The Great Grid Upgrade

Sea Link

Preliminary Environmental Information Report

Volume: 1

Part 2 Suffolk Onshore Scheme

Chapter 8 Traffic and Transport

Version A

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2.8 Traffic and Transport

2.8.1 Introduction

2.8.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents information about the preliminary environmental assessment of the likely significant traffic and transport effects identified to date, that could result from Sea Link (hereafter referred to as the Proposed Project) (as described in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**).

2.8.1.2 This chapter describes the methodology used, the datasets that have informed the preliminary assessment, baseline conditions, mitigation measures and the preliminary traffic and transport residual significant effects that could result from the Proposed Project.

2.8.1.3 The draft Order Limits, which illustrate the boundary of the Proposed Project, are illustrated on **Figure 1.1.1 Draft Order Limits** and the Suffolk Onshore Scheme Boundary is illustrated on **Figure 1.1.2 Suffolk Onshore Scheme Boundary**.

2.8.1.4 This chapter should be read in conjunction with:

- **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology;**
- **Volume 1, Part 1, Chapter 6, Scoping Opinion and EIA Consultation;**
- **Volume 1, Part 2, Chapter 1, Evolution of the Suffolk Onshore Scheme;**
- **Volume 1, Part 2, Chapter 3, Ecology and Biodiversity;**
- **Volume 1, Part 2, Chapter 9, Air Quality;**
- **Volume 1, Part 2, Chapter 10, Noise and Vibration;**
- **Volume 1, Part 2, Chapter 11, Socio-economics, Recreation and Tourism;**
- **Volume 1, Part 2, Chapter 12, Health and Wellbeing;** and
- **Volume 1, Part 2, Chapter 14, Suffolk Onshore Scheme Inter-Project Cumulative Effects.**

2.8.1.5 This chapter is supported by the following figures:

- **Volume 3, Part 1, Figure 1.4.19 Suffolk Onshore Scheme Traffic Routes during Construction and Operation;**
- **Volume 3, Part 2, Figure 2.8.1 Traffic and Transport Study Area in Suffolk;**
- **Volume 3, Part 2, Figure 2.8.2 HGV Routing Plan;**
- **Volume 3, Part 2, Figure 2.8.3 Abnormal Load Routing Plan;**
- **Volume 3, Part 2, Figure 2.8.4 Public Rights of Way**
- **Volume 3, Part 2, Figure 2.8.5 Transport and Traffic Count Locations; and**
- **Volume 3, Part 2, Figure 2.8.6 Road Link and Road Junction Receptors.**

2.8.1.6 This chapter is supported by the following appendices:

- **Volume 2, Part 1, Appendix 1.4.A, Outline Code of Construction Practice**;
- **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**;
- **Volume 2, Part 1, Appendix 1.4.D, Crossings Schedule;**
- **Volume 2, Part 1 Appendix 1.4.F, Outline Schedule of Environmental Commitment and Mitigation Measures**;
- **Volume 2, Part 2, Appendix 2.8.A, SCC Highways Scoping Meeting**;
- **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**;
- **Volume 2, Part 2, Appendix 2.8.C, Baseline Traffic Flows**;
- **Volume 2, Part 2, Appendix 2.8.D, Preliminary Highway Impact Assessment**;
- **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact;** and
- **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

2.8.2 Regulatory and Planning Context

2.8.2.1 This section sets out the legislation and planning policy that is relevant to the preliminary traffic and transport assessment. A full review of compliance with relevant national and local planning policy will be provided within the Planning Statement that will be submitted as part of the application for Development Consent.

2.8.2.2 Policy generally seeks to minimise traffic and transport effects from development and to avoid significant adverse effects. This applies particularly to considering transport issues at an early stage and proposing mitigation measures to promote sustainable development to avoid unacceptable or severe impacts where necessary.

Legislation

2.8.2.3 There is no transport specific legislation relevant to the Proposed Project.

National Policy

National Policy Statements (July 2011)

2.8.2.4 National Policy Statements (NPSs) set out the primary policy tests against which the application for a Development Consent Order (DCO) for the Proposed Project would be considered. A review of the NPS was announced in the 2020 Energy white paper: Powering our net zero future. This review was to ensure the NPSs were brought up to date to reflect the policies set out in the white paper. Table 2.8.1 below provides details of the elements of NPS for Energy (EN-1) (Ref. 2.8.1) that are relevant to this chapter, and how and where they are covered in the PEIR or will be covered within the Environmental Statement (ES).

Table 2.8.1: NPS EN-1 (July 2011) requirements relevant to traffic and transport

NPS EN-1 section	Where this is covered in the PEIR
5.13.3 If a project is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.	This PEIR chapter has been prepared using the National Planning Practice Guidance; Travel Plans, Transport Assessments and Statements and includes the components which typically form part of a Transport Assessment (see Section 2.8.4). These details will inform the ES.
5.13.4 Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.	Details of control management measures including those relating to construction staff travel movements are set out within the Outline Construction Traffic Management Plan (CTMP) (held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**). The appropriate Highways Authorities (Suffolk County Council and National Highways if necessary) will be consulted throughout the ES process.
5.13.5 If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.	Details relating to how any additional transport infrastructure will be secured/funded will be subject to further discussions with the appropriate Highway Authorities and will subsequently be documented within the ES.
5.13.6 A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC (Infrastructure Planning Commission) should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider	Whilst the Proposed Project is not a new energy generating facility, mitigation measures required to manage or mitigate potential effects of the Proposed Project are reported in Section 2.8.8 of this Chapter as well as the Outline CTMP (held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction**

NPS EN-1 section	Where this is covered in the PEIR
requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.	**Traffic Management Plan (Suffolk Onshore Scheme)**).
5.13.10 Water-borne or rail transport is preferred over road transport at all stages of the project, where cost effective.	Opportunities for utilising water-borne or rail transport will be sought where possible, but only where cost effective and safe. For the purpose of the assessment within this chapter, to provide a worst-case assessment, it is assumed that all materials and equipment would be transported by road.
5.13.11 The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that: - *control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;* - *make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and* - *ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.*	Noted, further details on Heavy Goods Vehicle (HGV) movements, routing, parking and abnormal loads are provided within the Outline CTMP (held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**).

2.8.2.5 The draft version of the Overarching National Policy Statement for Energy (EN-1) published in March 2023 (Ref. 2.8.2) also refers to factors that should be taken into consideration when completing a traffic and transport assessment. However, these remain similar to the adopted version and refers to the Secretary of State as the decision maker rather than the IPC.

2.8.2.6 The draft document includes the following additional elements:

"5.14.4 The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).

5.14.9 Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts."

2.8.2.7 NPS for Electricity Networks Infrastructure (EN-5) (Ref. 2.8.3) applies to electricity networks specifically but provides no further guidance on traffic and transport considerations. The draft version of EN-5 published in March 2023 (Ref. 2.8.4) also does not provide any further guidance on traffic and transport considerations.

National Planning Policy Framework (July 2021)

2.8.2.8 The National Planning Policy Framework (NPPF) (Ref. 2.8.5) has the potential to be considered important and relevant to the Secretary of State's (SoS') consideration of the Proposed Project. Table 2.8.2 below provides details of the elements of the NPPF that are relevant to this chapter, and how and where they are covered in the PEIR or will be covered within the ES.

Table 2.8.2: NPPF requirements relevant to traffic and transport

NPPF section	Where this is covered in the PEIR
Paragraph 104 outlines that 'transport issues should be considered from the earliest of stages of plan-making and development proposals'; this is to ensure that: - *the potential impacts of development on transport networks can be addressed;* - *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;* - *opportunities to promote walking, cycling and public transport use are identified and pursued;* - *the environmental impacts of traffic and transport infrastructure can be identified, assessed and considered – including appropriate opportunities for mitigation and for net gains in environmental quality; and* - *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.*	Transport issues have been considered from an early stage and have informed the design of the Proposed Project (such as defining draft Order Limits or where highway improvements are required to facilitate construction access). Further details over potential transport issues and management measures and mitigation are included within the EIA Scoping Report and Section 2.8.8 of this chapter.
Paragraph 110 outlines the key considerations when assessing sites to be allocated for development in plans or specific development applications. These are: - *appropriate opportunities to promote sustainable transport modes can be (or have been) taken up, given the type of development and its location;* - *safe and suitable access to the Order limits can be achieved for all users;*	Details of key considerations for traffic and transport including access, capacity/congestion and highway safety are set out within this chapter (Section 2.8.9) as well as the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic**

NPPF section	Where this is covered in the PEIR
- *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance; and* - *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*	**Management Plan (Suffolk Onshore Scheme)**). Mitigation has been identified where necessary (Section 2.8.8) to reduce the potential for the Proposed Project to have any significant impacts on the transport network. No significant effects have been identified as a result of the Proposed Project for the majority of the receptors which have been assessed. Whilst potentially significant effects have been identified for several receptors for select criteria (see Section 2.8.9), this will be reviewed further as part of the ES when updated baseline traffic flows and full PIA data are obtained to increase the confidence of the findings, as well as once a preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.
Paragraph 111 states that development should only be prevented or refused on highways grounds where there would be an unacceptable impact on highway safety, or the residual cumulative impacts of development on the road network would be severe.	Based on the preliminary assessment carried out within this PEIR chapter for road safety, no significant effects have been identified as a result of the Proposed Project for the majority of the receptors which have been assessed. Whilst potentially significant effects have been identified for several receptors (see Section 2.8.9), this will be reviewed further as part of the ES when updated baseline traffic flows and full PIA data are obtained to increase the confidence of the findings, as

NPPF section	Where this is covered in the PEIR
	well as once a preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to ensure that the Proposed Project is not expected to have an unacceptable impact on highway safety or result in any severe residual cumulative impacts on the road network with the mitigation in place.
Within this context, paragraph 112 states that applications for development should: - *give priority first to pedestrian and cycle movements and then, as far as possible, facilitate access to high quality public transport;* - *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;* - *create places that are safe, secure and attractive, which minimise the scope for conflicts between pedestrians, cyclists and vehicles;* - *allow for the efficient delivery of goods, and access by service and emergency vehicles; and* - *be designed to enable charging of plug-in and other ultra-low emission vehicle in safe, accessible and convenient locations.*	This preliminary environmental assessment presented in this chapter (Section 2.8.9) includes an assessment of severance, pedestrian delay, non-motorised user amenity, fear and intimidation, driver delay, road safety, hazardous/large Loads and Public Rights of Way (PRoW) Diversions and Closures. PRoW and national/regional walking and cycling routes will be managed where required to ensure that these routes remain safe, secure and attractive for pedestrians and cyclists to avoid any conflicts. The proposed access points and internal haul roads have been designed to accommodate construction vehicles (including large goods and servicing vehicles) as well as emergency vehicles. Further details are set out within the Outline Construction Traffic Management Plan held in

NPPF section	Where this is covered in the PEIR
	Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme). The proposed car park for construction workers within the site compound will include EV charging facilities to enabling charging of plug-in and other ultra-low emission vehicles.
As outlined in Paragraph 113, all developments that generate significant amounts of movements should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or TA so that the likely impacts of the proposal can be assessed	The Proposed Project is not expected to generate a significant amount of movements during the operational phase and an Operational Travel Plan is not therefore required. However, an Outline Construction Traffic Management Plan is held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)** which includes measures to reduce/manage construction phase staff movements. This PEIR chapter includes the components which typically form part of a Transport Assessment (see Section 2.8.4). These details will inform the ES.

National Planning Practice Guidance (2014)

2.8.2.9 The Government's National Planning Practice Guidance; Travel Plans, Transport Assessments and Statements (Ref. 2.8.6) provides advice on when a Transport Assessment (TA) or a Transport Statement is required, and what they should contain. The most relevant paragraphs are summarised below:

- Paragraph 002 states that Travel Plans, TAs and Transport Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements.

- Paragraphs 004 and 005 state that TAs should primarily focus on evaluating the potential transport impacts of a development proposal and may propose mitigation measures to promote sustainable development in order to avoid unacceptable or severe impacts where necessary.
- Paragraph 006 states that TAs support national planning policy and can positively contribute to encouraging sustainable travel, reducing traffic generation and detrimental impacts, reducing carbon emissions and climate impacts, creating accessible, connected and inclusive communities, improving health outcomes and quality of life, improving road safety and reducing the need for new development to increase existing road capacity or provide new roads.
- Paragraph 007 states that TAs should be established at an early stage and be tailored to local circumstances, as well as proportionate to the size and scope of the proposed development. In addition, they should be brought forward through collaborative ongoing working between the local planning authority/transport authority, transport operators, rail network operators, as well as National Highways where there may be implications for the strategic road network and other relevant bodies.
- Paragraphs 013 to 015 provide further details of when TAs are required, how the need and scope of a TA should be established and what information should be included.

Local Planning Policy

2.8.2.10 The Suffolk Onshore Scheme (refer to **Figure 1.1.2 Suffolk Onshore Scheme Boundary**) lies within the jurisdiction of Suffolk County Council. County planning policy which is relevant to a study of traffic and transport and has informed the assessment of preliminary effects in this chapter are as follows:

- Suffolk's Local Transport Plan (2011-2031) (Ref. 2.8.7); and
- East Suffolk Council – Suffolk Coastal Local Plan (2020) (Ref. 2.8.8).

Suffolk's Local Transport Plan (2011 – 2031)

2.8.2.11 The Local Transport Plan (Ref. 2.8.7) was prepared by Suffolk County Council (SCC) with an aim to provide a clear vision for the future of transport across the county up to 2031. The document outlines policies and provides a four-year implementation plan to manage and enhance the local transport network; the key aims and strategy focus on:

- the challenge of maintaining the highway network in good condition;
- tackling congestion in the larger towns by more efficient management of traffic, reducing the demand for car travel and promoting more sustainable means of travel;
- improved connectivity and accessibility in rural areas;
- seeking improvement to the A11, A12 and A14 trunk roads connecting businesses in Suffolk to each other and to their markets;
- seeking improvement to the rail network for freight and passengers;
- relief for our market towns suffering from high levels of through traffic; and

- recognising that securing high speed broadband throughout Suffolk is very important at present in addressing accessibility and connectivity issues throughout Suffolk and supporting business growth.

2.8.2.12 The Local Transport Plan (LTP) recognises the potential of promoting transport systems with the aim of reducing carbon emissions. In addition, the LTP supports the County's Sustainable Community Strategy to meet the following objectives:

- Creating a prosperous and vibrant economy;
- Improving learning and skills for the future;
- Creating the greenest county; and
- Providing safe, healthy and inclusive communities.

2.8.2.13 The key measures proposed within the Implementation Plan are region, mode and route specific.

East Suffolk Council – Suffolk Coastal Local Plan (2020)

2.8.2.14 The Local Authority was created from a merger of the former Suffolk Coastal and Waveney districts, and as such there are two adopted Local Plans within East Suffolk. The study area is located within the former Suffolk Coastal district and subject to decision making with reference to the relevant Local Plan adopted in September 2020.

2.8.2.15 The Suffolk Coastal Local Plan (Ref. 2.8.8) sets out a vision and a framework for the future development of the area, addressing needs and opportunities for housing, the economy, community facilities and infrastructure, as well as the basis for conserving and enhancing the natural and historic environment, mitigating and adapting to climate change, and achieving well designed places. Chapter 7 of the document sets out the Council's strategy for transport and infrastructure provision in the district and the relevant policies, which focuses on sustainable transport (Policy SCLP7.1) and parking (Policy SCLP7.2). Local Plan policies which are relevant to traffic and transport matters and will inform the assessment in the ES include are detailed in Table 2.8.3.

Table 2.8.3: Local Planning Policies relevant to traffic and transport –Suffolk Coastal Local Plan (2020)

Suffolk Coastal Local Plan – Policy	Where this is covered in the PEIR
SCLP7.1: Sustainable Travel Development proposals should be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home, school, employment, services and facilities. Development will be supported where: a) Any significant impacts on the highways network are mitigated; b) It is proportionate in scale to the existing transport network;	The Sustainable Travel policy is considered to be largely non-applicable to this chapter which assesses the construction and decommissioning phases of the Proposed Project, where construction workers will predominantly travel by car. Nevertheless, sustainable travel will be promoted for usage by construction staff travelling to/from the

Suffolk Coastal Local Plan – Policy	Where this is covered in the PEIR
c) All available opportunities to enable and support travel on foot, by cycle or public transport have been considered and taken; d) It is located close to, and provides safe pedestrian and cycle access to services and facilities; e) It is well integrated into and enhances the existing cycle network including the safe design and layout of new cycle routes and provision of covered, secure cycle parking; f) It is well integrated into, protects and enhances the existing pedestrian routes and the public rights of way network; g) It reduces conflict between users of the transport network including pedestrians, cyclists, users of mobility vehicles and drivers and does not reduce road safety; and h) The cumulative impact of new development will not create severe impacts on the existing transport network. Development will be expected to contribute to the delivery of local sustainable transport strategies for managing the cumulative impacts of growth. Opportunities to improve provision of or access to public transport, in rural and urban areas will be supported. Proposals for new development that would have significant transport implications should be accompanied by a Travel Plan. A Travel Plan will be required for proposals for: i) New large-scale employment sites; j) Residential development of 80 or more dwellings; and k) A development that when considered cumulatively with other developments, is likely to have a severe impact on the local community or road network. In consultation with the Highway Authority, the scale, location and nature of development will be considered in determining how the transport impacts of development should be assessed. As indicative thresholds a Transport Statement will be required for development of 50 -80 dwellings and a Transport Assessment and Travel Plan will be required for developments of over 80 dwellings. Non-residential development will be considered on a case-by-case basis dependent on the volume of movements anticipated with the use proposed.	Proposed Project where practicable. The assessment identifies mitigation requirements and these are detailed within the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**). In relation to part g), the effects of the development will be largely restricted to construction period. An Outline PRoW Management Plan will be prepared and submitted with the application for development consent. In response to part h), a preliminary assessment of cumulative impacts are set out within **Volume 1, Part 2, Chapter 14, Suffolk Onshore Scheme Inter-Project Cumulative Effects** which will be taken forward to ES stage. Given that the proposal has impacts largely confined to the construction phase, the measures typically included within a Travel Plan are provided within the Outline CTMP, which includes measures to manage the impact of staff travel.

Suffolk Coastal Local Plan – Policy	Where this is covered in the PEIR
Policy SCLP7.2: Parking Proposals and Standards: Traffic Management The Council will work with partners to ensure that vehicle parking provision is protected and managed to support the economy and sustainable communities. The level of parking provision required will depend on the location, type and intensity of use. Proposals that minimise congestion, encourage sustainable transport modes and reduce conflict between road users across the plan area will be supported. Proposals involving vehicle parking will be supported where they take opportunities to make efficient use of land and they include: a) The provision of safe, secure, and convenient off-street parking of an appropriate size and quantity including addressing the need for parking or secure storage for cars, cycles and motorcycles, and where relevant, coaches and lorries; b) Opportunities to reduce the recognised problem of anti-social parking or potential problems that may arise which impacts the quality of life or vitality of an area for residents and visitors; c) Appropriate provision for vehicle charging points and ancillary infrastructure associated with the increased use of low emission vehicles; and d) The incorporation of sustainable drainage systems (SuDS), permeable surfacing materials and means of protecting water quality in drainage schemes should be ensured. Where proposals involve public transport improvements or redevelopments, the Council will encourage the provision of Park & Ride facilities, if appropriate. Proposals will be expected to have regard to the parking standards contained in the Suffolk Guidance for Parking (including subsequent revisions), excluding the elements of the Guidance related to 'Residential Parking Design', unless other local planning considerations indicate otherwise. Proposals should also accord with both the East Suffolk Area Parking Plan and the Suffolk Parking Management Strategy, or Neighbourhood Plans for the area where applicable.	The Suffolk Guidance for Parking is not considered to be applicable to the construction phase of the Proposed Project. An appropriate level of car parking provision will be provided for construction workers within the main construction compound to meet the expected level of peak parking demand whilst minimising the risk of 'overspill' parking on the surrounding highway network. Further details on parking are provided within the Outline CTMP (held in **Volume 2, Part 1, Appendix 1.4.B Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**). Car parking will be contained within the construction compounds on the basis that all forecast demand would be contained within each compound site and away from the public highway. The compounds will include dedicated spaces for construction vehicles and minibuses, which will assist in promoting sustainable travel between different parts of the site.

2.8.3 Scoping Opinion and Consultation

Scoping

2.8.3.1 An EIA Scoping Report (Ref. 2.8.9) for the Proposed Project was issued to the Planning Inspectorate (PINS) on 24 October 2022 and a Scoping Opinion (Ref. 2.8.10) was received from the Secretary of State (SoS) on 1 December 2022.

