

The Great Grid Upgrade

Eastern Green Link 5 (EGL 5)

Preliminary Environmental Information Report

Volume 1

Part 2

Chapter 12 Traffic and Transport

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12. Traffic and Transport

12.1 Introduction

- 12.1.1 This chapter presents the preliminary findings of the Environmental Impact Assessment (EIA) undertaken to date for the Eastern Green Link (EGL) 5 English Onshore Scheme, with respect to traffic and transport. The preliminary assessment is based on information obtained to date. It should be read in conjunction with the description of the Project provided in **Volume 1, Part 1, Chapter 4 Description of the Project**.
- 12.1.2 This chapter describes the methodology used, the datasets that have informed the preliminary assessment, current baseline conditions, current environmental measures, and the preliminary traffic and transport effects that could result from the English Onshore Scheme during the construction, operation (and maintenance), and decommissioning phases. Specifically, it relates to the English Onshore elements of the Scheme landward of Mean Low Water Springs (MLWS).
- 12.1.3 This chapter should be read in conjunction with and considered alongside the following chapters found in **Volume 1**:
- **Part 1, Chapter 4: Description of the Project** (due to the close association between the Project's design parameters, programme, and traffic and transport assessment);
 - **Part 1, Chapter 5: PEIR Approach and Methodology** (due to the association between the overall PEIR methodology and the traffic and transport assessment methodology);
 - **Part 2, Chapter 13: Noise and Vibration** (with regards to the potential impacts and effects of road traffic associated with the English Onshore Scheme to Noise and Vibration receptors);
 - **Part 2, Chapter 14: Air Quality** (with regards to the potential impacts and effects of road traffic associated with the English Onshore Scheme to Air Quality receptors);
 - **Part 2, Chapter 15: Socio-economics, Recreation and Tourism** (with regards to the potential impacts and effects of road traffic associated with the English Onshore Scheme to socio-economic receptors); and
 - **Part 2, Chapter 16: Health and Wellbeing** (with regards to the potential impacts and effects of road traffic associated with the English Onshore Scheme to health and wellbeing receptors).
- 12.1.4 This chapter is supported by the following figures:
- **Volume 3, Part 2, Figure 12-1: Study Area;**
 - **Volume 3, Part 2, Figure 12-2: Public Rights of Way Network;**
 - **Volume 3, Part 2, Figure 12-3: Local Cycling Routes;**
 - **Volume 3, Part 2, Figure 12-4 : Construction Access Routes;**
 - **Volume 3, Part 2, Figure 12-5: Personal Injury Collisions; and**
 - **Volume 3, Part 2, Figure 12-6: Sensitive Receptors.**

12.1.5 This chapter is supported by the following appendices in **Volume 2**:

- **Part 1, Appendix 2.A: Regulatory and Planning Context;**
- **Part 2, Appendix 12.A: Scoping Opinion Response;**
- **Part 2, Appendix 12.B: Baseline Conditions;**
- **Part 2, Appendix 12.C: Construction Phase Traffic Flows; and**
- **Part 2, Appendix 12.D: Construction Phase Effects.**

Limitations

- 12.1.6 The information provided in this Preliminary Environmental Information Report (PEIR) is preliminary, the final assessment of likely significant effects will be reported in the Environmental Statement (ES). The PEIR has been produced to fulfil National Grid Electricity Transmission plc (NGET)'s consultation duties in accordance with Section 42 of the PA2008 and enable consultees to develop an informed view of the preliminary significant effects of the English Onshore Scheme.
- 12.1.7 Baseline traffic flows have been obtained from a range of sources, including publicly available Department for Transport traffic data, project commissioned Automatic Traffic Count (ATC) surveys, and ATC survey data shared by EGL 3 and 4 on highway links that may potentially form part of constructions access routes on both projects. There are some gaps identified in the baseline data available from these sources (in relation to the coverage for the study area for the Project), where data has not been collected specifically for the Project. The baseline data would be reviewed prior to the submission of the ES to ensure it is still considered suitable, and additional data collected where this PEIR identifies further assessment is required. This would include further engagement with the relevant highway authorities.
- 12.1.8 Driver delay during the construction phase would be assessed as part of the ES following junction capacity and / or link capacity assessments within the study area, where appropriate, and following technical engagement with the highway authorities.
- 12.1.9 No Road Safety Audits have been undertaken at this stage of the English Onshore Scheme. Targeted Road Safety Audits would be undertaken, in agreement with the local highway authority, as part of the ES stage and submitted to the local highway authority in advance of the DCO application for approval.
- 12.1.10 The construction traffic flow estimates do not include Abnormal Indivisible Loads (AIL). AILs would be assessed separately in the ES when more details are known regarding the number of AIL movements, vehicle composition including AIL category, and the route options between the origin of the AILs and the English Onshore Scheme.
- 12.1.11 The construction phasing, construction worker profile, and associated vehicle movements have been developed with the Applicant and the Front End Engineering Design (FEED) team and are subject to change. Programme changes could include changes to the sequencing of works to avoid sensitive locations, time of year, or other consented projects.
- 12.1.12 Construction traffic forecasts are based on an estimate of construction materials, workforce, and current construction phasing. This has informed the PEIR assessment and is considered to provide a realistic worst-case scenario but is subject to change as the English Onshore Scheme programme and design evolves including in response to feedback from stakeholders.

- 12.1.13 Discussions with Lincolnshire County Council and National Highways regarding the detailed scope and methodology of the traffic and transport assessment will continue post submission of the PEIR and prior to submission of the ES.
- 12.1.14 No quantitative usage data have been collected for Public Rights of Way (PRoW) that have the potential to be impacted by the English Onshore Scheme as it is anticipated that any impacts can be actively managed with minimal disruption to users of the PRoW network during the construction phase and negligible permanent changes to the PRoW network during the operational phase. Any surveys, if deemed necessary, and their timing would be identified in the PRoW Management Plan and agreed with the Lincolnshire County Council PRoW officers.
- 12.1.15 These limitations would be reviewed based on the design presented in the Development Consent Order (DCO) application and, where required, updated, or refined, for the assessment presented in the ES.

Preliminary significance conclusions

- 12.1.16 For ease of reference, a summary of the potentially significant effects from the preliminary traffic and transport assessment is provided in **Table 12-1**. All other effects in relation to the traffic and transport have been assessed as not significant or will be assessed at the ES stage. Further details of the methodology behind the assessment, and a detailed narrative of the assessment itself are provided within the sections below.

Table 12-1 Preliminary summary of significance of effects

Receptor and summary of predicted effects	Sensitivity / importance / value of receptor¹	Magnitude of change²	Significance³	Summary rationale
Severance effects and delays to pedestrians and other non-motorised users on the following road links: A16 London Road (Link 3) (HGVs only)	High	Minor	Moderate	Based on the magnitude of change and the assigned sensitivity of the links the significance of effect is classified as having a moderate effect on the identified link.
Severance effects and delays to pedestrians and other non-motorised users on the following road links: A52 Sutton Road (Link 12) (HGVs only)	Medium	Major	Large	Based on the magnitude of change and the assigned sensitivity of the links the significance of effect is classified as having a large effect on the identified link.
Non-motorised user amenity effects on the following road links: A16 London Road (Link 3) (HGVs only)	High	Moderate	Large	Based on the magnitude of change and the assigned sensitivity of the links the significance of effect is classified as having a large effect on the identified link.

¹ The sensitivity / importance / value of a receptor is defined using the criteria set out in Section 12.9 and is defined as ‘negligible’, ‘low’, ‘medium’, or ‘high’.

² The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in Section 12.9 and is defined as ‘no change’, ‘negligible’, ‘minor’, ‘moderate’, and ‘major’ for severance and pedestrian delay and non-motorised user amenity and ‘no change’, ‘negligible’, ‘low’, ‘medium’, and ‘high’ for fear and intimidation.

³ The significance of effects is based on the combination of the sensitivity / importance / value of a receptor and the magnitude of change on a receptor and is categorised as ‘large or very large (significant)’, ‘moderate (significant)’, ‘slight (not significant)’, and ‘neutral (not significant)’, subject to the methodology set out in Section 12.9.

