter.

Emerging National Planning Policy Framework (2025 Consultation Draft)

11.3.7 The 2025 consultation draft retains a strong emphasis on sustainable development, which provides relevant wider planning context. Accordingly, the relevant elements of the adopted 2024 NPPF remain applicable to the Scheme and would continue to apply upon adoption of the draft NPPF.

Local Planning Policy

11.3.8 The Scheme is located within the administrative boundaries of Norfolk County Council (NCC) and South Norfolk Council (SNC), which act as the Local Highway Authority (LHA) and the principal host authority respectively for the project. NCC is responsible for strategic matters such as highways, PRoW, and overarching environmental considerations, while SNC covers local planning, community impacts, and environmental health within the district. The relevant policies from these authorities relating to the Scheme are detailed below.

- NCC Local Transport Plan 4 Strategy 2021-2036 (2022) (Ref 11-14)
- South Norfolk Council Strategic Plan (2024-2028) (Ref 11-15)

Other Guidance

11.3.9 The assessment has been carried out in accordance with the following other guidance documents.

11.3.10 Guidelines for the Environmental Assessment of Transport and Access, published in 2023 by the IEMA (the IEMA EATM Guidelines) (Ref 11-16), have been considered and are set out in **Paragraphs 11.5.6 to 11.5.30**. IEMA has since transitioned to the Institute of Sustainability and Impact Professionals (ISIP), but the referenced guidelines remain widely recognised and applicable.

11.4 Assessment Assumptions and Limitations

11.4.1 The Transport and Access assessment has considered the following assumptions:

- Forecasts of the traffic generation of the Scheme during the construction phase have been developed based on professional judgement and derived from experience with other solar developments similar in scale and nature to the Scheme. Full details are presented in **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** and the **Outline CTMP [EN0110014/APP/7.6]**.

- Trip generation figures are indicative and representative of activities at the Sites occurring simultaneously. Whilst this is highly unlikely to occur in the construction phase as construction activities will be staggered to reduce impacts on the highway network, it has been included as a means of assessing a reasonable worst-case scenario;

- It is assumed that traffic generation forecasts associated with the operation and maintenance phase and decommissioning phase will be no worse than the construction phase. This is because the vehicle requirements for the operation and maintenance and decommissioning phases will be less than in the construction phase.

11.4.2 The Transport and Access assessment has considered the following limitations:

- The traffic surveys were carried out in line with DfT's Transport Analysis Guidance (TAG) Unit M1.2 (Ref 11-17). Using seven-day, 24-hour ATC surveys follows standard best practice in transport planning and provides a reliable reflection of both weekday and weekend traffic patterns under normal conditions. The 24-hour MCC survey was completed on a neutral weekday, also in line with best practice, to ensure the results reflect typical traffic conditions. All surveys took place in September, which is considered a 'traffic neutral' month and falls outside school holiday periods;

- In estimating traffic flows using AAWT and AADT, the data was extrapolated from morning and evening peak-hour counts using growth factors. This introduces assumptions about traffic volumes during off-peak and nighttime periods. Furthermore, both AAWT and AADT rely on the assumption of consistent traffic throughout the year, which may not reflect seasonal or event-driven fluctuations;

- For assessing traffic speeds, average speeds were not measured across all links in the study area. Instead, speed limits were used as a proxy, which assumes all vehicles travel at the maximum legal speed. While this approach helps represent worst-case environmental conditions, it overlooks real-world variations in driving behaviour and actual speeds.

11.5 Assessment Methodology

11.5.1 This section sets out the scope and methodology for the assessment of the impacts of the Scheme on Transport and Access.

Sources of Information

11.5.2 The following sources of information that have been consulted in the preparation of this chapter are as follows:

- Desk-based assessment of local conditions;
- Desk-based assessment of relevant solar and BESS schemes prepared by the Applicant;
- Engagement with the LHA (NCC), and wider stakeholder engagement;
- In-person site visits;
- Automatic Traffic Count (ATC) and Manual Classified Count (MCC) surveys;
- Personal injury accident data;
- Highway boundary information;
- Vehicle tracking and visibility splay drawings; and
- Ordnance survey and topographical survey data.

Study Area

11.5.3 The Study Area for the Transport and Access assessment is shown in **ES: Figure 11.1 Indicative Transport and Access Study Area [EN0110014/APP/6.2.11.1]**. It identifies the road network likely to be affected by the Scheme. The Study Area has been defined based on the anticipated vehicle routing from the Strategic Road Network (SRN) onto the Major Road Network (MRN) and Local Road Network (LRN), and the likely routes within the MRN and LRN to access the Scheme. While SRN links were considered for context, no direct impacts are expected on the SRN. The Study Area has been identified for assessment with relevant industry guidance and consideration of sensitive receptors. The final Study Area has been agreed with the LHA.

11.5.4 The Study Area consists of the following links (listed alphabetically):

- A140 Norwich Road / Ipswich Road;
- Alburgh Road / Spring lane;
- B1132 Norwich Road;
- B1134 Station Road;
- B1527 (between A140 and B1332);
- Boylandhall Lane;
- Brick Kiln Lane;
- Bussey's Loke / The Green;
- Cargate Lane;
- Church Lane;
- Edge's Lane;
- Fairstead Lane;
- Field Lane;
- Fylands Road;
- Hall Lane / Mill Road;
- Harvey Lane / Upgate Road;
- Heath Road / Brooke Road / Honeypot Lane;
- Littlebeck Lane / Mill Lane;
- Lodge Road / Frith Way;
- Long Stratton Bypass;
- Lundy Green;
- Market Lane;
- Mill Lane / Norwich Road;
- Parker's Lane;
- Shotesham Road / Woodton Road / Baxter's Lane;
- The Krons;

- The Street (Hempnall) / Broaden Lane / Church Lane / Church Hill / The Street (Saxlingham Nethergate);
- The Street (south of B1527); and
- Wood Lane / Common Road.

Potential Impacts

11.5.5 Embedded mitigation measures being incorporated into the design and construction of the Scheme are set out in **Section 11.7**. Prior to the implementation of any mitigation (embedded or additional), the Scheme has the potential to have the following affects (beneficially or adversely), during the construction and decommissioning Phases:

- Construction phase: Temporary increases in traffic volumes, particularly from heavy goods vehicles (HGVs) transporting materials and equipment, may lead to congestion, increased wear on local roads, and potential disruption to access for local residents and businesses. There may also be short-term road safety risks associated with construction traffic movements;
- Decommissioning phase: Similar to the construction phase, decommissioning activities may result in temporary increases in traffic volumes and associated disruption to local access and road safety. These impacts are expected to be short-term and reversible.

Impact Assessment Methodology

11.5.6 The Transport and Access assessment follows the general approach to undertaking EIA, explained in **ES: Chapter 2 EIA Methodology [EN0110014/APP/6.1.2]**. Albeit, it has been modified to align with the industry standard IEMA EATM Guidance.

11.5.7 In summary, the IEMA EATM Guidance sets out thresholds and assessments for the following effects relevant to Transport and Access, which are discussed in further detail below in this chapter of the ES:

- Severance;
- Driver Delay;
- Pedestrian Delay;
- NMUs;
- Fear and Intimidation;
- Road Safety; and
- Hazardous and Large Loads.

11.5.8 The methodology for attributing sensitivity of receptors, magnitude of impacts and the significance of effects in relation to Transport and Access is described below in this chapter of the ES.

11.5.9 The process that has been utilised for the Transport and Access assessment within this chapter is as follows:

- Consultation was undertaken with National Highways regarding matters affecting the SRN only, and with NCC in its role as the local highway authority for the local road network within the Council's administrative area;
- Procured and processed baseline traffic data, arranging the additional surveys where necessary in collaboration with key stakeholders and consultees;
- Undertaken vehicle route feasibility assessments for construction vehicles equipment and staff, including detailed observations of each of the proposed route options and identifying any sensitive receptors or constraints along the length of the routes. The main route assessments will primarily comprise the LRN. However, the impact on the MRN has also been assessed where relevant;
- Application of 'Department for Transport' (DfT) Trip End Model Presentation Program (TEMPro) (Ref 11-18) Growth Factors in order to develop and assess future construction years, with an emphasis placed on assessing the peak year;
- In consultation with NCC and NH, route options have been explored and developed further to determine the feasibility of each route and whether they are acceptable or require further refinement;
- An assessment has been undertaken of the likely Transport and Access effects. The outcome of the assessment has identified residual effects and suitable mitigation;
- Mitigation measures have been considered at all stages of the project. Embedded mitigation includes design rationalisation, internal haul roads, use of trenchless crossing techniques for key road links and route planning to minimise traffic impacts. Management Plans, such as the **Outline CTMP [EN0110014/APP/7.6],** provide additional controls during construction. Mitigation will also be achieved through compliance with relevant legislation and best practice standards. Where needed, the mitigation measures have been discussed and agreed with stakeholders prior to submission.

11.5.10 As is standard practice, the ES assessment has been undertaken primarily through a desktop-based assessment, supported by a series of site visits utilised to validate the findings of the vehicle routeing strategy.

11.5.11 The approach to the sensitivity of receptors, magnitude of impacts and the significance of effect in relation to Transport and Access for the ES assessment is described later within this section.

11.5.12 As detailed in **Section 11.1**, the operation and maintenance phase has been scoped out within this assessment because traffic associated with this phase is expected to be significantly lower than during the construction and decommissioning phases. This approach aligns with IEMA EATM guidance, which states that '*the greatest environmental change will generally be when the project traffic is at the largest proportion of the total flow. It is therefore recommended that the environmental assessment should be undertaken at the construction/decommissioning phase, year of opening of the project or the first full year of its operation*.' Since traffic volumes are anticipated to peak during construction and decommissioning, these phases are considered to represent the reasonable worst-case scenarios. Therefore, limiting the assessment to these scenarios is regarded as a robust and proportionate approach. Suitable control mechanisms for the operation and maintenance phase are secured in the **Outline OTMP [EN0110014/APP/7.7]** to manage any potential traffic and transport impacts during the operation and maintenance phase.

11.5.13 The ES assessment has been undertaken using a robust interpretation of the likely number of construction vehicles and construction staff that will be required, with further details provided in the supporting **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]**.

11.5.14 To provide a robust worst-case assessment of the likely significant environmental effects, it is assumed that the Scheme will be constructed in one phase.

11.5.15 The IEMA EATM Guidance identifies two broad rules which have been used as a scoping process to determine the scale and extent of assessment. These rules are summarised as follows:

- Rule 1 – include highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and
- Rule 2 – include any other specifically sensitive areas where traffic flows may increase by 10% or more (or there is a significant change in the mix of vehicles, such as an increase of more than 10% in the number of HGVs).