2.8.3.2 Table 2.8.4 sets out the comments raised in the Scoping Opinion and how these have been addressed in this PEIR or otherwise will be addressed within the ES. The Scoping Opinion takes account of responses from prescribed consultees as appropriate.

Table 2.8.4: Comments raised by PINS in the Scoping Opinion

ID	Inspectorate's comments	Response
3.7.1	***Traffic and Transport effects – operational and maintenance phase*** The Applicant proposes to scope out transport effects on roads and users associated with the operational phase and maintenance activities on the basis that vehicle movements associated with the operation of the site and maintenance requirements are anticipated to be infrequent and low. The Inspectorate agrees that on this basis, this matter can be scoped out from further assessment. The ES should provide a description of the likely number and type of vehicles required during all phases of development to support this conclusion.	Noted, traffic and transport effects associated with the operational and maintenance phase are scoped out of the assessment. Details of the likely number and type of vehicles required during the operational and maintenance phase of the development are provided in Section 2.8.9. In summary, this is likely to include up to four daily car/Light Goods Vehicle (LGV) trips associated with two staff members who will be on-site or on call at all times for the proposed converter stations. In addition, there will be monthly substation inspections and annual maintenance visits for the substations and converter stations, which would be carried out by LGVs and potentially HGVs on rare occasions where equipment needs to be replaced.
3.7.2	***Hazardous loads – operational and maintenance phase*** The Applicant proposes to scope out impacts from hazardous and dangerous loads during the operational and maintenance phase on the basis that few hazardous loads are anticipated. The Inspectorate agrees to scope this matter out but would expect the ES to provide a	Noted, hazardous loads during the operational and maintenance phase is scoped out of the assessment, as HGVs (including any hazardous/large loads) are expected to rarely access the site during this phase (see Section 2.8.4).

ID	Inspectorate's comments	Response
	reasoned justification as to why such loads are likely to be infrequent during the operation and maintenance phase.	
3.7.3	***Driver delay on PRoW and National/regional walking and cycling routes – construction and decommissioning*** The Inspectorate agrees to scope this matter out on the basis that PRoW and national and regional walking and cycling routes are not utilised by drivers limiting the impact pathway.	Noted, driver delay on PRoW and national/regional walking and cycling routes are scoped out of the assessment.
3.7.4	***Decline in road safety on PRoW and national/regional walking and cycling routes – construction and decommissioning*** The Inspectorate agrees to scope this matter out on the basis that PRoW and national and regional walking and cycling routes are not utilised by drivers limiting the impact pathway.	Noted, decline in road safety on PRoW and national/regional walking and cycling routes are scoped out of the assessment.
3.7.5	***Additional hazardous loads on PRoW and national/regional walking and cycling routes – construction and decommissioning*** The Inspectorate agrees to scope this matter out on the basis that PRoW and national and regional walking and cycling routes are not utilised by drivers limiting the impact pathway.	Noted, additional hazardous loads on PRoW and national/regional walking and cycling routes are scoped out of the assessment.
3.7.6	***PRoW diversions or closures on road links, road junctions and national/regional walking and cycling routes – construction and decommissioning*** The Inspectorate agrees that significant effects on road links, road junctions and national/regional walking and cycling routes as a result of closures or diversions of PRoW during construction and decommissioning are unlikely and this matter can be scoped out.	Noted, PRoW diversions or closures on road links, road junctions and national/regional walking and cycling routes are scoped out of the assessment.
3.7.7	***Study area*** Whilst it is acknowledged that the study area is yet to be confirmed, this should be informed by the extent of the affected road network.	Noted. The study area has now been agreed with SCC Highways based on the extent of the affected road network.

ID	Inspectorate's comments	Response
3.7.8	***Receptors – 'England Coast Path' National Trail*** The Applicant's attention is directed to the comments of Suffolk County Council and Natural England at Appendix 2 to this Opinion with regards to the recent approval of the England Coast Path National Trail within Suffolk, which is located within the Suffolk Onshore Scoping Boundary. The ES should include an assessment of effects on this proposed National Trail, where likely significant effects could occur.	Noted. The National Trail is included in the future baseline for assessment.

2.8.3.3 In terms of feedback received from National Highways at EIA Scoping, the following comments were made with respect to the Suffolk Onshore Scheme. These have been tabulated and include responses to comments where these have been, or will be, considered.

"In respect to this proposal the A14 which we look after is crossed or could be potentially affected by construction traffic. It is unlikely that once the proposed transmission line is complete that there will be any impact upon the SRN [Strategic Road Network] *we do not object to the principle of the electricity transmission network proposed by the Sea Link.*

We appreciate the scheme is at an early stage of design and construction is some way off. We will need to agree how and where cables cross our network, you will also need to assess construction traffic impact upon the network and if necessary, mitigate, at this stage it is difficult to comment other than in broad principals as it will depend on where, when and how much traffic is generated by the construction activity.

I note that there are other proposals in the area, notably Sizewell, East Anglia Green, management of the cumulative construction impacts of these projects could be an issue as they follow similar timelines and affect similar geographical locations."

2.8.3.4 The proposal is not considered likely to result in impacts on the SRN during the construction or operational period. However, the non-SRN portion of the A12 between Farnham in the south and Yoxford in the north has been assessed. Details of the likely number and type of vehicles required during all phases of the development are provided in Section 2.8.9. No instances of cables crossing the SRN are proposed, and no accesses will be provided from the SRN. The other proposals in the same area are covered within **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects**.

2.8.3.5 For the purpose of context, the nearest portion of the SRN to the study area is the Seven Hills Interchange, between the A12 and A14, which is located some 25 km via the A12 south west of the study area (as measured from the A12 junction with the A1094).

2.8.3.6 The proposed assessment methodology set out in Section 2.8.4 has been developed further since the EIA Scoping Report was prepared, to inform the preliminary assessment within this chapter through discussions with the local highway authorities and updated Institute of Environmental Management and Assessment (IEMA) guidance. Further details of these changes are identified in Section 2.8.4.

Consultation and Project Engagement

2.8.3.7 Following the feedback received in the Scoping Opinion (Ref. 2.8.10), a transport scoping meeting was held with SCC Highways on 9 June 2023 to provide them with a project update and to agree the scope of the Traffic and Transport chapter and the approach for the supporting deliverables. The presentation which informed the meeting and the resultant meeting minutes are held in **Volume 2, Part 2, Appendix 2.8.A, SCC Highways Scoping Meeting – Presentation and Meeting Minutes**. A summary of the key points raised including how these have been addressed is set out below.

Table 2.8.5: Key topics discussed during SCC highways scoping meeting

Topic	SCC Feedback	Response
Car sharing	Further evidence should be provided in support of the proposed car occupancy figure for construction staff, or occupancy level should be reduced	Following SCC's feedback, the proposed car occupancy figure for construction staff has been reduced from 2.0 to 1.5 for robustness. A formal Car Share Scheme will be implemented to match potential sharers. Further details provided in Section 2.8.9.
Shift patterns	Shift patterns that assist with the spread of traffic demand should be secured within the DCO. Consider that 'shift peaks' across multiple projects could create a peak of similar prominence to the network peak.	Noted. This assessment considers both development and network peaks. The cumulative assessment in **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects** considers 'shift peaks' across multiple projects.
HGV profile	SCC expect that more HGV movements will likely take place during the morning (rather than being a flat profile throughout the day) and therefore confidence is required on the accuracy of the daily profile of HGV movements.	In response to this comment, HGV movements have been weighted towards the start of the day.
Use of B1119	SCC note concerns with the use of the B1119 in relation to the Sizewell C DCO	The effects in relation to other projects is contained within **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects**.
A1094 bridge	The bridge along this route has a weight limit which should be considered as part of planning for Abnormal and Indivisible Loads.	This constraint is noted and Transformer Abnormal Indivisible

Topic	SCC Feedback	Response
		Loads (AILs) will avoid this part of the network.
Staff catchment	Broad agreement on use of staff census and 60-mile catchment, albeit noted that multiple assessments have been carried out for same area on other projects.	The assessment has adopted 100% of staff traffic demand from the A12 North and A12 South for a worst-case assessment. Distribution of staff is based on the most logical route that would be used to and from the A12.
DMRB Human health guidance	Recommendation that in addition to IEMA guidance, that human health guidance from DMRB is considered. Also that IEMA guidance due to be updated.	The assessment has been undertaken using the recently adopted 2023 IEMA guidance (Ref. 2.8.12). Matters relating to human health are addressed in **Volume 1, Part 2, Chapter 12, Health and Wellbeing**.
Saxmundham south residential development	SCC recommended that this proposal should be included as a cumulative scheme.	The cumulative impacts are set out in the **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects**. Whilst the Saxmundham South Green Neighbourhood is included within the list of schemes (Stages 1 and 2), insufficient information is currently available to allow potential traffic and transport cumulative effects to be reviewed (Stage 3). Therefore, this scheme will be reviewed as part of the ES, subject to further information being available at that time.
Access during operational phase	Although screened out, proposals for access during the operational phase should be considered.	Rights of access will be retained for the operational phase. Details of retained accesses will be provided at ES stage
Access junctions	Access proposals should be supported by swept path analysis.	These will be provided as the designs develop. The

Topic	SCC Feedback	Response
	Drawings should include order limits and highway boundary also required.	matter is addressed within the Outline CTMP, held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme).**
Routing of traffic at Saxmundham	Clarification requested regarding two proposed link routes bypassing north east and south east Saxmundham.	The assessment has considered both route options in order to provide a worst-case scenario for each part of the network to the north and south of Saxmundham.
Collision data	The period affected by Covid-19 from March 2020 to September 2021 should be excluded.	Whilst this is acknowledged, for the purposes of this PEIR a review five years' of CrashMap data (2017-2021) has been carried out, rather than limiting this to three years' of CrashMap data (2017-2019), on the basis that data for 2022 and 2023 is not yet currently available, and data for 2015 and 2016 would not be considered to be representative of baseline conditions. The full PIA review (ES stage) will exclude the Covid-19 period as requested, including the most recently available three-year period (which will include a period after August 2021)
Friday PM peak	Given the weekend holiday traffic in the area, a Friday PM peak scenario should be considered	The traffic survey scope to inform the ES will include data collection for the Friday PM peak period.
Assessment Year	Flexibility regarding the assessment year is recommended in case the project programme changes.	The peak construction phase (2029) has been assessed in this chapter, as well as individual section peaks (varying

Topic	SCC Feedback	Response
		between 2027-2029) for the local highway network, based on the construction programme. At this stage, it is considered that the conclusions of the assessment as reported in Section 2.8.9 would remain unchanged in the instance that the start of construction is delayed. Section 2.8.5 provides justification for this approach.
Study area	The study area presented is acceptable, although advised to include A12/A14 Seven Hills Interchange, A1120, B1078 corridors if movement from workers is significant. A12 junctions between A14 and A1152 Melton were assessed in East Anglia 1 North project. Saxmundham A12 junctions need to be considered in detail, as well as effects on Snape and Tunstall.	The study area has been extended following that presented at scoping stage. The main study area presented is consistent with the East Anglia 1 North project (**Figure 2.8.1 Traffic and Transport Study Area in Suffolk**). It is not considered necessary to extend the study area further to the north or south along the A12, as no significant effects are expected on the A12 within the study area, as a result of construction vehicles (including staff).
CTMP	A draft CTMP should be discussed at an early stage. Reference needs to be made to HGV routing and numbers, as well as travel planning and staff vehicle numbers.	An Outline CTMP has been prepared, which is held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**.
Assessment periods	Due to the number of projects, 'shift' peak hours should be considered in the assessment, as well as the site Saturday PM peak	These 'shoulder peaks' have been considered along with the network peaks, as set out in Section 2.8.9. An assessment of the Saturday PM peak will be carried out within the ES,

Topic	SCC Feedback	Response
		in the absence of Saturday baseline information within this chapter.
PRoW	The effect of specific PRoWs being subject to repeated impacts should be considered, as well as impacts on the whole network. Use of PRoW should be discouraged.	Further details on PRoW are provided in Section 2.8.9 and details on PRoW mitigation are included within the Outline CTMP, held in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**. An Outline PRoW Management Plan will be prepared in support of the ES
TA	Upon reflection following meeting of 9th June 2023, preference expressed for a separate TA but that duplication should be avoided wherever possible. For example an ES chapter deals with severance, fear, anxiety etc and the TA focuses on road safety, junction modelling and access routes. Preference that PRoW are treated as a specific topic, or if not within transport, and not split up across other topics such as landscape, tourism.	The components which traditionally inform the assessment work of the TA are set out in various sections within this chapter (see Section 2.8.4 for further details). The provision of a standalone Transport Assessment will be considered at ES stage if necessary. PRoW is also covered within the Socio-Economic and Landscape chapters of the PEIR.
Cumulative Schemes	Recommendation that the applicant refers to PINS for an up-to-date list of relevant NSIP projects, and recommends that contact is made with applicants with regard to delivery timescales. Non-NSIP developments are best discussed with local planning authorities.	Noted, agreement with relevant authorities on final list of cumulative schemes will be sought. Further details on inter-project cumulative effects are set out in **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects.**

2.8.4 Approach and Methodology

2.8.4.1 **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology** sets out the overarching approach which has been used in developing the preliminary environmental information. This section describes the technical methods used to determine the baseline conditions, sensitivity of the receptors and magnitude of effects and sets out the significance criteria that have been used for the preliminary traffic and transport assessment.

Guidance Specific to the Traffic and Transport Assessment

2.8.4.2 The preliminary traffic and transport assessment has been carried out in accordance with the following good practice guidance documents:

- Government's National Planning Practice Guidance; Travel Plans, Transport Assessments and Statements (Ref. 2.8.6); and
- the IEMA Guidelines for the Environmental Assessment of Road Traffic (Ref. 2.8.11), which provides guidance on examining the environmental impacts of developments in terms of traffic and transportation and was adopted at the time of the EIA Scoping Report (Ref. 2.8.9); and
- the recently adopted (July 2023) IEMA Guidelines for the Environmental Assessment of Traffic and Movement (Ref. 2.8.12), which provides an update to the above and has been referenced where appropriate.

Baseline Data Gathering and Forecasting Methods

2.8.4.3 The traffic and transport baseline environment conditions described in Section 2.8.7 have been informed by the following data sources and site surveys:

- Baseline traffic data obtained for the surrounding highway network, based on Department for Transport (DfT) traffic counts (Ref. 2.8.13Ref. 2.8.25) where available (see **Figure 2.8.6 Road Link and Road Junction Receptors** for the locations of these counts);
- Traffic survey data has also been extracted from the East Anglia One North DCO (Ref. 2.8.14), where counts fall within the Traffic and Transport Study Area (see **Figure 2.8.6 Road Link and Road Junction Receptors** for the locations of these counts). The final survey specification and study area is pending formal agreement with SCC;
- Traffic growth calculated using National Road Traffic Forecast (NRTF) growth factors, with National Transport Model (NTM) adjustments applied within the Trip Ends Model Program (TEMPro) (Ref. 2.8.15) utilising National Trip Ends Model (NTEM) dataset v7.2;
- Personal Injury Accident (PIA) data from CrashMap (Ref. 2.8.16) which contains official data published by the DfT for the agreed study area shown on **Figure 2.8.1 Traffic and Transport Study Area in Suffolk**;
- Ordnance Survey (OS) Base Mapping to ascertain an accurate geographical representation of the areas in the vicinity of the Proposed Project;

- Local travel and network information gathered from various online sources including local public transport operators, PRoW and promoted recreational routes (Ref. 2.8.17);
- For cumulative schemes, planning applications documents on the PINS Examination Library for the Sizewell C Project (Ref. 2.8.18) and the East Suffolk Planning Portal for High Lodge Leisure (Ref. 2.8.19), Land South and East of Adastral Park (Ref. 2.8.20), Land South of Darsham Station (Ref. 2.8.21) and Land at Redwale Road (Ref. 2.8.22 and Ref. 2.8.23), which has informed **Volume 1, Part 2, Chapter 14, Suffolk Onshore Scheme Inter-Project Cumulative Effects**; and
- Route planning software, such as Google Maps (Ref. 2.8.24), used to inform the review of the most direct and functional routes to the Proposed Project (in combination with the above).

Assessment Criteria

2.8.4.4 In accordance with the 2023 IEMA Guidelines for the Environmental Assessment of Traffic and Movement (Ref. 2.8.12), the following criteria has been considered in this assessment:

- severance of communities;
- pedestrian delay (incorporating delay to all non-motorised users);
- non-motorised user amenity;
- fear and intimidation on and by road users;
- road vehicle driver and passenger delay;
- road user and pedestrian safety; and
- hazardous/large loads.

2.8.4.5 In addition, the following criteria has been considered in this assessment:

- PRoW diversions and closures.

2.8.4.6 The 2023 IEMA guidelines set out two rules in identifying potential links for analysis:

- 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 (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc.) where traffic flows have increased by 10% or more.

2.8.4.7 Based on this, links and junctions have been assessed where traffic flows are expected to increase by 30% or more as a result of the Suffolk Onshore Scheme. Links and junctions have not been assessed where there is expected to be a less than 30% increase in traffic flows as a result of the Suffolk Onshore Scheme, unless any specifically sensitive areas are identified. In addition, a negligible magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Suffolk Onshore Scheme, irrespective of the proportional increase in traffic flows.

2.8.4.8 In addition to the above, potential traffic-related effects have also been considered by other topics, including (and not limited to) the following examples:

- potential effects of construction traffic on sites of ecological and nature conservation value are considered in **Volume 1, Part 2, Chapter 3, Ecology and Biodiversity**;
- potential effects of construction traffic on air quality are considered in **Volume 1, Part 2, Chapter 9, Air Quality**;
- potential effects of construction traffic on noise and vibration are considered in **Volume 1, Part 2, Chapter 10, Noise and Vibration**; and
- potential effects of construction traffic on tourists, visitor attractions and other businesses are considered in **Volume 1, Part 2, Chapter 11, Socio-economics, Recreation and Tourism**.

2.8.4.9 The type of traffic which is anticipated to be generated by the Suffolk Onshore Scheme has been categorised as follows: primarily general traffic, LGVs, HGVs and Abnormal Indivisible Loads (AILs). The vehicle routing and movements associated with the Project's construction have been considered and discussed through consultation with SCC.

2.8.4.10 The receptors which may be impacted upon have been identified based on the locations and volumes of the proposed construction traffic i.e. the forecast increase in vehicle movements. This has been completed by identifying the percentage increases in vehicular activity along the identified construction routes when compared to DfT baseline traffic count data (factored up to the future baseline year of 2029) for road links within the traffic and transport study area.

2.8.4.11 Typically, when assessing the impacts of traffic effects, there are a range of particular groups and locations which may be sensitive to changes in traffic conditions compliant with the criteria previously outlined. These are outlined in the 2023 IEMA Guidance as 'Affected Parties', as follows:

- people at home;
- people at work;
- sensitive and/or vulnerable groups (including young age, older age, income, health status, social disadvantage and access and geographic factors);
- locations with concentrations of vulnerable users (e.g. hospitals, places of worship and schools);
- retail areas;
- recreational areas;
- tourist attractions;
- collisions clusters and routes with road safety concerns; and
- junctions and highway links at (or over) capacity.

2.8.4.12 As a general rule of thumb, the forecast changes to baseline (magnitude of change), the relative value/sensitivity/importance of the affected receptor and the scale, nature and significance of the effect (consequence) should be considered. In addition, the

anticipated effect should be classified as short-term, medium-term or long-term, as well as permanent or temporary.

2.8.4.13 To calculate the trip distribution of construction vehicles travelling to and from the Proposed Project each day, it has been assumed that 100% of vehicles would travel to/from the A12 to the north of the study area and 100% of vehicles would travel to/from the A12 to the south of the study area, to provide a worst-case assessment. Construction vehicles have then been distributed across the local highway network by following the most logical route to/from each access.

2.8.4.14 Assessments have been undertaken at the peak period of construction (as agreed with SCC), which represents 2029 based on forecast construction traffic movements. The local highway network is however expected to experience varying peaks (between 2027 and 2029) based on forecast activity associated with each access. Individual 'section peaks' have therefore been identified and assessed to provide a worst-case assessment of each part of the local highway network.

2.8.4.15 Baseline traffic flows have been factored up to the identified peak year of construction (2029) by adopting growth factors derived from TEMPro v7.2 (Ref. 2.8.15) for the relevant areas impacted by the Suffolk Onshore Scheme. Meanwhile, the peak construction traffic flows have been derived by analysing construction traffic data and construction programmes provided by Design Engineers.

