Scottish & Southern Electricity Networks
TRANSMISSION

CONTENTS

11. TRAFFIC AND TRANSPORT

11.1 Introduction

11.1.1 This chapter considers the access proposals, and the potential traffic and transport effects associated with the construction and operation of the Proposed Development on the surrounding public road network and on sensitive receptors. This chapter (and its associated figures and appendices) is not intended to be read as a standalone assessment and reference should be made to the introductory chapters of this EIA Report (**Volume 2, Chapters 1-6**).

11.1.2 Additional information which supports this chapter is presented in the following figures and appendices (see **Volume 3: Figures** and **Volume 4: Appendices**, respectively):

- **Volume 3, Figure 11.1: Traffic and Transport Study Area;**
- **Volume 3, Figure 11.2: Traffic Count Site Locations;**
- **Volume 3, Figure 11.3: Personal Injury Accident Locations; and**
- **Volume 4, Appendix 11.1: Construction Traffic Management Plan.**

11.1.3 The specific objectives of this chapter are to:

- identify the relevant policy and legislative outline;
- describe the assessment methodology and significance criteria used in undertaking the assessment;
- describe the baseline conditions;
- identify sensitive receptors;
- determining potential origin locations of construction staff and supply locations for construction materials to inform extent of local area road network to be included in the assessment;
- perform impact analysis;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to address likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation measures.

11.1.4 Reference should be made to **Volume 5, Appendix 5.1 EIA Team** for details on the competent experts who undertook the assessment.

11.2 Legislation, Policy and Guidance

11.2.1 The assessment has been undertaken in accordance with the following:

- Scottish Government – Planning Advice Note (PAN) 75 – Planning for Transport[1] (17 August 2005); and
- Transport Scotland – Transport Assessment Guidance[2] (July 2012);
- Regional Transport Strategy (Nestrans, 2022[3]);
- Aberdeenshire Local Transport Strategy 2012[4];
- IEMA; Environmental Assessment Traffic and Movement July 2023[5]; and

[1] Scottish Government (2005) *Planning Advice Note (PAN) 75 – Planning for Transport.* (online). Available at: https://www.gov.scot/publications/planning-advice-note-pan-75-planning-transport/ [Accessed November 2024].
[2] Transport Scotland (2012). *Transport Assessment Guidance (July 2012).* (online). Available at: https://www.transport.gov.scot/media/4589/planning_reform_-_dpmtag_-_development_management__dpmtag_ref__17__-_transport_assessment_guidance_final_-_june_2012.pdf. [Accessed November 2024].
[3] Nestrans, (2022). The Nestrans Regional Transport Strategy (RTS). (online). Available at: https://www.nestrans.org.uk/regional-transport-strategy/#:~:text=The%20Nestrans%20Regional%20Transport%20Strategy%20%28RTS%29%20The%20Regional,in%20the%20region%20up%20to%20the%20year%202040. [Accessed October 2024].
[4] Aberdeenshire Council, (2012). Local Transport Strategy 2012. (online). Available at: https://engage.aberdeenshire.gov.uk/localtransportstrategy2023 [Accessed November 2024].
[5] Institute of Environmental Management and Assessment (IEMA), (2023). *Environmental Assessment Traffic and Movement - July 2023.* (online). Available at: https://www.iema.net/resources/blog/2023/07/12/new-iema-guidance-environmental-assessment-of-traffic-and-movement. [Accessed November 2024].

- National Highways et al. (various dates). Design Manual for Roads and Bridges, Volume 15, Section 1, Part 1 The Nesa Manual (DMRB[6]).

11.3 Assessment Methodology and Significance Criteria

Scope of the Assessment

11.3.1 The assessment is made with reference to the Proposed Development as described in **Volume 2, Chapter 3: Description of Proposed Development**.

11.3.2 The assessment is structured around the consideration of the following seven potential environmental effects related to traffic and transport within the Study Area (outlined in **Paragraph 11.3.8**), as identified by the IEMA Guidance for Environmental Impact Assessment, hereafter referred to as 'IEMA Guidance[5]Error! Bookmark not defined.:

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

11.3.3 A number of the impacts which are identified within the IEMA Guidelines such as Air quality, Noise, Vibration, Landscape and Visual, Biodiversity, Cultural Heritage and Climate and GHGs fall outwith the scope of this chapter and are discussed and assessed in detail within relevant chapters of Volume 2 of the EIA Report. These include:

- Landscape and Visual (**Volume 2, Chapter 8 Landscape and Visual Impact**);
- Biodiversity (**Volume 2, Chapter 9 Ecology, Nature Conservation and Ornithology**);
- Cultural Heritage (**Volume 2, Chapter 10 Cultural Heritage**); and
- Noise and Vibration (**Volume 2, Chapter 13 Noise and Vibration**).