11.5.16 The following sub-sections set out the IEMA EATM Guidance effects for consideration in this chapter:

- Severance is defined as the '*perceived division that can occur within a community when it becomes separated by a major traffic artery*'. In addition, the assessment has considered any effects from traffic flow changes, as well as effects from formal diversions or closures required for network or infrastructure upgrades. IEMA EATM guidance states that '*changes in traffic flow of 30%, 60% and 90% correspond to slight,*

moderate and substantial severance impacts'. For consistency across all assessment topics, severance thresholds have been applied to a standard magnitude scale, as outlined in **Table 11.5** as: 'negligible' (<30%), 'low' (30–60%), and 'medium' (61–90%) and high (>90%) magnitude;

- Driver Delay is defined as delay which may occur to motorists as a consequence of the Scheme. The IEMA EATM Guidance states that driver delays due to a Scheme are only likely to be significant when the network is close to or already at capacity. The IEMA EATM Guidance goes on to state '*The assessment of driver delay will normally be based on technical work reported within the Transport Assessment, which generally focuses on conditions in the network peak periods, with highway mitigation defined to ensure conditions within the development are not materially worse than would otherwise have been the case without the development and mitigation*';

- Pedestrian Delay is utilised as a proxy for other NMU delay when crossing a road. In the IEMA EATM Guidance, it is stated '*Given the range of local factors and conditions that can influence pedestrian and non-motorised user delay (e.g. a discrete delay may have a lesser impact in an urban environment than a rural setting), it is not considered wise to set down definitive thresholds. Instead, it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect*';

- NMU Amenity is defined as '*the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic*'. The guidance suggests that a tentative threshold for judging the significance of changes in NMU amenity would be where the traffic flow is halved or doubled which would lead to a high impact, although that any assessment should pay full regard to the local conditions;

- Fear and Intimidation is defined as '*a further environmental impact that affects people is the fear and intimidation created by all moving objects. While the traffic and movement assessment has to consider motorcycles, cars, lorries and buses, this scope of consideration is not exclusive – it also has to consider other modes of travel, including horses, cycles, mobility scooters, e-scooters and e-cycles, if appropriate*'. For the assessment of Fear and Intimidation, the IEMA EATM Guidance refers to an assessment of the 'degree of hazard' (DoH) but acknowledges professional judgement should be used with reference to local conditions;

- Road Safety refers to the use of collision rates and identification of collision clusters to assess the implications of a development. The IEMA EATM Guidance recommends consultation with LHAs to determine the significance of any Road Safety effects. The guidance also notes '*The movement of hazardous/large loads will heighten people's perception of fear and intimidation and, if this is likely to occur, it should be noted*';

- Hazardous and large loads refer to specialist loads that might be involved in the Construction and Decommissioning Phases of the development. The IEMA EATM Guidance states that '*The traffic and movement expert must consider appropriate routes for abnormal load movements and mitigation strategies to secure safe passage. If frequent abnormal load movements are anticipated (e.g., heavy plant movements), the traffic and transport expert should consider if other traffic impacts could be induced (e.g., fear and intimidation, driver delay, etc.).*' The guidance also acknowledges that the extent of such analysis should clearly reflect the nature of the load being transported. Where such movements are expected, appropriate planning and coordination will be undertaken to ensure safe and efficient transport, minimise disruption, and comply with relevant regulatory requirements.

Sensitivity of Receptor

11.5.17 Categories of receptor sensitivity have been defined based on the principles set out in the IEMA EATM Guidance and include the following through applying professional judgement:

- Particular groups or locations which may be sensitive to changes in traffic conditions;
- The list of affected groups and special interests set out in the guidance; and
- The identification of links or locations where it is felt that specific environmental problems may occur noting that such locations '…*would include accident black spots, conservation areas, hospitals, links with high pedestrian flows etc*.'

11.5.18 In accordance with the IEMA EATM Guidance, the following sensitive receptors are considered within this chapter:

- NMUs;
- PRoW users;
- Motorists and freight vehicles;
- Public transport users; and
- Emergency services.

11.5.19 Any nearby Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Local Wildlife Sites (LWS), County Wildlife Sites (CWS) and Roadside Nature Reserves (RNR), where present along the proposed construction routes, are identified as standard sensitive receptors, as these could be impacted by construction vehicles, or any highway works required to facilitate the Scheme.

11.5.20 All receptors will exhibit a greater or lesser degree of sensitivity to the changes brought about by the Scheme. The sensitivity of a receptor is a function of its capacity to accommodate change. For example, transport users (receptors) that have a higher sensitivity to changes in traffic are those visiting places such as schools, hospitals and playgrounds.

11.5.21 Further, the sensitivity of a receptor can also be a function of the infrastructure on a highway link. For example, where there is a high concentration of pedestrians, and limited facilities such as crossings and footways, the transport users would have a higher sensitivity to changes in traffic.

11.5.22 Highway links which have these characteristics are assumed to have a higher concentration of these users and are classified with a higher sensitivity.

11.5.23 For the purpose of the assessment with respect to Transport and Access, 'High Sensitivity' refers to any receptors who are non-motorised or vulnerable road users, such as children, elderly people, equestrians or disabled people who could be negatively impacted by a change in traffic flows. For example, a change in HGV composition may significantly impact these users more than other motorised road users who are less sensitive to changes in vehicle composition or flows.

11.5.24 The sensitivity of highway links with regard to infrastructure and the receptors on those links are set out in **Table 11.3** which has been prepared with reference to the IEMA EATM Guidelines.

Table 11.3: Sensitivity Criteria of Identified Receptor

Sensitivity	Description
High	Receptors of greatest sensitivity to traffic flows, such as schools, playgrounds, accident blackspots, retirement homes, areas with no footways with high pedestrian footfall, congested areas.
Medium	Receptors with some sensitivity to traffic flow, such as Conservation Areas, listed buildings, tourist attractions, and residential areas.
Low	Receptors with low sensitivity to traffic flows, and those distant from affected roads.
Negligible	Receptors with no material sensitivity to traffic flows.

11.5.25 Based on the criteria set out in **Table 11.3**, the sensitivities of identified receptors are shown below in **Table 11.4**.

Table 11.4: Sensitivity of Identified Receptor

Sensitivity	Identified Receptor
High	PRoW used by vulnerable users (e.g. older age, younger age and ill-health status)

Sensitivity	Identified Receptor
	Emergency service routes with limited alternative access
	Residential areas directly adjacent to construction access points
Medium	Local rural roads with limited structural capacity (e.g. Restricted carriageway width, susceptible to wear from HGVs and limited pavement stretch)
	School routes or bus stops near the Scheme
	Agricultural access routes used regularly by farm vehicles
Low	Wider road network with sufficient capacity and resilience
	Commercial or industrial areas with low pedestrian activity
	Occasional maintenance access roads
Negligible	Private roads not used by the public
	Remote tracks or field boundaries with no formal access designation
	Occasionally used agricultural tracks with no public or strategic transport function

Magnitude of Impact

11.5.26 The categorisation of the magnitude of impact takes into account the following factors:

- Extent;
- Duration;
- Frequency; and
- Reversibility.

11.5.27 The magnitude of impact is the level of change caused by the Scheme and is defined in **Table 11.5.**

Table 11.5: Criteria for Determining Magnitude of Impact

	Magnitude of Impact			
	High	**Medium**	**Low**	**Negligible**
Severance of communities	Change in traffic or HGV flows of >90%	Change in traffic or HGV flows of >=60% and <90%	Change in total traffic or HGV flows of >=30 and 60%	Change in total traffic or HGV flows of >0 and <30%
Driver Delay				
NMU delay				
NMU amenity	Magnitude of impact is based on professional judgement regarding the 'pleasantness' of a journey and is affected by the composition, speed or volume of traffic introduced as a result of the Scheme. This judgment will be considered			

	Magnitude of Impact			
	High	**Medium**	**Low**	**Negligible**
	against a quantitative consideration of traffic movement where the relevance of amenity becomes more significant through halving or doubling traffic volumes. The IEMA EATM Guidelines suggests that assessors use their judgement to determine whether pedestrian amenity is a significant effect. As such, the magnitude of change for pedestrian amenity has been defined qualitatively based on professional judgement.			
Fear and intimidation on and by road users	As IEMA EATM guidance: Two step changes in level.	One step change in level, but with: a) change >400 in average 18hr two-way all vehicle flow; and/or b) b) change >500 in total 18hr heavy vehicle flow.	One step change in level, but with: a) change <400 in average 18hr two-way all vehicle flow; and/or b) change <500 in total 18hr heavy vehicle flow.	No change in step changes.
Road user and pedestrian safety	Magnitude of impact based on professional judgement following analysis detailed in the TA on collision history and the nature of movements associated with the Scheme.			
Hazardous / large loads	Magnitude of impact based on professional judgement following the outcomes of the Abnormal Indivisible Loads (AILs) assessment which will be an appendix to the TA, frequency and size of AILs and consideration of wider traffic effects.			

Categorising Scale of Effect

11.5.28 The scale of significance of effect that the Scheme may have on an impacted receptor will be influenced by a combination of the sensitivity of the identified receptor and the magnitude of impact.

11.5.29 There are four categories demonstrating the scale of significance of effect:

- Negligible;
- Minor;
- Moderate; and
- Major.

Table 11.6: Scale of Significance of Effect

Magnitude of Impact	Receptor Sensitivity			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major/Moderate	Moderate	Negligible
Medium	Major/Moderate	Moderate	Moderate/Minor	Negligible

Low	Moderate	Moderate/Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

11.5.30 The nature of effects will be defined as either: beneficial or adverse.

11.6 Baseline Conditions

The Order Limits

11.6.1 The Scheme is located within the administrative area of SNC which is the host authority. A full description of the Order limits is provided in **ES: Chapter 3: The Order Limits [EN0110014/APP/6.1.3].**

Existing Baseline

11.6.2 The existing baseline conditions are derived from the completed desk and field-based studies.

Desk Study

Highway Access

11.6.3 The road network surrounding the Order Limits consist of two main north to south links, A140 and B1332, and one main east to west link, B1527. These three links comprise the key arterial connectors for construction traffic associated with the Scheme. B1134 Station Road runs west of A140 and will be the key link for access to the National Grid Substation, Project Substation in BESS Site and Project Substation in Sub-site 1B. Access to the Project Substation in Sub-Site 5A is accessed from B1527.

11.6.4 The remaining links within the Scheme Study Area comprise more rural roads with intermittent road markings and varying carriageway widths. **Table 11.7** summarises the attributes of the highway network within the Study Area.

Table 11.7: Links within the Study Area

List (Alphabetical)	Description	Speed Restriction	Notes
A140 Norwich Road / Ipswich Road	Single carriageway	60mph	Key arterial road with varied speed limit, carriageway width suitable for large vehicles to pass and good forward visibility. Avoids construction related vehicles travelling through Long Stratton, following completion of Long Stratton bypass. Passes through some residential and commercial areas.

List (Alphabetical)	Description	Speed Restriction	Notes
Alburgh Road / Lundy Green / Spring Lane	Single carriageway, single track at points	50mph (Swainsthorpe)	Varying road width on Lundy Green, overall good visibility, passes through some built-up residential areas.
B1134 Station Road	Single carriageway	40mph (Newton Flotman)	Good overall visibility, some varying road widths, level crossing to the west.
B1332 Norwich Road	Single carriageway	50mph (Upper Tasburgh)	Arterial road with good forward visibility. Passes through some residential and commercial areas.
B1527 (between A140 and B1332)	Single carriageway	30-50mph (Long Stratton)	Hempnall village with on-street parking, varyinge road width and alignment, some narrow footways. Carriageway width suitable for large vehicles to pass and good forward visibility along remainder of link eastbound and westbound to/from Hempnall.
Bussey's Loke / The Green	Single carriageway, single track	60mph	7.5T weight restriction except for loading. Some overhanging trees and varying road widths, potentially challenging for two-way vehicle movements.
Cargate Lane	Single carriageway, single track at points	40mph (Hempnall Green)	Good forward visibility with varying street widths and provision of vehicle passing points.
Fairstead Lane	Single carriageway, single track	60mph	Good forward visibility with some overhanging trees, potentially challenging for two-way vehicle movements.
Fylands Road	Single carriageway, single track	60mph	Good forward visibility with some overhanging trees, potentially challenging for two-way movements, provision of some vehicle passing points.
Hall Lane	Single carriageway	60mph	Good forward visibility with some overhanging trees, suitable for two-way traffic, road width narrows at points, provision of some vehicle passing points.
Harvey Lane / Upgate Road	Single carriageway	40mph (Ditchingham)	Varying road widths, existing crossover points and good overall visibility.
Heath Road / Brooke Road	Single carriageway	60mph	Varying road widths although suitable for two-way traffic, good forward visibility with some overhanging trees. Provision of vehicle passing points.
Honeypot Lane	Single carriageway	30mph (west of Hempnall)	Varying road widths although suitable for two-way traffic, good forward visibility with some overhanging trees. Provision of vehicle passing points.