Sensitivity

2.8.4.16 The general criteria for defining the importance or sensitivity of receptors are set out in Table 2.8.6, which applies to the assessment of severance, pedestrian delay, non-motorised user amenity, and fear and intimidation. Key factors influencing this include:

- the value of the receptor or resource based upon empirical and/or intrinsic factors, for example considering any legal or policy protection afforded which is indicative of the receptor or resources' value internationally, nationally or locally; and
- the sensitivity of the receptor or resource to change, for example is the receptor likely to acclimatise to the change. This will consider legal and policy thresholds which are indicative of the ability of the resources to absorb change.

Table 2.8.6: Categorising the overall sensitivity of receptors (severance, pedestrian delay, non-motorised user amenity, and fear and intimidation)

Receptor sensitivity	Receptor examples
Very High	Road links and junctions: More than two sensitive users present (e.g. schools, play areas, care/retirement homes, disabled parking bays, hospitals, places of worship, historic buildings) Walk/Cycle Links including PRoW: Heavily trafficked highway with on-road pedestrian/cycle route
High	Road links and junctions: Two sensitive users present (e.g. schools, play areas, care/retirement homes, disabled parking bays, hospitals, places of worship, historic buildings)

Receptor sensitivity	Receptor examples
	Walk/Cycle Links including PRoW: Lightly trafficked highway with on-road pedestrian/cycle route
Medium	Road links and junctions (at least one of the following): - One sensitive user present (e.g., schools, play areas, care/retirement homes, disabled parking bays, hospitals, places of worship, historic buildings); - Many residential properties with direct frontage to highway link being used as construction route; - Pedestrians using footways, PRoW and/or crossings on highway link; and - Cyclists using on-road designated cycle routes along highway link. Walk/Cycle Links including PRoW: Heavily trafficked highway with off-road pedestrian/cycle route
Low	Road links and junctions (at least one of the following): - Few residential properties with direct frontage to the highway link being used as a construction traffic route; - Workplaces with direct frontage to highway link being used as construction route; and - Cyclists using off-road designated cycle routes along highway link. Walk/Cycle Links including PRoW: Lightly trafficked highway with off-road pedestrian/cycle route
Negligible	Road links and junctions: No receptors along link Walk/Cycle Links including PRoW: Pedestrian/cycle route not running alongside highway

2.8.4.17 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of driver delay are set out in Table 2.8.7. This has been determined in the absence of any junction capacity assessment information or queue length data. Therefore, the sensitivity criteria will be reviewed at ES stage when further baseline traffic count data becomes available, in consultation with SCC Highways.

Table 2.8.7: Categorising the overall sensitivity of receptors (driver delay)

Receptor sensitivity	Receptor examples
Very High	Road links: Not applicable at this stage Road junctions: Roundabout or signalised junction (at least four arms) within a built-up area
High	Road links: Local route within a built-up area Road junctions: Roundabout or signalised junction (at least four arms) outside of a built-up area
Medium	Road links: Strategic route within a built-up area OR a local route outside of a built-up area Road junctions: Roundabout or signalised junction (fewer than four arms) outside of a built-up area OR a priority junction within a built-up area
Low	Road links: Strategic route outside of a built-up area OR a local no-through route Road junctions: Priority junction outside of a built-up area
Negligible	Road links: Not applicable at this stage (worst-case) Road junctions: Not applicable at this stage (worst-case)

2.8.4.18 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of road safety are set out in Table 2.8.8. The collision rate for road links has also been calculated and compared with national road safety statistics provided within Road Casualties for Great Britain (Ref. 2.8.25) to determine an appropriate receptor sensitivity level. This criteria has been determined in the absence of full PIA data and will therefore be reviewed at ES stage when full PIA data becomes available, in consultation with SCC Highways.

Table 2.8.8: Categorising the overall sensitivity of receptors (road safety)

Receptor sensitivity*	Receptor examples
Very High	Road links and road junctions: 10+ collisions in five years, or more than four serious or two fatal collisions
High	Road links and road junctions: 7-9 collisions (with up to four serious collisions and one fatal collision) in five years
Medium	Road links and road junctions: 5-6 collisions (with up to two serious collisions and one fatal collision) in five years

Receptor sensitivity*	Receptor examples
Low	Road links and road junctions: 3-4 collisions in five years (with up to one serious collision and no fatal collisions) in five years
Negligible	Road links and road junctions: Fewer than three collisions (with no serious or fatal collisions) in five years

*subject to a comparison of the collision rate with national road safety statistics (for road links)

2.8.4.19 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of hazardous/large Loads are set out in Table 2.8.9. As above, the receptor sensitivity level for road links also considers the collision rate in comparison with national road safety statistics. This criteria has been determined in the absence of full PIA data and will therefore be reviewed at ES stage when full PIA data becomes available, in consultation with SCC Highways.

Table 2.8.9: Categorising the overall sensitivity of receptors (hazardous/large Loads)

Receptor sensitivity*	Receptor examples
Very High	Road links and road junctions: More than five serious and/or two fatal collisions involving goods vehicle(s) in five years
High	Road links and road junctions: 4-5 serious collisions and/or two fatal collisions involving goods vehicle(s) in five years
Medium	Road links and road junctions: 2-3 serious collisions and/or one fatal collision involving goods vehicle(s) in five years
Low	Road links and road junctions: One serious collision involving goods vehicle(s) in five years
Negligible	Road links and road junctions: No serious or fatal collisions involving goods vehicle(s) in five years

*subject to a comparison of the collision rate with national road safety statistics (for road links)

2.8.4.20 The preliminary criteria for defining the importance or sensitivity of PRoW receptors for the assessment of PRoW diversions and closures are set out in Table 2.8.10. This criteria will be reviewed at ES in consultation with SCC Highways.

Table 2.8.10: Categorising the overall sensitivity of receptors (PRoW Diversions and Closures)

Receptor sensitivity	Receptor examples
Very High	Main route of excellent quality expected to be well used
High	Main route of good quality, expected to be fairly well used, with no alternative route(s) available

Receptor sensitivity	Receptor examples
Medium	Main route of good quality, expected to be fairly well used, with alternative route(s) available OR a minor route of mixed quality, expected to be lightly used, with no alternative route(s) available
Low	Minor route of mixed quality, expected to be lightly used, with alternative route(s) available
Negligible	Poor quality route which appears to be inaccessible, out of use or rarely used

2.8.4.21 The levels of sensitivity which have been attributed to the receptors identified in Section 2.8.6 based on the information presented above are summarised in Section 2.8.7 and within **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**.

2.8.4.22 An assessment of the railway network has been scoped out from this Traffic and Transport chapter given that trenchless methods will be employed when installing cables to avoid any potential impacts on the railway, and that the use of any existing level crossings by construction vehicles will be managed to ensure operational rail and road user safety.

Magnitude

2.8.4.23 As identified within the 2023 IEMA guidelines, the magnitude of each impact represents the level of change from the baseline conditions.

2.8.4.24 This assessment considers a range of potential effects that could be experienced during the construction stage of the Suffolk Onshore Scheme and this section identifies how magnitude will be considered for each.

2.8.4.25 **Severance** is defined in the IEMA guidelines as the *"perceived division that can occur within a community when it becomes separated by major traffic infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure"*. The guidelines state that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. However, caution should be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes in traffic.

2.8.4.26 **Pedestrian delay** (incorporating delay to all non-motorised users) is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective impacts on the ability of pedestrians to cross roads. The assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay.

2.8.4.27 **Non-motorised user amenity** is broadly 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 non-motorised user amenity would be where the traffic flow (or HGV component) is halved or doubled.

2.8.4.28 **Fear and intimidation** occurs through a combination of traffic flow, speed, proportion of HGVs and the proximity of traffic to people. These indicators are often heightened by a perceived lack of protection or buffers from the highway or through narrow or non-existent footways. The assessment considers each road on a case-by-case basis, however there are thresholds provided in the 2023 IEMA guidelines which are presented in Table 2.8.12.

2.8.4.29 **Driver delay** is an effect cited in the 2023 IEMA guidance and relates to incremental increases in traffic (as outlined in Table 2.8.11). However, traffic delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. As a further consideration, where any temporary road closures or traffic management is likely to be in place to enable the construction of the Suffolk Onshore Scheme, any additional potential delay caused by these resultant diversion routes has been reported.

2.8.4.30 **Road safety** considers PIA data obtained for the most recent five-year period available at junctions and links along the proposed construction traffic routes. The sensitivity of discrete areas of the highway network can then be determined following a detailed review of the baseline characteristics including the collision rate and any collision clusters. This has been used to assess whether the additional traffic during construction of the Suffolk Onshore Scheme would be likely to have a detrimental effect on road safety.

2.8.4.31 **PRoW diversions and closures** have been considered on the basis of the type of impact i.e. whether a temporary or permanent PRoW closure or diversion is proposed and how long any potential disruption to an existing route would therefore occur for. The assessment considers the indicative thresholds presented in Table 2.8.13 below which have been derived based on professional experience.

2.8.4.32 With regard to **hazardous/large Loads**, the guidance states that the transportation of dangerous or hazardous loads by road should be recognised, including specialist loads that might be involved in the construction or decommissioning phases of the development. Where the number of movements is considered to be significant, risk or catastrophe analysis should be carried out to illustrate the potential for an accident and the likely effect of such an effect. Appropriate routes for abnormal load movements should be considered, with mitigation strategies to secure safe passage. There will be a requirement to transport gas and oil during the Proposed Project (particularly during the construction and decommissioning phases) which are categorised as hazardous loads. There will also be the requirement for abnormal loads which are categorised as Large Loads.

2.8.4.33 In view of the above, the impacts of hazardous/large Loads have been considered, in the form of a qualitative risk assessment to establish the likelihood and extent of such effects. The projected impacts of the Suffolk Onshore Scheme will be measured separately, dependent upon the receptor, for the construction and decommissioning periods. The Outline CTMP, provided in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)** includes details of measures that will be employed to ensure the safe vehicular transport of components to and from the Suffolk Onshore Scheme.

2.8.4.34 Table 2.8.11 to Table 2.8.13 summarise the criteria that have been used to assess the magnitude of effect (based on increases i.e. 'adverse' effects), along with the thresholds that have been used to determine whether effects are considered large, medium, small or negligible. Depending on the baseline information available, the various thresholds identified for the proportional increases in traffic flow relate to peak hour flows and daily flows (whichever is highest). Within these tables, neither the sensitivity of receptors, nor the duration of effects, is taken into consideration. These tables are formed using 2023 IEMA Guidelines and professional experience.

2.8.4.35 In terms of magnitude of change for road links and junctions, a negligible magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Suffolk Onshore Scheme, irrespective of the proportional increase in traffic flows.

Table 2.8.11: Categorising the overall magnitude of effect of a road link and junction

Impact	Negligible	Small	Medium	Large
Severance	Increase in total traffic flows of under 30% (or increase in HGV flows under 10%).	Increase in total traffic flows of 30-59% (or increase in HGV flows of between 10%-39%).	Increase in total traffic flows of 60%-89% (or increase in HGV flows between 40%-89%).	Increase in total traffic flows or HGV flows of 90% and above.
Pedestrian delay	The severity of the impact will be determined based on the thresholds identified above for severance.			
Non-motorised user amenity	Increase in total traffic flows of under 50%.	Increase in total traffic flows of 50-69%.	Increase in total traffic flows of 70%-99%.	Increase in total traffic flows of 100% or above.
Fear and intimidation	No change in overall level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see Table 2.8.12 below).	One step change in overall level (see Table 2.8.12 below), but with <400 daily vehicle increase or <500 daily HGV increase.	One step change in overall level (see Table 2.8.12 below), but with >400 daily vehicle increase or >500 daily HGV increase.	Two step changes in overall level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see Table 2.8.12 below).
Driver delay	Increase in total traffic flow of under 30%.	Increase in total traffic flow of between 30% and 59%.	Increase in total traffic flow of between 60% and 89%.	Increase in traffic flow of 90% and above.
Road safety	Increase in total traffic	All links estimated to experience increases in total traffic flows of at least 30% or increases in HGV		

Impact	Negligible	Small	Medium	Large
	flows of under 30% (or increase in HGV flows of under 10%).	flows of at least 10% are analysed further on a case-by-case basis.		
Hazardous/large loads	Based on the probability of a personal injury accident, categorised as fatal or serious, involving a hazardous/large load, occurring.			

2.8.4.36 Further details relating to fear and intimidation, in terms of calculating magnitude of impact based on the 2023 IEMA guidelines, are provided in Table 2.8.12 below.

Table 2.8.12: Categorising the overall magnitude for fear and intimidation

Criteria	Degree of hazard (Score)			
	Small	Moderate	Great	Extreme
A) Average Hourly Traffic Flow	<600 (0)	600-1,200 (10)	1,200-1,800 (20)	>1,800 (30)
B) Daily HGV Flow	<1,000 (0)	1,000-2,000 (10)	2,000-3,000 (20)	>3,000 (30)
C) Average Speed	<20 mph (0)	20-30 mph (10)	30-40 mph (20)	>40 mph (30)
Total Score (A+B+C)	0-20	21-40	41-70	71+

2.8.4.37 Magnitude of change with respect to severance, pedestrian delay, non-motorised user amenity, and fear and intimidation across PRoW receptors and national/regional walking and cycling routes has been categorised as follows based on professional experience (and further to the information presented within the EIA Scoping Report):

- Negligible: Up to one temporary localised diversion to accommodate cable installation works or one construction route crossing point during the works;
- Small: Two temporary localised diversions (cable installation works) and/or construction route crossing points (inclusive) or one temporary diversion to accommodate the construction route (haul road);
- Medium: Three temporary localised diversions (cable installation works) and/or construction route crossing points (inclusive);
- Large: Four or more temporary localised diversions (cable installation works) and/or construction route crossing points (inclusive); and
- Large (severance and pedestrian delay only): A long-term closure/diversion.

2.8.4.38 In terms of PRoW diversions and closures, the following thresholds are proposed to identify magnitude of effect based on professional experience:

Table 2.8.13: Categorising the overall magnitude of effect of a PRoW diversion and/or closure

Impact	Negligible	Small	Medium	Large
PRoW Diversions and Closures	A temporary PRoW diversion (no closure) with either no increase in pedestrian journey length or an increase in pedestrian journey length for one to five days.	A temporary PRoW diversion (no closure) with an increase in pedestrian journey length for one to four weeks.	A short-term PRoW closure (for less than four weeks in any 12-month period) without a diversion route; OR A temporary PRoW diversion (no closure) with an increase in pedestrian journey length for more than four weeks.	A short-term PRoW closure (for more than four weeks in any 12-month period) without a diversion route, or a long-term PRoW closure/diversion.

2.8.4.39 Tables 2.8.11 to 2.8.13 above set out the proposed magnitude thresholds for the respective environmental effects that are considered in this assessment. With the exception of PRoW diversion and closure effects, all effects have a proposed magnitude that does not, initially, consider the duration over which an effect is likely to be experienced.

2.8.4.40 As identified within DMRB LA 104 (Ref. 2.8.26), duration (long or short term), permanence (permanent or temporary) and reversibility should be considered when assessing the overall significance of residual effects.

2.8.4.41 All of the traffic and transport effects associated with the construction and decommissioning of the Suffolk Onshore Scheme would be temporary effects, aside from diversion of a number of PRoW. Some temporary effects would be likely to last longer than others and these have therefore been reported where necessary. Following the quantitative assessment, residual effects have been reported by taking into account professional experience on the duration over which effects are likely to be experienced.

Significance of effects

2.8.4.42 As set out in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology** the general approach taken to determining the significance of effect in this preliminary assessment is only to state whether effects are likely or unlikely to be significant, rather than assigning significance levels.

2.8.4.43 The significance of effect is determined through consideration of two elements; the magnitude of the impact and the sensitivity of the receptor as outlined above. Table 2.8.14 below shows the matrix that has been used to determine the effect category. Effects which are classified as **major** or **moderate** are considered to be significant (shown in **bold**).

Table 2.8.14: Significance matrix

Magnitude of effect	**Receptor sensitivity**				
	Very high	**High**	**Medium**	**Low**	**Negligible**
Large	**Major**	**Major/ Moderate**	**Major/ Moderate/** Minor	**Moderate**/ Minor	Minor/ Negligible
Medium	**Major/ Moderate**	**Major/ Moderate**	**Moderate**/ Minor	Minor/ Negligible	Negligible
Small	**Major/ Moderate/** Minor	**Moderate**/ Minor	**Moderate**/ Minor	Minor/ Negligible	Negligible
Negligible	Minor/ Negligible	Minor/ Negligible	Minor/ Negligible	Negligible	Negligible

Assumptions and Limitations

2.8.4.44 The scope of assessment within this PEIR chapter is set out within Table 2.8.7 of the EIA Scoping Report (Ref. 2.8.9), based on the potential sources and impacts and potential impact pathways with receptors presented in Table 2.8.1 and Table 2.8.2 of the EIA Scoping Report respectively. It should be noted that the assessment criteria has been updated to reflect the 2023 IEMA guidelines where appropriate.

2.8.4.45 This assessment is based on baseline data and Proposed Project design information (described in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**). This includes baseline traffic data obtained for the surrounding highway network based on available DfT traffic counts (see **Figure 2.8.6 Road Link and Road Junction Receptors** for locations), as it was not possible to accommodate these surveys in support of this PEIR due to the programme for submission and the requirement to avoid the 2023 school summer holiday period. An updated set of traffic surveys will therefore be carried out in support of the ES to provide a more comprehensive set of baseline traffic flows.

2.8.4.46 This chapter has been informed by the consultation responses to the Scoping Opinion (Ref. 2.8.10) and scoping discussions with SCC, as set out in Section 2.8.3.

2.8.4.47 The construction vehicle trip generation associated with the co-location scenario is marginally higher than compared to the Proposed Project in isolation. Therefore, the construction vehicle trip generation presented within this chapter and appendices are on the basis of a co-location scenario, where allowance is made for the installation of ducting to facilitate the delivery of adjacent energy infrastructure projects; namely LionLink (formerly known as EuroLink) and Nautilus. This approach is therefore designed to provide a worst-case assessment. Nonetheless, no new or different effects have been identified as part of this assessment, when comparing the Proposed Project (in isolation) and co-location scenarios in terms of construction traffic. The assessment findings reported in Section 2.8.9 are applicable to the Proposed Project both with and without co-location. Any differences in terms of potential impacts relating to PRoW Closures and Diversions as a result of the Proposed Project (in isolation) and co-location scenarios are identified in Section 2.8.9.

2.8.4.48 This assessment considers the peak construction period (expected to take place in 2029) and includes HGV movements, LGV movements and vehicle movements associated with construction worker arrivals and departures. Construction traffic forecasts are set out in Section 2.8.9.

2.8.4.49 Vehicular access is anticipated to be taken from S-BM01 and S-BM02 (Leiston Road), S-BM03 and S-BM04 (A1069 Snape Road), S-BM05 and S-BM06 (Grove Road), S-BM07 (B1121 Saxmundham Road), S-BM08 (B1119 Church Hill south side), S-BM09 or S-BM12 (B1121 Main Road) and S-BM10 and S-BM11 (B1119 Church Hill north side). Further details on proposed access to the Suffolk Onshore Scheme are set out within Section 2.8.4 and the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**).

2.8.4.50 Construction vehicle trips will be split across the various access points and have been assigned to each access (and associated parts of the local highway network) in accordance with programme of works for each access.

2.8.4.51 In order to provide a robust assessment, the trip distribution is set as 100% of trips to be taken to and from both the A12 north and the A12 south, routed to the access points based on the most logical routes to the access points. This PEIR includes an assessment of the Proposed Project within Section 2.8.9.

2.8.4.52 Although the Proposed Project is located close to a number of towns/villages including Saxmundham, Leiston and Friston, only a small proportion of trips are expected to either originate from or pass through these settlements during the construction, operation and maintenance, and the decommissioning phases. The routes to/from the proposed site accesses are illustrated by the HGV routing plan shown in **Figure 2.8.2 HGV Routing Plan**. Whilst some staff may originate from the range of small settlements nearby and may travel by public transport or bicycle (the distance is largely considered too far to walk), these modes are not expected to constitute a significant proportion of trips to the Proposed Project.

2.8.4.53 The Proposed Project is expected to generate a low level of trips during the operational and maintenance phases, and a review of operational phase transport effects has been excluded from the scope of this assessment (see Section 2.8.9 for further details).

2.8.4.54 Further details relating to the assumptions that have been adopted in support of the assessment work (i.e. relating to access points, working hours, trip generation) are set out below as well as within Section 2.8.9. The assessment is based on worst-case parameters in terms of the length of the construction programme and the peak number of daily vehicle trips associated with the Proposed Project. The approach for the assessment work has also been reviewed and agreed with Suffolk County Council as set out in Section 2.8.3.