11.3.4 It is noted that Air quality and Climate were scoped out of assessment within the scoping exercise (Ref: ENQ/2024/0903[7]).

Issues Scoped Out

11.3.5 The following topic areas have been scoped out of detailed assessment as agreed in association with the pre-application and scoping exercise (Reference ENQ/2024/0141 and ENQ/2024/0903[7]) undertaken in June 2024:

- The effects of construction traffic outwith the Study Area. It is anticipated that the volume of traffic associated with the construction of the Proposed Development would not have a discernible effect on roads and sensitive receptors outwith the Study Area as the effects of traffic are reduced with increasing distance from the point of origin.
- The effects of traffic associated with the operational stage. It is expected that the Proposed Development would not require permanent staff, therefore, the amount of traffic generated would be minimal and generally related to monitoring and maintenance activities. Vehicles used are likely to be a small number of private cars and/or utility vehicles (typically 4x4s or light goods vehicles). With respect to traffic and transport, the operational stage of the Proposed Development is therefore not assessed in this chapter.

[6] DMRB (2015). Design Manual for Roads and Bridges (DMRB), Volume 15, Section 1, Part 1 The Nesa Manual - October 2015. (Online). Available at: https://www.standardsforhighways.co.uk/ [Accessed November 2024].
[7] Aberdeenshire Council Planning Portal, (2024). ENQ/2024/0903. (Online). Available at: https://upa.aberdeenshire.gov.uk/online-applications/caseDetails.do?caseType=Application&keyVal=SFF2EYCA2TK00 [Accessed November 2024].

- The effects of traffic associated with the decommissioning stage. Traffic associated with the decommissioning stage is anticipated to be significantly less than that generated during construction. Due to the timescales involved and the likelihood for changes to the baseline situation during this period, the traffic and transport effects are not assessed in this chapter.
- The effect of hazardous loads. The form of the Proposed Development would not generate hazardous load movements in association with its construction or operation and this impact has therefore not been considered as part of this assessment.

Extent of the Study Area

11.3.6 The Study Area for the purposes of the Traffic and Transport Chapter has been defined as the public road network in the vicinity of the Proposed Development which would be used by vehicles to access the Site in relation to construction activities.

11.3.7 Potential construction access routes have been identified by the Applicant's contractor, with these to use the following roads to access the Site:

- A981, A948, A950, A920;
- B9207, B9170, B9005; and
- Unclassified C29S, C30S, and C121B.

11.3.8 The following road sections therefore form the Study Area:

- C29S between Oldmill of Allathan and the Site Access;
- B9170 between the B9027 and Old Meldrum;
- B9027 between the B9170 and the A98;
- A948 between the B9170 junction at New Deer to the A90 east of Ellon;
- A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950;
- C30S between the C29S and the B9005 at Cottown;
- B9005 between the C30S at Cottown and the A947 at Fyvie;
- A920 between Kirkton of Culsalmond and the B9170;
- A950 between the A98 and the Peterhead (A90);
- B9005 between the C30S at Cottown and the A947 at Fyvie; and
- C121B between the C29S and the B9170.

11.3.9 The extent of the Study Area is shown in **Volume 3, Figure 11.1: Traffic and Transport Study Area**.

Consultation Undertaken to Date

11.3.10 Consultation responses which are relevant to this chapter include those provided by Aberdeenshire Council's Roads Officer (ACRO) to a request to agree the Study Area. Other consultation responses included are in response to the recent Scoping exercise (Reference ENQ/2024/0903[7]) which refers to the pre-application enquiry (Reference ENQ/2024/0141) and is also captured in **Table 11-1**.