Receptor and summary of predicted effects	Sensitivity / importance / value of receptor ¹	Magnitude of change ²	Significance ³	Summary rationale
Non-motorised user amenity effects on the following road links: A52 Sutton Road (Link 12) (HGVs only)	Medium	Major	Large	Based on the magnitude of change and the assigned sensitivity of the links the significance of effect is classified as having a large effect on the identified link.

12.2 Relevant Technical Guidance

12.2.1 The legislation and planning policy which has informed the assessment of effects with respect to traffic and transport is provided within **Volume 2, Part 1, Appendix 2.A: Regulatory and Planning Context**. Further information on policies relevant to the English Onshore Scheme is provided in **Volume 1, Part 1, Chapter 2: Regulatory and Policy Overview**. Relevant technical guidance, specific to traffic and transport, that has informed this PEIR and would inform the assessment within the ES is summarised below.

Technical guidance

12.2.2 A summary of the technical guidance for traffic and transport is given in **Table 12-2**.

Table 12-2 Technical guidance relevant to the traffic and transport assessment

Technical guidance document	Context
Planning Practice Guidance - Travel Plans, Transport Assessments and Statements (2014) (Ref 12.1)	This Planning Practice Guidance sets out when Travel Plans, Transport Assessments, Transport Statements are required, and what they should contain. This guidance sets out that local planning authorities, developers, relevant transport authorities and neighbourhood planning organisations should agree what evaluation is needed in each instance.
Environmental Assessment of Traffic and Movement (2023) (Ref 12.2)	The Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment (IEMA)) Environmental Assessment of Traffic and Movement (EATM) guidelines provide practitioners with good practice advice on how to carry out the assessment of traffic and movement of people as part of a statutory EIA or non-statutory environmental assessment.
Design Manual for Roads and Bridges (DMRB) LA 101 – Introduction to Environmental Assessment (2019) (Ref 12.3)	LA 101 sets out the over-arching requirements and principles that form an introduction to the environmental assessment of motorway and all-purpose trunk roads.
DMRB LA 103 – Scoping Reports for Environmental Assessment (2020) (Ref 12.4)	LA 103 sets out the requirements for scoping motorway and all-purpose trunk road projects for environmental assessment.
DMRB LA 104 – Environmental Assessment and monitoring (2020) (Ref 12.5)	LA 104 sets out the requirements for environmental assessment of projects, including reporting and monitoring of significant adverse environmental effects.

Technical guidance document	Context
DMRB LA 112 – Population and Human Health (2020) (Ref 12.6)	LA 112 sets out the requirements for assessing and reporting the environmental effects on population and health from construction, operation, and maintenance of highway projects.

12.3 Consultation and Engagement

Overview

- 12.3.1 The assessment has been informed by non-statutory consultation responses, with formal consultation to follow, and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 5.9 of Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**.

Scoping Opinion

- 12.3.2 A Scoping Opinion (Ref 12.7) was adopted by the Secretary of State, administered by the Planning Inspectorate, on 13 October 2025. **Volume 2, Part 2, Appendix 12.A: Scoping Opinion Response** outlines the comments made in the Scoping Opinion in relation to traffic and transport and how these have been addressed within this chapter.
- 12.3.3 In line with the approach set out in the Scoping Report (Ref 12.8) and which the Planning Inspectorate noted their contentment with the approach, the operational (and maintenance) phase has been scoped out.
- 12.3.4 The information provided in this PEIR is preliminary and not all of the Scoping Opinion comments have been addressed at this stage. However, all comments would be addressed within the ES.

Technical engagement

- 12.3.5 Technical engagement with consultees in relation to traffic and transport is ongoing. A summary of the technical engagement undertaken to date (8 April 2026) is outlined in **Table 12-3**.

Table 12-3 Technical engagement on the environmental aspect assessment

Consultee	Consideration	How addressed in this PEIR
National Highways	At a meeting on the 23 October 2025, details of the Project routes, including for ALLs, were presented to National Highways. The current study area does not include any part of the strategic road network (SRN): the nearest locations on the SRN are the A46 (Lincoln) and the A180 (Grimsby),	Proposed construction access routes, including for ALLs, are shown in Volume 3, Part 2, Figure 12-4 . The forecast number of vehicle movements are set out in Volume 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows for the construction

Consultee	Consideration	How addressed in this PEIR
	<p>approximately 25 miles from the English Onshore Scheme. The impact of construction traffic on the Strategic Road Network and AIL routeing were the main concerns for National Highways.</p>	<p>programme. Further technical engagement may be required following the submission of the PEIR.</p>
Lincolnshire County Council	<p>At a meeting on the 27 November 2025, information on construction access routes, road crossings and access points, AIL routeing, and PRow crossings was presented to Lincolnshire County Council.</p>	<p>The meeting for was information sharing purposes only</p>
Lincolnshire County Council	<p>At a meeting on the 19 January 2026, potential construction access routes were presented. Lincolnshire County Council said that they would like to see speed surveys undertaken. Lincolnshire County Council stated that they would require Road Safety Audits for temporary access routes on A roads or serving major compounds.</p>	<p>Speed surveys are to be undertaken as part of the methodology for calculating visibility splays. Lincolnshire County Council's Road Safety Audit requirement is noted. Further technical engagement may be required following the submission of the PEIR.</p>
Lincolnshire County Council	<p>At a meeting on the 20 January 2026, potential routes for the transformer AILs were presented to Lincolnshire County Council highways officers. Possible constraints on each route option were discussed.</p>	<p>Proposed construction access routes, including for AILs, are shown in Volume 3, Part 2, Figure 12-4. Proposed AIL routes to be assessed against axle weight limits, gross vehicle weight limits, and AIL vehicle swept paths. Engagement with Lincolnshire County Council to continue following the submission of the PEIR and assessment of potential AIL routes.</p>
Lincolnshire County Council	<p>At a meeting on the 12 March 2026, the option of a beach landing for transformer AILs was presented.</p>	<p>The meeting for was information sharing purposes only</p>
Lincolnshire County Council	<p>At a meeting on the 16 March 2026, the potential impacts of the English Onshore Scheme</p>	<p>The meeting for was information sharing purposes only</p>

Consultee	Consideration	How addressed in this PEIR
	on PRow were discussed with PRow officers from Lincolnshire County Council.	
National Highways	At a meeting on the 19 March 2026, options for the delivery of transformer AILs were only discussed.	The meeting for information sharing purposes was discussed.

- 12.3.6 Engagement will continue following the submission of this PEIR and in advance of the production and submission of the ES. Meetings are scheduled with Lincolnshire County Council each month and these meetings are proposed to continue after submission of this PEIR and throughout the ES stage. Additional technical working group meetings to discuss specific topics will be arranged as required.
- 12.3.7 Engagement with National Highways will continue regarding the routing of the transformer AILs, with meetings arranged at appropriate times as the AIL routing strategy develops.
- 12.3.8 It is proposed that a traffic and transport Technical Working Group (TWG) is set up following statutory consultation, comprising the Applicant, Lincolnshire County Council, and National Highways. The frequency of the TWG meetings has yet to be determined.

12.4 Data Gathering Methodology

Study area

- 12.4.1 The traffic and transport study area is shown on **Volume 3, Part 2, Figure 12-1**. In line with the Scoping Report (Ref 12.8), the study area for the traffic and transport has been informed by the following:
- Highway links intersected by any element of the English Onshore Scheme;
 - Highway links which are likely to be subject to physical alteration, temporary road restrictions, and / or temporary traffic management measures required to construct the English Onshore Scheme;
 - PRow intersected by any element of the English Onshore Scheme as shown on **Volume 3, Part 2, Figure 12-2**;
 - Local cycle routes that interact with the construction access routes as shown on **Volume 3, Part 2, Figure 12-3**; and
 - Highway links providing access for construction traffic generated by the English Onshore Scheme including to temporary construction working areas and laydown areas as set out in **Volume 3, Part 2, Figure 12-4** and listed in **Table 12-6**.

Desk study

- 12.4.2 A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 12-4**.