Approach for the Transport Assessment

2.8.4.55 During scoping discussions with SCC (including the meeting on 9 June 2023), it was proposed and seemingly agreed that the components traditionally forming part of the Transport Assessment (TA) would be incorporated within the PEIR and ES. Subsequently however, in communication received on 17 July 2023, SCC stated preference for a standalone TA report but without duplication of content within the PEIR and ES. Given the limited programme between the receipt of this feedback and the PEIR submission, the potential to prepare a separate standalone TA will be considered at ES stage. The following information has been included within this assessment to assess the ability of the highway network to accommodate the development:

- a review of relevant national, regional and local policies (Section 2.8.2);
- description of the existing and future baseline conditions – a description of the roads, railway lines, footpaths, bridleways and cycle paths within the study area, including those which are expected to be crossed by the route and/or impacted by the works (Section 2.8.7);
- details of the baseline traffic data which has been used to identify baseline traffic flows on the surrounding highway network (Section 2.8.7);
- a review of the PIA data for the most recently available five-year period within CrashMap (Ref. 2.8.16) within the study area (Section 2.8.7);
- description of the Project and Suffolk Onshore Scheme setting out timescales for construction, identification of route sections, typical working width layouts, compound locations, access routes to compounds, construction methods for individual railway and road crossings (where required) (**Volume 1, Part 2, Chapter 1, Evolution of the Suffolk Onshore Scheme** and the Outline CTMP in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**);
- mitigation measures (Section 2.8.8);
- traffic generation of the Proposed Project (based on the co-location scenario) including for construction staff, LGVs and HGV traffic with a profile of their arrivals and departures throughout the day (Section 2.8.9);
- distribution and assignment of trips to the network with construction traffic distributed based on 100% to/from the A12 to the north and 100% to/from the A12 to the south to provide a worst-case assessment of the SRN, followed by a distribution across the local highway network based on the most logical routes that would be used to access each access (Section 2.8.9);

- an initial highway impact assessment of the Proposed Project (based on the co-location scenario) during the construction and decommissioning phases (Section 2.8.9) prior to the preliminary traffic and transport assessment of the significance criteria for both the highway network and walking and cycling routes including PRoW;
- a qualitative review of operational phase considerations associated with the Proposed Project (Section 2.8.9); and
- summary and conclusions (Section 2.8.10).

2.8.5 Basis of Assessment

2.8.5.1 This section sets out the assumptions that have been made in respect of design flexibility maintained within the Proposed Project and the consideration that has been given to alternative scenarios and the sensitivity of the preliminary assessment to changes in the construction commencement year.

2.8.5.2 Details of the available flexibility and assessment scenarios are presented in **Volume 1, Part 1, Chapter 4, Proposed Project Description** and **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology.**

Flexibility Assumptions

2.8.5.3 The main preliminary assessments have been undertaken based on the description of the Proposed Project provided in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**. To take account of the flexibility allowed in the Proposed Project, consideration has been given to the potential for preliminary effects to be of greater or different significance should any of the permanent or temporary infrastructure elements be moved within the Limits of Deviation (LoD) or draft Order Limits.

2.8.5.4 The assumptions made regarding the use of flexibility for the main assessment, and any alternatives assumptions are set out in Table 2.8.15 below. Should the flexibility assumptions alter the results of the preliminary assessment of effects, this has been noted within the preliminary assessment section (see Section 2.8.9).

Table 2.8.15: Flexibility assumptions

Element of flexibility	Proposed Project assumption for initial preliminary assessment	Flexibility assumption considered
Lateral LoD High Voltage Direct Current (HVDC) cables	It is assumed that the cables would cross any roads or PRoW within the LoD, to provide a worst-case assessment	All potential road and PRoW crossing points have been considered. The precise location of the cables does not however influence the number of construction vehicles required, or the assessment of peak construction vehicle activity.

Element of flexibility	Proposed Project assumption for initial preliminary assessment	Flexibility assumption considered
Lateral LoD Saxmundham Converter Station	It is assumed that the location of the converter station within the LoD would result in the permanent diversion of PRoW (see Section 2.8.9 for further details), to provide a worst-case assessment. Otherwise, the location of the converter station within the LoD does not affect this assessment in terms of roads, construction vehicle routing or numbers	Lateral movement of Saxmundham Converter Station within the LoD will not influence the traffic and transport assessment as a worst-case assumption has been adopted in terms of PRoW diversions.
Vertical LoD Saxmundham Converter Station	No assumptions required, as the height of the converter station does not affect this assessment	Vertical movement of Saxmundham Converter Station within the LoD will not influence the traffic and transport assessment.

Consideration of Scenarios and Options

2.8.5.5 There are three scenarios which have been considered by the preliminary assessment. These are:

- Friston Substation is installed either under the current consent sought by Scottish Power Renewables (SPR) or as part of the Proposed Project, as explained in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**. Friston Substation will be located to the northeast of the B1121 Saxmundham Road and will be accessed via S-BM07. The access via Grove Road (and S-BM06) would also be used for construction traffic accessing the Friston Substation along the haul road from S-BM04, as well as by light vehicles.;
- Saxmundham Converter Station construction access will be located to the south of the B1119 and will be accessed for construction via the B1121 Main Road (and S-BM09) to the west if this option is taken forward, or otherwise the B1121 Main Road (and S-BM12) and the B1119 (and S-BM10 plus S-BM11) to the northwest if this option is taken forward, as explained in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**; and
- Saxmundham Converter Station permanent access is taken via S-BM09 and S-BM12 as well as S-BM13. There is also potential for a permanent access from S-BM11 whilst retaining the route from S-BM12 or S-BM09 as a right of access for the delivery of AILs., as explained in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**.

2.8.5.6 The following Table 2.8.16 sets out whether each assessment scenario is relevant to this assessment, and how it has been assessed.

Table 2.8.16: Suffolk Onshore Scheme consideration of scenarios

Assessment scenario	How it has been considered within the preliminary assessment
Friston Substation	The installation of the Friston Substation is accounted for by the construction traffic flows which have informed this assessment, to provide a worst-case assessment.
Saxmundham Converter Station construction access	For robustness, the assessment includes both options where construction traffic uses the B1121 Main Road to access S-BM12 to the north, and the B1121 Main Road to access S-BM09 to the south, for the purposes of accessing the Saxmundham Converter Station. Therefore, both routes have been considered and any differences in potential effects as a result of each option (i.e., due to different receptors being affected) have been reported in Section 2.8.9 where necessary.
Saxmundham Converter Station permanent access	The operational phase traffic is scoped out of the assessment. As such access on a permanent basis is not assessed, although details of permanent access will be provided to address feedback from SCC Highways once the option is selected as per the above. In addition, consideration of any permanent PRoW diversions as a result of Saxmundham Converter Station has also been made within Section 2.8.9, including with reference to mitigation.

Coordination including Co-location

2.8.5.7 The Proposed Project includes an option for co-location with National Grid Ventures proposed Nautilus and LionLink (formerly known as EuroLink) interconnector projects as explained in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**.

2.8.5.8 Table 2.8.17 details where the option of co-location is relevant to the preliminary traffic and transport assessment and how this option has been assessed and reported in Section 2.8.9, preliminary assessment of effects.

Table 2.8.17: Suffolk Onshore Scheme consideration of co-location

Element of co-location	How it has been considered within the preliminary assessment
HVDC ducts	The traffic and transport assessment has been carried out on the basis that co-location forms the core assumption in terms of traffic demand. This ensures a 'worst case' assessment has been considered. The increased working widths associated with the installation of additional ducts within the limits of deviation as a result of co-location would not impact any additional receptors to those already considered by the assessment for the Proposed Project, and these are therefore not material to this assessment.
HVAC ducts	The traffic and transport assessment has been carried out on the basis that co-location forms the core assumption in terms of traffic demand. This ensures a 'worst case' assessment has been

Element of co-location	How it has been considered within the preliminary assessment
	considered. The increased working widths associated with the installation of additional ducts within the limits of deviation as a result of co-location would not impact any additional receptors to those already considered by the assessment for the Proposed Project, and these are therefore not material to this assessment.
Saxmundham Converter Station	The traffic and transport assessment has been carried out on the basis that co-location (which includes installation of additional ducts) forms the core assumption in terms of traffic demand. This ensures a 'worst case' assessment has been considered. The assessment also considers the presence of three converter stations in terms of potential PRoW and walking/cycling route impacts. However, the converter stations are not expected to impact any additional road link or road junction receptors to those already considered by the assessment for the Proposed Project. In terms of the operational and maintenance phase, each proposed converter station associated with the Suffolk Onshore Scheme will be manned by two operatives, resulting in up to four daily car/LGV trips per converter station. Therefore, due to the low level of trips likely to be generated, it has been agreed to exclude operational phase transport effects from the EIA (see Scoping Opinion ref ID 3.7.1).
Friston substation	No option has been included for co-location as part of the Proposed Project. This is assessed cumulatively in **Volume 1, Part 2, Chapter 14, Suffolk Onshore Scheme Inter-project Cumulative Effects**.
Suffolk landfall	The traffic and transport assessment has been carried out on the basis that co-location forms the core assumption in terms of traffic demand. This ensures a 'worst case' assessment has been considered. The increased working widths associated with the installation of additional ducts within the limits of deviation as a result of co-location would not impact any additional receptors to those already considered by the assessment for the Proposed Project, and these are therefore not material to this assessment. Furthermore, trenchless methods will be employed at the Suffolk landfall to avoid any potential impacts on the Suffolk Coastal Path, King Charles III England Coast Path, PRoW E-103/006/0 and Thorpe Road.

Sensitivity Test

Programme duration sensitivity test

2.8.5.9 It is likely that under the terms of the draft DCO, construction could commence in any year up to five years from the granting of the DCO which is assumed to be 2026. Consideration has been given as to whether the preliminary effects reported would be any different if the works were to commence in any year up to year five. Where there is a difference, this is reported in Section 2.8.9, preliminary assessment of effects.

2.8.5.10 At this stage, it is considered that the conclusions of the assessment as reported in Section 2.8.9 would remain unchanged in the instance that the start of construction is delayed. For example, other cumulative schemes may have been completed by the time the Proposed Project construction begins, which would elevate the trips on the local road network in the future baseline. As the assessment criteria is based on a percentage change of vehicle numbers, a higher baseline flow would reduce the proportional impact that the Proposed Project has on the road network. This would reduce or maintain the levels of effect presented in this chapter. It is therefore considered that assessment of 2029 reflects a worst-case approach and the conclusions would remain valid should the peak be later than this.

Construction hours sensitivity test

2.8.5.11 The proposed working hours for the Proposed Project exclude working on a Sunday and Bank Holidays (except for specific works) as outlined in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**. Consideration is being given to whether the outcome of the assessment may change if working on Sunday and Bank Holidays is permitted to provide flexibility in the programme.

2.8.5.12 At this stage, it is considered that the preliminary assessment of effects reported in Section 2.8.9 would remain unchanged in the instance that added flexibility was built into the programme, as this would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days.

2.8.6 Study Area

2.8.6.1 The study area for the assessment has been defined based on the area where there is likely to be a transport impact resulting from the construction of the Proposed Project. This includes routes along which HGVs and construction worker vehicles will travel during the works programme.

2.8.6.2 This study area has been defined following discussions with SCC during the initial scoping meeting on 9 June 2023. This included a review of the highway network and the pedestrian/cycle network including Public Rights of Way (PRoW) which may potentially be affected by the Suffolk Onshore Scheme. The study area is shown on **Figure 2.8.1 Traffic and Transport Study Area in Suffolk**.

2.8.6.3 The following road link receptors have been assessed in relation to the Proposed Project within the agreed study area:

- S-RL1: A12 (south of A1094 junction);
- S-RL2: A12 (between A1094 and B1121 South junctions);
- S-RL3: A12 (between B1121 South and B1121 North);

- S-RL4: A12 (north of B1121 junction);
- S-RL5: B1121 Main Road (southern section between A12 and B1119 Church Hill junctions);
- S-RL6: B1121 Main Road (northern section between B1119 Church Hill and A12 junctions);
- S-RL7: B1119 (between A12 and B1121 junctions);
- S-RL8: B1119 Church Hill (between the B1121 and Grove Road junctions);
- S-RL9: B1121 (between B1121 Main Road and A1094 junctions);
- S-RL10: A1094 (between the A12 and B1069 junctions);
- S-RL11: A1094 (between the B1069 and the B1122 junctions);
- S-RL12: B1069 Snape Road (between the A1094 and B1353 junctions); and
- S-RL13: B1122 (between the A1094 and the B1353).

2.8.6.4 The following road junction receptors have been assessed in relation to the Proposed Project within the agreed study area:

- S-RJ1: A12/A1094 junction;
- S-RJ2: A12/B1121 (South) junction;
- S-RJ3: A12/B1119 junction;
- S-RJ4: A12/B1121 (North) junction;
- S-RJ5: A12/B1122 junction;
- S-RJ6: B1121 Main Road/B1121 Church Hill junction;
- S-RJ7: B1121 Main Road/B1119 Church Hill Signalised junction;
- S-RJ8: B1121 Saxmundham Road/Grove Road/Mill Road junction;
- S-RJ9: A1094 Aldeburgh Road/B1121 Aldeburgh Road junction;
- S-RJ10: A1094 Aldeburgh Road/B1069 Snape Road junction; and
- S-RJ11: A1094/B1122 Leiston Road/Church Farm Road Roundabout.

2.8.6.5 The above road link and road junction receptors are shown on **Figure 2.8.5 Transport Traffic Count Locations**.

2.8.6.6 The following PRoW receptors (running from east to west, with local reference numbers identified) have been assessed in relation to the Proposed Project within the agreed study area, based on the locations where the proposed construction routes will cross PRoW within the draft Order Limits or where temporary/permanent PRoW diversions may be required to accommodate the works or to ensure that these PRoW will remain physically separated from the proposed construction routes/works:

- S-P1: E-103/006/0 (6318) Public footpath;
- S-P2: E-103/016/0 (6333) Public footpath;
- S-P3: E-103/001/0 (10027) Public footpath;
- S-P4: E-260/013/A (7452) Public footpath;

- S-P5: E-260/012/A (7450) Bridleway;
- S-P6: E-354/022/0 (7991) Public footpath;
- S-P7: E-260/026/0 (12866) Bridleway;
- S-P8: E-354/020/0 (7990) Bridleway;
- S-P9: E-354/036/0 (14032) Bridleway;
- S-P10: E-354/002/0 (7970) Bridleway;
- S-P11: E-354/001/0 (7969) Bridleway;
- S-P12: E-354/018/0 (7988) Public footpath;
- S-P13: E-354/007/A (7977) Public footpath;
- S-P14: E-354/006/0 (7975) Public footpath;
- S-P15: E-354/008/0 (7978) Public footpath;
- S-P16: E-260/017/0 (7455) Public footpath;
- S-P17: E-260/015/0 (7453) Public footpath;
- S-P18: E-260/016/0 (7454) Public footpath;
- S-P19: E-491/010/0 (8906) Bridleway;
- S-P20: E-491/006/0 (8904) Public footpath;
- S-P21: E-491/005/0 (8903) Public footpath;
- S-P22: E-491/004/0 (8902) Public footpath;
- S-P23: E-460/023/0 (8644) Public footpath;
- S-P24: E-344/034/0 (7881) Public footpath; and
- S-P25: E-460/001/0 (8622) Public footpath.

2.8.6.7 For ease of reference, the shorter references in brackets have been taken forward for the remainder of this report.

2.8.6.8 The following national/regional walking and cycling route receptors have been assessed in relation to the Proposed Project within the agreed study area, based on the locations where the proposed construction routes will cross these routes within the draft Order Limits or where temporary diversions or closures will be required:

- S-C1: National Cycle Network Route 42;
- S-W1: King Charles III England Coast Path.
- S-W2: The Suffolk Coast Path; and
- S-W3: Sandlings Walk.

2.8.6.9 The above walking and cycling routes including PRoW are shown on **Figure 2.8.4 Public Rights of Way**.

2.8.7 Baseline Conditions

Existing Baseline

Highway network

2.8.7.1 The study area (see **Figure 2.8.1 Traffic and Transport Study Area in Suffolk**) includes main portions of the surrounding highway network. The most prominent is the A12, the B1121 to the north and south of Saxmundham, the B1119 and the A1094 to the west of Aldeburgh. The A1094 has a single lane in each direction and is the main route between Aldeburgh and the A12. The portion of the A1094 within the study area includes a number of farm accesses and is subject to the national speed limit (derestricted).

2.8.7.2 The study area includes the B1122 Leiston Road which runs from Aldeburgh in the south towards Aldringham, Leiston and Yoxford in the north. The portion of the B1122 within the study area provides access to a farm access and operates with a 30 mph speed limit. The B1122 is linked to the A1094 to the south and the A12 to the north.

2.8.7.3 Thorpe Road is a coastal road to the east of the study area which links Aldeburgh in the south with Thorpeness to the north. The route, which operates with the national speed limit, does not include connectivity with any other key routes within the study area.

2.8.7.4 The B1069 Snape Road bisects the centre of the study area and connects the A1094 to the south with the village of Knodishall Common to the north. Grove Road is also a north-south route through the centre of the study area, running northwards from the village of Friston. Grove Road is unclassified and is a single lane carriageway, subject to a 30 mph speed limit in the south and the national speed limit in the north of the study area. School Road also forms a junction with Grove Road and runs eastwards towards Knodishall. There are a number of unmade tracks which provide agricultural access within the centre of the study area via the A1094 and the B1069.

2.8.7.5 The northwest section of the study area includes several minor rural roads which predominantly provide agricultural and local access. The western perimeter of the study area includes the A12, which interacts with the B1119 and B1121 routes, which run from Saxmundham to Leiston and Sternfield to Friston respectively. The study area includes the junction between the B1119 and B1121 within Saxmundham. The B1121 operates with a 30 mph speed limit whereas the B1119 is subject to the national speed limit, at its extents abutting the study area.

Baseline traffic data

2.8.7.6 As part of this preliminary environmental assessment, baseline traffic data has been obtained for the surrounding highway network within the study area based on available DfT traffic counts and data publicly available from the East Anglia One North (EA1N) DCO (see **Figure 2.8.5** for the survey locations). The following 24-hour average daily and 12-hour weekday DfT traffic count or EA1N data has been used to identify baseline traffic flows:

- A12 North (EA1N 2018);
- A12 South (EA1N 2018);
- A1094 between the A12 and B1069 junctions (EA1N 2018);

- A1094 between the B1069 and the B1122 junctions (DfT 2019);
- B1121 between B1121 Main Road and A1094 junctions (DfT 2019);
- B1121 Main Road (northern section between B1119 Church Hill and A12 junctions) (DfT, 2009); and
- B1069 Snape Road (EA1N 2018).

2.8.7.7 The traffic flows for the B1121 Main Road (northern section between B1119 Church Hill and A12 junctions) have been adopted for parts of the B1121 and B1119, in the absence of any traffic count data for these parts of the network. The traffic flows for the A1094 (between the B1069 and the B1122 junctions) have been adopted for the B1122 (between the A1094 and the B1353) in the absence of traffic count data for this part of the network.

2.8.7.8 A summary of the traffic count data is provided in Table 2.8.18 with further detail (including for the peak hours) provided in **Volume 2, Part 2, Appendix 2.8.C, Baseline Traffic Flows**.