Table 11-1 Consultation responses of relevance this Traffic and Transport Chapter

Body/ organisation	Type of consultation/ date	Response	How response has been considered
Aberdeenshire Council - Roads Officer	Study Area Scoping Emails	"*We note that that all large construction vehicles will access the site on the unclassified C29S, from the north via the B9170. We have no issues with this, although would enquire whether there would be a possibility of any construction-related traffic from the C29S south of the site access? If there is any possibility of this (whether or not any large construction vehicles), then we would request that an additional survey site is included on the C29S south of the site access.*"	The Study Area is shown in **Volume 3, Figure 11.1: Traffic and Transport Study Area**, and is detailed in **Paragraphs 11.3.6** to **11.3.9** which confirms that all HGV construction traffic would access from the North. The Study Area has been determined taking cognisance of the Council's comment and construction traffic routing and Site Access detail included within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**.
Aberdeenshire Council - Roads Development	Scoping Response, August 2024 ENQ/2024/0141 within ENQ/2024/0903	No comment to make in relation to the scoping report and refer to comments made in relation to the earlier pre-application enquiry (ENQ/2024/0141). This advice stated:	Noted.
		Vehicular Access In respect vehicular access the maximum gradient of the first 10 m of access must not exceed 1 in 20. The centreline of the proposed access should be a minimum of 40 m from the existing junction centreline.	The location and form of the proposed Site Access on the unclassified C29S would be provided in accordance with standards, with the junction a minimum of 40 m from the existing junction centreline, and the design would not exceed a 1 in 20 gradient within the first 10 m of the access. Details of the final design are included in drawing number GRNS4-LT379-SEBAM-ZZ-ZZ-D-C-0118.
		Parking Standards The application must include details of both construction and	The location and formation of the Site parking provision for the construction and operation of the Proposed Development would

Body/ organisation	Type of consultation/ date	Response	How response has been considered
		operational parking arrangements.	consider both the parking requirements during construction so that no queueing occurs of the adopted road network, and the requirement for operational parking.
		Traffic Assessment A Traffic Assessment will be required in support of this proposal.	This Traffic and Transport Chapter provides a Road Capacity Assessment as part of a traffic assessment of the road network which concludes that there is substantial capacity remaining with the addition of construction traffic. The capacity assessment can be found in **Paragraphs 11.5.40** to **11.5.44** of this report.
		Construction Traffic Management Plan (CTMP) CTMP to be agreed with planning authority and developed with the consultation of the local roads' maintenance team.	The CTMP is to be treated as a live document and details of consultation carried out for production of the traffic management plan is included within the CTMP found in **Volume 4, Appendix 11.1: Construction Traffic Management Plan**.

Method of Baseline Data Collation

Desk Study

11.3.11 The desk study included the following:

- a review of relevant transport policy to the Site;
- a review of local road network including traffic flows;
- a review of personal injury accident data;
- the identification of any other traffic sensitive receptors in the area (Core Paths, walking routes, communities, etc.);
- a review of Ordnance Survey (OS) plans;
- the determination of potential origin locations of construction staff and supply locations for construction materials to inform extent of local area road network to be included in the assessment; and
- the Identification of constraints to the movement of Heavy Goods Vehicles (HGV) traffic and larger loads.

Traffic Data

11.3.12 To establish baseline traffic flows, Automatic Traffic Counters (ATCs) were installed at the following locations:

- ATC 1 - C29S, north of Site Access at Land at Mains of Greens;
- ATC 2 - B9170 (north west of New Deer) at Brucehill;

- ATC 3 - B9170 between the junction of the B9170 / C29S and Cuminestown; and
- ATC 4 - C30S between the C29S and the B9005 at Blackhillock.

11.3.13 To supplement the ATC survey data, traffic survey data has been obtained from the following Department for Transport (DfT)[8] traffic count sites for the remaining road network contained within the Study Area:

- Traffic Count Point 1180;
- Traffic Count Point 41009;
- Traffic Count Point 50860;
- Traffic Count Point 30978;
- Traffic Count Point 1181;
- Traffic Count Point 811604; and
- Traffic Count Point 80576.

11.3.14 In addition to the ATC Survey and DfT Count Data, the following traffic data has been obtained from consented developments in the area such as that obtained for the existing New Deer Substation (as per the requirements for Abnormal Indivisible Loads (AILVs) for New Deer Substation, and for the Green Volt Offshore Wind Farm onshore grid connection (References: APP/2018/0624[9] and APP/2023/1454[10]). The traffic data has been referred to as the following throughout the assessment:

- ATC 5: Data Year 2014 – located on the C29S south of the indicative Site Access; and
- ATC 6: Data Year 2023 – located on the C121B between he C29S and the B9170.