Table 12-4 Data sources used to inform the traffic and transport assessment

Organisation	Data source	Data provided
Office for National Statistics	2011 and 2021 Censuses (Refs 12.9 and 12.10)	Census Data
Ordnance Survey	Ordnance Survey (Ref 12.11)	1:25,000 and 1:50,000 map data
Google	Google Maps (Ref 12.12)	Aerial Imagery, Streetview Imagery and Traffic Data
Sustrans	Map of the National Cycle Network (Ref 12.13)	National Cycle Network (NCN) information
Lincolnshire County Council	Lincolnshire electronic working copy definitive map (Ref 12.14)	PRoW information
	Lincolnshire County Council website (Ref 12.15)	Local cycling routes
Visit Lincolnshire	Visit Lincolnshire website (Ref 12.16)	Local cycling routes
Department for Transport	Road traffic statistics manual count points (Ref 12.17)	Vehicle counts / flows
	Road safety statistics (Ref 12.18)	STATS19 Personal Injury Collision (PIC) data
National Rail	National Rail All Stations Route Map (Ref 12.19)	Active railway lines in the study area
Inland Waterways Association	Inland Waterways Association Map of the Inland Waterways of Great Britain (Ref 12.20)	Navigable waterways in the study area

Survey work

- 12.4.3 A drive-over of the traffic and transport study area of the English Onshore Scheme (**Volume 3, Part 2, Figure 12-1**) will be undertaken prior to the submission of the ES to visually understand the characteristics of the highway network most impacted by the English Onshore Scheme.
- 12.4.4 Further survey work, including ATC surveys, would be undertaken prior to the submission of the ES with details set out in Section 12.11.

12.5 Overall Baseline

Current baseline

Construction Access Routes

12.5.1 An access strategy has been developed for the English Onshore Scheme which has used the types of access required and access and routeing criteria to identify the construction road traffic access routes for the English Onshore Scheme. The baseline conditions are described for these access routes. The access strategy identified different types of access associated with the construction phase:

- Transformer AIL Access;
- Primary Access (Cable Drum AIL);
- Primary Access (Construction);
- Advanced / Mobilisation Access (Heavy Goods Vehicles (HGVs)⁴);
- Advanced / Mobilisation Access (Restricted); and
- Crossings.

12.5.2 A defined set of criteria and considerations were applied to aid selection of suitable access locations and routes as set out in **Table 12-5**.

Table 12-5 Access and routeing criteria

Consideration	Detail
Onwards routeing to the SRN and major road network (MRN)	The route between access points and the A16 are considered.
Impact on residential areas	Residential areas are preferably avoided where possible to ensure as little impact as reasonably practicable on residents in proximity to the Indicative Alignment of the cable route.
Road visibility at bellmouth location	Visibility for turning and approaching vehicles is a critical safety consideration for the design for access and egress. When locating bellmouths, consideration is given to the geometry, elevation, and presence of vegetation on existing roads as these impact visibility.
Pinch points	These include constrictions on the carriageway width, such as single-lane bridge crossings, and changes in the horizontal geometry, such as bends or junctions with tight radii. The limited manoeuvrability of some of the construction traffic vehicles means that routes with constrictions are to

⁴ A heavy goods vehicle is classified as one exceeding 3.5 tonnes.

Consideration	Detail
	be avoided where possible to prevent vehicles from becoming stranded or a hazard to other road users.
Proximity to project area	Bellmouth accesses off the local highway network are preferred to be as close to the Indicative Alignment of the cable route as possible to reduce the requirement for temporary infrastructure (haul roads).
Routes for construction traffic	Where traffic volumes on the major road network necessitate, restrictions on construction traffic manoeuvres are considered (e.g., restricting right turns onto the construction haul road, one-way systems, etc.). Such restrictions are not proposed at this stage but could be considered on a case-by-case basis as the English Onshore Scheme progresses.

12.5.3 The defined access locations and routes have been extended throughout the study area to assess the impact on the wider highway network. The construction access routes are shown on **Volume 3, Part 2, Figure 12-4**. Construction access routes are formed of one or more highway ‘links’. Typically, these links comprise a section of route between key junctions. **Table 12-6** details the highway links which comprise the construction access routes and the access points to which they provide access.

Table 12-6 Highway links in construction access routes

Link number	Link description	Construction access routes and access points accessed using link
1	A157, B1373, Louth to Alford	Transformer AIL Access, Primary Access (Cable Drum AIL), Primary Access (Construction) (from north), Advanced / Mobilisation Access (HGVs) (from north), and Advanced / Mobilisation Access (Restricted) (from north). Bellmouths BM/001, BM/002, BM/003, BM/004, BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), BM/009, BM/010 (via haul road), BM/011 (via haul road), BM/012 (via haul road), and BM/013.
2	A157 Kenwick Hill	Transformer AIL Access, Primary Access (Cable Drum AIL), Primary Access (Construction) (from north), Advanced / Mobilisation Access (HGVs) (from north), and Advanced / Mobilisation Access (Restricted) (from north). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), BM/009, BM/010 (via haul road), BM/011 (via haul road), BM/012 (via haul road), and BM/013.

Link number	Link description	Construction access routes and access points accessed using link
3	A16: Louth to Ulceby Cross	Primary Access (Construction) (alternative route from north), Advanced / Mobilisation Access (HGVs) (alternative route from north), and Advanced / Mobilisation Access (Restricted) (alternative route from north). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), and BM/009.
4	A1104: Ulceby Cross to Alford	Primary Access (Construction) (from south and west; alternative route from north), Advanced / Mobilisation Access (HGVs) (from south and west; alternative route from north), and Advanced / Mobilisation Access (Restricted) (from south and west; alternative route from north). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), and BM/009.
5	A1111: Alford Road	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), and BM/009.
6	B1449: Thurlby Road	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), BM/008 (via haul road), and BM/009.
7	B1449: Long Lane	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), and BM/008 (via haul road).
8	A52: Mumby Road	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), and BM/008 (via haul road).
9	Rectory Road / Sea Road	Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001 and BM/002.

Link number	Link description	Construction access routes and access points accessed using link
10	Roman Bank / Huttoft Bank	Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001 and BM/002.
11	Sea Lane	Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001 and BM/002.
12	A52: Sutton Road	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouths BM/001, BM/002, BM/003 (via haul road), BM/004 (via haul road), BM/005, BM/006, BM/007 (via haul road), and BM/008 (via haul road).
13	Huttoft Road	Advanced / Mobilisation Access (Restricted).
14	Huttoft 9/1 Footpath	Advanced / Mobilisation Access (Restricted).
15	Mill Lane, Huttoft	Advanced / Mobilisation Access (Restricted).
16	Crawcroft Lane	Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted).
17	A1111: Sutton Road	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouth BM/010.
18	Asserby Road	Advanced / Mobilisation Access (Restricted).
19	Track off Roman Bank	Primary Access (Cable Drum AIL), Primary Access (Construction), Advanced / Mobilisation Access (HGVs), and Advanced / Mobilisation Access (Restricted). Bellmouth BM/001.
20	Mill Lane, Saleby	Advanced / Mobilisation Access (Restricted).

Traffic Data

12.5.4 Traffic data have been obtained from the latest available Department for Transport permanent counts and relevant ATC data shared by EGL 3 and 4 to understand the existing traffic flows on the highway network within the study area. Traffic count locations are shown on **Volume 3, Part 2, Figure 12-4**.

12.5.5 **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** contains the baseline traffic flows used in this PEIR.

Personal Injury Collision Data

12.5.6 Personal Injury Collision (PIC) data have been obtained from Department for Transport Road Safety Statistics (Ref 12.18) using the 'stats19' R package (Ref 12.21). The latest five years of PIC data available from STATS19 (2020-2024) for the study area were utilised. Up to date local personal injury collision data would be requested direct from the local highway authorities for the ES in order to ensure that the latest PIC data available was considered for the ES.

12.5.7 The locations of all collisions within the study area are shown on **Volume 3, Part 2, Figure 12-5**. The breakdown of collisions per year and severity is summarised in **Table 12-7**.