Table 2.8.18: Historic data average weekday (12 hours) and daily (24 hours)

Location	Source	Base year	Average weekday		Average day	
			HGVs	Total	HGVs	Total
A1094 (S-RL11) and B1122 (S-RL13)	EA1N (Count Site 15)	2018	168	4,843	185	5,483
B1069 (S-RL12)	EA1N (Count Site 7)	2018	153	3,791	175	4,508
A1094 (S-RL10)	DfT (Count Site 27547)	2019	208	6,538	192	7,209
B1121 (S-RL9)	DfT (Count Site 809444)”	2019	15	1,182	13	1,238
B1121 (S-RL5)	DfT (Count Site 950953)	2009	89	3,532	85	3,903
B1119 (S-RL7 and S-RL8)	DfT (Count Site 950953)	2009	89	3,532	85	3,903
B1121 (RL-6)	DfT (Count Site 950953)	2009	89	3,532	85	3,903
A12 North (S-RL4)	EA1N (Count Site 11)	2018	790	10,787	919	12,593
A12 South (S-RL1, S-RL2 and S-RL3)	EA1N (Count Site 13)	2018	784	9,865	896	11,274

2.8.7.9 Traffic growth has been calculated using NRTF growth factors, reflecting projected increases in annual vehicle mileage on roads within England and Wales. NTM adjustments have then been applied within TEMPro as follows:

- for converting 2009 to 2023 (B1121 Main Road and B1119 only): NTEM dataset v7.2 and NTM AF15 dataset (covering the period up to 2040) to reflect local factors (i.e. Suffolk Coastal) for an urban minor road, to determine the forecast increases in future baseline car driver/passenger trips during each period. It should be noted that factors were only available between 2011 and 2023 (12 years' growth), and two additional years of growth has therefore been applied to cover 2009 to 2023 (14 years' growth);
- for converting 2018 to 2023 (for data collected from EA1N DCO): NTEM dataset v7.2 and 2018 Road Traffic Forecasts (RTF) – Scenario 1 (Reference Case) dataset (covering the period up to 2050) to reflect local factors (i.e. Suffolk Coastal) for the appropriate road types, to determine the forecast increases in future baseline car driver/passenger trips during each period; and
- for converting 2019 to 2023 (for data collected from 2019 DfT counts): NTEM dataset v7.2 and 2018 RTF – Scenario 1 (Reference Case) dataset (covering the period up to 2050) to reflect local factors (i.e. Suffolk Coastal) for the appropriate road types, to determine the forecast increases in future baseline car driver/passenger trips during each period.

2.8.7.10 A summary of the growth factors is set out in Table 2.8.19 below.

Table 2.8.19: Traffic growth factors to 2023

Growth Period	Road Type	Traffic Growth Factor			
		AM Peak	PM Peak	Average Weekday	Average Day
2009 to 2023	Urban Minor (B1121 Main Road and B1119)	1.1145	1.1376	1.1698	1.1737
2018 to 2023	Principal	1.0292	1.0303	1.0361	1.0363
	Minor	1.0289	1.0299	1.0357	1.0359
	All	**1.0368**	**1.0379**	**1.0438**	**1.0440**
2019 to 2023	Principal	1.0238	1.0247	1.0293	1.0296
	Minor	1.0236	1.0246	1.0292	1.0294
	All	**1.0290**	**1.0300**	**1.0346**	**1.0349**

2.8.7.11 To provide consistency across the network, the growth factors for all roads (as presented above in **bold**) have been applied to the 2018 and 2019 baseline traffic flows to derive 2023 baseline traffic flows for the respective time period. The 2009 baseline traffic flows for the B1121 Main Road and B1119 have been converted to 2023 baseline traffic flows by adopting growth factors for urban minor roads.

2.8.7.12 The above traffic data has been used to estimate baseline traffic flows for the road junction receptors within the study area (S-RJ1 to S-RJ11) upon which the assessment work has then be based.

2.8.7.13 A summary of the 2023 baseline traffic flows on the above parts of the highway network, during the individual hours between 7am-10am, 4pm-7pm, 12-hour weekday (7am-7pm) and 24 hour daily are held in **Volume 2, Part 2, Appendix 2.8.C, Baseline Traffic Flows**. The average weekday and daily traffic flows are also provided in Table 2.8.20.

Table 2.8.20: 2023 Baseline average weekday (12 hours) and daily (24 hours) flows

Location	Average weekday		Average day	
	HGVs	Total	HGVs	Total
A1094 (S-RL11) and B1122 (S-RL13)	175	5,055	193	5,724
B1069 (S-RL12)	160	3,957	183	4,706
A1094 (S-RL10)	215	6,764	199	7,460
B1121 (S-RL9)	16	1,223	13	1,281
B1121 (S-RL5)	104	4,132	100	4,581
B1119 (S-RL7 and S-RL8)	104	4,132	100	4,581
B1121 (RL-6)	104	4,132	100	4,581
A12 North (S-RL4)	825	11,259	959	13,147
A12 South (S-RL1, S-RL2 and S-RL3)	818	10,297	935	11,770

2.8.7.14 As part of the ES, a series of traffic surveys will be undertaken to obtain a more comprehensive set of baseline traffic flows for the existing highway network within the agreed study area. At the SCC Highways Scoping Meeting in June 2023, SCC also stated that they may be able to provide their own survey data to inform the baseline traffic flows. In terms of commissioning traffic surveys for the Proposed Project, it was not possible to agree or accommodate surveys in support of the PEIR due to the programme for submission and the requirement to avoid the 2023 school summer holiday period.

Sensitivity of road links and junctions for assessments

2.8.7.15 Table 2.8.21 provides a summary of the road link and road junction sensitivity to severance, pedestrian delay, fear and intimidation, and non-motorised user amenity effects taken forward for assessment. Further detail is provided in **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels** and **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.21: Sensitivity of road links and junctions for severance, pedestrian delay, fear and intimidation, non-motorised user amenity

Ref	Receptor Type	Description	Sensitivity
S-RL1	Road Link	A12 (south of A1094 junction)	Low

Ref	Receptor Type	Description	Sensitivity
S-RL2	Road Link	A12 (between A1094 and B1121 South junctions)	Negligible
S-RL3	Road Link	A12 (between B1121 South and B1121 North)	Negligible
S-RL4	Road Link	A12 (north of B1121 junction)	Low
S-RL5	Road Link	B1121 Main Road (southern section between A12 and B1119 Church Hill junctions)	Medium
S-RL6	Road Link	B1121 Main Road (northern section between B1119 Church Hill and A12 junctions)	Low
S-RL7	Road Link	B1119 (between A12 and B1121 junctions)	High
S-RL8	Road link	B1119 Church Hill (between the B1121 and Grove Road junctions)	Medium
S-RL9	Road link	B1121 (between B1121 Main Road and A1094 junctions)	High
S-RL10	Road link	A1094 (between the A12 and B1069 junctions)	Medium
S-RL11	Road link	A1094 (between the B1069 and the B1122 junctions)	Medium
S-RL12	Road link	B1069 Snape Road (between the A1094 and B1353 junctions)	Low
S-RL13	Road link	B1122 (between the A1094 and the B1353)	High
S-RJ1	Road junction	A12/A1094 junction	Negligible
S-RJ2	Road junction	A12/B1121 (South) junction	Low
S-RJ3	Road junction	A12/B1119 junction	Negligible
S-RJ4	Road junction	A12/B1121 (North) junction	Negligible
S-RJ5	Road junction	A12/B1122 junction	Low
S-RJ6	Road junction	B1121 Main Road/B1121 Church Hill junction	Medium
S-RJ7	Road junction	B1121 Main Road/B1119 Church Hill Signalised junction	High

Ref	Receptor Type	Description	Sensitivity
S-RJ8	Road junction	B1121 Saxmundham Road/Grove Road/Mill Road junction	High
S-RJ9	Road junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road junction	Negligible
S-RJ10	Road junction	A1094 Aldeburgh Road/B1069 Snape Road junction	Negligible
S-RJ11	Road junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout	High

2.8.7.16 Table 2.8.22 provides a summary of the road link and road junction sensitivity to driver delay effects taken forward for assessment. Further detail is provided in **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels** and **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.22: Sensitivity of road links and junctions for driver delay

Ref	Receptor Type	Description	Sensitivity
S-RL1	Road link	A12 (south of A1094 junction)	Low
S-RL2	Road link	A12 (between A1094 and B1121 South junctions)	Low
S-RL3	Road link	A12 (between B1121 South and B1121 North)	Low
S-RL4	Road link	A12 (north of B1121 junction)	Low
S-RL5	Road link	B1121 Main Road (southern section between A12 and B1119 Church Hill junctions)	Medium
S-RL6	Road link	B1121 Main Road (northern section between B1119 Church Hill and A12 junctions)	Medium
S-RL7	Road link	B1119 (between A12 and B1121 junctions)	High
S-RL8	Road link	B1119 Church Hill (between the B1121 and Grove Road junctions)	Medium
S-RL9	Road link	B1121 (between B1121 Main Road and A1094 junctions)	Low
S-RL10	Road link	A1094 (between the A12 and B1069 junctions)	Low
S-RL11	Road link	A1094 (between the B1069 and the B1122 junctions)	Low

Ref	Receptor Type	Description	Sensitivity
S-RL12	Road link	B1069 Snape Road (between the A1094 and B1353 junctions)	Low
S-RL13	Road link	B1122 (between the A1094 and the B1353)	High
S-RJ1	Road junction	A12/A1094 junction	Low
S-RJ2	Road junction	A12/B1121 (South) junction	Low
S-RJ3	Road junction	A12/B1119 junction	Low
S-RJ4	Road junction	A12/B1121 (North) junction	Low
S-RJ5	Road junction	A12/B1122 junction	Low
S-RJ6	Road junction	B1121 Main Road/B1121 Church Hill junction	Low
S-RJ7	Road junction	B1121 Main Road/B1119 Church Hill Signalised junction	Very High
S-RJ8	Road junction	B1121 Saxmundham Road/Grove Road/Mill Road junction	Medium
S-RJ9	Road junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road junction	Low
S-RJ10	Road junction	A1094 Aldeburgh Road/B1069 Snape Road junction	Low
S-RJ11	Road junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout	Very High

Collision data

2.8.7.17 This section provides a summary of the PIA data obtained from CrashMap (Ref. 2.8.16) which contains official data published by the DfT for the highway network within the agreed study area as shown on **Figure 2.8.1 Traffic and Transport Study Area in Suffolk**. The scope of the collision review was discussed with SCC Highways at the SCC Highways Scoping Meeting in June 2023. The most recently available PIA data from CrashMap covers the five-year period between the start of 2017 and the end of 2021. Full PIA data will be obtained from SCC Highways for the most recent five-year period available as part of the ES (which will exclude the Covid-19 period, between March 2020 and August 2021).

2.8.7.18 A summary of the PIA data from CrashMap (categorised by severity; slight, serious and fatal) is set out below in Table 2.8.23. This includes a separate summary of collisions involving goods vehicles to inform the assessment of hazardous/large loads in Section 2.8.9.

Table 2.8.23: Collision review (CrashMap)

Location	Total collisions				Collisions involving a goods vehicle			
	Sl	Se	Fa	Total	Sl	Se	Fa	Total
A12 (south of A1094 junction)	2	0	0	2	1	0	0	1
A12 (between A1094 and B1121 South junctions)	0	0	0	0	0	0	0	0
A12 (between B1121 South and B1121 North)	1	3	0	4	0	1	0	1
A12 (north of B1121 North junction)	11	1	1	13	1	0	0	1
B1121 Main Road (southern section between A12 and B1119 Church Hill junctions)	2	0	0	2	0	0	0	0
B1121 Main Road (northern section between B1119 Church Hill and A12 junctions)	1	1	0	2	0	0	0	0
B1119 (between A12 and B1121 junctions)	1	2	0	3	0	0	0	0
B1119 Church Hill (between the B1121 and Grove Road junctions)	4	1	0	5	1	0	0	1
B1121 (between B1121 Main Road and A1094 junctions, excluding junction with Sandy Lane)	1	0	0	1	0	0	0	0
A1094 (between the A12 and the B1069 junctions)	7	2	0	9	2	0	0	2
A1094 (between the B1069 and the B1122 junctions)	1	3	0	4	0	0	0	0
B1069 Snape Road (between the A1094 and B1353 junctions)	2	2	0	4	0	0	0	0
B1122 (between the A1094 and the B1353)	1	0	0	1	0	0	0	0
A12/A1094 junction	8	2	0	10	0	0	0	0
A12/B1121 (South) junction	4	0	0	4	0	0	0	0
A12/B1119 junction	5	4	0	9	2	1	0	3
A12/B1121 (North) junction	4	0	0	4	0	0	0	0
A12/B1122 junction	2	0	0	2	0	0	0	0
B1121 Main Road/B1121 Church Hill junction	0	0	0	0	0	0	0	0
B1121 Main Road/B1119 Church Hill Signalised junction	4	0	0	4	0	0	0	0

Location	Total collisions				Collisions involving a goods vehicle			
	Sl	Se	Fa	Total	Sl	Se	Fa	Total
B1121 Saxmundham Road/Grove Road/Mill Road junction	0	0	0	0	0	0	0	0
A1094 Aldeburgh Road/B1121 Aldeburgh Road junction	1	0	0	1	0	0	0	0
A1094 Aldeburgh Road/B1069 Snape Road junction	0	0	0	0	0	0	0	0
A1094/B1122 Leiston Road/Church Farm Road Roundabout	2	1	0	3	0	0	0	0

Sl = Slight, Se = Serious, Fa = Fatal

2.8.7.19 The above shows that there are several locations where more than five PIAs were recorded within the five-year period, which may suggest that these locations are more sensitive to an increase in traffic from a highway safety perspective. There are also several locations which appear to have a good safety record with two or fewer PIAs within the five-year period, which suggest that these locations may be less sensitive to an increase in traffic from a highway safety perspective. In terms of PIAs involving goods vehicles, there are no locations where more than five PIAs were recorded (involving goods vehicles) within the five-year period.

2.8.7.20 Following on from the above, collision rates have been calculated in billion vehicle miles for road links to provide a comparison with national road safety statistics provided within Road Casualties Great Britain (Ref. 2.8.25). The following formula has been used to calculate the collision rate, where 1,826 reflects the number of days over which the collision data has been sourced (between 01 January 2017 to 31 December 2021).

$$\text{Collision Rate} = \frac{\text{Number of recorded PIAs (per road link) x 1 billion}}{\text{1,826 x AADT (2019) x length of road (miles)}}$$

2.8.7.21 The national average collision rate has been calculated between 2017 and 2021 using dataset RAS0302: Urban and rural roads, for the appropriate road type. A summary of the comparison is presented in Table 2.0.24 below.

Table 2.0.24: Collision rates (road links)

Location	PIAs	AADT (2019)	Link length (miles)	Collision rate	National average
A12 (south of A1094 junction)	2	11,274	0.5	194	188*
A12 (between A1094 and B1121 South junctions)	0	11,274	0.6	0	188*
A12 (between B1121 South and B1121 North)	4	11,274	2.9	67	188*
A12 (north of B1121 North junction)	13	12,593	2.3	246	188*

Location	PIAs	AADT (2019)	Link length (miles)	Collision rate	National average
B1121 Main Road (southern section between A12 and B1119 Church Hill junctions)	2	4,321	1.2	211	512^^
B1121 Main Road (northern section between B1119 Church Hill and A12 junctions)	2	4,321	1.7	149	512^^
B1119 (between A12 and B1121 junctions)	3	4,321	0.6	634	649^
B1119 Church Hill (between the B1121 and Grove Road junctions)	5	4,321	1.7	373	512^^
B1121 (between B1121 Main Road and A1094 junctions, excluding junction with Sandy Lane)	1	1,238	2.6	170	324**
A1094 (between the A12 and the B1069 junctions)	9	7,209	3.1	221	188*
A1094 (between the B1069 and the B1122 junctions)	4	5,483	2.6	154	188*
B1069 Snape Road (between the A1094 and B1353 junctions)	4	4,508	1.4	347	324**
B1122 (between the A1094 and the B1353)	1	5,483	2.4	42	324**

*rural A-roads **rural other roads ^urban other roads ^^all roads other roads

2.8.7.22 The above shows that the majority of the highway network has a lower collision rate than the national average for the comparable road type and may therefore be less sensitive to a change in traffic flow/type, particularly parts of the A12, the B1121 and the B1122. No PIAs were recorded on the A12 between the A1094 and B1121 South junctions. The B1119 (between A12 and B1121 junctions) and the B1069 Snape Road have comparable collision rates with the national average. The A12 (north of the B1121 junction) and the A1094 (between the A12 and B1069 junctions) have higher collision rates than the national average. This information has been used to inform the assessment of road safety and hazardous/large Loads within Section 2.8.9.

Sensitivity of road links and junctions for assessment of road safety and hazardous/large Loads

2.8.7.23 Table 2.8.25 provides a summary of the road link and road junction sensitivity to road safety and to hazardous/large Loads effects taken forward for assessment. Further detail is provided in **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels** and **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.25: Sensitivity of road links and junctions for assessment of road safety and hazardous/large loads

Ref	Receptor type	Description	Sensitivity	
			Road safety	Hazardous/ large loads
S-RL1	Road link	A12 (south of A1094 junction)	Negligible	Negligible
S-RL2	Road link	A12 (between A1094 and B1121 South junctions)	Negligible	Negligible
S-RL3	Road link	A12 (between B1121 South and B1121 North)	Medium*	Low
S-RL4	Road link	A12 (north of B1121 junction)	Very High	Negligible
S-RL5	Road link	B1121 Main Road (southern section between A12 and B1119 Church Hill junctions)	Negligible	Negligible
S-RL6	Road link	B1121 Main Road (northern section between B1119 Church Hill and A12 junctions)	Low	Negligible
S-RL7	Road link	B1119 (between A12 and B1121 junctions)	Medium	Negligible
S-RL8	Road link	B1119 Church Hill (between the B1121 and Grove Road junctions)	Low*	Negligible
S-RL9	Road link	B1121 (between B1121 Main Road and A1094 junctions)	Negligible	Negligible
S-RL10	Road link	A1094 (between the A12 and B1069 junctions)	High	Negligible
S-RL11	Road link	A1094 (between the B1069 and the B1122 junctions)	Medium*	Negligible
S-RL12	Road link	B1069 Snape Road (between the A1094 and B1353 junctions)	Medium	Negligible
S-RL13	Road link	B1122 (between the A1094 and the B1353)	Negligible	Negligible
S-RJ1	Road junction	A12/A1094 junction	Very High	Negligible
S-RJ2	Road junction	A12/B1121 (South) junction	Low	Negligible
S-RJ3	Road junction	A12/B1119 junction	High	Low
S-RJ4	Road junction	A12/B1121 (North) junction	Low	Negligible

Ref	Receptor type	Description	Sensitivity	
			Road safety	Hazardous/ large loads
S-RJ5	Road junction	A12/B1122 junction	Negligible	Negligible
S-RJ6	Road junction	B1121 Main Road/B1121 Church Hill junction	Negligible	Negligible
S-RJ7	Road junction	B1121 Main Road/B1119 Church Hill Signalised junction	Low	Negligible
S-RJ8	Road junction	B1121 Saxmundham Road/Grove Road/Mill Road junction	Negligible	Negligible
S-RJ9	Road junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road junction	Negligible	Negligible
S-RJ10	Road junction	A1094 Aldeburgh Road/B1069 Snape Road junction	Negligible	Negligible
S-RJ11	Road junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout	Low	Negligible

*sensitivity level has been adjusted to reflect a lower collision rate than the national average

Public transport network

2.8.7.24 A high-level review has been carried out below for public transport as this is not expected to constitute a key travel mode for construction workers. The focus of the assessment work within this chapter is on the highway network and the walking/cycling network including PRoW.

2.8.7.25 There are bus stops in both directions on the B1122 towards the southeast of the study area, circa. 800m to the south of the draft Order limits. The bus routes that operate along the B1122 are route numbers 64, 65 and 522. The 522 service operates between Saxmundham and Aldeburgh, with services operating from 07:00 and 17:00, at a frequency of one service per hour in each direction. The 64 service runs from Ipswich to Aldeburgh via Leiston between 06:00 and 20:00 at a frequency of one service per hour in each direction. The 65 service runs from Ipswich to Leiston via Woodbridge between 06:00 and 15:30 on an hourly frequency in each direction.

2.8.7.26 The B1121 within the study area is used by bus route 521 which runs between Aldeburgh and Halesworth. The service operates four times per day in each direction and can be accessed from stops at Friston circa. 800m to the west of the draft Order limits, and Sandy Lane further to the west. The 522 bus route also operates along the B1119 circa. 1km to the southwest of the draft Order limits, with access points within Saxmundham, including from the Waitrose store on this road.

2.8.7.27 There are no rail services within the study area, although Saxmundham railway station is only 900 m to the northwest of the draft Order limits. The station operates services between Lowestoft and Ipswich at one service per hour in each direction. There is a branch railway line between Saxmundham and Leiston, although this is solely for service access to Sizewell power station.

Active travel network

2.8.7.28 National Cycle Network Route 42 runs in a southwest to northeast direction across the study area. The Suffolk Coast Path crosses the study area, north of Aldeburgh. Sandlings Walk, which is a promoted route from Ipswich to Lowestoft, runs east to west across the south of the study area.