List (Alphabetical)	Description	Speed Restriction	Notes
Lodge Road / Frith Way	Single carriageway, single track	60mph	Single track with varying road widths.
Mill Lane / Norwich Road	Single carriageway, single track	60mph	7.5T weight restriction except for loading (Mill Lane). Shotesham Ford located on Mill Lane, potential flooding and consequent inaccessibility by vehicles. Varying width and hedgerows on either side of the carriageway.
Shotesham Road / Woodton Road / Baxter's Lane	Single carriageway, single-track, one-way access at some junctions	60mph	7.5T weight restriction except for loading (Shotesham Road). Varying road widths and one-way access at some junctions. Potentially challenging for two-way vehicle movements.
The Krons	Single carriageway, single-track at points	60mph	Crosses two bridges over minor water passages, although no signage visible for weight restrictions. Varying road widths with overhanging trees.
The Street (Hempnall) / Broaden Lane / Church Hill / The Street (Saxlingham Nethergate)	Single carriageway	60mph	Hempnall Primary School and Saxlingham Primary School located along route. On-street parking along Hempnall section. Overhanging building in Hempnall with speed restriction.
The Street (south of B1527)	Single carriageway	60mph	Good forward visibility with some overhanging trees.
Wood Lane / Common Road	Single carriageway	60mph	Good forward visibility, varying road width, provision of vehicle passing points.

Public Transport Network

11.6.5 The Great Eastern Main Line runs approximately 6km west of Hempnall and 300m west of Sub-Site 1A, running north to south from Norwich to London. The nearest railway station to the northern extent of the Scheme is Norwich, which is located approximately 14km north of Hempnall (or 10km north of Site 9). The nearest railway station to the south-western extent of the Order Limits is Diss, which is located approximately 10km south-west of the A140 / B1134 roundabout (or 9.5km south-west of Sub-Site 2A. **Table 11.8** summarises the train services available from both railway stations.

Table 11.8: Railway Services

Railway Station	Destination	Frequency, Mon-Sat (approx.)	Operating Hours, Mon-Sat (approx.)
Norwich	Lowestoft	Hourly (Mon-Sat)	05:30 – 23:00 (Mon-Fri)
	Great Yarmouth	Hourly (Mon-Fri)	05:30 – 22:30 (Sat)

Railway Station	Destination	Frequency, Mon-Sat (approx.)	Operating Hours, Mon-Sat (approx.)
	London Liverpool Street / Ipswich	Twice-hourly (Sat)	05:00 – 23:00 (Mon-Fri)
	Cambridge / Stansted Airport	Twice-hourly (Mon-Sat)	05:30 – 23:00 (Sat)
	Sheringham / Cromer	Hourly (Mon-Sat)	05:00 – 23:00 (Mon-Fri)
	Liverpool Lime Street / Manchester Piccadilly / Nottingham / Sheffield	Hourly (Mon-Sat)	05:00 – 22:00 (Sat)
Diss	Norwich	Hourly (Mon-Sat)	05:30 – 22:30 (Mon-Sat)
	London Liverpool Street / Ipswich	Twice-hourly (Mon-Sat)	05:00 – 23:00 (Mon-Sat)

11.6.6 The key bus corridors within the vicinity of the Scheme within the Study Area are summarised in **Table 11.9**.

11.6.7 Bus stops located within the Study Area are shown in **ES: Figure 11.9 Public Rights of Way, National Cycle Network and Bus Stops [EN0110014/APP/6.2.11.9]** to **ES: Figure 11.13 Public Rights of Way, National Cycle Network and Bus Stops [EN0110014/APP/6.2.11.13]**.

Table 11.9: Bus Services

Service Number	Route	Nearest Sites	Frequency, Mon-Sat (approx.)	Operating Hours, Mon-Sat (approx.)
82	Norwich - Roydon	2A-C, 7A	Every hour	09:00-22:00
84	Norwich – Hempnall – Long Stratton / Wacton / Harleston	6, 7D-F	(Mon-Sat)	(Mon-Sat)
41 / 41A / X41 / 941	Norwich – Brooke – Woodton – Ditchingham – Bungay / Halesworth	10C	Every 2 hours	08:00-18:00
1 / 1A	Norwich – Long Stratton / Burston / Tivetshall - Diss	1A-B, 7A	(Mon-Sat)	(Mon-Sat)
36 / 36A / 36B	Horsford – Norwich – Long Stratton / Harleston	7A, CRC4	Every 30 mins	08:00-23:00

Cycle, Pedestrian and Equestrian Network

11.6.8 There are several road and PRoW within the Study Area as shown on **ES: Figure 11.9 Public Rights of Way, National Cycle Network and Bus Stops [EN0110014/APP/6.2.11.9]** to **ES: Figure 11.13 Public Rights of Way, National Cycle Network and Bus Stops [EN0110014/APP/6.2.11.13]**.

11.6.9 A full list of PRoW which intersect with the Scheme, including Sub-Sites and CRC, and roads within the Study Area is provided in the **Outline PRoW Management Plan [EN0110014/APP/7.8]**.

11.6.10 National Cycle Network (NCN) routes 30 and 40 run to the south of the Scheme, roughly on a south-west to north-east direction. NCN route 30 runs from Thetford, roughly following A1066 and A143 via Diss, Harleston, Bungay and Beccles. The route continues in a roughly circular direction along the Norfolk Coast. NCN route 40 runs further south and roughly parallel to route 30 between Bungay and Eye, before travelling south to Framlingham.

11.6.11 NCN route 1 runs east of the Scheme in a roughly north to south direction from Norwich to Beccles via Loddon, continuing south towards London and north-west towards Northern England and Scotland.

11.6.12 Boudicca Way is a long-distance trail which passes through South Norfolk, running for approximately 58km between Norwich and Diss, roughly parallel to A140 and adjacent to Sub-Site 7A on Fairstead Lane. The trail also interacts with CRC11.

11.6.13 Another long-distance trail, Angles Way, runs to the south of the Scheme on a 150km route following the country boundary of Norfolk and Suffolk from Great Yarmouth to Thetford. The closest site to the trail is Sub-Site 10A which is located approximately 4km to the north.

Road Safety

11.6.14 Accident data obtained from NCC for the five-year period (September 2019–August 2024) shows a total of 100 recorded accidents on the LRN and MRN within the study area. Of these, 72 were slight, 26 serious, and 2 fatal, with the majority occurring on the A140 and B1332. The Hempnall Roundabout was introduced in November 2019 to address previous safety concerns at the A140/B1527 crossroads, and its impact is reflected in records from late 2019 onwards.

11.6.15 Analysis indicates that 72% of accidents were slight in severity, most accidents (57%) occurred between 8am–4pm, and there were two fatal accidents which occurred in December. Accident volumes are not considered high relative to baseline traffic flows on the A140 and B1332, where the majority of them occurred, suggesting no existing highway safety concerns. Further analysis, including a summary of the recorded incidents by severity and time of day is provided in **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]**.

Surveys

11.6.16 A combination of ATC surveys, MCC survey and Department for Transport (DfT) Manual Count Point (MCP) data has been collected within the Study Area and potential access junctions.

11.6.17 The ATC and MCC surveys were undertaken between Friday 1 November 2024 and Thursday 7 November 2024. ATC surveys were collected for a 7-day, 24-hour period and the MCC survey was for a one-day 24-hour period, on Thursday 7 November.

11.6.18 The survey locations are summarised as follows (the A140/B1527 roundabout is referred to as Hempnall Roundabout):

- ATC Location 1: A140, north of Hempnall Roundabout;
- ATC Location 2: B1527, east of Hempnall Roundabout;
- ATC Location 3: A140 south of Hempnall Roundabout;
- ATC Location 4: Bungay Road, west of Hempnall Roundabout;
- ATC Location 5: Fairstead Lane, between A140 and The Krons;
- ATC Location 6: Norwich Road, north of Saxlingham Nethergate;
- ATC Location 7: Broaden Lane, north of Hempnall;
- ATC Location 8: Littlebeck Lane, south of Brooke;
- ATC Location 9: Shotesham Road, north of B1527;
- ATC Location 10: B1332, north of Woodton;
- ATC Location 11: Harvey Lane, south of Kirstead Green;
- ATC Location 12: B1527, north of Woodton;
- ATC Location 13: B1332, southeast of Woodton;
- ATC Location 14: Alburgh Road, north of Hempnall Green;
- ATC Location 15: The Street, north of Fritton;
- ATC Location 16: Lodge Road, north of B1134;
- ATC Location 17: B1134, west of A140 / B1134 roundabout;
- ATC Location 18: The Green, southeast of Saxlingham Nethergate;
- ATC Location 19: Wash Lane, southeast of Saxlingham Nethergate;
- ATC Location 20: Baxter's Lane, east of Saxlingham Nethergate; and
- MCC Location 1: Hempnall Roundabout.

11.6.19 Following the revision of the Study Area, and for completeness, ten further ATCs were undertaken to supplement the baseline data. These were

undertaken from Saturday 26 April 2025 and Friday 2 May 2025. The additional ATC surveys were collected under the same specifications and conditions as previously and are as follows:

- ATC Location 21: A140 (S-B1134);
- ATC Location 22: Spring Lane;
- ATC Location 23: The Krons;
- ATC Location 24: Fairstead Lane (E);
- ATC Location 25: Fylands Road;
- ATC Location 26: Bussey's Loke;
- ATC Location 27: Heath Road;
- ATC Location 28: Market Lane;
- ATC Location 29: Wood Lane; and
- ATC Location 30: Edge's Lane.

11.6.20 **ES: Figure 11.14 Traffic Survey Locations [EN0110014/APP/6.2.11.14]** to **ES: Figure 11.17 Traffic Survey Locations [EN0110014/APP/6.2.11.17]** show the ATC and MCC survey locations.

11.6.21 The links identified for each of the 30 ATC locations have been adopted as the basis for assessing potential transport effects. These links collectively encompass the study area described in **Section 11.5 Assessment Methodology**, ensuring that the assessment captures all relevant traffic movements and interactions within the defined geographical scope. This approach provides consistency between the traffic data collection points and the impact analysis, supporting a robust assessment of transport-related effects.

11.6.22 **Table 11.10** summarises the baseline results of the ATC locations, showing AADT, which is derived from an average of the 7-day survey period.