Table 12-7 Collisions by years and severity

Severity / year	2020	2021	2022	2023	2024	Total
Fatal	3	0	1	0	1	5
Serious	8	6	8	2	3	27
Slight	18	11	13	20	16	78
Total	29	17	22	22	20	110

12.5.8 Over the five-year period, a collision cluster has been determined by the following criteria:

- A location where there are six or more collisions occurring within a junction or a 100 m stretch.
- A location with three or more fatal and / or serious collisions happening either within a junction or within a 100 m stretch.

12.5.9 Typically, collision clusters occur at and on the approaches to junctions. From the collision data analysis, a collision cluster has been identified on the highway links on each of the following Construction Access Route links, as shown on **Volume 3, Part 2, Figure 12-5**. This collision cluster is:

- Link 3 (A16): South of Burwell village.

12.5.10 Additional data will be obtained from the Local Highway Authority to confirm cluster locations and further assessment will be undertaken at the ES stage to understand if mitigation is required.

PRoW Network

12.5.11 39 PRoW within the draft Order Limits would potentially be temporarily affected by the English Onshore Scheme, as shown on **Volume 3, Part 2, Figure 12-2** and listed in **Table 12-8**.

Table 12-8 Potentially affected PRow

Reference no. from Figure 12-2	PRow name	Reference no. from Figure 12-2	PRow name
1	Alfo/281/1	21	Hutt/11/2
2	Alfo/281/2	22	Hutt/1177/1
3	Alfo/282/2	23	Hutt/12/1
4	Alfo/282/3	24	Hutt/13/2
5	Alfo/282/5	25	Hutt/14/1
6	Alfo/283/1	26	Hutt/15/1
7	Alfo/283/2	27	Hutt/2/3
8	Alfo/283/3	28	Hutt/4/3
9	Alfo/283/4	29	Hutt/4/4
10	Alfo/283/5	30	Hutt/6/1
11	Alfo/285/1	31	Hutt/6/2
12	Alfo/289/1	32	Hutt/854/1
13	Alfo/290/1	33	Hutt/9/1
14	Bils/11/1	34	Hutt/965/1
15	Bils/13/1	35	Legb/204/1
16	Bils/73/1	36	Sale/281/1
17	Hutt/10/2	37	Sale/284/3
18	Hutt/10/4	38	SRes/193/1
19	Hutt/10/5	39	SRes/193/2
20	Hutt/11/1		

12.5.12 In addition to the PRow listed, the King Charles III England Coast Path, a National Trail, passes through the study area on the coastline between Sandilands and Anderby Creek.

Local and National Cycle Network

12.5.13 No NCN routes have been identified within the traffic and transport study area that would potentially be affected by the English Onshore Scheme.

12.5.14 Three local cycle routes publicised by Visit Lincolnshire (Ref 12.16) pass through the study area and would potentially be affected by the English Onshore Scheme: the Lincolnshire Wolds, Humber to the Wash, and Alford to the Coast cycle routes.

12.5.15 **Volume 3, Part 2, Figure 12-3** shows the sections of the local cycle routes that could be affected by the English Onshore Scheme including associated construction access routes.

Rail Network

12.5.16 No railway lines have been identified within the traffic and transport study area that would potentially be affected by the English Onshore Scheme.

Inland Waterways

12.5.17 No navigable inland waterways have been identified within the traffic and transport study area that would potentially be affected by the English Onshore Scheme.

Future baseline

Traffic Data

12.5.18 In line with the methodology set out in the Scoping Report (Ref 12.8), traffic growth factors have been calculated and applied to the baseline traffic data to generate a future baseline for the peak year of construction. **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** includes the future baseline traffic flows and growth factor.

12.5.19 At the ES stage, further analysis of traffic growth associated with other committed developments that use highway links within the study area would be undertaken. Sensitivity testing may be undertaken where appropriate. This would be determined through technical engagement with the relevant local highway authorities and National Highways.

12.5.20 In addition, this technical engagement would include discussions about planned highway improvements that could change traffic flows within the traffic and transport study area or use of the PRow or cycle networks.

12.6 Environmental Measures

12.6.1 As set out in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**, the environmental measures are characterised as design measures or control and management measures. A range of environmental measures would be implemented as part of the English Onshore Scheme and will be secured in the DCO as relevant.

12.6.2 **Table 12-9** outlines how these design and control measures will influence the traffic and transport assessment. Measures listed in Table 12-9 have been assigned references, for example (TT01). These align with the references provided in **Volume 2, Part 1, Appendix 5.B: Outline Code of Construction Practice (CoCP)** for ease of cross-reference. Any references identified with the ID MT (for example, MT01) include measures which may also be listed in other aspects considered as part of this PEIR therefore, have been identified as measures which apply to multiple aspects. In addition to the measures listed in **Table 12-9**, standard mitigation measures, comprising management activities and techniques, would be implemented during the construction of the English Onshore Scheme to limit effects through adherence to good site practices and achieving legal compliance. These are listed in **Volume 2, Part 1, Appendix 5.B: CoCP** and are not repeated below.

12.6.3 No environmental measures have been provided for the operational and maintenance phase as this has been scoped out (as outlined in **Section 12.3**).

Table 12-9 Summary of environmental measures

Receptor	Potential effects	changes	and Environmental measures	ID Reference
Construction				
Motorised users of the highway network	Potential temporary changes in traffic flows within the study area during the construction phase and associated traffic and transport effects.		All traffic to be managed in accordance with an Outline Construction Traffic Management Plan (Outline CTMP). The Outline CTMP would set out construction traffic management measures to, from and around the site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. It would 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 would also identify access for emergency vehicles. It would also set out measures to reduce safety risks through construction vehicle and driver quality standards and measures to manage AILs.	TT01 (C)
Motorised users of the highway network	Potential temporary changes in traffic flows within the study area during the construction phase and associated traffic and transport effects.		The Contractor would implement a monitoring and reporting system to check compliance with the measures set out within the Outline CTMP. The Contractor would also be expected to monitor the use of authorised routes and number of construction vehicles accessing the site at each access point. Deviations from the authorised routes or changes to traffic levels that are greater than the Outline CTMP assumptions would require discussion of the need for additional mitigation measures with highways authorities.	TT02 (C)
Motorised users of the highway network	Potential temporary changes in traffic flows within the study area during the construction phase and associated traffic and transport effects.		Where mitigation for traffic congestion is necessary (based on modelling outcomes), deliveries of construction materials would be timed to fall outside of the traditional peak traffic period.	TT03 (C)
Motorised users of the highway network	Potential temporary changes in traffic flows within the study area during the construction		The Contractor would undertake pre and post condition visual surveys (photographic and descriptive) on the areas that may be affected by the construction activities, prior to works commencing. This record would be	TT04 (C)

Receptor	Potential effects	changes	and Environmental measures	ID Reference
	phase and transport effects.	and associated traffic	available for comparison following completion of the works to ensure that the condition of the highways affected at least meets that recorded in the pre-condition survey.	
PRoW users	Potential temporary closure of PRoW for cable crossing of PRoW within the draft Order Limits.	All PRoW which have the potential to be impacted by the Project would be identified in an Outline PRoW Management Plan (PRoWMP). The Outline PRoWMP would set out the measures required (including any potential temporary closures applied for / detailed in the DCO) to ensure that PRoW remain safe to use and that any potential disruption to PRoW is minimised. All designated PRoW crossing the working area would be managed in discussion with the relevant local authority, with access only closed for short periods while construction activities occur. Any required temporary diversions or closures of PRoW, footways or carriageways undertaken during construction would be clearly marked at both ends with signage explaining the diversion, the duration of the diversion and a contact number for any concerns. The signage will display the temporary diversion routes in place.	TT05 (C)	
Design				
Motorised users of the highway network Non-motorised users of the highway network	Potential changes to the layout of the highway network and associated road safety effects.	All changes to the highway are to be designed in accordance with appropriate design guidance ensuring they are to standard.	TT01 (D)	

12.7 Scope of the Assessment

Spatial scope and study area

- 12.7.1 The spatial scope of the assessment of traffic and transport covers the area of the English Onshore Scheme contained within the draft Order Limits, together with the local roads likely to be used for construction routes. The study area for traffic and transport is shown on **Volume 3, Part 2, Figure 12-1**.
- 12.7.2 Following the determination of a study area, the ISEP EATM (Ref 12.2) recommends the competent traffic and movement expert applies two broad rules of thumb as criteria to assist in delimiting the scale and extent of the environmental assessment:
- Rule 1 – Include highway links where traffic flows (or HGV flows) are predicted to increase by more than 30 per cent; and
 - Rule 2 – Include any other specifically sensitive areas where traffic flows (or HGV flows) are predicted to increase by 10 per cent or more.
- 12.7.3 The highway links for further assessment have been identified with reference to Rules 1 and 2.
- 12.7.4 **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** sets out the highway links subject to Rule 1 and Rule 2 and those to be carried forward for assessment. 8 highway links have been identified as requiring further assessment as part of this preliminary report.