11.3.15 This data is provided as two-way Average Annual Daily Traffic (AADT) flows, by vehicle type including HGVs.

Personal Injury Accident Data

11.3.16 Personal Injury Accident data for the most recently available five-year period, covering 2018 to 2022, was obtained from the online resource Crashmap.co.uk[11] which uses data collected by Police Scotland.

Characterisation of Effect

11.3.17 The IEMA Guidelines identify the key impacts that are most important when assessing the magnitude of traffic impacts from an individual development. Those key impacts are as follows:

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

11.3.18 The evaluation methodologies for each of the seven traffic related impacts are discussed individually in turn in the following sections.

[8] Department for Transport (2022). *Road traffic statistics*. (online). Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-11.107/basemap-regions-countpoints. [Accessed November 2024].
[9] Aberdeenshire Council Planning Portal, (2022). APP/2018/0624. (online). Available at: https://upa.aberdeenshire.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=P5UE6ECA00G00 [Accessed November 2024].
[10] Aberdeenshire Council Planning Portal, (2024). APP/2023/1454. (online). Available at: https://upa.aberdeenshire.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=RYTOJ0CAII400 [Accessed November 2024].
[11] Crashmap, (2022). *crashmap.co.uk*. (online). Available at: https://www.crashmap.co.uk/ [Accessed November 2024].

Severance of Communities

11.3.19 Severance is described by the IEMA Guidelines as:

"the perceived division that can occur within a community when it becomes separated by major transport infrastructure … severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure", (IEMA, 2023).

11.3.20 The following levels of change in traffic flow have been considered when assessing the likely level of severance:

- ≤30 % increase in traffic equates to a negligible change in severance;
- >30 % ≤60% increase in traffic equates to a low change in severance;
- >60 % ≤90% increase in traffic equates to a medium change in severance; and
- >90 % increase in traffic equates to a high change in severance.

11.3.21 The guidance outlines that when assessing severance, the assessor should consider any physical infrastructure barriers, road width, traffic flow, traffic composition, traffic speed, crossing facilities and likely crossing movements (e.g. defining facilities to which access may be impaired and the potential total users and user groups), along with considering the impact on vulnerable groups.

Road Vehicle Driver and Passenger Delay

11.3.22 The IEMA guidance states that:

"driver delay is only likely to be significant when traffic on the network surrounding the site is already at, or close to, the capacity of the system", (IEMA, 2023).

11.3.23 The guidance confirms that impacts may be 'beneficial' or 'adverse' depending on whether the change in traffic results in an increase or decrease in driver delay. The effect on driver delay on links (excluding junctions), has been based on the change in traffic volume that would occur on key links as a result of the Proposed Development. In this case, professional judgement has been used to determine whether there would be a significant impact.

Non-Motorised User Delay

11.3.24 Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. However, delays would also depend upon the general level of pedestrian activity, visibility and general physical condition of the road.

11.3.25 The IEMA guidance does not support the use of threshold assessments to quantify the magnitude of impacts due to changes in delay. Therefore, the magnitude of this impact has been determined using professional judgement based on the predicted increase in traffic levels and the predicted level of pedestrian activity.

Non-Motorised User Amenity

11.3.26 Pedestrian amenity describes the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width / separation from traffic.

11.3.27 The IEMA guidance considers that a suitable starting point for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Therefore, the magnitude of impact in pedestrian amenity has been determined based on the level of increase in traffic flows on a particular road link and the level of pedestrian activity on that link.

Fear and Intimidation

11.3.28 Danger is recognised as an important environmental impact and the IEMA guidance suggests a set of thresholds for estimating fear and intimidation caused by traffic based on the following:

- the degree of hazard;
- the level of fear and intimidation; and
- the resulting magnitude of impact reviewed in relation to the change in traffic flows.

11.3.29 The IEMA guidelines states that, the extent of fear and intimidation is dependent on:

- the total volume of traffic;
- the heavy vehicle composition;
- the speed these vehicles are passing; and
- the proximity of traffic to people and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles.

11.3.30 The IEMA guidelines also note that special consideration should be given to areas where there are likely to be:

- high-speed sections of road;
- locations of turning points and accesses;
- narrow pavement median, narrow footway and/or constraints such as fences;
- areas frequented by road users unfamiliar with the location such as tourist spots; and
- areas frequented by vulnerable groups.