Table 11.10: ATC Baseline Traffic Flows

Link	85th Percentile Speed	Two-way Traffic Flows			
		All Vehicles AAWT (18-hour)	HGVs>3.5 T (18-hour)	All Vehicles AADT (24-hour)	HGVs>3.5 T (24-hour)
01 - A140 (N-B1527)	41	20,462	3,441	19,731	2,792
02 - B1527	39	5,473	758	5,078	630

Link	85th Percentile Speed	Two-way Traffic Flows			
		All Vehicles AAWT (18-hour)	HGVs>3.5 T (18-hour)	All Vehicles AADT (24-hour)	HGVs>3.5 T (24-hour)
03 - A140 (S-B1527)	43	20,973	3,817	20,145	3,052
04 - Bungay Rd	41	2,751	479	2,577	388
05 - Fairstead Ln (W)	38	87	16	82	14
06 - Norwich Rd	46	1,321	138	1,220	111
07 - Broaden Ln	52	1,310	131	1,229	102
08 - Littlebeck Ln	34	108	25	103	22
09 - Shotesham Rd	41	140	31	134	26
10 - B1332 (North)	59	7,363	1,384	7,051	1,080
11 - Harvey Ln	42	496	110	435	85
12 - B1527 (Woodton)	45	998	225	903	162
13 - B1132 (South)	48	7,861	1,274	7,393	1,027
14 - Alburgh Rd	47	1,169	254	1,077	204
15 - The Street	45	1,530	215	1,398	173
16 - Lodge Rd	40	181	46	172	39
17 - B1134	50	3,249	655	2,936	517
18 - The Green	37	72	26	67	22
19 - Wash Ln	37	72	26	67	22
20 - Baxter's Ln	41	150	29	139	26
21 - A140 (S-B1134)	56	14,727	3,259	14,104	2,651
22 - Spring Lane	47	802	160	729	130
23 - The Krons	34	1,056	169	910	136
24 - Fairstead Ln (E)	33	1,588	241	1,391	202
25 - Fylands Rd	41	125	27	121	23
26 - Bussey's Loke	37	56	8	53	7
27 - Heath Rd	47	422	65	383	57

Link	85th Percentile Speed	Two-way Traffic Flows			
		All Vehicles AAWT (18-hour)	HGVs>3.5 T (18-hour)	All Vehicles AADT (24-hour)	HGVs>3.5 T (24-hour)
28 - Market Ln	31	34	6	31	4
29 - Wood Ln	41	795	172	738	150
30 - Edge's Ln	18	46	7	41	6

11.6.23 In line with the IEMA EATM Guidelines and summarised in **Section 11.5**, each link within the Study Area has been assessed with respect to sensitivity and scored from 'negligible' to 'high'. Links have been split into multiple sections where road conditions or the surrounding environment is considered to differ along its length, or of a different sensitivity scoring. A full assessment of links and sensitivity scoring, including additional justifications for each scoring, is detailed in **Table 11.11** below.

Table 11.11: Sensitivity of Transport Links within the Study Area

Link	Sensitivity	Justification for Sensitivity
01 - A140 (N-B1527)	Low	Passes the eastern edge of Tasburgh and Upper Tasburgh with limited frontage development and minimal sensitive receptors directly adjacent to the carriageway.
02 - B1527	Medium	Passes Jack in the Box Nursery and through residential areas with narrow footways in places and higher levels of pedestrian activity.
03 - A140 (S-B1527)	High	Passes through residential and commercial areas with high pedestrian footfall and frequent frontage development.
04 - Bungay Rd	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
05 - Fairstead Ln (W)	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
06 - Norwich Rd	High	Passes through areas with residential frontage and higher levels of pedestrian activity, increasing sensitivity to traffic change.
07 - Broaden Ln	High	Passes through residential areas and the vicinity of Hempnall Primary School, resulting in a high proportion of sensitive receptors.
08 - Littlebeck Ln	Low	Passes through a predominantly rural area with limited residential frontage and minimal sensitive receptors.
09 - Shotesham Rd	Low	Passes a small number of farmhouses and residential dwellings dispersed along the route.
10 - B1332 (North)	High	Passes through Brooke and Poringland, including Framingham Earl High School and Time Childcare in Poringland, with additional proximity to Woodton Primary School.

Link	Sensitivity	Justification for Sensitivity
11 - Harvey Ln	Negligible	Passes minor agricultural and industrial premises, all generally set back from the highway with limited sensitivity.
12 - B1527 (Woodton)	Low	Passes through areas with limited frontage development and minimal sensitive receptors adjacent to the route.
13 - B1132 (South)	Low	Route is largely rural in character with limited development and minimal sensitive receptors.
14 - Alburgh Rd	Medium	Passes through several residential areas with regular frontage development and local access movements.
15 - The Street	Low	Passes a small number of residential dwellings with limited pedestrian activity.
16 - Lodge Rd	Medium	Passes through Great Moulton, including residential and commercial land uses.
17 - B1134	Low	Predominantly rural route with limited frontage development and minimal sensitive receptors.
18 - The Green	Medium	Contains some residential dwellings, largely set back from the carriageway, with Saxlingham Hall nursing home located nearby on a side road.
19 - Wash Ln	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
20 - Baxter's Ln	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
21 - A140 (S-B1134)	Low	Strategic highway section with limited direct access and minimal sensitive receptors adjacent to the carriageway.
22 - Spring Lane	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
23 - The Krons	Low	Local road with limited residential frontage and low pedestrian activity.
24 - Fairstead Ln (E)	Medium	Passes residential dwellings on both the northern and southern sides of the carriageway.
25 - Fylands Rd	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
26 - Bussey's Loke	Medium	Passes a mix of residential dwellings, agricultural land uses and small-scale commercial premises.
27 - Heath Rd	Negligible	Route contains minimal sensitive receptors and limited adjacent development.
28 - Market Ln	Medium	Passes a small number of residential dwellings with regular frontage access.
29 - Wood Ln	Low	Passes a small number of farmhouses and dispersed residential dwellings.
30 - Edge's Ln	Low	Passes a small number of farmhouses and dispersed residential dwellings.

11.6.24 **Table 11.12** outlines the MCP locations within the Study Area and their respective AADT. The latest year that data was collected or estimated for these points was 2019 as there has been no MCP data recorded since then. They have been included as they provide a pre-Covid baseline.

Table 11.12: MCP Locations in Study Area

MCP	Road Section	Latest Estimated / Manual Count Year	All Vehicles AADT (24-hour)	% HGV (2019)
941724	B1527 east of A140 / B1527 roundabout	2019 (estimated);	3,472	3%
807192	Broaden Lane north of Hempnall	2018 (manual count)	2,038	0%
806210	Field Lane south of B1527 Hempnall	2019 (manual count)	552	1%
802270	Low Road north of Hardwick	2019 (estimated);	863	0%
941771	B1527 north of Woodton	2018 (manual count)	901	4%
806756	Triple Plea Road south of Hempnall Road	2019 (estimated);	290	1%
951638	B1332 north-west of Ditchingham	2018 (manual count)	6,080	5%

Vehicle Routes and Scheme Access

Sites and Sub-Sites

11.6.25 Construction vehicle routes have been selected with the principal aim for avoiding routeing vehicles through local villages wherever possible including the villages of Great Moulton, Long Stratton, Hempnall, Saxlingham Nethergate and Brooke. The selected routes are considered the most appropriate to each access and have been prepared based on engagement with NCC.

11.6.26 The proposed construction vehicle routing to access the Sites is outlined in **Table 11.13** below. Routeing maps illustrating the proposed access routes described in **Table 11.14** are provided in **ES: Figure 11.2-11.8 Likely and Suitable Routes to the Scheme [EN0110014/APP/6.2.11.2 - 11.8]**.

11.6.27 The corresponding accesses referenced in **Table 11-13** below are detailed in Table 4.1 of **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** and illustrated in **ES: Figure 4.1 Indicative Masterplan [EN0110014/APP/6.2.4.1]**.

Table 11.13: Construction Vehicle Routeing - Solar PV Sites

Site Group	Accesses Used	Proposed Access Route
1A-D and BESS	*A01*, *A02*	**From A140/B1134 roundabout**: westbound on B1134, northbound on *A01/A02*. Depart on same route in reverse.
2A-C	*A07*, *A08*, *A10*	**From A140 (for vehicles from south)**: northbound on A140, access on *A07/A08/A10* via existing laybys. Depart site: northbound on A140, execute u-turn on roundabout at Long Stratton Bypass / Parker's Lane, southbound on A140. **From A140 (for vehicles from north)**: southbound on A140 Norwich Road, execute u-turn on A140/B1134 roundabout, northbound on A140, access on *A07/A08/A10* via existing laybys. Depart travelling northbound on A140.
3	*A34*	**From B1332**: westbound on B1527, southbound on Alburgh Road and Spring Lane, west onto *A34*.
4A	*A19*	**From Hempnall Roundabout**: south-west off exit of roundabout onto *A19*. Depart on same route in reverse.
4B	*A20*	**From Hempnall Roundabout**: eastbound on B1527, south onto *A20*. Depart on same route in reverse.
5A-B	*A23*, *A24*, *A25*, *A26*	**From Hempnall Roundabout**: eastbound on B1527, south onto *A23/A24*, for *A25/A26* continue eastbound on B1527, southbound on The Street and west onto *A25/A26*. Depart on same route in reverse.
7A-F	*A28*, *A29*, *A30*, *A40*, *A42*	**From A140**: south on Hempnall Roundabout onto Site 4A via *A19*, *await call-forward to site*, eastbound on Hempnall Roundabout and B1527, northbound on The Krons, westbound on Fairstead Lane, north onto *A29/31*. Internal haul route to Sites 7A-F – cross Broaden Lane via *A40* for access to 7E-F. For southern portion of 7D, southbound on Broaden Lane and west onto *A42*. Depart on same route in reverse.
7G-H	*A44*, *A45*, *A57*	**From B1332**: westbound on B1527, northbound on Shotesham Road and Woodton Road, west onto *A57*, internal haul route through 7K and 7J, exit on *A45*, southwest on Fylands Road, Bussey's Loke east/west on *A44*. Depart on same route in reverse.
7I-J	*A45*, *A57*	**From B1332**: westbound on B1527, northbound on Shotesham Road and Woodton Road, west onto *A57*, internal haul route through 7K and 7J, cross on *A45* for access to 7I. Depart on same route in reverse.
7K-L	*A57*, *A58*	**From B1332**: westbound on B1527, northbound on Shotesham Road and Woodton Road, west onto *A57/A58*. Depart on same route in reverse.
8A-B	*A52*, *A50*, *A49*	**From B1332**: westbound on B1527, northbound on Shotesham Road and Woodton Road, westbound on Heath Road, southbound on Baxter's Lane, west on *A52*. For access to 8A, west on internal haul route through 8B, exit off *A50* onto Market Lane, south onto *A49*. Depart on same route in reverse
9	*A56*	**From B1332**: westbound on Littlebeck Lane, north onto *A56*. Depart on same route in reverse.
10A-E	*A61*, *A62*, *A65*	**From B1332**: eastbound on Harvey Lane, south onto *A61/A62*, for *A65* continue eastbound on Harvey Lane, northbound on Seething Road, west onto *A65*. Depart on same route in reverse.

Internal Haul Routes

11.6.28 There are three proposed internal haul routes to connect the Sites. The internal haul routes will be temporary for construction. These are as described in **Table 11-12** and will be utilised to connect Sub-Sites 7A-F using CRC 11, Site 12, Sub-Sites 7G-L and Sub-Sites 8A-B. The internal haul routes are shown in **ES: Figure 4.1 Indicative Masterplan [EN0110114/APP/6.2.4.1]**.

Cable Route Corridor

11.6.29 The proposed construction vehicle routeing for access to the CRC is summarised in **Table 11.14** below. Routeing maps illustrating the proposed access routes described in **Table 11.14** are provided in **ES: Figure 11.2-11.8: Likely and Suitable Routes to the Scheme [EN0110014/APP/6.2.11.2 - 11.8]**.

11.6.30 The corresponding accesses referenced in **Table 11.15** below are detailed in **Table 4.1** of **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** and illustrated in **ES: Figure 4.1 Indicative Masterplan [EN0110014/APP/6.2.4.1]**.