Temporal scope

- 12.7.5 The temporal scope of the assessment of traffic and transport is consistent with the period over which the English Onshore Scheme would be carried out. As detailed in **Volume 1, Part 1, Chapter 4: Description of the Project**, it covers the period 2029 – 2035 for construction, and the lifetime of the Project for operation (expected to operate for 40 years, although likely extended through replacement and repair).
- 12.7.6 The English Onshore Scheme is expected to have a minimum life span of approximately 40 years. If decommissioning is required at this point in time, then activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works, albeit with a lesser duration of two years. Acknowledging the complexities of completing a detailed assessment for decommissioning works up to 40 years in the future, it is considered that the significance of effects relating to the decommissioning phase would be no greater than those from the construction phase and decommissioning effects are not discussed in detail in this chapter; however, **Table 4-19** in **Volume 1, Part 1, Chapter 4: Description of the Project** provides a high level summary assessment of the likely significant effects associated with decommissioning. Furthermore, should decommissioning take place it is expected that an assessment in accordance with the legislation and guidance at the time of decommissioning would be undertaken.

Identification of receptors

- 12.7.7 The principal traffic and transport receptors that have been identified as being potentially subject to significant effects are summarised in **Table 12-10**.

Table 12-10 Traffic and transport receptors subject to potential effects

Receptor	Reason for consideration
Motorised users of the highway network	Temporary changes in traffic volumes and highway layouts due to construction activities.
Non-motorised users of the highway network	Temporary changes in accessibility and amenity during construction activities.
PRoW users	Temporary changes to PRoW access due to construction activities.
Public transport (bus) users	Temporary changes to bus services due to construction activities.

12.7.8 In addition, sensitive locations have been identified and are defined by the presence of special interests that the ISEP EATM (Ref 12.2) guidance advises should be considered:

- People at home;
- People at work;
- Sensitive and / or vulnerable groups;
- Locations with a concentration of vulnerable users (e.g., hospitals, places of worship and schools);
- Retail areas;
- Recreational areas;
- Tourist attractions;
- Collision clusters and routes with road safety concerns; and
- Junctions and highways links at or over capacity.

12.7.9 The sensitive locations are shown on **Volume 3, Part 2, Figure 12-6**.

Potential effects considered within this assessment

12.7.10 The effects on traffic and transport receptors, which have the potential to be significant and have been taken forward for detailed assessment are summarised in **Table 12-11**.

Table 12-11 Traffic and transport receptors scoped in for further assessment

Receptor	Likely significant effects
Motorised users of the highway network	Delays to motorists including freight traffic during construction.
Non-motorised users (e.g., pedestrians, cyclists and riders) of the highway network	Severance of non-motorised routes, pedestrian delay, and reduction in non-motorised user amenity during construction.

Receptor	Likely significant effects
PRoW users	Severance of PRoW routes due to diversions or closure during construction, and reduction in PRoW amenity during construction.
Public transport (bus) users	Delays to bus services or loss of bus services due to bus service changes during construction.

12.7.11 The receptors / effects detailed in **Table 12-12** have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant.

Table 12-12 Summary of effects scoped out of the traffic and transport assessment

Receptors / potential effects	Justification
Potential effects associated with the operational and maintenance phase	As set out in Volume 2, Part 2, Appendix 12.A: Scoping Opinion Response operational phase activities would be limited to routine maintenance activities by a small team, with negligible increases in traffic volumes.
Potential effects associated with the movement of hazardous loads	As set out in Volume 2, Part 2, Appendix 12.A: Scoping Opinion Response , no hazardous loads are anticipated during construction or operation and are therefore scoped out of this assessment.

12.8 Key Parameters for Assessment

Realistic worst-case design scenario

- 12.8.1 The assessment has followed the Rochdale Envelope approach as outlined in **Volume 1, Part 1, Chapter 4: Description of the Project** and **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**. The assessment of effects has been based on the description of the Project and parameters outlined in **Volume 1, Part 1, Chapter 4: Description of the Project**. However, where there is uncertainty regarding a particular design parameter, the realistic worst-case design parameters are provided below with regards to traffic and transport along with the reasons why these parameters are considered worst-case. The preliminary assessment for traffic and transport has been undertaken on this basis. Effects of greater adverse significance are not likely to arise should any other development scenario, based on details within the Rochdale Envelope (e.g., different infrastructure layout within the draft Order Limits), to that assessed here be taken forward in the final design scheme.
- 12.8.2 Regarding traffic and transport, the following assumptions are made concerning the English Onshore Scheme's design parameters in order to ensure a realistic worst-case assessment has been undertaken:
- The assessment presented in this PEIR includes the latest design information available at the time of the submission.

- Where design information is not available, reasonable worst-case assumptions have been applied.

Consideration of construction scenarios

12.8.3 As detailed in **Volume 1, Part 1, Chapter 4 Description of the Project**, the timing of construction activities set out within this PEIR is indicative. It has been identified that elements of the Project could be constructed sequentially or concurrently. For the purposes of the assessment, it has been assumed that all elements of the English Onshore Scheme would be constructed concurrently as this would represent the realistic worst-case scenario for transport and movement. Making this assumption results in the forecast vehicle movements peaking at a greater level than if elements of the English Onshore Scheme were to be constructed where traffic movements would be distributed over a longer period.

12.9 Assessment Methodology

Overview

12.9.1 The generic project-wide approach to the assessment methodology is set out in **Volume 1, Part 1, Chapter 5 PEIR Approach and Methodology**, and specifically in **Sections 5.4 - 5.6**. However, whilst this has informed the approach that has been used in this traffic and transport assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this traffic and transport assessment. Details are provided below.

Receptor sensitivity / value

12.9.2 The sensitivity of each highway link in the assessment has been assigned a sensitivity in accordance with the advice set out in the ISEP EATM guidelines (Ref 12.2), as summarised in **Table 12-13**, and based on professional judgement.

Table 12-13 Highway link sensitivity

Sensitivity	Reason for receptor sensitivity	Receptor type
High	<p>High concentration of 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.</p> <p>Limited separation of footway / cycleways from traffic. Significant level of pedestrian / cycle desire lines.</p> <p>A volume / highway capacity (i.e., V / C) ratio greater than 100%.</p>	<p>Motorised users of the highway network</p> <p>Non-motorised users (e.g., pedestrians, cyclists and horse riders) of the highway network</p> <p>PRoW users</p> <p>Public transport (bus) users</p>