2.8.7.29 There are a significant number of bridleways and shared walking and cycling routes within the study area. The PRoW within the study area are set out below, which includes those assessed within this chapter (with the associated local reference number and receptor reference), as well as additional PRoW within the study area which are not expected to be affected by the Proposed Project (no receptor reference):

- 6318 (S-P1) Footpath;
- 6333 (S-P2) Footpath;
- 10027 (S-P3) Footpath;
- 7452 (S-P4) Footpath;
- 7450 (S-P5) Bridleway;
- 7991 (S-P6) Footpath;
- 12866 (S-P7) Bridleway;
- 7990 (S-P8) Bridleway;
- 14032 (S-P9) Bridleway;
- 7970 (S-P10) Bridleway;
- 7969 (S-P11) Bridleway;
- 7988 (S-P12) Footpath;
- 7977 (S-P13) Footpath;
- 7975 (S-P14) Footpath;
- 7978 (S-P15) Footpath;
- 7455 (S-P16) Footpath;
- 7453 (S-P17) Footpath;
- 7454 (S-P18) Footpath;
- 8906 (S-P19) Bridleway;
- 8904 (S-P20) Footpath;
- 8903 (S-P21) Footpath;
- 8902 (S-P22) Footpath;
- 8644 (S-P23) Footpath;
- 7881 (S-P24) Footpath;
- 8622 (S-P25) Footpath;
- 7971 Footpath;
- 8907 Bridleway;
- 7976 Footpath;
- 7979 Footpath;
- 16992 Footpath;
- 7997 Footpath;
- 7447 Footpath;
- 7456 Footpath;
- 7989 Footpath;
- 7972 Footpath;
- 7464 Bridleway;
- 7449 Bridleway;
- 7986 Footpath;
- 7446 Footpath;
- 7457 Footpath;
- 7445 Footpath;
- 7973 Footpath; and
- 6334 Footpath.

2.8.7.30 Table 2.8.26 provides a summary of the PRoW and walking/cycling route sensitivity to severance, pedestrian delay, fear and intimidation, and non-motorised user amenity effects taken forward for assessment. Further detail is provided in **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels** and **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.26: Sensitivity of PRoW and walking/cycling routes for severance, pedestrian delay, fear and intimidation, non-motorised user amenity

Ref	Receptor type	Description	Sensitivity
S-P1	PRoW	6318	Negligible
S-P2	PRoW	6333	Low
S-P3	PRoW	10027	Medium
S-P4	PRoW	7452	Low
S-P5	PRoW	7450	Low
S-P6	PRoW	7991	Negligible
S-P7	PRoW	12866	Medium
S-P8	PRoW	7990	Medium
S-P9	PRoW	14032	Medium
S-P10	PRoW	7970	Medium
S-P11	PRoW	7969	Low
S-P12	PRoW	7988	Negligible
S-P13	PRoW	7977	Negligible
S-P14	PRoW	7975	Low
S-P15	PRoW	7978	Low
S-P16	PRoW	7455	Low
S-P17	PRoW	7453	Negligible
S-P18	PRoW	7454	Medium
S-P19	PRoW	8906	Medium
S-P20	PRoW	8904	Negligible
S-P21	PRoW	8903	Negligible
S-P22	PRoW	8902	Low
S-P23	PRoW	8644	Low
S-P24	PRoW	7881	Negligible
S-P25	PRoW	8622	Negligible
S-C1	National Cycling Route	NCN Route 42	Medium
S-W1	National Walking Route	King Charles III England Coast Path	Medium
S-W2	Regional Walking Route	Suffolk Coast Path	Medium
S-W3	Regional Walking Route	Sandlings Walk	Medium

2.8.7.31 Table 2.8.27 provides a summary of the PRoW sensitivity to PRoW diversions and closures taken forward for assessment. Further detail is provided in **Volume 1,** Part 2, **Appendix 2.8.B, Receptor Sensitivity Levels** and **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.27: Sensitivity of PRoW for PRoW diversions and closures

Ref	Receptor type	Description	Sensitivity
S-P1	PRoW	6318	Low
S-P2	PRoW	6333	Medium
S-P3	PRoW	10027	Low
S-P4	PRoW	7452	Low
S-P5	PRoW	7450	Low
S-P6	PRoW	7991	Negligible
S-P7	PRoW	12866	Medium
S-P8	PRoW	7990	Medium
S-P9	PRoW	14032	Medium
S-P10	PRoW	7970	Medium
S-P11	PRoW	7969	Low
S-P12	PRoW	7988	Negligible
S-P13	PRoW	7977	Low
S-P14	PRoW	7975	Low
S-P15	PRoW	7978	Low
S-P16	PRoW	7455	Low
S-P17	PRoW	7453	Low
S-P18	PRoW	7454	Low
S-P19	PRoW	8906	Low
S-P20	PRoW	8904	Medium
S-P21	PRoW	8903	Low
S-P22	PRoW	8902	Low
S-P23	PRoW	8644	Medium
S-P24	PRoW	7881	Low
S-P25	PRoW	8622	Low

Future Baseline

2.8.7.32 The future baseline scenarios are set out in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**.

2.8.7.33 In the absence of the Proposed Project, traffic flows on the surrounding highway network would be expected to increase as a result of housing and employment growth. Therefore, projected background traffic growth has been applied to the 2023 baseline traffic flows to represent conditions during the future baseline (and construction peak assessment year) of 2029. As previously mentioned, the decommissioning phase is considered to be too far into the future to be able to accurately predict traffic flows at that time.

2.8.7.34 With regard to non-motorised users, emerging proposals to adopt a National Trail, to be known as the King Charles III England Coast Path, will create the longest managed coastal path in the world. The route is being established in sections and forms part of the future baseline. The section in relation to the study area follows existing routes parallel to the shoreline and would be crossed by the cable route as it passes from terranean to marine.

2.8.7.35 Traffic growth has been calculated using NRTF growth factors, reflecting projected increases in annual vehicle mileage on roads within the England and Wales. NTM adjustments have then been applied within TEMPro utilising NTEM dataset v7.2 and 2018 RTF – Scenario 1 (Reference Case) to reflect local factors (i.e. Suffolk Coastal) for the appropriate road types, to determine the forecast increases in future baseline car driver/passenger trips during each period. These represent the latest datasets available, covering the period up to 2050.

2.8.7.36 A summary of the growth factors is set out in Table 2.8.28 below.

Table 2.8.28: Traffic growth factors to 2029

Growth Period	Road type	Traffic growth factor			
		AM peak	PM peak	Average weekday	Average day
2023 to 2029 (Construction)	Principal	1.0376	1.0399	1.0460	1.0465
	Minor	1.0377	1.0399	1.0460	1.0466
	All	**1.0427**	**1.0450**	**1.0511**	**1.0517**

2.8.7.37 To provide consistency across the network and a robust assessment, the growth factors for all roads (as presented above in **bold**) have been applied to the 2023 baseline traffic flows to derive 2029 baseline traffic flows for the respective time period.

2.8.7.38 The anticipated future baseline flows on the surrounding highway network are summarised in **Volume 2, Part 2, Appendix 2.8.C, Baseline Traffic Flows**, including for the peak hours. The average weekday and daily traffic flows are provided in Table 2.8.29.

Table 2.8.29: 2029 Future baseline average weekday (12 hours) and daily (24 hours) flows

Location	Average weekday		Average day	
	HGVs	Total	HGVs	Total
A1094 (S-RL11) and B1122 (S-RL13)	184	5,313	203	6,020
B1069 (S-RL12)	168	4,159	192	4,949
A1094 (S-RL10)	226	7,110	209	7,846
B1121 (S-RL9)	16	1,285	14	1,347
B1121 (S-RL5)	109	4,343	105	4,818
B1119 (S-RL7 and S-RL8)	109	4,343	105	4,818
B1121 (RL-6)	109	4,343	105	4,818
A12 North (S-RL4)	867	11,834	1,009	13,826
A12 South (S-RL1, S-RL2 and S-RL3)	860	10,823	984	12,378

2.8.7.39 The consideration of cumulative effects as a result of committed developments is set out within **Volume 1, Part 2, Chapter 14, Inter-Project Cumulative Effects**.

2.8.8 Mitigation

2.8.8.1 As set out in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**, mitigation measures typically fall into one of the three categories:

- Embedded measures;
- Control and management measures; and
- Mitigation measures.

Embedded Measures

2.8.8.2 Embedded measures have been integral in reducing the traffic and transport effects of the Proposed Project. Measures that that have been incorporated are:

- sensitive routing and siting of infrastructure and temporary works;
- commitments made within **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme) and Volume 2, Part 1, Appendix 1.4.F, Outline Schedule of Environmental Commitment and Mitigation Measures**;
- trenchless methods will be utilised at landfall (including underneath the Suffolk Coastal Path, King Charles III England Coast Path, PRoW 6318 and Thorpe Road) in order to minimise potential impacts. See **Volume 2, Part 1, Appendix 1.4.D, Crossings Schedule** for further details; and

- widening works at the A1094/B1121 junction and the A1096/Snape Road junction to facilitate construction traffic movements.

Control and Management Measures

2.8.8.3 The following measures have been included within **Volume 2, Part 1, Appendix 1.4.A, Outline Code of Construction Practice** relevant to the control and management of impacts that could affect traffic and transport receptors:

- GG03: A Construction Traffic Management Plan (CTMP) will be produced prior to construction. An **Outline CTMP** is provided in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**.
- GG12: Appropriate site layout and housekeeping measures will be implemented by the contractor(s) at all construction sites. This will include, but not be limited to:
  - managing staff/vehicles entering or leaving site, especially at the beginning and end of the working day; and
  - managing potential off-site contractor and visitor parking.
- GG13: Vehicles will be correctly maintained and operated in accordance with the manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. In addition, plant and vehicles will conform to relevant applicable standards for the vehicle type.
- TT01: The CTMP will set out measures to reduce route and journey mileage to and from, as well as around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. It will also provide suitable control for the means of access and egress to the public highway and set out measures for the maintenance and upkeep of the public highway. The plan will also identify access for emergency vehicles. It will also set out measures to reduce safety risks through construction vehicle and driver quality standards and measure to manage abnormal loads.
- TT02: The contractor(s) will implement a monitoring and reporting system to check compliance with the measures set out within the CTMP. This will include the need for a GPS tracking system to be fitted to Heavy Goods Vehicles to check for compliance with authorised construction routes. The contractor(s) will also be expected to monitor the number of construction vehicles between the site and the strategic road network. Deviations from the authorised routes or changes to traffic levels that are higher than the CTMP assumptions, should they occur, will require discussion of the need for additional mitigation measures with highways authorities.

2.8.8.4 TT03: All designated PRoW will be identified, and any potential temporary and/or permanent diversions applied for/detailed in the application for development consent. All designated PRoW crossing the working area will be managed with access only closed for short periods while construction activities occur. Any required diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion (for temporary diversions) and a contact number for any concerns. An Outline CTMP has been prepared and is provided in **Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (CTMP) (Suffolk Onshore Scheme)**. The Outline CTMP includes construction traffic management measures that will be implemented in support of the Proposed Project, to avoid any adverse impacts on the surrounding networks during the construction phase. Measures include management of construction vehicles at any road/rail/pedestrian/cycle crossing points (see **Volume 2, Part 1, Appendix 1.4.D, Crossing Schedule**) by using gates to control construction vehicle movements at any crossing points, with the default position that construction routes would be gated off to provide priority to other users. This also applies to construction traffic on the highway network and using the proposed haul road.

Mitigation Measures

2.8.8.5 Mitigation measures are additional topic and site-specific measures that have been applied to mitigate or offset any likely significant effects. Mitigation measures included that are relevant to traffic and transport receptors are:

- Further consultation will be held with SCC Highways and PRoW Officers at ES stage, to develop a solution where permanent PRoW diversions can be avoided where possible, or to otherwise identify appropriate mitigation for any permanent PRoW diversions (e.g. 7975, 8903 and 8904) should these be required to accommodate any substations and/or converter stations; and
- An Outline PRoW Management Plan will be prepared at ES stage to identify the management and mitigation measures to be implemented to avoid any significant effects on PRoW (e.g. as a result of any diversions or closures) during all phases of the Proposed Project.

2.8.8.6 The ES will include a review of full PIA data (to be obtained from SCC Highways), to identify any collision clusters/patterns, confirm receptor sensitivity levels (road safety and hazardous/large Loads) and determine whether any further mitigation measures are required to safely manage construction vehicles travelling to/from the Proposed Project. This will also increase the confidence of the findings set out in Table 2.8.43 and Table 2.8.44.

2.8.8.7 The ES will be supported by updated traffic count data for the surrounding highway network to provide updated baseline traffic flows for the road link and road junction receptors. The assessment work will be updated accordingly, to determine whether any further mitigation measures are required to safely manage construction vehicles travelling to/from the Proposed Project. This will also increase the confidence of the findings set out in Table 2.8.38 to Table 2.8.45.

2.8.9 Preliminary Assessment of Effects

2.8.9.1 The preliminary assessment of the effects of the Suffolk Onshore Scheme described in this section considers the embedded, control and management and mitigation measures described in Section 2.8.8.

Proposed Access and Vehicle Movements

Proposed access arrangements

2.8.9.2 The Proposed Project will be accessed via the following five main access points during the construction phase (as shown on **Figure 2.8.2 HGV Routing Plan**):

- **B1121 Northwest (S-BM12 or S-BM09)**: Access to Area 7 (two potential routing options for Saxmundham Converter Station, both of which have been assessed) for preparation works, haul road and compound installation, bridge and converter station installation demobilisation and reinstatement – to be used between 2027 and 2031.
- **B1119 (S-BM08)**: Access to Area 4 for utility crossings, preparation works, haul road and compound installation, cable installation works, trench works, drainage, demobilisation and reinstatement – to be used between 2027 and 2031.
- **B1069 Western Side (S-BM04)**: Access to Area 3 for access works, utility crossings, haul road and compound installation, cable jointing, testing, demobilisation and reinstatement – to be used between 2027 and 2030.
- **B1069 Eastern Side (S-BM03)**: Access to Area 2 for cable installation, build Joint Bay shed, cable jointing and joint bays – to be used between 2028 and 2029.
- **B1122 Eastern Side (S-BM01)**: Access to Area 1 for preparation works, haul road and compound installation, trenchless crossing and cable installation – to be used between 2027 and 2028.

2.8.9.3 Accesses S-BM02, S-BM05, S-BM06, S-BM07, S-BM10 and S-BM11 are proposed as minor accesses for specific aspects of the proposals, and lower levels of construction traffic have been assigned to these accesses as part of the assessment.

2.8.9.4 Further details of the above access arrangements are set out within the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**).

Construction vehicle routes

2.8.9.5 The primary construction vehicle routes to/from the Proposed Project will include journeys from the A12 to the chosen access north or south of Saxmundham using the B1121. Construction vehicles will also use the B1119, A1094, A1069 and Leiston Road. The latter two of these routes are accessible from the A1094 which runs from a junction with the A12 in the west, towards the Proposed Project in the east. An HGV routing plan is held in **Figure 2.8.2 HGV Routing Plan**.

2.8.9.7 In terms of abnormal loads, the following route is envisaged to be used:

- Transformer Abnormal Indivisible Loads (AILs): To arrive from the A12, towards the B1122 and leading to B1069 for S-BM03. In terms of routing to Saxmundham Converter Station, to arrive via the B1069 and the B1121 Saxmundham Road (for S-BM13) or via the A12 and the B1121 Main Road for S-BM09 (south option) or S-BM12 (north) depending on which option is taken forward. The exact AIL transformer AIL routing will be finalised post statutory consultation, following further discussion with SCC Highways.
- Cable Drum Abnormal Loads: As above. In addition, to arrive from the A12, then along the A1094 and leading to the B1069 for S-BM03, as well as leading to Aldringham Lane and the B1122 further to the east for S-BM01 and S-BM02.

2.8.9.8 An abnormal load routing plan is held in **Figure 2.8.3 Abnormal Load Routing Plan**. It will be necessary to close these roads for the duration of these manoeuvres. This would require a Temporary Traffic Regulation Order/Notice from the Highway Authority.

2.8.9.9 A number of secondary access routes will also be used by construction vehicles, although these will be limited to LGVs where possible. These routes include the following which are illustrated on **Figure 1.4.19 Suffolk Onshore Scheme Traffic Routes during Construction and Operation**:

- Rendham Road, Mill Road and Chantry Road (Saxmundham);
- B1121 from Church Hill to junction with A1069 Aldeburgh Road;
- Unnamed lane between B1121 and B1119 via Moor Farm and Redhouse Barn;
- B1119 from S-BM08 to the west, to the junction with Grove Road and then towards S-BM05 and S-BM06 and subsequently the junction with B1121 Saxmundham Road to the south;
- Snape Road and Sloe Lane (north of the red line boundary); and
- Access track west of B1122 Leiston Road, north of Warren Hill Lane.

Construction programme, working hours and assessment parameters

2.8.9.10 The following assumptions have been adopted to provide a robust assessment of the Proposed Project:

- the shortest expected construction programme will be 48 months, which provides a worst-case in terms of monthly (and therefore daily) construction vehicle trips;
- the core construction working hours will be Monday to Friday (7am-7pm) and Saturday (7am-5pm) with no Sunday or Bank Holiday working;
- the forecast is for the co-location construction scenario, which provides a worst-case assessment in terms of forecast construction vehicle trips (compared to a Sea Link only construction scenario). Nonetheless, the assessment findings reported in Section 2.8.9 are applicable to the Proposed Project both with and without co-location;

- to provide a robust weekday assessment following consultation with SCC Highways, rather than adopting 6am-7am for staff arrivals and 7pm-8pm for staff departures, construction worker travel patterns have been based on the 'shoulder' peaks to the traditional network peak hours; therefore, staff arrivals have been assumed to take place between 7am-8am and staff departures have been assumed to take place between 6pm-7pm (Monday to Friday);
- HGV movements have been distributed across a 10-hour window, arriving and departing between 8am-6pm. For robustness, a higher proportion of HGV movements have been allocated to the start (between 8am-11am) of the day rather than adopting a flat profile. However, HGV movements will, in practice, be limited as far as possible so as not to travel during the traditional peak hours of 8am-9am and 5pm-6pm through the measures set out within the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**);
- (LGV movements have been distributed across a 12-hour window between 7am-7pm based on flat profile;
- a weekday assessment (Monday to Friday) has been carried out to provide a worst-case assessment of the peak construction phase based on the above, including both the shoulder and traditional network peaks; and
- a Saturday assessment will be carried out as part of the ES, as there is currently insufficient baseline data available to inform a Saturday assessment at this stage.

Forecast trip attraction

2.8.9.11 For the purposes of this assessment and based on the information provided in support of the application, the peak daily number of HGVs, LGVs and construction staff required for the Proposed Project are identified below, during the peak construction phase (2029). It should be noted that the forecast numbers below include consideration of daily variation and peak daily movements to provide a robust assessment.

2.8.9.12 There is expected to be a daily peak of 414 construction workers associated with the Proposed Project (which is a maximum daily figure). All 414 construction workers will travel to/from the Proposed Project at the start and end of the working day. The following has been assumed:

- office-based/supervision/management construction staff to travel in single occupancy vehicles (included in the LGV movements below); and
- site-based construction staff to travel by private vehicle with an average occupancy of 1.5 staff per vehicle (supported by a formal Car Share Scheme to match potential car sharers) resulting in 276 site-based staff vehicles (552 daily movements). This represents a lower factor than originally proposed (following feedback from Kent County Council (KCC) as part of scoping for the Kent portion of the Proposed Project) and is applied consistently across both the Kent Onshore Scheme and Suffolk Onshore Scheme, resulting in a more robust assessment.

2.8.9.13 Although the Suffolk Onshore Scheme is located near to a number of small settlements including Saxmundham, Leiston and Friston, the majority of staff (associated with each phase) are expected to travel by vehicle as opposed to on foot, by bicycle or by public transport for logistical reasons e.g., due to travel distance or the requirement to carry equipment. Therefore, to provide a worst-case assessment in terms of road trips, it has been assumed that all construction workers would travel by vehicle to/from the Proposed Project.

2.8.9.14 In terms of total construction vehicles associated with the Proposed Project during the peak construction year of 2029, there will be a maximum of 473 vehicles per day including 276 site-based construction staff vehicles, 68 LGVs and 129 HGVs per day. There will be an average of 302 vehicles per day including 177 staff vehicles, 46 LGVs and 79 HGVs.

2.8.9.15 In terms of total construction vehicles associated with the Proposed Project during the secondary peak construction year of 2028, there will be a maximum of 448 vehicles per day including 195 staff vehicles, 199 LGVs and 54 HGVs per day. There will be an average of 328 vehicles per day including 148 staff vehicles, 115 LGVs and 65 HGVs. It is acknowledged that average levels of vehicle activity are expected to be slightly higher in 2028, and the assessment therefore takes account of this (further details below).