Table 11.14: Construction Vehicle Routeing - CRC

CRC Compound	Accesses Used	Proposed Access Route
Compound 1: A140	*A09*	**From A410 (for vehicles from south)**: northbound on A140, execute u-turn on roundabout at Long Stratton Bypass / Parker's Lane, southbound on A140, east onto *A09*. Depart travelling southbound on A140. **From A140 (for vehicles from north)**: southbound on A140, east onto *A09*. Depart travelling southbound on A140, execute u-turn on A140/B1134 roundabout, northbound on A140.
Compound 2: Hall Lane	*A09*	**From A140 (for vehicles from south)**: northbound on A140, execute u-turn on roundabout at Long Stratton Bypass / Parker's Lane, southbound on A140, east onto A09. Northbound on internal haul route along CRC. Depart travelling southbound on A140. **From A140 (for vehicles from north)**: southbound on A140, east onto A09, northbound on internal haul route on CRC. Depart travelling southbound on A140, execute u-turn on A140/B1134 roundabout, northbound on A140. **Alternative access**: via Sub-Site 4B and internal haul route along CRC
Compound 3: B1527	*A37*, *A38*	**From B1332**: westbound on B1527, north onto *A37A38*. Depart on same route in reverse.

Future Baseline

11.6.31 This section considers changes to the baseline conditions as far as changes can be established, that might occur irrespective of the Scheme coming forward during the time period over which the Scheme would be under

construction. The future baseline scenarios are set out in **ES: Chapter EIA Methodology [EN0110014/APP/6.1.2]**.

11.6.32 For the construction phase assessment, baseline traffic flows will be projected to the future year 2029, corresponding to the anticipated start of construction and extending through to its completion.

11.6.33 For this Transport and Access chapter assessment, growth factors from the DfT's TEMPro tool have been applied across appropriate routes. This approach has been applied to links on the LRN and MRN.

11.6.34 The 85th percentile speed from the 2024/2025 Baseline has been retained for the Future Baseline, as there is no evidence or planned changes that would affect speed behaviour. This approach ensures consistency and provides a robust basis for further assessment, offering a realistic representation of future traffic conditions.

11.6.35 The A140 Long Stratton bypass opened to traffic in August 2025. No further highway upgrades are planned within the Study Area before the commencement of the construction phase of the Scheme.

11.6.36 Traffic flows or infrastructure may change as a result of cumulative schemes in the area. These are considered as part of the ES assessment in **Section 11.11.**

11.6.37 The 2029 Future Baseline traffic flows, derived using TEMPro growth factors, are presented in **Table 11.15** below.

Table 11.15: 2029 Future Baseline Traffic Flows

Link	85th Percentile Speed (MPH)	Two-way Traffic Flows			
		All Vehicles AAWT (18-hour)	HGVs >3.5T (18-hour)	All Vehicles AADT (24-hour)	HGVs >3.5T (24-hour)
01 - A140 (N-B1527)	41	21,645	3,640	20,871	2,953
02 - B1527	39	5,790	802	5,372	667
03 - A140 (S-B1527)	43	22,185	4,038	21,310	3,228
04 - Bungay Rd	41	2,910	507	2,726	410
05 - Fairstead Ln (W)	38	92	17	86	15
06 - Norwich Rd	46	1,397	146	1,290	117
07 - Broaden Ln	52	1,386	139	1,300	108
08 - Littlebeck Ln	34	114	26	110	23

Link	85th Percentile Speed (MPH)	Two-way Traffic Flows			
		All Vehicles AAWT (18-hour)	HGVs >3.5T (18-hour)	All Vehicles AADT (24-hour)	HGVs >3.5T (24-hour)
09 - Shotesham Rd	41	148	33	141	27
10 - B1332 (North)	59	7,789	1,464	7,458	1,142
11 - Harvey Ln	42	525	116	461	90
12 - B1527 (Woodton)	45	1,056	238	955	171
13 - B1132 (South)	48	8,316	1,348	7,820	1,086
14 - Alburgh Rd	47	1,237	269	1,139	216
15 - The Street	45	1,618	227	1,479	183
16 - Lodge Rd	40	192	49	182	41
17 - B1134	50	3,437	693	3,106	547
18 - The Green	37	76	28	71	23
19 - Wash Ln	37	76	28	71	23
20 - Baxter's Ln	41	159	31	147	28
21 - A140 (S-B1134)	56	15,493	3,429	14,837	2,789
22 - Spring Lane	47	843	168	767	136
23 - The Krons	34	1,111	178	957	144
24 - Fairstead Ln (E)	33	1,671	254	1,464	213
25 - Fylands Rd	41	132	28	128	24
26 - Bussey's Loke	37	58	8	56	7
27 - Heath Rd	47	444	68	403	60
28 - Market Ln	31	36	6	33	4
29 - Wood Ln	41	837	181	776	157
30 - Edge's Ln	18	49	7	44	6

11.7 Embedded Mitigation

11.7.1 Likely environmental effects have been or will be avoided, minimised, mitigated or reduced through design measures and/or management of the

Scheme, as outlined in this section. Proposed environmental enhancements are also described where relevant.

11.7.2 The following embedded mitigation measures have been incorporated into the Scheme's design.

Embedded Construction Phase Mitigation

Construction Route Planning

11.7.3 Early consideration of appropriate construction routes and access to the Scheme for construction traffic movements in the design evolution of the Scheme has been undertaken. This has included consideration of limiting movements through communities such as Hempnall, Brooke and Saxlingham Nethergate as far as practicable, together with considering the most suitable access routes and locations.

11.7.4 A review was undertaken to assess the possible construction routes that are available to access each Sub-Site. Initially, priority was given to the most direct routes that connect the Sub-Sites to the SRN and strategic links within the MRN. The strategy has been reaffirmed through site visits.

11.7.5 Each route was assessed to consider key constraints such as:

- Height and weight restrictions;
- The location of settlements along routes;
- Use of existing access points, where possible;
- Interactions with PRoW;
- Identifying construction compound locations with access to the MRN where possible; and
- Appropriate visibility splays, narrow carriageways and single lane tracks.

11.7.6 In all cases the most appropriate route has been selected with regard to the above considerations and identified in this chapter as the designated route to provide access to each of the Sites for construction traffic. Construction traffic routes will continue to be reviewed as the Scheme design is progressed and consultations with relevant authorities are undertaken. The proposed access routes designated for HGV traffic are defined in the **Outline CTMP [EN0110014/APP/7.6]**. A final CTMP (to be substantially in accordance with the Outline CTMP) will be secured via a Requirement within the DCO.

Internal Haul Routes

11.7.7 Internal haul routes have been incorporated into the access strategy to minimise the use of public roads for material and equipment movements during construction. This approach reduces the number of vehicle trips on the LRN, limits potential congestion and highway safety risks, and optimises site logistics. Three internal haul routes will be utilised to connect Sub-Site groups 7A-F, 7G-L and 8A-B. The proposed internal haul routes are described in **Paragraph 11.6.28** and are illustrated in **ES Figure 11.2-11.8: Likely and Suitable Routes to the Scheme [EN0110014/APP/6.2.6.2.11.2 - 11.8.11].**

11.7.8 Internal haul routes will continue to be reviewed as the Scheme design is progressed and consultations with relevant authorities are undertaken. The proposed internal haul routes are defined in the **Outline CTMP [EN0110014/APP/7.6]**. A final Construction Traffic Management Plan (CTMP) (to be substantially in accordance with the Outline CTMP) will be secured via a Requirement within the DCO.

Trenchless Crossing Techniques

11.7.9 The use of trenchless crossing techniques, such as Horizontal Directional Drilling (HDD), has also been incorporated into the design as an embedded mitigation measure. These methods significantly reduce the need for open-cut excavation at sensitive locations including key links such as the A140. This helps minimise disruption to the MRN and LRN, reducing traffic management requirements, and limiting potential impacts on road safety and journey times.

11.7.10 The use of trenchless crossing techniques is described and secured in the **Outline CEMP [EN0110014/APP/7.1]**. A final Crossing Schedule of key infrastructure and environmental features will be provided for each stage of construction.

Outline Construction Traffic Management Plan

11.7.11 The **Outline CTMP [EN0110014/APP/7.6]** provides a clear framework for managing construction vehicle movements to and from the Scheme. Its purpose is to minimise transport-related impacts during the construction phase by setting out the proposed access arrangements, designated vehicle routes, anticipated trip generation, and the management and mitigation measures to be implemented.

11.7.12 The following mitigation measures have been identified and can be utilised to manage traffic movements, minimise times at which traffic is present across sites simultaneously, and have the potential to reduce traffic numbers. Measures detailed in the **Outline CTMP [EN0110014/APP/7.6]** include:

- Defined construction vehicle routes;

- Delivery scheduling;
- Using construction compounds for materials consolidation and distribution;
- Controls on construction working days and times;
- Signage to assist enforcement of preferred routes;
- Wheel cleaning and street cleaners to reduce debris, where appropriate;
- Use of traffic marshals at accesses;
- Community engagement and advance notice of key activities to local residents;
- Pre-commencement road condition surveys; and
- Construction Worker Travel Plan.

11.7.13 Each measure is targeted towards managing driver behaviours, the times at which vehicles arrive and leave each of the Sites, or to reduce traffic volumes and effects overall.

11.7.14 Requirements for AILs to be delivered to the Scheme during construction (for elements such as transformers and cable drums) have been determined through the design process and in consultation with statutory consultees. The AILs are assessed in the ES and further assessed in **ES: Appendix 11.1 Transport Assessment [EN0110014/APP/6.3.11.1]** and the **Outline CTMP [EN0110014/APP/7.6]** contains AIL management measures.

Framework Construction Worker Travel Plan

11.7.15 A Framework Construction Worker Travel Plan is provided in Chapter 8 of the **Outline CTMP [EN0110014/APP/7.6]** and has set out the plan to reduce vehicle impacts associated with construction staff trips on the highway network. This plan encourages the use of sustainable modes of transport, where appropriate, and details measures such as staff shuttle services, provision of parking facilities, and any other proposed measures to reduce mode shift from private car use. A final Construction Worker Travel Plan (CWTP) will be secured as part of the CTMP to be approved pursuant to a Requirement of the DCO.

Outline Construction Environmental Management Plan

11.7.16 An **Outline CEMP [EN0110014/APP/7.1]** is also provided in support of the DCO Application. This sets out the wider environmental management and mitigation measures during the construction phase.

Embedded Operation and Maintenance Phase Mitigation

11.7.17 Although the operation and maintenance phase has been scoped out of this ES chapter, embedded operation and maintenance phase management measures will still be applied. Their inclusion ensures that, even though operational effects are not assessed in detail within this chapter, appropriate controls are in place to avoid or reduce any traffic and transport impacts that could arise during operation.

Outline Operational Transport Management Plan

11.7.18 The **Outline OTMP [EN0110014/APP/7.1]** has been prepared to support the DCO Application and sets out the overarching principles and controls that will guide the management of traffic associated with the Scheme during its operational life. It establishes the framework for how vehicle movements linked to maintenance, inspection and replacement activities will be planned, coordinated and monitored, ensuring that traffic-related effects are appropriately managed.

11.7.19 The detailed OTMP will set out the specific measures to be implemented during the operational phase to manage and mitigate the effects of vehicle movements associated with panel and infrastructure replacement activities. It will define the daily cap on acceptable vehicular activity at the Scheme and include a programme for how and when replacement activities will be undertaken. The detailed OTMP will be prepared in accordance with the OOTMP. It will be secured via a requirement in the DCO.