11.3.31 The IEMA guidelines also confirms that the assessment should be defined by the degree of hazards to pedestrians by average traffic flow over an 18-hour heavy vehicle flow and average speed (mph) over an 18-hour day.

11.3.32 **Table 11-2** identifies the criteria as extracted from the IEMA Guidance, which has been used to review the Proposed Development's impact in relation to Fear and Intimidation.

Table 11-2 Fear and Intimidation Degree of Hazard

Average traffic flows over 18-hour day – all vehicles/hour 2-way (a)	Total 18-hour heavy vehicle flow (b)	Average vehicle speed (mph) (c)	Degree of Hazard (DoH) 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

Source: Table 3.1 of the IEMA Guidelines: Environmental Assessment of Traffic and Movement

11.3.33 The IEMA Guidelines suggests that assessors should consider the Total Hazard Score for each link within the Study Area base on a review of the total traffic flow, the level of HGVs using the link and the typical vehicle speeds to determine the level of Fear and Intimidation in comparison with guidance summarised in **Table 11-3**.

Table 11-3 Level of Fear and Intimidation

Level of Fear and Intimidation (LoFI)	Total Hazard Score – (a) + (b) + (c)
Extreme	71+
Great	41 – 70
Moderate	21 – 4
Small	0 – 20

Source: Table 3.2 of the IEMA Guidelines: Environmental Assessment of Traffic and Movement

11.3.35 **Table 11-4** summarises the magnitude of impact which has been used to assess Fear and Intimidation taking cognisance of the criteria shown in **Table 11-2** and **Table 11-3**.

Table 11-4 Fear and Intimidation Magnitude of Impact

Magnitude of Impact	Change in step/traffic flows (AADT) from baseline conditions
High	Two step changes in level
Medium	One step change in level, but with >400 vehicle increase in average 18-hour average two-way all vehicle flow: and/or >500 Heavy Vehicle (HV) increase in total 18-hour HV flow
Low	One step change in level, but with <400 vehicle increase in average 18-hour average two-way all vehicle flow: and/or <500 HV increase in total 18-hour HV flow
Negligible	No change in step changes

Source: Table 3.3 of the IEMA Guidelines: Environmental Assessment of Traffic and Movement

Road User and Pedestrian Safety

11.3.36 The IEMA guidance recommends that at locations where high levels of Personal Injury Accidents (PIAs) are recorded, accident statistics should be used to provide an estimate of the existing road link's accident rate. As assessment of the Proposed Development's construction traffic in addition of baseline traffic flows can then be used to undertake a statistical assessment of the likely increase in accident rates based on the increase in vehicle-kilometres.

Hazardous/Large Loads

11.3.37 The IEMA guidance states that should a development involve the transportation of hazardous loads, these would need to be considered under the Carriage of Dangerous Goods and the use of Transportable Pressure Equipment Regulations (2009).

11.3.38 As previously stated in **Section 11.3**, the form of the Proposed Development would not generate hazardous load movements in association with its construction or operation and this impact has therefore not been considered further as part of this assessment.

11.3.39 The guidance states that should large or Abnormal Indivisible Loads (AILs) be anticipated:

"The traffic and movement expert must consider appropriate routes for abnormal load movements and mitigation strategies to secure safe passage. If frequent abnormal load movements are anticipated (e.g. heavy plant movements), the traffic and transport expert should consider if other traffic impacts could be induced (e.g. fear and intimidation, driver delay, etc", (IEMA, 2023).

11.3.40 Transport Scotland specify that an AIL Vehicle (AILV) is classified as larger than 2.9 m overall width by 18.3 m rigid length or exceeding 44 tonne gross weight[12]. Movement of AILVs is subject to separate agreement with the relevant road authority and police via notification or an Electronic Service Delivery for AILs (ESDAL) system. The extent of such analysis should clearly reflect the nature of the load being transported. This is considered further as part of the Abnormal Load Route Assessment (ALRA), the results of which are presented in the Route Feasibility Study which is an appendix within the CTMP (see **Volume 4, Appendix 11.1: Construction Traffic Management Plan)**.

11.3.41 Local air quality and dust / dirt impacts have not been assessed in detail, however actions to ensure appropriate management of these impacts would be included in a Construction Environmental Management Plan (CEMP).