2.8.9.16 A daily profile of overall construction vehicle movements (arrivals and departures) for the Proposed Project (co-location scenario) during the peak construction phase is presented in Table 2.8.30 below. It should be noted that for robustness, trips during the traditional network peak hours have been based on the construction year of 2028 when a higher number of HGVs and LGVs (combined) are expected (than compared to 2029).

Table 2.8.30: Forecast peak daily and hourly construction vehicle movements (co-location, average weekday peak)

Time	Period	Peak year	Staff		LGVs		HGVs		Total vehicles		
			Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	AM Dev Peak	2029	276	0	6	5	0	0	282	5	287
08:00-09:00	AM Network Peak	2028	0	0	17	17	6	6	23	23	46
17:00-18:00	PM Network Peak	2028	0	0	16	17	4	4	20	21	41
18:00-19:00	PM Dev Peak	2029	0	276	5	6	0	0	5	282	287
Total (07:00-19:00)	12 Hours	2029	276	276	68	68	129	129	473	473	946

2.8.9.17 The above trips have been adopted for road link receptors S-RL1, S-RL2, S-RL3 and S-RL4, as well as road junction receptors S-RJ1, S-RJ2, S-RJ3, S-RJ4 and S-RJ5, given that these represent the highest flows for the strategic highway network.

Forecast trip distribution

2.8.9.18 The forecast trip distribution in terms of trips entering/exiting the study area based on their expected points of origin when arriving to the Proposed Project (and conversely points of destination when departing) is set out on the basis that 100% of trips would take points of entry and exit from the A12 north and south (using both the B1121 and A1094), and from the A12 via the B1119 and B1121. This approach ensures that all potential routes are assessed.

2.8.9.19 The above approach to distribution is also designed to provide a worst-case assessment of the SRN and the forecast construction vehicle trip generation presented in Table 2.8.30 above has been adopted to inform the assessment of the A12.

2.8.9.20 In terms of the HGV and LGV trip distributions, all trips are expected to enter/exit the study area via the A12 (north and south) as this part of the strategic highway network ultimately serves the majority of Suffolk and routes to/from London and further afield. There are no other local opportunities for travel using strategic routes. An HGV routing plan is held in **Figure 2.8.2 HGV Routing Plan**.

2.8.9.21 The construction trips have been distributed across the local highway network as well as to and from each proposed access. The following tables review the 'peak' traffic flow forecast for each section of the local highway network, which varies between 2027 and 2029 in accordance with the progress of the construction phase.

A1094 (between the B1069 and the B1122)

2.8.9.22 The following trip generation has been derived for the proposed site accesses S-BM01 and S-BM02 served by the A1094 (between the B1069 and the B1122, for the peak day within the construction programme which occurs in 2027 for this part of the network.

Table 2.8.31: Forecast peak daily and hourly construction vehicle movements for the A1094 between the B1069 and the B1122 (co-location, peak day, 2027)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	44	0	2	2	0	0	46	2	48
08:00-09:00	0	0	3	2	1	1	4	3	7
09:00-10:00	0	0	2	3	1	1	3	4	7
10:00-11:00	0	0	3	2	1	1	4	3	7
11:00-12:00	0	0	2	3	1	1	3	4	7
12:00-13:00	0	0	2	2	1	1	3	3	6
13:00-14:00	0	0	2	2	0	0	2	2	4
14:00-15:00	0	0	3	2	1	1	4	3	7
15:00-16:00	0	0	2	3	0	0	2	3	5
16:00-17:00	0	0	3	2	1	1	4	3	7
17:00-18:00	0	0	2	3	0	0	2	3	5
18:00-19:00	0	44	2	2	0	0	2	46	48
Total	**44**	**44**	**28**	**28**	**7**	**7**	**79**	**79**	**158**

2.8.9.23 The above trips have been adopted for road link receptors S-RL11 and S-RL13, as well as road junction receptor S-RJ11, given that these represent the highest flows for these parts of the network.

B1069 (Snape Road)

2.8.9.24 The following trip generation has been derived for the proposed site accesses S-BM03 and S-BM04 served by the B1069 (Snape Road), for the peak day within the construction programme which occurs in 2028 for this part of the network.

Table 2.8.32: Forecast peak daily and hourly construction vehicle movements for the B1069 Snape Road (co-location, peak day, 2028)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	96	0	6	5	0	0	102	5	107
08:00-09:00	0	0	5	6	12	12	17	18	35
09:00-10:00	0	0	6	5	11	11	17	16	33
10:00-11:00	0	0	5	6	11	11	16	17	33
11:00-12:00	0	0	6	5	11	11	17	16	33
12:00-13:00	0	0	6	6	11	11	17	17	34
13:00-14:00	0	0	6	6	8	8	14	14	28
14:00-15:00	0	0	5	6	8	8	13	14	27
15:00-16:00	0	0	6	5	8	8	14	13	27
16:00-17:00	0	0	5	6	7	7	12	13	25
17:00-18:00	0	0	6	5	7	7	13	12	25
18:00-19:00	0	96	5	6	0	0	5	102	107
Total	**96**	**96**	**67**	**67**	**94**	**94**	**257**	**257**	**514**

2.8.9.25 The above trips have been adopted for road link receptor S-RL12, given that these represent the highest flows for this part of the network.

A1094 (between the A12 and the B1069)

2.8.9.26 The following trip generation has been derived for the proposed site accesses S-BM01, S-BM02, S-BM03 and S-BM04, served by the A1094 (between the A12 and the B1069), for the peak day within the construction programme which occurs in 2028 for this part of the network.

Table 2.8.33: Forecast peak daily and hourly construction vehicle movements for the A1094 between the A12 and the B1069 (co-location, peak day, 2028)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	111	0	7	6	0	0	118	6	124
08:00-09:00	0	0	6	7	12	12	18	19	37

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
09:00-10:00	0	0	6	6	12	12	18	18	36
10:00-11:00	0	0	7	6	12	12	19	18	37
11:00-12:00	0	0	6	7	11	11	17	18	35
12:00-13:00	0	0	6	6	11	11	17	17	34
13:00-14:00	0	0	7	6	8	8	15	14	29
14:00-15:00	0	0	6	7	8	8	14	15	29
15:00-16:00	0	0	6	6	8	8	14	14	28
16:00-17:00	0	0	7	6	7	7	14	13	27
17:00-18:00	0	0	6	7	7	7	13	14	27
18:00-19:00	0	111	6	6	0	0	6	117	123
Total	**111**	**111**	**76**	**76**	**96**	**96**	**283**	**283**	**565**

2.8.9.27 The above trips have been adopted for road link receptor S-RL10, as well as road junction receptors S-RJ9 and S-RJ10, given that these represent the highest flows for these parts of the network.

B1121 (Aldeburgh Road)

2.8.9.28 The following trip generation has been derived for the proposed site accesses S-BM07 and S-BM13 served by the B1121 Aldeburgh Road, for the peak day within the construction programme which occurs in 2027 for this part of the network.

Table 2.8.34: Forecast peak daily and hourly construction vehicle movements for the B1121 Aldeburgh Road (co-location, peak day, 2027)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	0	0	1	0	0	0	1	0	1
08:00-09:00	0	0	1	1	6	6	7	7	14
09:00-10:00	0	0	1	1	6	6	7	7	14
10:00-11:00	0	0	1	1	5	5	6	6	12
11:00-12:00	0	0	1	1	5	5	6	6	12
12:00-13:00	0	0	0	1	5	5	5	6	11
13:00-14:00	0	0	1	0	3	3	4	3	7
14:00-15:00	0	0	1	1	3	3	4	4	8
15:00-16:00	0	0	0	1	3	3	3	4	7
16:00-17:00	0	0	1	0	3	3	4	3	7
17:00-18:00	0	0	1	1	3	3	4	4	8
18:00-19:00	0	0	0	1	0	0	0	1	1
Total	**0**	**0**	**9**	**9**	**42**	**42**	**51**	**51**	**102**

2.8.9.29 The above trips have been adopted for road link receptor S-RL9, as well as road junction receptor S-RJ8, given that these represent the highest flows for these parts of the network.

B1121 Main Road (North and South Options)

2.8.9.30 The following trip generation has been derived for the proposed site access S-BM12 served by the B1121 Main Road (North Option) and the proposed site access S-BM09 served by the B1121 Main Road (South Option), for the peak day within the construction programme which occurs in 2029 for this part of the network, depending on which option is taken forwards.

Table 2.8.35: Forecast peak daily and hourly construction vehicle movements for the B1121 Main Road North and South Options (co-location, peak day, 2029)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	140	0	2	2	0	0	142	2	144
08:00-09:00	0	0	2	2	8	8	10	10	20
09:00-10:00	0	0	2	2	8	8	10	10	20
10:00-11:00	0	0	2	2	8	8	10	10	20
11:00-12:00	0	0	2	2	8	8	10	10	20
12:00-13:00	0	0	2	2	8	8	10	10	20
13:00-14:00	0	0	2	2	5	5	7	7	14
14:00-15:00	0	0	2	2	5	5	7	7	14
15:00-16:00	0	0	2	2	5	5	7	7	14
16:00-17:00	0	0	2	2	5	5	7	7	14
17:00-18:00	0	0	2	2	5	5	7	7	14
18:00-19:00	0	140	2	2	0	0	2	142	144
Total	**140**	**140**	**24**	**24**	**65**	**65**	**229**	**229**	**458**

2.8.9.31 The above trips have been adopted for road link receptors S-RL5 and S-RL6 (assessing both options), as well as road junction receptors S-RJ6 and S-RJ7 (again, assessing both options), given that these represent the highest flows for these parts of the network.

B1119 (Rendham Road, Mill Road and Church Hill)

2.8.9.32 The following trip generation has been derived for the proposed site accesses S-BM10 and S-BM11 served by the B1119, for the peak day within the construction programme which occurs in 2027 for this part of the network.

Table 2.8.36: Forecast peak daily and hourly construction vehicle movements for the B1119 (co-location, peak day, 2027)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	28	0	2	1	0	0	30	1	31
08:00-09:00	0	0	1	2	1	1	2	3	5
09:00-10:00	0	0	1	1	1	1	2	2	4
10:00-11:00	0	0	2	1	0	0	2	1	3
11:00-12:00	0	0	2	2	0	0	2	2	4
12:00-13:00	0	0	1	2	0	0	1	2	3
13:00-14:00	0	0	1	1	0	0	1	1	2
14:00-15:00	0	0	2	1	0	0	2	1	3
15:00-16:00	0	0	1	2	0	0	1	2	3
16:00-17:00	0	0	2	1	0	0	2	1	3
17:00-18:00	0	0	2	2	0	0	2	2	4
18:00-19:00	0	28	1	2	0	0	1	30	31
Total	**28**	**28**	**18**	**18**	**2**	**2**	**48**	**48**	**96**

2.8.9.33 The above trips have been adopted for road link receptor S-RL7, given that these represent the highest flows for this part of the network.

B1119 (East)

2.8.9.34 The following trip generation has been derived for the proposed site access S-BM08 served by the B1119 (East), for the peak day within the construction programme which occurs in 2028 for this part of the network.

Table 2.8.37: Forecast peak daily and hourly construction vehicle movements for the B1119 East (co-location, peak day, 2028)

Time	Staff		LGVs		HGVs		Total Vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	67	0	2	1	0	0	69	1	70
08:00-09:00	0	0	1	2	4	4	5	6	11
09:00-10:00	0	0	1	1	4	4	5	5	10
10:00-11:00	0	0	2	1	4	4	6	5	11
11:00-12:00	0	0	1	2	4	4	5	6	11
12:00-13:00	0	0	2	1	4	4	6	5	11
13:00-14:00	0	0	1	2	3	3	4	5	9
14:00-15:00	0	0	1	1	3	3	4	4	8
15:00-16:00	0	0	2	1	2	2	4	3	7
16:00-17:00	0	0	1	2	2	2	3	4	7
17:00-18:00	0	0	1	1	2	2	3	3	6

Time	Staff		LGVs		HGVs		Total Vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
18:00-19:00	0	67	1	1	0	0	1	68	69
Total	**67**	**67**	**16**	**16**	**32**	**32**	**115**	**115**	**229**

2.8.9.35 The above trips have been adopted for road link receptor S-RL8, given that these represent the highest flows for this part of the network.

Construction and Decommissioning

Preliminary highway impact assessment

2.8.9.36 A preliminary highway impact assessment has been carried out to identify the forecast increases in traffic levels on the surrounding highway network (road link and road junction receptors) as a result on construction traffic during the peak construction phase. This has been informed by the forecast trip generation and distribution presented above and has been used to identify worst-case percentage increases in terms of HGVs and total vehicles to inform the assessments set out later within this section.

2.8.9.37 The preliminary highway impact is set out in **Volume 2, Part 2, Appendix 2.8.D, Preliminary Highway Impact Assessment**, which includes all road link and road junction receptors during the development 'shoulder' peak hours (7am-8am and 6pm-7pm), network peak hours (8am-9am and 5pm-6pm) and the weekday 12-hour period (7am-7pm). As above, the preliminary highway impact assessment is based on the co-location scenario to provide a worst-case assessment.

2.8.9.38 In the event that the Project is decommissioned, there is expected to be fewer HGV, LGV and worker arrivals and departures associated with the decommissioning phase of the Suffolk Onshore Scheme than during the construction phase. It is therefore considered reasonable to assume that the impacts of the decommissioning phase will be the same as, or not greater than, the construction phase. Therefore, and given that the exact timing of this scenario is unknown, the assessment of the construction phase has been adopted to determine the anticipated impact of the Suffolk Onshore Scheme during its decommissioning phase.

Severance

2.8.9.39 The assessment of severance in relation to the Proposed Project has been based on the road link receptors, road junction receptors, PRoW receptors and national/regional walking and cycling route receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.40 Details of magnitude of impact with respect to severance are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.41 The preliminary assessment of severance is summarised in Table 2.8.38 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.38: Preliminary assessment of severance

	Preliminary assessment
Receptor	Road link, road junction, PRoW and national/regional walking/cycling route receptors (see **Volume 2, Part 2, Appendix 2.8.B Receptor Sensitivity Levels**)
Potential impact	Severance
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, TT01, TT02 and TT03
Preliminary sensitivity	Road Links and Junctions S-RL7, S-RL9, S-RL13, S-RJ7, S-RJ8 and S-RJ11 are High S-RL5, S-RL8, S-RL10, S-RL11 and S-RJ6 are Medium S-RL1, S-RL4, S-RL6, S-RL12, S-RJ2 and S-RJ5 are Low S-RL2, S-RL3, S-RJ1, S-RJ3, S-RJ4, S-RJ9 and S-RJ10 are Negligible PRoW S-P3, S-P7, S-P8, S-P9, S-P10, S-P18 and S-P19 are Medium S-P2, S-P4, S-P5, S-P11, S-P14, S-P15, S-P16, S-P22 and S-P23 are Low S-P1, S-P6, S-P12, S-P13, S-P17, S-P20, S-P21, S-P24 and S-P25 are Negligible National and Regional Routes S-C1, S-W1, S-W2 and S-W3 are Medium Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary magnitude	Road Links and Junctions S-RL5 (southern option), S-RL6 (northern option), S-RL12, S-RJ2, S-RJ4, S-RJ6 (southern option), S-RJ7 (southern option), S-RJ9, and S-RJ10 are Large S-RL8, S-RL10 and S-RJ1 are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RJ3 and S-RJ5 are Small S-RL7, S-RL9, S-RL11, S-RL13, S-RJ8 and S-RJ11 are Negligible

	Preliminary assessment
	S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible <u>PRoW</u> S-P14 and S-P21 are Large S-P20 is Medium S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17 and S-P19 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible <u>National and Regional Routes</u> S-W3 is Small S-C1, S-W1 and S-W2 are Negligible Further details are provided in **Volume 2**, **Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary likely significance of effect	Likely to be **Significant** for the following receptors: • S-RL5 (southern option): B1121 Main Road (southern section between A12 and B1119 Church Hill junctions); • S-RL8: B1119 Church Hill (between the B1121 and Grove Hill junctions); • S-RL10: A1094 (between the A12 and B1069 junctions); • S-RJ6 (southern option): B1121 Main Road/B1121 Church Hill Junction; and • S-RJ7 (southern option): B1121 Main Road/B1119 Church Hill Signalised Junction. Likely to be **Not Significant** (all other receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	

	Preliminary assessment
Preliminary sensitivity	Same as above (i.e. without co-location)
Preliminary magnitude	PRoW S-P14, S-P20 and S-P21 are Large S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17 and S-P19 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible Remaining receptors: Same as above (without co-location)
Preliminary likely significance of effect	Same as above (without co-location)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.42 As shown above, the likely impact of the Proposed Project on severance across the majority of receptors within the study area is considered to be not significant based on the preliminary assessment. However, potentially significant effects in terms of severance have been identified for several receptors. This will therefore be reviewed further as part of the ES when updated baseline traffic flows are obtained to increase the confidence of the findings and once the preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

Pedestrian delay

2.8.9.43 The assessment of pedestrian delay in relation to the Proposed Project has been based on the road link receptors, road junction receptors, PRoW receptors and national/regional walking and cycling route receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.44 Details of magnitude of impact with respect to pedestrian delay are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact** , based on the information presented in Section 2.8.4.

2.8.9.45 The preliminary assessment of pedestrian delay is summarised in Table 2.8.39 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.39: Preliminary assessment of pedestrian delay

	Preliminary assessment
Receptor	Road link, road junction, PRoW and national/regional walking/cycling route receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Pedestrian delay

	Preliminary assessment
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, TT01, TT02 and TT03
Preliminary sensitivity	Road Links and Junctions S-RL7, S-RL9, S-RL13, S-RJ7, S-RJ8 and S-RJ11 are High S-RL5, S-RL8, S-RL10, S-RL11 and S-RJ6 are Medium S-RL1, S-RL4, S-RL6, S-RL12, S-RJ2 and S-RJ5 are Low S-RL2, S-RL3, S-RJ1, S-RJ3, S-RJ4, S-RJ9 and S-RJ10 are Negligible PRoW S-P3, S-P7, S-P8, S-P9, S-P10, S-P18 and S-P19 are Medium S-P2, S-P4, S-P5, S-P11, S-P14, S-P15, S-P16, S-P22 and S-P23 are Low S-P1, S-P6, S-P12, S-P13, S-P17, S-P20, S-P21, S-P24 and S-P25 are Negligible National and Regional Routes S-C1, S-W1, S-W2 and S-W3 are Medium Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary magnitude	Road Links and Junctions S-RL5 (southern option), S-RL6 (northern option), S-RL12, S-RJ2, S-RJ4, S-RJ6 (southern option), S-RJ7 (southern option), S-RJ9, and S-RJ10 are Large S-RL8, S-RL10 and S-RJ1 are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RJ3 and S-RJ5 are Small S-RL7, S-RL9, S-RL11, S-RL13, S-RJ8 and S-RJ11 are Negligible S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible PRoW S-P14 and S-P21 are Large S-P20 is Medium

	Preliminary assessment
	S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17 and S-P19 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible <u>National and Regional Routes</u> S-W3 is Small S-C1, S-W1 and S-W2 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary likely significance of effect	Likely to be **Significant** for the following receptors: • S-RL5 (southern option): B1121 Main Road (southern section between A12 and B1119 Church Hill junctions); • S-RL8: B1119 Church Hill (between the B1121 and Grove Hill junctions); • S-RL10: A1094 (between the A12 and B1069 junctions); • S-RJ6 (southern option): B1121 Main Road/B1121 Church Hill junction; and • S-RJ7 (southern option): B1121 Main Road/B1119 Church Hill Signalised junction. Likely to be **Not Significant** (all other receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	<u>PRoW</u> S-P14, S-P20 and S-P21 are Large S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17 and S-P19 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible

	Preliminary assessment
	Remaining receptors: Same as above (without co-location)
Preliminary likely significance of effect	Same as above (without co-location)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.46 As shown above, the likely impact of the Proposed Project on pedestrian delay across the majority of receptors within the study area is considered to be not significant based on the preliminary assessment. However, potentially significant effects in terms of pedestrian delay have been identified for several receptors. This will therefore be reviewed further as part of the ES when updated baseline traffic flows are obtained to increase the confidence of the findings and once the preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

Non-motorised user amenity

2.8.9.47 The assessment of non-motorised user amenity in relation to the Proposed Project has been based on the road link receptors, road junction receptors, PRoW receptors and national/regional walking and cycling route receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.48 Details of magnitude of impact with respect to non-motorised user amenity are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.49 The preliminary assessment of non-motorised user amenity is summarised in Table 2.8.40 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.40: Preliminary assessment of non-motorised user amenity