Outline Operational Environmental Management Plan

11.7.20 The **Outline OEMP [EN0110014/APP/7.2]** has been prepared in support of the DCO Application and places a focus on the maintenance aspects of the Scheme, including the ongoing maintenance and replacement of components during the lifespan of the Scheme.

11.7.21 A detailed OEMP will set out the specific operation and maintenance phase management procedures, monitoring requirements and responsibilities needed to ensure maintenance and replacement activities are carried out in a controlled and compliant manner. It will be prepared in accordance with the **Outline OEMP [EN0110014/APP/7.2]** and will be secured via a requirement in the DCO.

Outlined Public Rights of Way and Permissive Paths Management Plan

11.7.22 The **Outline PRoW Management Plan [EN0110014/APP/7.8]** has been prepared to support the DCO and sets out the overarching principles, management measures and commitments for protecting and managing Public Rights of Way during the operational, maintenance and replacement activities associated with the Scheme.

11.7.23 The detailed PRoWMP will be prepared in accordance with the oPROWMP and will detail the measures to be implemented during the operational phase to mitigate the impacts to PRoW users during the operational, maintenance and replacement activities associated with the Scheme.

Embedded Decommissioning Phase Mitigation

11.7.24 The decommissioning phase will be programmed to spread the transport effects of the decommissioning both temporally and geographically. Planning for the decommissioning phase will consider the transport network available at that time and the form of transport, including the use of consolidation of wastes and exports, to minimise the quantum of vehicle movements. Those movements would be assigned to the network such that the effects would be no greater than during the construction phase.

11.7.25 The **Outline DEMP [EN0110014/APP/7.3]** sets out the general principles to be followed in the decommissioning phase of the Scheme.

11.7.26 The **Draft Development Consent Order [EN0110013/APP/3.1]** includes a Requirement that a detailed DEMP would be prepared substantially in accordance with the **Outline DEMP [EN0110014/APP/7.3]** and approved by the relevant authorities at the time of decommissioning, in advance of the commencement of decommissioning works and would including timescales and transportation methods. The detailed DEMP will ensure that decommissioning is undertaken safely with regard to the environmental legislation at the time of decommissioning.

11.8 Assessment of Likely Effects

11.8.1 This section of the Transport and Access chapter identifies and characterises potential impacts arising during the construction and decommissioning phases of the Scheme.

11.8.2 Taking into account the embedded mitigation measures as detailed in **Section 11.7 Embedded Mitigation**, the potential for the likely effects of the Scheme on transport and access receptors was assessed using the methodology as detailed in **Section 11.5 Assessment Methodology**. In the sections below, effects during the construction and decommissioning phases of the Scheme are assessed for transport and access receptors scoped into this ES Chapter.

11.8.3 Any additional mitigation required to reduce these effects is then set out in **Section 11.9 Additional Mitigation Measures**. Thereafter, an assessment is made of the significance of any residual effects after all mitigation measures have been accounted for.

11.8.4 The construction traffic forecasting estimates for the Sub-Sites and CRCs are outlined in full detail in the **Outline CTMP [EN0110014/APP/7.6]**.

Construction Phase

11.8.5 The distribution of forecast construction traffic has been derived from the proposed access routes to the Sub-Sites and CRC, the baseline ATC survey data outlined in **Table 11.10** and the forecasting construction traffic estimates in the **Outline CTMP [EN0110014/APP/7.6]**.

11.8.6 A summary of the 2029 Future Baseline AADT traffic and total forecast construction traffic movements (arrivals and departures) from the Scheme is provided in **Table 11.16**. This does not factor in a phased construction programme and assumes all construction activity is occurring simultaneously. For this reason, this assessment provides a reasonable worst-case scenario.

Table 11.16: 2029 Future Baseline AADT plus the Scheme (Peak Construction)

Link	2029 Future Baseline Two-way AADT			2029 Future Baseline + The Scheme (Peak Construction) Two-way AADT			% Change	
	Total	HGV	HGV %	Total	HGV	HGV %	Total	HGV
01 - A140 (N-B1527)	20,871	2,953	14%	21,166	3,020	14%	1%	2%
02 - B1527	5,372	667	12%	5,542	705	13%	1%	2%
03 - A140 (S-B1527)	21,310	3,228	15%	21,531	3,295	15%	1%	2%
04 - Bungay Rd	2,726	410	15%	2,726	410	15%	0%	0%
05 - Fairstead Ln (W)	86	15	17%	186	37	20%	116%	147%
06 - Norwich Rd	1,290	117	9%	1,290	117	9%	0%	0%
07 - Broaden Ln	1,300	108	8%	1,300	108	8%	0%	0%
08 - Littlebeck Ln	110	23	21%	138	29	21%	25%	26%
09 - Shotesham Rd	141	27	19%	223	47	21%	58%	74%
10 - B1332 (North)	7,458	1,142	15%	7,589	1,148	15%	2%	1%
11 - Harvey Ln	461	90	20%	527	104	20%	14%	16%
12 - B1527 (Woodton)	955	171	18%	1,127	221	20%	18%	29%
13 - B1132 (South)	7,820	1,086	14%	7,956	1,156	15%	2%	6%
14 - Alburgh Rd	1,139	216	19%	1,177	224	19%	3%	4%
15 - The Street	1,479	183	12%	1,500	188	13%	1%	3%

Link	2029 Future Baseline Two-way AADT			2029 Future Baseline + The Scheme (Peak Construction) Two-way AADT			% Change	
	Total	HGV	HGV %	Total	HGV	HGV %	Total	HGV
16 - Lodge Rd	182	41	23%	182	41	23%	0%	0%
17 - B1134	3,106	547	18%	3,204	585	18%	3%	7%
18 - The Green	71	23	32%	71	23	32%	0%	0%
19 - Wash Ln	71	23	32%	71	23	32%	0%	0%
20 - Baxter's Ln	147	28	19%	147	28	19%	0%	0%
21 - A140 (S-B1134)	14,837	2,789	19%	14,980	2,856	19%	1%	2%
22 - Spring Lane	767	136	18%	795	142	18%	4%	4%
23 - The Krons	957	144	15%	1,057	166	16%	10%	15%
24 - Fairstead Ln (E)	1,464	213	15%	1,464	213	15%	0%	0%
25 - Fylands Rd	128	24	19%	153	27	16%	17%	0%
26 - Bussey's Loke	56	7	13%	81	10	12%	45%	43%
27 - Heath Rd	403	60	15%	433	68	16%	7%	13%
28 - Market Ln	33	4	12%	49	8	16%	48%	100%
29 - Wood Ln	776	157	20%	776	157	20%	0%	0%
30 - Edge's Ln	44	6	14%	44	6	14%	0%	0%

11.8.7 The two rules set out in the IEMA EATM Guidelines, where further assessment is required on links is described previously. These rules state that additional assessment should be undertaken where the predicted increase in traffic flows on a link is either more than 30% of the baseline, or more than 10% on links classed as having receptors with high sensitivity.

11.8.8 A summary of the links which reach the IEMA EATM Guideline thresholds is shown in **Table 11.17**.

11.8.9 In line with paragraph 3.16 of the IEMA EATM Guidelines, it is also noted that 'caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic.'

Table 11.17: Links Requiring Further Assessment

ATC Link	Sensitivity	Sub-Sites/CRC Accessing	Threshold Met
05 – Fairstead Ln (W)	Negligible	7A – 7C, CRC 10 – 13	Rule 1: Flows increase >30%
09 - Shotesham Rd	Low	7G – 7L, 8A, CRC 10 – 13	Rule 1: Flows increase >30%
26 - Bussey's Loke	Low	7G, 7H	Rule 1: Flows increase >30%
28 - Market Ln	Medium	8A, 8B	Rule 1: Flows increase >30%

11.8.10 As previously stated, the construction activity across the Scheme would not occur simultaneously. The programme will stagger activities to reduce impacts on the network as detailed in the **Outline CTMP [EN0110014/APP/7.6]**. As a result, the percentage changes identified in **Table 11.16** will be lower in reality.

Severance of Communities

11.8.11 Across the assessed links, existing traffic flows are very low and although percentage increases appear high, the absolute changes remain minimal. On Fairstead Lane (Link 05), the baseline AADT is 86 vehicles which is anticipated to increase to 186 vehicles with the Scheme, which represents a 116% rise. Despite this proportional increase, the absolute flow remains low and as the sensitivity of this link is negligible and the impact is medium-term, resulting in an overall effect that is considered **negligible** and **not significant**.

11.8.12 On Shotesham Road (Link 09), traffic is anticipated to increase from 141 to 223 vehicles per day, which is a 58% increase. With low sensitivity and a low magnitude of change, the significance of effect is **minor adverse** and **not significant**. Bussey's Loke (Link 26) would increase from 56 to 81 vehicles, a 45% increase; given its medium sensitivity and low magnitude, the effect is **minor adverse** and **not significant**. Market Lane (Link 28) would rise from 33 to 49 vehicles, a 48% increase; with medium sensitivity and low magnitude, the effect is also **minor adverse** and **not significant**. Overall, the additional traffic is unlikely to materially affect accessibility or cause meaningful severance impacts.

11.8.13 **Table 11.18** presents the assessment of likely effects on community severance during the Construction Phase.

Table 11.18: Assessment of Likely Effects - Severance of Communities, Construction Phase

Link	All Vehicles AADT (24-hour)		% Change in Traffic Flow	Severance of Communities
	2029 Future Baseline	2029 Future Baseline + The		

		Scheme (Peak Construction)		
05 - Fairstead Lane (W)	86	186	116%	High
09 - Shotesham Road	141	223	58%	Low
26 - Bussey's Loke	56	81	45%	Low
28 - Market Lane	33	49	48%	Low

NMU Delay

11.8.14 The level of pedestrian and cyclist activity along the affected routes is considered to be low; however, there are several PRoWs intersecting the road, and some pedestrian delay may occur as a result of construction vehicles travelling along these links. To address this, the **Outline PRoW Management Plan [EN0110014/APP/7.8]**, has been developed, which sets out measures for managing both short-term and medium-term closures in a way that minimises disruption. These measures include clear signage, provision of safe alternative routes, and advance communication with local users to ensure accessibility is maintained wherever possible. As a result of these mitigation measures the magnitude of impact is considered **negligible**, and the significance of effect is assessed as **not significant**.

NMU Amenity

11.8.15 The IEMA EATM Guidelines provide indicative thresholds for judging changes in amenity, suggesting that significant effects may occur where traffic flows or HGV flows are halved or doubled. Although the combined percentage change on Fairstead Lane is 116%, the construction programme will be staggered, meaning this threshold is unlikely to be met. Furthermore, existing pedestrian and cyclist activity along this link is low. Taking these factors into account, the magnitude of impact on NMU amenity is considered low, and the significance of effect is assessed as **negligible** and therefore **not significant**.

Fear and Intimidation on and by Road Users

11.8.16 The potential for fear and intimidation among NMUs has been assessed in accordance with IEMA EATM guidance, which considers traffic volumes, HGV movements, and vehicle speeds. Across the assessed links, average traffic flows remain very low, with Fairstead Lane (Link 05) experiencing 11 vehicles of all types per hour and approximately 39 HGV movements across the entire day. Shotesham Road (Link 09) has slightly higher flows, with 13 vehicles per hour and 53 HGV movements, while Bussey's Loke (Link 26) and Market Lane (Link 28) have even lower flows at 5 and 3 vehicles per hour respectively. Vehicle speeds range between 31 mph and 41 mph (85th percentile), which is typical for rural roads. Based on these conditions, the level of fear and intimidation is assessed as small for Fairstead Lane (Link

05), Bussey's Loke (Link 26), and Market Lane (Link 28), and moderate for Shotesham Road (Link 09). However, given the overall low traffic volumes and the temporary nature of construction activity, the level of change is considered **negligible** for all links. Consequently, the significance of effect is assessed as **not significant**.