Sensitive Receptors

11.3.42 The following receptors, including groups and special interests, have been assessed for the identified Study Area in line with the IEMA guidance, to determine the sensitivity of receptors:

- non-motorised users;
- public right of way users;
- motorists and freight vehicles;
- public transport; and
- emergency services.

11.3.43 The receptors above can broadly be grouped as the following affected parties; 'Users of Roads', and 'Users / Residents of Locations'. The following list identifies special interests that should be considered when defining sensitive receptor geographic locations, and the sensitive locations would inform the assessment of effect significance when the development traffic is assigned to the network:

- people at home;
- people at work;
- sensitive people 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, schools);
- recreational and shopping areas;
- recreation areas including ecological / nature conservation sites;
- tourist / visitor attractions;
- collision clusters and routes with road safety concerns; and
- junctions and road links at (or over) capacity.

11.3.44 The sensitivity level of receptors for the Site has been assessed using the following scale, the number of receptors present and proximity/level of interaction between the receptors and traffic flows:

- high sensitivity;
- medium sensitivity;
- low sensitivity;
- negligible sensitivity; and
- no receptors identified.

[12] Transport Scotland (2007). *Abnormal Load Movements - A brief guide to Notification and Authorisation requirements.* (Online). Available at: https://www.transport.gov.scot/media/33621/abnormal-load-movements-guide-to-regulations.pdf. [Accessed November 2024].

11.3.45 The IEMA guidance suggests how the sensitivity of receptors should be assessed. Professional judgement was subsequently used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in **Table 11-5.**

11.3.46 Where a road passes through a location, users are considered subject to the highest level of sensitivity defined by either the road or location characteristics.

Table 11-5 Receptor Sensitivity

Receptor	Sensitivity				
	High	Medium	Low	Negligible	No Receptors
Users of Roads	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures, and frequent bus services.	Where the road is a local A or B class road, capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures, and bus services.	Where the road is a Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures, and bus services.	Where roads have few adjacent settlements, and bus services. Includes strategic trunk roads (T) that would be little affected by additional traffic and suitable for construction type vehicles, including Abnormal Loads and new strategic trunk road junctions capable of accommodating similar types of vehicles.	Where roads have no adjacent settlements. Includes routes where there are no bus services.
Users / Residents of Locations	Where a location contains receptors with the greatest sensitivity to traffic flows: schools, colleges, playgrounds, collision clusters, retirement homes, roads without footways that are used by pedestrians.	Where a location contains receptors with medium sensitivity to traffic flow: congested junctions/ links, doctors' surgeries, hospitals, shopping area with roadside frontage, roads with narrow footways, recreation facilities.	Where a location contains receptors with low sensitivity to traffic flow links: with adjacent land-uses such as public open space, nature conservation areas, listed buildings and residential areas with adequate footway provision and limited pedestrian/cycle users.	Where a location includes individual dwellings or few settlements with no facilities. Including farmland usage and where receptors are sufficiently distant from affected roads and junctions and no/very limited number of pedestrian and cyclists.	Where roads have no adjacent settlements. Includes farmland.

Magnitude of Impact

11.3.47 The IEMA Guidelines recommend the following two rules to be considered when assessing the impact of development traffic on a road link:

- **Rule 1**: Include road links where traffic flows would increase more than 30% (or the number of HGVs would increase by more than 30%); and
- **Rule 2**: Include any other specific environmental or population sensitive areas where traffic flows have increased by 10% or more.

11.3.48 The IEMA guidelines go on to state that any increases in traffic flows of less than 10% are generally accepted as having no discernible environmental impact as daily variance in traffic flows can be of this magnitude.

11.3.49 The 30% threshold relates to the level at which receptors may perceive change and there may therefore be an effect. Impacts above this level therefore do not suggest that there is a significant impact, only that further consideration is required to assess the significance.

11.3.50 The criteria for assessing the magnitude of the predicted impact on severance, pedestrian delay and pedestrian amenity is given in **Table 11-6**.