Sensitivity	Reason for receptor sensitivity	Receptor type
Medium	<p data-bbox="309 224 1054 331">A link with three or more fatal and / or serious collisions happening either within a junction or within a 100 m stretch.</p> <ul data-bbox="320 360 1054 1003" style="list-style-type: none"> <li data-bbox="320 360 1054 685">• Medium concentration of 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. <li data-bbox="320 714 1054 822">• Limited separation of footway / cycleways from traffic. Moderate level of pedestrian / cycle desire lines. <li data-bbox="320 851 1054 884">• A V / C ratio between 90% and 100%. <li data-bbox="320 913 1054 1003">• A link where there are six or more injury collisions occurring within a junction or a 100 m stretch. 	<p data-bbox="1070 356 1477 427">Motorised users of the highway network</p> <p data-bbox="1070 443 1477 582">Non-motorised users (e.g., pedestrians, cyclists and horse riders) of the highway network</p> <p data-bbox="1070 598 1254 631">PRoW users</p> <p data-bbox="1070 647 1477 674">Public transport (bus) users</p>
Low	<ul data-bbox="320 1048 1054 1693" style="list-style-type: none"> <li data-bbox="320 1048 1054 1373">• Low concentration of 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. <li data-bbox="320 1402 1054 1547">• Provision of footway / cycleways that meet highway design standards. Footway / cycleways adequately separated from traffic. Limited pedestrian / cycle desire lines. <li data-bbox="320 1576 1054 1610">• A V / C ratio between 85% and 90%. <li data-bbox="320 1639 1054 1693">• A link where no clusters have been identified but there are isolated incidents. 	<p data-bbox="1070 1048 1477 1120">Motorised users of the highway network</p> <p data-bbox="1070 1135 1477 1274">Non-motorised users (e.g., pedestrians, cyclists and horse riders) of the highway network</p> <p data-bbox="1070 1290 1254 1323">PRoW users</p> <p data-bbox="1070 1339 1477 1366">Public transport (bus) users</p>
Negligible	<ul data-bbox="320 1738 1054 1995" style="list-style-type: none"> <li data-bbox="320 1738 1054 1995">• Very low concentration of 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), 	<p data-bbox="1070 1738 1477 1809">Motorised users of the highway network</p> <p data-bbox="1070 1825 1477 1964">Non-motorised users (e.g., pedestrians, cyclists and horse riders) of the highway network</p> <p data-bbox="1070 1980 1254 2013">PRoW users</p> <p data-bbox="1070 2029 1477 2056">Public transport (bus) users</p>

Sensitivity	Reason for receptor sensitivity	Receptor type
	<p>retail areas, recreational areas, tourist attractions.</p> <ul style="list-style-type: none"> • Provision of footway / cycleways that meet highway design standards. Footway / cycleways well separated from the carriageway. Minimum level of pedestrian / cycle desire lines. • A V / C ratio less than 85%. • A link where there have been no recorded personal injury collisions. 	

12.9.3 The sensitivity of a highway link is therefore assessed with reference to the type of user groups who may use it and the special interests present in an area.

Magnitude of impact

12.9.4 The traffic generated by the English Onshore Scheme has been used to assess the impacts on the highway links and junctions on the surrounding road network. The likely effects of the English Onshore Scheme in environmental terms would be evaluated in accordance with ISEP EATM (Ref 12.2) guidelines as outlined in the following subsections.

12.9.5 The guidelines acknowledge that, for many effects, there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and the application of professional judgement on the part of the assessor, supported by data or quantified information. Such judgement would include the assessment of the number of user groups impacted and the sensitivity of those user groups, as well as the assessment of damage to various natural or cultural resources.

12.9.6 An assessment has been undertaken to identify the percentage increase in HGVs and total traffic as a result of construction-related traffic on the road network using future baseline traffic flow data. The predicted increase has been assessed on Annual Average Daily Traffic (AADT) flows.

Severance and pedestrian delay (incorporating delay to all non-motorised users)

12.9.7 Severance occurs in a community when a major artery separates people from places and other people. Severance occurs from difficulty in crossing a road or where the road itself creates a physical barrier. Severance can affect pedestrians or motorists. ISEP EATM (Ref 12.2) guidelines state that historical guidance published by the Department for Transport suggested changes in total traffic flow of 30%, 60% and 90% result in slight, moderate, and substantial changes in severance respectively.

12.9.8 ISEP EATM notes that this guidance no longer appears in Department for Transport guidance but has not been superseded by subsequent changes and is established through planning case law. On this basis, it is considered appropriate to continue using these indicators to assess severance. **Table 12-14** contains how the magnitude of

impacts on sensitive receptors shall be reported within this preliminary assessment with respect to severance.

Table 12-14 Magnitude of impact (severance and pedestrian delay)

		Magnitude of impact (degree of change)				
		No change	Negligible	Minor	Moderate	Major
Severance	/	No change in traffic flow	Change in total traffic flow of less than 30%	Change in total traffic flow of 30 - 60%	Change in total traffic flow of 60 - 90%	Change in total traffic flow of greater than 90%
Pedestrian delay						

Driver delay

- 12.9.9 The use of industry standard junction capacity modelling programmes provides a methodology to quantify junction delay. Driver delay is only likely to be significant where the existing study area highway network is at or close to capacity.
- 12.9.10 The magnitude of impact is derived using professional judgement informed by the increase in vehicle delay, and whether a junction is at, or close to capacity. Alternatively, the forecast change in traffic flows can be used to assess the magnitude of impact. Impacts to local network performance would be assessed, and the impacts to driver delay would be presented in the ES. In accordance with ISEP EATM (Ref 12.2), this approach is considered to be appropriate to assess driver delay.

Non-motorised user amenity

- 12.9.11 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, pavement width, and separation between vehicles and pedestrians. The impact manifests itself in fear and intimidation, exposure to noise, and vehicle emissions. ISEP EATM states that historical guidance published by the Department for Transport suggested that a doubling or halving of total traffic flow or the HGV composition could lead to perceptible adverse or beneficial impacts upon Non-motorised user amenity. ISEP EATM guidelines note that this guidance no longer appears in Department for Transport guidance but has not been superseded by subsequent changes and is established through planning case law. On this basis, it is considered appropriate to continue using these indicators to assess Non-motorised user amenity. **Table 12-15** sets out how the magnitude of impacts on receptors shall be reported within this preliminary assessment with respect to Non-motorised user amenity.

Table 12-15 Magnitude of impact (non-motorised user amenity)

	Magnitude of impact (degree of change)				
	No change	Negligible	Minor	Moderate	Major
Non-motorised user amenity	No change in traffic flow	Change in total traffic flow (or HGV component) of less than 30%	Change in total traffic flow (or HGV component) of 30 - 50%	Change in total traffic flow (or HGV component) of 50 - 100%	Change in total traffic flow (or HGV component) of greater than 100%

Fear and intimidation

12.9.12 The ISEP EATM (Ref 12.2) guidelines state that the extent of fear and intimidation is dependent on the total volume of traffic, the HGV composition, the speed that these vehicles are passing and the proximity of traffic to people. ISEP EATM guidelines provide a weighted system to provide an approximation of the likelihood of pedestrian fear and intimidation. The degree of hazard is assessed with reference to the established thresholds (a, b and c) (see **Table 12-16**) and a score is provided for each combination on a highway link under consideration (see **Table 12-17**). The magnitude of impact is approximated with reference to changes in the level of fear and intimidation from baseline conditions (see **Table 12-18**).

Table 12-16 Fear and intimidation degree of hazard

Average traffic flow over 18-hour day – all vehicles / hour two way (a)	Total 18-hour flow (b)	HGV	Average speed (mph) (c)	vehicle	Degree of hazard score
+1,800	+3,000		≥40		30
1,200 - 1,800	2,000 - 3,000		30 - 40		20
600 - 1,200	1,000 - 2,000		20 - 30		10
<600	<1,000		<20		0

Table 12-17 Levels of fear and intimidation

Level of fear and intimidation	Total hazard score (a) + (b) + (c)
Extreme	71+
Great	41 - 70
Moderate	21 - 40
Small	0 - 20

Table 12-18 Magnitude of impact (fear and intimidation)

Magnitude of impact	of Change in step / traffic flows (AADT) from baseline conditions
High	Two step changes in level.
Medium	One step change in level, but with: <ul style="list-style-type: none"> <li data-bbox="491 434 1398 501">• >400 vehicle increase in average 18hr All Vehicle (AV) two-way all vehicle flow; and / or <li data-bbox="491 524 1161 557">• >500 HGV increase in total 18hr HGV flow.
Low	One step change in level with: <ul style="list-style-type: none"> <li data-bbox="491 645 1398 712">• <400 vehicle increase in average 18hr AV two-way all vehicle flow; and / or <li data-bbox="491 734 1161 768">• <500 HGV increase in total 18hr HGV flow.
Negligible	No change in step changes.
No change	No observable impact.