11.8.17 A summary of the assessment of likely effects with respect to fear and intimidation on and by road users for the construction phase is shown in **Table 11.19**.

Table 11.19: Assessment of Likely Effects - Fear and Intimidation on and by Road Users, Construction Phase

Link	Average Traffic Flow Over 18-Hour Day	Total 18-Hour HGV Flow	85 Percentile speed Over 18-Hour Day (Mph)	Total	Level of Fear and Intimidation - 2029 Future Baseline + The Scheme (Peak Construction)	Magnitude of Change from 2029 Future Baseline
05 - Fairstead Lane (W)	11	39	38	20	Small	Negligible
09 - Shotesham Road	13	53	41	30	Moderate	Negligible
26 - Bussey's Loke	5	11	37	20	Small	Negligible
28 - Market Lane	3	10	31	20	Small	Negligible

Road Vehicle Driver and Passenger Delay

11.8.18 Whilst no localised capacity assessments have been undertaken, as agreed with NCC, the majority of vehicle trips associated with the Scheme would take place outside of the typical network peak hours (assumed as 08:00-09:00 and 17:00-18:00), with the exception of any emergencies or exceptional circumstances. The restrictions on the timings of trips are set out within the **Outline CTMP [EN0110014/APP/7.6]**.

11.8.19 Existing and forecast baseline traffic flows on the assessed links are low. These links are predominantly single-track roads with some, but limited, provision of vehicle passing points. During the construction phase, there may be occasional delays associated with construction vehicles arriving at and departing from the Scheme, particularly where passing opportunities are restricted.

11.8.20 Given the rural nature of the network and the temporary increase in construction traffic, the magnitude of impact is considered to be **medium adverse**, and the significance of effect is assessed as **not significant** due to the short to medium-term nature of the works and the overall low baseline traffic flows.

Road Safety

11.8.21 The recorded incidents from September 2019 to August 2024 are described in **Section 11.6.14 Road Safety** concluding there are no existing highway safety concerns that would results in increased propensity for collisions to take place through introduction of traffic related to the Scheme.

11.8.22 Construction movements to and from these links will additionally be managed through the mitigation measures identified in the **Outline CTMP [EN0110014/APP/7.6]**, (and summarised in **Section 11.7**)**.** It is therefore considered that the Scheme would not result in adverse impacts on collisions or driver safety. This is further prevalent given the temporary nature of construction traffic and low operational traffic volumes. The magnitude of impact is therefore considered **low** and **not significant**.

Hazardous and Large Loads

11.8.23 Large loads in the form of Abnormal Indivisible Loads (AILs) will be required during the Construction Phase to transport specialist plant and equipment including transformers and cable drums. All AIL movements will be managed by a specialist haulage contractor for safety and compliance and to ensure they do not result in significant negative impacts. Measures will include advance planning of routes, scheduling to avoid peak periods, agreeing traffic management arrangements in advance with relevant authorities, and compliance with all relevant regulations, including those outlined in **Section 11.3.3**. The mitigation measures are summarised in **Section 11.7** and detailed in the **Outline CTMP [EN0110014/APP/7.6]**. A final CTMP will be secured as a Requirement of the DCO, ensuring that the risk of adverse effects from large loads is minimised. With these measures in place, the

effect of large load movements during the construction phase is considered to be **minor** and **not significant** on all links. There are no hazardous load movements forecast during the construction, operation and maintenance or decommissioning phases of the Scheme.

Summary

11.8.24 **Table 11.20** summarises the significance of effects for each link which was identified for further assessment. As shown, whilst the links exceeded the Rule 1 thresholds under IEMA EATM Guidelines, upon further assessment it is considered that none of the identified links have significant adverse effects on the road network with respects to: severance of communities; NMU delay; NMU amenity; fear and intimidation on and by road users; road vehicle driver and passenger delay; road user and pedestrian safety; and hazardous and large loads.

Table 11.20: Summary of Significance of Effects

Link	Severance of communities	NMU delay	NMU amenity	Fear and intimidation on and by road users	Road vehicle driver and passenger delay	Hazardous and Large Loads
05 - Fairstead Ln (W)	Negligible – Not Significant	Negligible – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not significant
09 - Shotesham Rd	Low – Not Significant	Negligible – Not Significant	Low – Not Significant	Medium – Not Significant	Low – Not Significant	Low – Not significant
26 - Bussey's Loke	Low – Not Significant	Negligible – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not significant
28 - Market Ln	Low – Not Significant	Negligible – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not Significant	Low – Not significant

Decommissioning Phase

11.8.25 The decommissioning phase is not anticipated to exceed the number of vehicles forecast during the construction phase, and it is expected that the period will be similar in duration. This is as the decommissioning phase will include similar activities to the construction phase, but in reverse. The National Grid Substation and the Grid Connection Infrastructure would remain in situ further reducing the activities during decommissioning. As such, similar impacts are anticipated subject to changes in technology and construction techniques. The decommissioning is detailed further in **Outline DEMP [EN0110014/APP/7.3]**.

11.8.26 It is considered that the effects of the Scheme during the decommissioning phase will be no worse than the construction phase and none of the links

identified have significant adverse effects on the road network with respects to: severance of communities; NMU delay; NMU amenity; fear and intimidation on and by road users; road vehicle driver and passenger delay; road user and pedestrian safety; and hazardous and large loads. The effect on all these categories is therefore **not significant**.

11.9 Additional Mitigation Measures

11.9.1 As no significant effects have been identified for receptors during any phase of the Scheme once embedded and secondary mitigation is taken into account, no additional mitigation measures for the Scheme are required.

11.10 Residual Effects

11.10.1 As there are no significant effects identified the effects will remain unchanged as those reported above in the assessment of likely effects.

11.11 Cumulative Effects Assessment

11.11.1 This section presents an assessment of cumulative effects between the Scheme and other existing and/or approved schemes.

11.11.2 As set out in **ES: Chapter 2 EIA Methodology [EN0110014/APP/6.1.2]** a Cumulative Effects Assessment (CEA) has been undertaken as part of the EIA in accordance with PINS Advice on Cumulative Effects Assessment (2024) (Ref 11-19) and has considered two types of cumulative effects.

- In combination effects: the combined effect generated by individual effects on a particular receptor (presented within **ES: Chapter 19 In-Combination Effects Assessment [EN0110014/APP/6.1.19]**); and
- Cumulative effects: effects generated by the Scheme and other planned or approved schemes on the same receptor (presented in **ES: Chapter 6 to 18**).

Cumulative Effects

11.11.3 Information about the Cumulative Schemes included in this assessment are presented in **ES Appendix 2.4: Cumulative Schemes [EN0110014/APP/6.3.2.4]**. Traffic flows from the cumulative schemes, excluding the Scheme and 2029 future baseline traffic, are presented in **Table 11.21**. It should be noted that many of the assessed links do not carry traffic from these cumulative schemes so are not presented in **Table 11.21**.

11.11.4 It should also be noted that the development flows obtained for EN020027 – Norwich to Tilbury is for the development's peak construction year of 2028. The peak construction year for the Scheme is identified as 2029. Therefore, the cumulative development flows can be considered a worst-case scenario

as the peak construction years do not overlap and will in reality be lower than those set out below.

Table 11.21: Traffic Flows from Cumulative schemes

	18-Hour AAWT		24-Hour AADT	
	All Vehicles	HGVs	All Vehicles	HGVs
01 - A140 (N-B1527)	1,092	739	1,092	739
02 - B1527	150	0	150	0
03 - A140 (S-B1527)	1,092	739	1,092	739
10 - B1332 (North)	75	0	75	0
21 - A140 (S-B1134)	1,017	739	1,017	739

11.11.5 Traffic generated by the Cumulative Schemes, which is anticipated to route along the assessed links, has been incorporated in addition to the Scheme peak construction traffic as presented in **Table 11.17**. **Table 11.22** summarises the combined two-way AADT (24-hour flows) from the Cumulative Schemes and the Scheme, alongside the 2029 Future Baseline traffic across all links assessed within the Study Area. **Table 11.22** also shows the percentage change between the 2029 Future Baseline, the Cumulative Schemes and the East Pye Solar Scheme (Peak Construction) compared to the 2029 Future Baseline.

Table 11.22: 2029 Future Baseline + The Scheme (Peak Construction) + Cumulative Schemes - 24-hour AADT and Percentage Change

Link	2029 Baseline Two-way AADT			2029 Baseline + Cumulative Development + Proposed Development			% Change	
	Total	HGV	HGV %	Total	HGV	HGV %	Total	HGV
01 - A140 (N-B1527)	20,871	2,953	14%	22,258	3,759	17%	7%	27%
02 - B1527	5,372	667	12%	5,692	705	12%	6%	6%
03 - A140 (S-B1527)	21,310	3,228	15%	22,623	4,034	18%	6%	25%
04 - Bungay Rd	2,726	410	15%	2,726	410	15%	0%	0%
05 - Fairstead Ln (W)	86	15	17%	186	37	20%	116%	147%

Link	2029 Baseline Two-way AADT			2029 Baseline + Cumulative Development + Proposed Development			% Change	
	Total	HGV	HGV %	Total	HGV	HGV %	Total	HGV
06 - Norwich Rd	1,290	117	9%	1,290	117	9%	0%	0%
07 - Broaden Ln	1,300	108	8%	1,300	108	8%	0%	0%
08 - Littlebeck Ln	110	23	21%	138	29	21%	25%	26%
09 - Shotesham Rd	141	27	19%	223	47	21%	58%	74%
10 - B1332 (North)	7,458	1,142	15%	7,664	1,148	15%	3%	1%
11 - Harvey Ln	461	90	20%	527	104	20%	14%	16%
12 - B1527 (Woodton)	955	171	18%	1,127	221	20%	18%	29%
13 - B1132 (South)	7,820	1,086	14%	8,031	1,156	14%	3%	6%
14 - Alburgh Rd	1,139	216	19%	1,177	224	19%	3%	4%
15 - The Street	1,479	183	12%	1,500	188	13%	1%	3%
16 - Lodge Rd	182	41	23%	182	41	23%	0%	0%
17 - B1134	3,106	547	18%	3,204	585	18%	3%	7%
18 - The Green	71	23	32%	71	23	32%	0%	0%
19 - Wash Ln	71	23	32%	71	23	32%	0%	0%
20 - Baxter's Ln	147	28	19%	147	28	19%	0%	0%
21 - A140 (S-B1134)	14,837	2,789	19%	15,997	3,595	22%	8%	29%
22 - Spring Lane	767	136	18%	795	142	18%	4%	4%
23 - The Krons	957	144	15%	1,057	166	16%	10%	15%
24 - Fairstead Ln (E)	1,464	213	15%	1,464	213	15%	0%	0%
25 - Fylands Rd	128	24	19%	153	27	16%	17%	0%
26 - Bussey's Loke	56	7	13%	81	10	12%	45%	43%
27 - Heath Rd	403	60	15%	433	68	16%	7%	13%
28 - Market Ln	33	4	12%	49	8	16%	48%	100%
29 - Wood Ln	776	157	20%	776	157	20%	0%	0%

Link	2029 Baseline Two-way AADT			2029 Baseline + Cumulative Development + Proposed Development			% Change	
	Total	HGV	HGV %	Total	HGV	HGV %	Total	HGV
30 - Edge's Ln	44	6	14%	44	6	14%	0%	0%

11.11.6 The two rules set out in the IEMA EATM Guidelines, as previously outlined, have been applied to determine where further assessment is required on individual links. These rules require additional assessment where there is a predicted increase in traffic flows of more than 30% compared to the baseline, or more than 10% on links with receptors categorised as high sensitivity.