	Preliminary assessment
Receptor	Road link, road junction, PRoW and national/regional walking/cycling route receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Non-motorised user amenity
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, GG13, TT01 and TT02
Preliminary sensitivity	Road Links and Junctions S-RL7, S-RL9, S-RL13, S-RJ7, S-RJ8 and S-RJ11 are High S-RL5, S-RL8, S-RL10, S-RL11 and S-RJ6 are Medium

	Preliminary assessment
	S-RL1, S-RL4, S-RL6, S-RL12, S-RJ2 and S-RJ5 are Low S-RL2, S-RL3, S-RJ1, S-RJ3, S-RJ4, S-RJ9 and S-RJ10 are Negligible PRoW S-P3, S-P7, S-P8, S-P9, S-P10, S-P18 and S-P19 are Medium S-P2, S-P4, S-P5, S-P11, S-P14, S-P15, S-P16, S-P22 and S-P23 are Low S-P1, S-P6, S-P12, S-P13, S-P17, S-P20, S-P21, S-P24 and S-P25 are Negligible National and Regional Routes S-C1, S-W1, S-W2 and S-W3 are Medium Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary magnitude	Road Links and Junctions S-RL5 (southern option), S-RL6 (northern option), S-RJ2, S-RJ4, S-RJ6 (southern option) and S-RJ7 (southern option) are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RL7, S-RL8, S-RL9, S-RL10, S-RL11, S-RL12, S-RL13, S-RJ1, S-RJ3, S-RJ5, S-RJ8, S-RJ9, S-RJ10 and S-RJ11 are Negligible S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible PRoW S-P14 and S-P20 are Medium S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17, S-P19 and S-P21 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible National and Regional Routes S-W3 is Small S-C1, S-W1 and S-W2 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**

	Preliminary assessment
Preliminary likely significance of effect	Likely to be **Significant** for the following receptors: • S-RL5 (southern option): B1121 Main Road (southern section between A12 and B1119 Church Hill junctions); • S-RJ6 (southern option): B1121 Main Road/B1121 Church Hill junction; and • S-RJ7 (southern option): B1121 Main Road/B1119 Church Hill Signalised junction. Likely to be **Not Significant** (all other receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity Test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	Same as above (without co-location)
Preliminary likely significance of effect	Same as above (without co-location)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.50 As shown above, the likely impact of the Proposed Project on non-motorised user amenity across the majority of receptors within the study area is considered to be not significant based on the preliminary assessment. However, potentially significant effects in terms of non-motorised user amenity have been identified for several receptors. This will therefore be reviewed further as part of the ES when updated baseline traffic flows are obtained to increase the confidence of the findings and once the preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

Fear and intimidation

2.8.9.51 The assessment of fear and intimidation in relation to the Proposed Project has been based on the road link receptors, road junction receptors, PRoW receptors and national/regional walking and cycling route receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.52 Details of magnitude of impact with respect to fear and intimidation are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.53 The preliminary assessment of fear and intimidation is summarised in Table 2.8.41 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.41: Preliminary assessment of fear and intimidation

	Preliminary assessment
Receptor	Road link, road junction, PRoW and national/regional walking/cycling route receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Fear and intimidation
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, GG13, TT01 and TT02
Preliminary sensitivity	<u>Road Links and Junctions</u> S-RL7, S-RL9, S-RL13, S-RJ7, S-RJ8 and S-RJ11 are High S-RL5, S-RL8, S-RL10, S-RL11 and S-RJ6 are Medium S-RL1, S-RL4, S-RL6, S-RL12, S-RJ2 and S-RJ5 are Low S-RL2, S-RL3, S-RJ1, S-RJ3, S-RJ4, S-RJ9 and S-RJ10 are Negligible <u>PRoW</u> S-P3, S-P7, S-P8, S-P9, S-P10, S-P18 and S-P19 are Medium S-P2, S-P4, S-P5, S-P11, S-P14, S-P15, S-P16, S-P22 and S-P23 are Low S-P1, S-P6, S-P12, S-P13, S-P17, S-P20, S-P21, S-P24 and S-P25 are Negligible <u>National and Regional Routes</u> S-C1, S-W1, S-W2 and S-W3 are Medium Further details are provided in **Volume 1, Appendix 2.8.F, Preliminary Assessment.**
Preliminary magnitude	<u>Road Links and Junctions</u> S-RL1, S-RL2, S-RL3, S-RL4 and S-RL10 are Small S-RL5 (southern option), S-RL6 (northern option), S-RL7, S-RL8, S-RL9, S-RL11, S-RL12, S-RL13, S-RJ1, S-RJ2, S-RJ3, S-RJ4, S-RJ5, S-RJ6 (southern option),

	Preliminary assessment
	S-RJ7 (southern option), S-RJ8, S-RJ9, S-RJ10 and S-RJ11 are Negligible S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible <u>PRoW</u> S-P14 and S-P20 are Medium S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17, S-P19 and S-P21 are Small S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25 are Negligible <u>National and Regional Routes</u> S-W3 is Small S-C1, S-W1 and S-W2 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	Same as above (without co-location)
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.54 As shown above, the likely impact of the Proposed Project on fear and intimidation across all receptors within the study area is considered to be not significant based on the preliminary assessment. This will be reviewed further as part of the ES when updated baseline traffic flows are obtained to increase the confidence of the findings.

Driver delay

2.8.9.55 The assessment of driver delay in relation to the Proposed Project has been based on the road link receptors and road junction receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.56 Details of magnitude of impact with respect to driver delay are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.57 The preliminary assessment of driver delay is summarised in Table 2.8.42 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.42: Preliminary assessment of driver delay

	Preliminary assessment
Receptor	Road link and road junction receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Driver delay
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, TT01 and TT02
Preliminary sensitivity	Road Links and Junctions S-RJ7 and S-RJ11 are Very High S-RL7 and S-RL13 are High S-RL5, S-RL6, S-RL8 and S-RJ8 are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RL9, S-RL10, S-RL11, S-RL12, S-RJ1, S-RJ2, S-RJ3, S-RJ4, S-RJ5, S-RJ6, S-RJ9 and S-RJ10 are Low Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary magnitude	Road Links and Junctions S-RL5 (southern option), S-RL6 (northern option), S-RJ2, S-RJ4, S-RJ6 (southern option) and S-RJ7 (southern option) are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RL8, S-RL12, S-RJ1, S-RJ3, S-RJ5 and S-RJ10 are Small S-RL7, S-RL9, S-RL10, S-RL11, S-RL13, S-RJ8, S-RJ9 and S-RJ11 are Negligible

	Preliminary assessment
	S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**
Preliminary likely significance of effect	Likely to be **Significant** for the following receptors: • S-RL5 (southern option): B1121 Main Road (southern section between A12 and B1119 Church Hill junctions); • S-RL6 (northern option): B1121 Main Road (northern section between B1119 Church Hill and A12 junctions); and • S-RJ7 (southern option): B1121 Main Road/B1119 Church Hill Signalised junction. Likely to be **Not Significant** (all other receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity Test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	Same as above (without co-location)
Preliminary likely significance of effect	Same as above (without co-location)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.58 As shown above, the likely impact of the Proposed Project on driver delay across the majority of receptors within the study area is considered to be not significant based on the preliminary assessment. However, potentially significant effects in terms of driver delay have been identified for several receptors. This will therefore be reviewed further as part of the ES when updated baseline traffic flows are obtained to increase the confidence of the findings and once the preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

Road safety

2.8.9.59 The assessment of road safety in relation to the Proposed Project has been based on the road link receptors and road junction receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.60 Details of magnitude of impact with respect to road safety are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.61 The preliminary assessment of road safety is summarised in Table 2.8.43 below, with further details held in **Volume 1, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.43: Preliminary assessment of road safety

	Preliminary assessment
Receptor	Road link and road junction receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Road safety
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, GG12, GG13, TT01 and TT02
Preliminary sensitivity	Road Links and Junctions S-RL4 and S-RJ1 are Very High S-RL10 and S-RJ3 are High S-RL3, S-RL7, S-RL11 and S-RL12 are Medium S-RL6, S-RL8, S-RJ2, S-RJ4, S-RJ7 and S-RJ11 are Low S-RL1, S-RL2, S-RL5, S-RL9, S-RL13, S-RJ5, S-RJ6, S-RJ8, S-RJ9 and S-RJ10 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary magnitude	Road Links and Junctions S-RL5 (southern option), S-RL6 (northern option), S-RJ2, S-RJ4, S-RJ6 (southern option), S-RJ7 (southern option) are Medium S-RL1, S-RL2, S-RL3, S-RL4, S-RL8, S-RL12, S-RJ1, S-RJ3, S-RJ5 and S-RJ10 are Small S-RL7, S-RL9, S-RL10, S-RL11, S-RL13, S-RJ8, S-RJ9 and S-RJ11 are Negligible S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible

	Preliminary assessment
	Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary likely significance of effect	Likely to be **Significant** for the following receptors: • S-RL4: A12 (north of B1121 junction); • S-RJ1: A12/A1094 junction; and • S-RJ3: A12/B1119 junction. Likely to be **Not Significant** (all other receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours Sensitivity Test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	Same as above (without co-location)
Preliminary likely significance of effect	Same as above (without co-location)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.62 As shown above, the likely impact of the Proposed Project on road safety across the majority of receptors within the study area is considered to be not significant based on the preliminary assessment. However, potentially significant effects in terms of road safety have been identified for several receptors. This will therefore be reviewed further as part of the ES when updated baseline traffic flows and full PIA data are obtained to increase the confidence of the findings. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

Hazardous/large loads

2.8.9.63 A potential source of impacts arise from large and hazardous loads.

2.8.9.64 Hazardous loads include the transport of explosives, gases, flammable liquid/solids, oxidising/toxic substances, radioactive material or corrosive substances. Oil will be required for the transformers and gases will be used in the Gas Insulated Switchgear. Large loads include any abnormal loads. These inputs are expected to be predominantly required during the construction and decommissioning phases and the transport of hazardous and large loads has been considered accordingly within this assessment and the Outline CTMP (**Volume 2, Part 1, Appendix 1.4.B, Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)**).

2.8.9.65 The assessment of hazardous/large Loads in relation to the Proposed Project has been based on the road link receptors and road junction receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.66 Details of magnitude of impact with respect to hazardous/large Loads are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.67 The preliminary assessment of hazardous/large Loads is summarised in Table 2.8.44 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.44: Preliminary assessment of hazardous/large loads

	Preliminary assessment
Receptor	Road link and road junction receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	Hazardous/Large Loads
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, GG13, TT01 and TT02
Preliminary sensitivity	Road Links and Junctions S-RL3 and S-RJ3 are Low S-RL1, S-RL2, S-RL4, S-RL5, S-RL6, S-RL7, S-RL8, S-RL9, S-RL10, S-RL11, S-RL12, S-RL13, S-RJ1, S-RJ2, S-RJ4, S-RJ5, S-RJ6, S-RJ7, S-RJ8, S-RJ9, S-RJ10 and S-RJ11 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary magnitude	Road Links and Junctions S-RL1, S-RL2, S-RL3, S-RL4, S-RL5 (southern option), S-RL6 (northern option), S-RL9, S-RL10, S-RL12, S-RL13, S-RJ1, S-RJ2, S-RJ3, S-RJ4, S-RJ5, S-RJ6 (southern option), S-RJ8, S-RJ9 and S-RJ10 are Small

	Preliminary assessment
	S-RL7, S-RL8, S-RL11, S-RJ7 (southern option) and S-RJ11 are Negligible S-RL5 (northern option), S-RL6 (southern option), S-RJ6 (northern option) and S-RJ7 (northern option) are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Programme duration sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours Sensitivity Test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Low
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	Same as above (without co-location)
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Low

2.8.9.68 As shown above, the likely impact of the Proposed Project on hazardous/large Loads across all receptors within the study area is considered to be not significant based on the preliminary assessment. This will be reviewed further as part of the ES when a full assessment is carried out based on full PIA data obtained from SCC Highways and once further details on abnormal loads are known (which will increase the confidence of the findings).

PRoW Diversions and Closures

2.8.9.69 The assessment of PRoW diversions and closures in relation to the Proposed Project has been based on the PRoW receptors identified in Section 2.8.6 (see also **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**).

2.8.9.70 Details of magnitude of impact with respect to PRoW diversions and closures are set out within **Volume 2, Part 2, Appendix 2.8.E, Magnitude of Impact**, based on the information presented in Section 2.8.4.

2.8.9.71 The preliminary assessment of PRoW diversions and closures is summarised in Table 2.8.45 below, with further details held in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment**.

Table 2.8.45: Preliminary assessment of PRoW Diversions and Closures

	Preliminary assessment
Receptor	PRoW receptors (see **Volume 2, Part 2, Appendix 2.8.B, Receptor Sensitivity Levels**)
Potential impact	PRoW Diversions and Closures
Proposed Project phase	Construction and decommissioning
Duration	Circa. five years (each phase)
Mitigation	GG03, TT01, TT02 and TT03 (all receptors) S-TTAM01 and S-TTAM02 (S-P14, S-P20 and S-P21)
Preliminary sensitivity	PRoW S-P2, S-P7, S-P8, S-P9, S-P10, S-P20 and S-P23 are Medium S-P1, S-P3, S-P4, S-P5, S-P11, S-P13, S-P14, S-P15, S-P16, S-P17, S-P18, S-P19, S-P21, S-P22, S-P24 and S-P25 are Low S-P6 and S-P12 are Negligible Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary magnitude	PRoW Temporary diversions would be required for S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P14, S-P16, S-P17, S-P18, S-P19, S-P20 and S-P25 during construction and decommissioning of the Proposed Project. In addition, permanent diversions would be required as follows: Friston Substation requires the permanent diversion of S-P14. This would result in a large impact on S-P14. With the mitigation identified (S-TTAM01 and S-TTAM02), this reduces to a small impact on S-P14. Saxmundham Converter Station requires the permanent diversion of S-P21. This would result in a large impact on S-P21. With the mitigation identified (S-TTAM01 and S-TTAM02), this reduces to a small impact on S-P21. Further to the above, minor permanent PRoW diversions may also be required for S-P16, S-P18, S-P20 and S-P23 to accommodate localised realignments and provide more preferable (safer) crossing locations of

	Preliminary assessment
	permanent access roads. These diversions will not however be required to avoid any substations or converter stations. The nature of any additional PRoW diversions (if required) will be subject to further discussions and agreement with PRoW Officers to avoid any significant impacts. As such, an assessment of the above potential (minor) PRoW realignments will be carried out within the ES to be produced, following these discussions and once the design has further developed. All other effects would be Medium (S-P4 and S-P20), Small (S-P2, S-P5, S-P9, S-P10, S-P13, S-P16, S-P17 and S-P19) or Negligible (S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P18, S-P22, S-P23, S-P24 and S-P25). Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Programme duration Sensitivity test	No change expected (a later baseline year due to a delay in the Proposed Project would increase baseline traffic flows, reducing proportional increases as a result of the Proposed Project)
Construction working hours sensitivity test	No change expected (working on Sundays and Bank Holidays would potentially reduce the magnitude of peak construction trips by spreading these movements over a greater number of days)
Confidence in prediction	Moderate
Proposed Project with co-location	
Preliminary sensitivity	Same as above (without co-location)
Preliminary magnitude	PRoW Temporary diversions would be required for S-P2, S-P4, S-P5, S-P9, S-P10, S-P13, S-P14, S-P16, S-P17, S-P18, S-P19, S-P20 and S-P25 during construction and decommissioning of the Proposed Project. In addition, permanent diversions would be required as follows: Friston Substation requires the permanent diversion of S-P14. This would result in a large impact on S-P14. With the mitigation identified (S-TTAM01 and S-TTAM02), this reduces to a small impact on S-P14.

	Preliminary assessment
	Saxmundham Converter Station and one other converter station (co-location) requires the permanent diversion of S-P21. This would result in a large impact on S-P21. With the mitigation identified (S-TTAM01 and S-TTAM02), this reduces to a small impact on S-P21. A converter station (co-location) requires the permanent diversion of S-P20. This would result in a large impact on S-P20. With the mitigation identified (S-TTAM01 and S-TTAM02), this reduces to a small impact on S-P20. Further to the above, minor permanent PRoW diversions may also be required for S-P16, S-P18, S-P20 and S-P23 to accommodate localised realignments and provide more preferable (safer) crossing locations of permanent access roads. These diversions will not however be required to avoid any substations or converter stations. The nature of any additional PRoW diversions (if required) will be subject to further discussions and agreement with PRoW Officers to avoid any significant impacts. As such, an assessment of the above potential (minor) PRoW realignments will be carried out within the ES to be produced, following these discussions and once the design has further developed. All other effects would be Medium (S-P4 and S-P16), Small (S-P2, S-P5, S-P9, S-P10, S-P13, S-P17, S-P18, S-P19 and S-P25) or Negligible (S-P1, S-P3, S-P6, S-P7, S-P8, S-P11, S-P12, S-P15, S-P22, S-P23 and S-P24). Further details are provided in **Volume 2, Part 2, Appendix 2.8.F, Preliminary Assessment.**
Preliminary likely significance of effect	Likely to be **Not Significant** (all receptors)
Sensitivity test	Same as above (without co-location)
Confidence in prediction	Moderate

2.8.9.72 As shown above, the likely impact of the Proposed Project on PRoW diversions and closures is considered to be not significant based on the preliminary assessment, with the additional mitigation (S-TTAM01 and S-TTAM02) identified for S-P14, S-P20 and S-P21. This will be reviewed further as part of the ES and the Outline PRoW Management Plan when further information is available to inform the full assessment (which will increase the confidence of the findings).

Operation and Maintenance

2.8.9.73 During the operational and maintenance phase, the Suffolk Onshore Scheme will be manned by two operatives across the site (associated with the operation of the proposed converter stations), resulting in up to four daily car/LGV trips. There will also be additional infrequent trips associated with monthly or annual maintenance/inspections or repairs when required. Staff vehicles and those used for maintenance are primarily expected to be pickup trucks and vans, with HGVs rarely accessing the site for the replacement of equipment. Therefore, due to the low level of trips likely to be generated, it has been agreed to exclude operational phase transport effects from the EIA (see Scoping Opinion ref ID 3.7.1). The proposed permanent routes which will be used during the operational and maintenance phase are shown on **Figure 1.4.19 Suffolk Onshore Scheme Traffic Routes during Construction and Operation**. Further details relating to the operational and maintenance phase are set out within **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**.

2.8.9.74 Whilst it is acknowledged that the Proposed Project will result in the permanent diversion of S-P14 (with and without co-location), S-P20 (co-location only) and S-P21 (with and without co-location), the additional mitigation (S-TTAM01 and S-TTAM02) will be applicable to all phases and the likely impact is considered to be not significant, as per the findings in Table 2.8.45 for the construction and decommissioning phase. This will be reviewed as part of the ES once further information is available to inform a full assessment.

2.8.10 Summary

2.8.10.1 Following the above preliminary assessment, no significant effects have been identified as a result of the Proposed Project on transport and access during the operational and maintenance phase. Furthermore, no significant effects have been identified for Fear & Intimidation, hazardous/large Loads and PRoW diversions and closures during the construction and decommissioning phases with the proposed mitigation in place, as all effects have either been categorised as minor adverse or negligible. As such, no additional mitigation (to that already identified) is considered to be necessary at this stage for these phases and/or assessment criteria.

2.8.10.2 For the remaining assessment criteria during the construction and decommissioning phases, no significant effects have been identified as a result of the Proposed Project for the majority of the receptors which have been assessed. However, potentially significant effects have been identified for several receptors in terms of severance, pedestrian delay, non-motorised user amenity, driver delay and road safety. This will therefore be reviewed further as part of the ES when updated baseline traffic flows and full PIA data are obtained to increase the confidence of the findings, as well as once a preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

2.8.11 References

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Ref. 2.8.3 Department of Energy and Climate Change (2011). National Policy Statement for Electricity Networks Infrastructure (EN-5). London: Department of Energy and Climate Change.

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Ref. 2.8.5 Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. London: Ministry of Housing, Communities & Local Government, pp. 30-32.

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Ref. 2.8.11 Institute of Environmental Management and Assessment (IEMA) (1993). Guidelines for the Environmental Assessment of Road Traffic. Lincoln: IEMA, pp 1-34.

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Ref. 2.8.19 East Suffolk Council (ESC) (2023). High Lodge Leisure, Suffolk – Transport Assessment [online]. Available at https://publicaccess.eastsuffolk.gov.uk/online-applications/applicationDetails.do?keyVal=QF7QUWQXLN300&activeTab=summary [Accessed 10 August 2023].

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