Road safety

12.9.13 Road safety is assessed by the frequency and severity of injury accidents that are attended by the police and recorded in official accident statistics. Intensification of use or changes in the composition of traffic has the potential to have an effect on collision rates. The examination of recent collision statistics on routes within the study area would highlight any hotspots that need further examination.

12.9.14 The PIC records for the local highway network has been examined for the 5-year period 2020 - 2024.

12.9.15 The magnitude of impact is derived using professional judgement informed by the frequency and severity of recorded collisions within the study area and the forecast increase in traffic.

Road safety audits

12.9.16 The ISEP EATM (Ref 12.2) guidance state that the standard and prescribed Road Safety Audits (GG 119 – Road Safety Audit DMRB) (Ref 12.22) should be used to review the road safety attributes of any proposed engineering changes in the adopted highway prior to submission. However, as local highway authorities often have their own standards and audit processes, the approach would be agreed with the local highway authority (Lincolnshire County Council) where changes to the highway are proposed.

Significance of effect

12.9.17 **Table 12-19** and **Table 12-20** combine receptor sensitivity with the magnitude of impact (degree of change), classifying the effects as neutral, slight, moderate, or very large, and as adverse or beneficial. Whether an effect is significant in EIA terms is identified in the matrices in **Table 12-19** and **Table 12-20**. The significance matrices are based on Table 3.8.1 from LA104 (Ref 12.5) and adjusted where required to align with ISEP EATM (Ref 12.2) guidelines.

Table 12-19 Significance evaluation matrix (severance, pedestrian delay, non-motorised user amenity, driver delay)

		Magnitude of change									
		Major		Moderate		Minor		Negligible		No change	
Receptor sensitivity	High	Very Large (significant)		Large (significant)		Moderate (significant)		Slight (not significant)		Neutral (not significant)	
	Medium	Large (significant)		Moderate (significant)		Slight (not significant)		Slight (not significant)		Neutral (not significant)	
	Low	Moderate (significant)		Slight (not significant)		Slight (not significant)		Slight (not significant)		Neutral (not significant)	
	Negligible	Slight (not significant)		Slight (not significant)		Slight (not significant)		Neutral (not significant)		Neutral (not significant)	

Table 12-20 Significance evaluation matrix (fear and intimidation)

		Magnitude of change									
		High		Medium		Low		Negligible		No change	
Receptor sensitivity	High	Very Large (significant)		Large (significant)		Moderate (significant)		Slight (not significant)		Neutral (not significant)	
	Medium	Large (significant)		Moderate (significant)		Slight (not significant)		Slight (not significant)		Neutral (not significant)	
	Low	Moderate (significant)		Slight (not significant)		Neutral or Slight (not significant)		Slight (not significant)		Neutral (not significant)	
	Negligible	Slight (not significant)		Slight (not significant)		Slight (not significant)		Neutral (not significant)		Neutral (not significant)	

12.9.18 The assessment of the significance of environmental effects shall also cover the following factors:

- The duration (long- or short-term); permanence (permanent or temporary), and changes in significance (increase or decrease);
- Reversibility – e.g., whether the change is reversible or irreversible, permanent or temporary; and

- Feasibility and mechanisms for delivering mitigating measures – e.g., whether there is evidence of the ability to legally deliver the environmental assumptions which are the basis for the assessment.

12.9.19 ‘Significant effects’ comprise residual effects that are within the moderate, large, or very large categories for the purposes of this EIA; neutral or slight effects are ‘not significant’.

Preliminary assessment of cumulative effects

12.9.20 At the current stage of the Project (PEIR stage), design information for the Project is insufficient to allow for a robust cumulative assessment to be undertaken. Furthermore, given the current position in relation to baseline data collection, with much of the environmental surveys still to be undertaken during 2026, the baseline identified at this PEIR stage cannot be taken as a complete picture of the potential presence and significance of sensitive receptors. Therefore, a cumulative assessment has not been undertaken at this stage. However, **Volume 1, Part 4, Chapter 27 Cumulative Effects** and **Volume 2, Part 4, Appendix 27.A Long List of other Developments** present the long and short lists of ‘other developments’ for the inter-project cumulative effects which would be considered at the ES stage (with updates as necessary), and the methodology which allowed for the identification of these other developments, to enable consultation bodies to form a view and provide comment on the other developments included. The long list will be reviewed and, if necessary, updated in the lead up to the ES, as the Project design further evolves and in response to any comments raised at statutory consultation.

12.9.21 Intra-project cumulative effects result principally from different types of impacts from one development acting in combination on a specific receptor. The increase in vehicle movements during the construction phase and the intra-project cumulative effects from other types of effect on receptors would be considered as part of the ongoing assessment in the following chapters:

- **Volume 1, Part 2, Chapter 6 Biodiversity;**
- **Volume 1, Part 2, Chapter 7 Cultural Heritage;**
- **Volume 1, Part 2, Chapter 8 Landscape and Visual Amenity;**
- **Volume 1, Part 2, Chapter 13 Noise and Vibration;**
- **Volume 1, Part 2, Chapter 14 Air Quality;**
- **Volume 1, Part 2, Chapter 15 Socio-economics, Recreation and Tourism;** and
- **Volume 1, Part 2, Chapter 16 Health and Wellbeing.**

12.9.22 Further details on the intra-project cumulative effects can be found in the individual chapters.

12.10 Preliminary Assessment of Traffic and Transport Effects

12.10.1 This section details the preliminary assessment of significant effects due to traffic and transport of the English Onshore Scheme during the construction phase, considering the environmental measures detailed in Section 12.6 of this chapter.

12.10.2 To assess the potential likely significant effects on receptors, the current estimated construction-related traffic has been assigned to the network in accordance with the assessment methodology previously outlined in Section 12.9 of this chapter, with the

preliminary analysis underpinning the trip generation, distribution and assignment during the construction phase included in **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows**.

12.10.3 The assessment is a preliminary assessment based on the current design, available data, current assumptions, and limitations. A full detailed assessment will be presented within the ES to be submitted with the DCO application.

Assessment of construction phase effects

12.10.4 The traffic and transport effects associated with the English Onshore Scheme would be a direct result of an increase in traffic flows on the surrounding roads used during the construction phase. An assessment has been undertaken to identify the percentage increase in total traffic and HGVs during the construction phase on the local road network in comparison to the future baseline traffic flow data allowing for traffic growth. The predicted increase has been assessed using AADT flows.

12.10.5 Traffic and transport effects associated with the construction phase on receptors relates to the change in traffic flow compared with baseline flows, vehicle composition and the sensitivity of the highway link. The level of sensitivity of the link-specific receptors has been identified in **Volume 2, Part 2, Appendix 12.B: Baseline Conditions** and presented in **Volume 3, Part 2, Figure 12.8**.

12.10.6 **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** sets out the predicted increase in traffic on the local and road network associated with predicted worst-case AADT construction traffic movements during the concurrent construction programme.

12.10.7 The predicted increase for AADT total vehicle flows and / or HGVs exceeds the 10% threshold (for sensitive roads) and 30% threshold (for non-sensitive roads) on eight highway links forming part of the Construction Access Routes and connecting roads and would be subject to further assessment within the ES. These links are listed in **Table 12-21** and shown in **Volume 3, Part 2, Figure 12-4**.

Table 12-21 Highway links exceeding ISEP thresholds

Highway link	Road name	Threshold
1	A157 / B1373 / A1104	30% threshold (non-sensitive roads)
3	A16 London Road	10% threshold (sensitive roads)
5	A1111 Alford Road	30% threshold (non-sensitive roads)
6	B1449 Thurlby Road	30% threshold (non-sensitive roads)
8	A52 Mumby Road	30% threshold (non-sensitive roads)
9	Sea Road / Rectory Road	30% threshold (non-sensitive roads)
11	Sea Lane	30% threshold (non-sensitive roads)
12	A52 Sutton Road	30% threshold (non-sensitive roads)

- 12.10.8 **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** indicates 12 highway links where the impacts are currently unknown owing to the requirement for additional traffic data. These links would need to be assessed fully at the ES stage.
- 12.10.9 **Volume 2, Part 2, Appendix 12.C: Preliminary Construction Phase Traffic Flows** indicates no highway links that form part of the Construction Access Routes and connecting roads are below the assessment threshold and would not be subject to further assessment based on current design, assumptions, and limitations.
- 12.10.10 The following sub-sections provide a preliminary assessment of the effects in relation to severance and pedestrian delay (incorporating delay to all non-motorised users), non-motorised user amenity, and fear and intimidation with reference to the change in traffic flows. As referenced earlier in this chapter, driver delay has not been assessed at this stage and road safety audits have yet to be undertaken.