11.11.7 Links requiring further assessment have only been considered within the cumulative assessment where traffic from the cumulative schemes is predicted to route along them. For Fairstead Lane – West (Link 5), Shotesham Road (Link 9), Bussey's Loke (Link 26), Market Lane (Link 28), no traffic from the cumulative schemes is assigned. Consequently, these links have not been taken forward for cumulative assessment, even though the predicted changes exceed the IEMA EATM guideline thresholds, as their effects remain unchanged from those identified in **Section 11.8**. For details on the magnitude of impact and associated effects on these links, refer to **Section 11.8.**

11.11.8 Consequently, only A140 South – B1527 (Link 3) requires further assessment, as it is the sole link where traffic from the cumulative schemes is predicted to route and where the combined flows exceed the IEMA EATM guideline thresholds for assessment. The characteristics of this link are presented in **Table 11.23**.

Table 11.23: Link Requiring Further Assessment

ATC Link	Sensitivity	Sub-Sites/CRC Accessing	Threshold Met
03 - A140 (S-B1527)	High	2A, 2B, 2C, CRC3 and CRC4	Rule 2: Flows increase > 10% on links with receptors of high sensitivity

11.11.9 As previously noted, construction activities across the Scheme will not occur simultaneously; the flows presented represent a reasonable worst-case scenario assuming concurrent activity. Details of the construction programme are provided in **Outline CTMP [EN0110014/APP/7.6]**. Consequently, the percentage changes shown in **Table 11.24** will be lower when assessed on an individual site basis.

Severance of Communities

11.11.10 In the 2029 Future Baseline scenario with the Scheme and Cumulative Schemes in place, traffic flows on the assessed link are predicted to increase by approximately 6%. According to IEMA EATM guidance, this level of change is well below the threshold at which severance effects are typically considered significant (30%). As a result, the impact on severance is classified as negligible impact, and the overall effect is assessed as **negligible** in terms of magnitude and **not significant**.

Table 11.24: Assessment of Likely Effects - Severance of Communities, Construction Phase

Link	All Vehicles AADT (24-hour)		% Change in Traffic Flow	Severance of Communities
	2029 Future Baseline	2029 Future Baseline + The Scheme (Peak Construction) + Cumulative Schemes		
03 - A140 (S-B1527)	21,310	22,623	6%	Negligible impact

NMU Delay

11.11.11 The level of pedestrian and cyclist activity along A140 South – B1527 (Link 3) is low; however, the presence of PRoWs intersecting the route means some minor delay could occur due to construction vehicles. To address this, an **Outline PRoW Management Plan [EN0110014/APP/7.8]** has been prepared to support the DCO Application. This plan sets out measures to minimise disruption, including the provision of clear signage, safe alternative routes, and advance communication with local users. Given these mitigation measures and the overall low level of NMU activity, the magnitude of impact is assessed as **negligible**, and the significance of effect is considered **not significant**.

NMU Amenity

11.11.12 The IEMA EATM Guidelines suggest that changes in amenity NMUs may become significant where traffic flows (or HGV flows) are approximately halved or doubled. On A140 South – B1527 (Link 3), traffic flows are predicted to increase by around 6% in the 2029 baseline scenario with the Scheme and cumulative schemes in place. This level of change is well below the threshold at which amenity impacts are typically considered noticeable. Consequently, the impact on NMU amenity is assessed as low, and the overall effect is considered **negligible** in terms of magnitude and the significance of effect is considered **not significant**.

Fear and Intimidation on and by Road Users

11.11.13 The potential for fear and intimidation among NMUs has been assessed in accordance with IEMA EATM guidance, which considers factors such as traffic volumes, HGV movements, and vehicle speeds. On A140 South – B1527 (Link 3), the level of fear and intimidation is categorised as extreme in the baseline, and the predicted changes from the Scheme and cumulative schemes are not sufficient to alter this classification. As a result, the level of change is assessed as **negligible**, and the significance of effect is considered **not significant**.

11.11.14 **Table 11.25** presents a summary of the assessment of fear and intimidation on and by road users.

Table 11.25: Assessment of Likely Effects - Fear and Intimidation on and by Road Users, Construction Phase

Link	Average Traffic Flow Over 18-Hour Day	Total 18-Hour HGV Flow	Average Vehicle Speed Over 18-Hour Day (Mph)	Total	Level of Fear and Intimidation - 2029 Future Baseline + The Scheme (Peak Construction) + Cumulative Schemes	Level of Change from 2029 Future Baseline
03 - A140 (S-B1527)	1,305	4,843	43	80	Extreme	Negligible

Road Vehicle Driver and Passenger Delay

11.11.15 Road vehicle driver and passenger delay has been assessed in accordance with IEMA EATM guidance, which considers the potential for increased journey times resulting from changes in traffic flow and construction activity. On A140 South – B1527 (Link 3), the predicted increase in traffic flow in the 2029 forecast baseline scenario with the Scheme and Cumulative Schemes in place is approximately 6%. This level of change is not expected to result in any perceptible delay for drivers or passengers. In addition, three out of four cumulative schemes comprise infrastructure and energy-related Schemes which, like the proposed Scheme, are likely to generate construction traffic outside of the typical network peak hours (assumed as 08:00–09:00 and 17:00–18:00). Consequently, the magnitude of impact is assessed as **negligible**, and the significance of effect is considered **not significant**.

Road Safety

11.11.16 The recorded incidents from September 2019 to August 2024 are described in **Section 11.6.14 Road Safety** concluding there are no existing highway safety concerns that would results in increased propensity for collisions to take place through introduction of traffic related to the Scheme.

11.11.17 While construction traffic associated with the Scheme and Cumulative Schemes will increase vehicle movements along this link, including an approximate 25% increase in total HGVs, this is unlikely to present a road safety concern. This is because the link already accommodates HGV traffic, and the increase will be managed through the mitigation measures set out in the **Outline CTMP [EN0110014/APP/7.6]**, and summarised in **Section 11.7** and those of the other schemes. These measures include controlled access points, adherence to designated haul routes, and driver safety protocols to minimise risk. Given the absence existing highway safety concerns and the implementation of robust traffic management measures, the magnitude of impact on road safety is assessed as **low**, and the significance of effect is considered **not significant**.

Hazardous and Large Loads

11.11.18 There is potential for hazardous and large loads to be required for the Cumulative Schemes to transport specialist plant, materials and equipment. However, there is no evidence to indicate that the cumulative presence of other schemes would exacerbate the impact on the A140 S-B1527 (Link 3), as such movements are expected to be infrequent, well-coordinated, and subject to robust management and mitigation. As outlined in **Paragraph 11.8.23**, the movement of hazardous and large loads for the Scheme will be managed to ensure there are no significant negative impacts on the combined network. With these measures in place, the cumulative effect of hazardous and large load movements during the Construction Phase is considered to be **low** and **not significant** on all assessed links.

Summary

11.11.19 **Table 11.26** summarises the significance of effects for A140 South – B1527 (Link 3) which is the only link identified for further assessment. As shown, whilst the link exceeded the Rule 2 threshold under IEMA EATM Guidelines, upon further assessment it is considered that none of the identified links have significant adverse effects on the road network with respects to: severance of communities; NMU delay; NMU amenity; fear and intimidation on and by road users; road vehicle driver and passenger delay; road user and pedestrian safety; and hazardous and large loads.

Table 11.26: Summary of Significance of Effects

Link	Severance of communities	NMU delay	NMU amenity	Fear and intimidation on and by road users	Road vehicle driver and passenger delay	Hazardous and Large Loads
03 - A140 (S-B1527)	Negligible - Not Significant	Negligible – Not Significant	Low – Not Significant	Negligible – Not significant	Negligible – Not significant	Negligible – Not significant

Decommissioning Phase

11.11.20 The cumulative impact of the Decommissioning Phase is not assessed at this stage. This is because it is expected to broadly mirror the Construction Phase for the Scheme, involving similar types and volumes of traffic, albeit in reverse. There can be no certainty that the collective cumulative Schemes would be decommissioned concurrently and, therefore, the cumulative effects assessed for the Construction Phase are considered to represent a reasonable worst-case scenario. Additionally, the specific schemes and associated transport demands during the decommissioning phase cannot be reliably forecast, as this phase is anticipated to occur over 60 years in the future. Any attempt to assess cumulative impacts at this point would be speculative and of limited value.

11.12Conclusion

11.12.1 This chapter has set out and assessed the likely effects of the Scheme in relation to Transport and Access. Likely effects have been assessed for the Construction Phase of the Scheme, as the reasonable worst-case scenario. Following the implementation of embedded as detailed in **Sections 11.7 Embedded Mitigation**. Residual effects have not been identified in relation to Transport and Access during the Construction Phase or Decommissioning Phase.

11.12.2 **Table 11.27** sets out a summary of the Transport and Access environmental effects.

Table 11.27: Summary of Likely Effects for Transport and Access

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Scale and Nature of Effect	Significant/Not Significant
Construction Phase					
'Severance' of NMUS across LRN	High	Impact on changes to severance of NMUs due to increased vehicles associated with construction.	Minor	Adverse, local, temporary, medium-term	Not significant
'Driver Delay' of motorised vehicles	Low	Impact on changes to drive delay due to increased vehicles associated with construction.	Medium	Adverse, local, temporary, medium-term	Not significant
'NMU Delay' of NMUs across LRN	High	Impact on delay of NMUs due to increased vehicular activity associated with construction.	Negligible	Adverse, local, temporary, medium-term	Not significant
'NMU Amenity' of NMUs across LRN	High	Impact on NMUs due to increased vehicular activity associated with construction.	Low	Adverse, local, temporary, medium-term	Not significant
'Fear and Intimidation' of NMUs across LRN	High	Impact on Fear and Intimidation due to increased vehicular activity associated with construction.	Negligible	Adverse, local, temporary, medium-term	Not significant
Road Safety of all receptors	High	Impact on road safety due to increased vehicular activity associated with construction.	Low	Adverse, local, temporary, medium-term	Not significant
Hazardous and Large Loads	High	Impact of hazardous and large loads associated with construction.	Low	Adverse, local, temporary, medium-term	Not significant
Decommissioning Phase					
'Severance' of NMUS across LRN	High	Impact on changes to severance of NMUs due to increased vehicles associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Scale and Nature of Effect	Significant/Not Significant
'Driver Delay' of motorised vehicles	Low	Impact on changes to drive delay due to increased vehicles associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant
'Pedestrian Delay' of NMUs across LRN	High	Impact on delay of NMUs due to increased vehicular activity associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant
'NMU Amenity' of NMUs across LRN	High	Impact on NMUs due to increased vehicular activity associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant
'Fear and Intimidation' of NMUs across LRN	High	Impact on Fear and Intimidation due to increased vehicular activity associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant
Road Safety of all receptors	High	Impact on road safety due to increased vehicular activity associated with decommissioning.	Negligible	Adverse, local, temporary, medium term	Not Significant
Hazardous and Large Loads	High	Impact of hazardous and large loads associated with construction.	Low	Adverse, local, temporary, medium-term	Not significant

References

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