Severance and pedestrian delay (incorporating delay to all non-motorised users)

- 12.10.11 The results set out in **Volume 2, Part 2, Appendix 12.D: Preliminary Construction Phase Effects** indicate that, in relation to the magnitude of change and assigned sensitivity for the links carried forward, the significance of effect in relation to severance and pedestrian delay (incorporating delay to all non-motorised users) is classified as potentially significant on two links (Link 3 and Link 12) in relation to HGVs. For the remaining six links, effects in relation to the increase in HGVs on the affected road network (ARN) would not be significant.
- 12.10.12 Based on the magnitude of change and the assigned sensitivity of the link, the significance of effect in relation to severance and pedestrian delay (incorporating delay to all non-motorised users) is classified as potentially significant on no links, and as not significant on eight links, in relation to the increase in total vehicles on the ARN.
- 12.10.13 In summary, the preliminary assessment indicates that there are potentially significant effects in relation to severance and pedestrian delay (incorporating delay to all non-motorised users) on two links (Link 3 and Link 12). The potentially affected links form part of the construction access route (A16 London Road and A52 Sutton Road).

Non-motorised user amenity

- 12.10.14 The preliminary assessment set out in **Volume 2, Part 2, Appendix 12.D: Preliminary Construction Phase Effects** indicates that, in relation to the magnitude of change and assigned sensitivity for the links carried forward for preliminary assessment, the significance of effect in relation to non-motorised user amenity is classified as potentially significant on two links (Link 3 and Link 12) and as not significant on six links in relation to the increase in HGVs on the ARN.
- 12.10.15 Based on the magnitude of change and the assigned sensitivity of the link, the significance of effect in relation to non-motorised user amenity is classified as potentially significant on no links, and as not significant on eight links, in relation to the increase in total vehicles on ARN.
- 12.10.16 In summary, the preliminary assessment indicates that there are potentially significant effects in relation to non-motorised user amenity on two links (Link 3 and Link 12). The

potentially affected links form part of the construction access route (A16 London Road and A52 Sutton Road).

Fear and intimidation

- 12.10.17 A further effect that traffic may have on pedestrians is fear and intimidation, which is dependent on the following factors: the volume of traffic, its HGV composition, its proximity to people, or the lack of protection caused by factors such as narrow pavement widths.
- 12.10.18 The preliminary assessment set out in **Volume 2, Part 2, Appendix 12.D: Preliminary Construction Phase Effects** indicates that, in relation to the magnitude of change and assigned sensitivity of the links carried forward for preliminary assessment, the significance of effect in relation to fear and intimidation is classified as not significant on all eight links, due to there being no step change between the without and with development scenarios in relation to the increase in vehicles on the ARN.

Road safety

- 12.10.19 Following a preliminary assessment of PIC within the study area, one collision cluster was identified on Link 3 (A16) south of Burwell village. However, the available data do not indicate whether the collisions had similar causes or occurred under similar circumstances.
- 12.10.20 A full review, including an analysis of clusters, HGV movements and collisions where an individual was killed or seriously injured would be undertaken in the ES for all links and junctions carried forward for further assessment. This would ensure a comprehensive road safety analysis is undertaken, informed by the daily vehicle movements for the construction phase.
- 12.10.21 If there are any areas within the study area where underlying road safety issues could be exacerbated by traffic movements associated with the English Onshore Scheme, then appropriate mitigation measures would be proposed. In addition, as set out in Section 12.9, road safety audits would be undertaken of highway interventions if requested by the relevant highway authority.

Abnormal indivisible loads

- 12.10.22 The likely abnormal indivisible load (AIL) movements, set out in **Table 12-22**, would be assessed, with the results presented in the ES.

Table 12-22 Likely large (abnormal indivisible loads) frequencies

Element	Vehicle type and load	Total frequency of movement
EGL 5 converter station	Transformer delivery vehicle to transport transformers from dock to EGL 5 converter station site.	21
EGL 5 HVAC and HVDC Underground Cables	Cable drum delivery vehicle to transport cable drums.	Approximately 60

- 12.10.23 The requirements and routing of AILs are still being determined and, therefore, detail to inform the assessment is not available at this stage. The ES shall include preferred routes for the movement of AILs including route, vehicle type, anticipated time of movement(s), and the nature of any highway works and / or temporary closures required to accommodate the movement. Whilst this may lead to some congestion and increased journey times from temporary road closures and / or diversions, experience from other projects shall be employed to seek to minimise disruption and delay to other road users.
- 12.10.24 The ES will confirm the worst-case number of AIL movements, the route options, and the types of vehicles required. Any mitigation measures necessary to facilitate the AIL movements shall be detailed in the ES and any resultant likely significant effects assessed. However, at this stage, associated significant effects cannot be ruled out.

12.11 Further Work to be Undertaken

- 12.11.1 The information provided in this PEIR is preliminary; the final assessment of significant effects shall be reported in the ES. This section describes the further work to be undertaken to support the traffic and transport assessment presented in the ES.

Baseline

- 12.11.2 The following baseline information shall be collated to inform the work being undertaken for the ES:
- Additional existing traffic flow data, collected through ATC surveys, on links where baseline data are absent in this chapter or as a result of changes between the preparation of this PEIR chapter and the submission of the ES.
 - Additional site visits are likely to be undertaken during 2026, closer to the submission of the ES.
 - If required, additional traffic surveys would be undertaken ahead of the submission of the ES to supplement the baseline data.
 - Speed data to inform the design of visibility splays and minimise impacts from implementation of any visibility splays required, such as vegetation loss, subject to agreement with the relevant local highway authority.
 - Up to date personal injury collision data shall be obtained from STATS19 and / or the local highway authority.
 - Any PRow usage surveys, if required, will be identified in the PRow Management Plan and agreed with the Lincolnshire County Council PRow officers.

Engagement

- 12.11.3 Engagement will continue following the submission of this PEIR and in advance of the production and submission of the ES. It is anticipated that monthly meetings with Lincolnshire County Council will continue after submission of this PEIR and throughout the ES stage. Additional technical working group meetings to discuss specific topics will be arranged as required.
- 12.11.4 Engagement with National Highways will continue regarding the routing of the transformer AILs, with meetings arranged at appropriate times as the AIL routing strategy develops.

Assessment

- 12.11.5 This chapter provides preliminary assessment based on the development of the English Onshore Scheme to date and data gathered at this point. The ES shall include updated construction access route details based on the design presented in the DCO application.
- 12.11.6 The ES would include an assessment of the potential effects related to driver delay and public transport delay to passengers. The ES would also include an updated assessment of the following:
- Potential effects related to severance and pedestrian delay (incorporating delays to all non-motorised users);
 - Potential effects concerning non-motorised user amenity;
 - Potential effects related to fear and intimidation; and
 - Potential effects on road safety.
- 12.11.7 **Table 12-8** lists recreational PRow routes that have been identified as potentially being impacted by the English Onshore Scheme. Part of the King Charles III England Coast Path National Trail has also been identified as potentially being impacted by the English Onshore Scheme. These routes, and any others identified through discussions with PRow officers, would be assessed, either as part of the traffic and transport chapter at the ES stage, or related chapter, such as Socioeconomics, Health and Wellbeing, and / or Landscape, as appropriate.

Further environmental measures

- 12.11.8 The Outline PRow Management Plan and Outline CTMP shall be developed further prior to the submission of the ES and shared with the highway authorities in advance for review, comment, and subsequent refinement.

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