Table 11-6 Magnitude of Impact

Transport effect	Magnitude of Impact			
	High	Medium	Low	Negligible
Severance	Change in total traffic or HGV flows of >90 %	Change in total traffic or HGV flow of >60 % ≤90 %	Change in total traffic or HGV flows of >30 % ≤60 %	Change in total traffic or HGV flows of ≤30 %
	Where severance is thought likely to require more detailed investigation, it is recommended the assessment involves: a) Defining the facilities to which access is potentially impaired; b) Defining facility catchment areas from which users may be drawn; and c) Estimating the populations within those both in total and in vulnerable groups.			
Driver delay	High increase in queuing at junctions and/or congestion on road links.	Medium increase in queuing at junctions and/or congestion on road links.	Low increase in queueing at junctions and/or congestion on road links.	Low or no increase in queuing at junctions and/or congestion on road links.
Non-motorised user delay	Generally, increases in traffic may lead to greater delay, though is dependent on the level of non-motorised users' activity in the area. Assessed based on pedestrian delay experienced when crossing highways links considering a range of factors including crossing type, pedestrian flows, traffic levels, visibility and general highway condition.			
Non-motorised users' amenity	A halving or doubling of traffic flow (or HGV flow) can be used as a broad threshold when considered in the local context and applied with caution.			
Fear and intimidation	Assessed as per **Table 11-2**, **Table 11-3** and **Table 11-4**. Note that if there are AILVs used in the transporting of transformers, the perception of fear and intimidation may be heightened.			
Road safety	Assignment informed by a review of existing collision patterns and trends based upon the existing personal injury accident records and the forecast increase in traffic that may change the risk of serious and fatal injuries.			
Large Loads	Generally, the movements of large loads may have an effect on other traffic impacts (e.g. fear and intimidation, driver delay). The number, composition, frequency, timing and nature of the load may induce an effect of the other six traffic impacts.			

11.3.51 The magnitude of each impact has subsequently been determined in accordance with the IEMA guidelines and based on professional judgement.

Assessment of Significance of Effects

11.3.52 **Table 11-7** sets out the significance effects matrix adopted based on the receptor sensitivity and magnitude of impact is in **Table 11-5** and **Table 11-6**.

Table 11-7 Significant Effects Matrix

		Receptor Sensitivity (Environmental Value)			
		High	Medium	Low	Negligible
Magnitude of Impact	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

11.3.53 The combination of the receptor sensitivity and magnitude of impact due to the effect of the Proposed Development, enables the significance of effects to be determined.

11.3.54 The likely effects can be:

- **Beneficial (positive):** meaning that the changes produce benefits in terms of transportation and access (such as reduction of traffic, travel time or patronage, or provision of a new service, access or facility);
- **Negligible:** meaning that there is no measurable effect; or
- **Adverse (negative):** meaning that changes produce disbenefits in terms of transportation and access (such as increase of traffic, travel time, patronage or loss of service or facility).

11.3.55 The significance grading criteria are summarised in **Table 11-8**. It is these criteria that have been used in the assessment.

Table 11-8 Significance Criteria

Significance Criteria	Description
Major (Beneficial)	Major improvement in transport terms. This has been deemed a **Significant** effect.
Moderate (Beneficial)	Moderate improvement in transport terms. This has been deemed a **Significant** effect.
Minor (Beneficial)	Minor improvements in transport terms. This has been deemed a **Not Significant** effect.
Negligible	No appreciable impact in transport terms. This has been deemed a **Not Significant** effect.
Minor (Adverse)	Minor adverse impact in transport terms. This has been deemed a **Not Significant** effect.
Moderate (Adverse)	Moderate adverse impact in transport terms. This has been deemed a **Significant** effect.
Major (Adverse)	Major adverse impact in transport terms. This has been deemed a **Significant** effect.

11.3.56 Following the classification of an effect using the significance criteria identified in **Table 11-7**, a clear statement is then made as to the temporal and spatial scale of the effects on the basis of the following criteria:

- **'Temporary'** – where the effect occurs for a limited period of time (e.g. the construction period) and the change for a defined receptor can be reversed;
- **'Permanent '**– where the effect represents a long-lasting change for a defined receptor;

- 'Local' effects are those affecting neighbouring receptors;
- 'District' effects are those which are likely to occur to receptors within the administrative boundary of Aberdeenshire Council;
- 'Sub-regional' effects are those affecting areas adjacent to the administrative area of Aberdeenshire Council;
- 'Regional' effects are those affecting receptors across the Aberdeenshire East region; and
- 'National' effects are those affecting receptors within the United Kingdom.

Requirements for Mitigation

11.3.57 Where potential significant adverse effects are identified, mitigation measures are proposed to reduce or remove these effects.

11.3.58 At present, potential mitigation measures have been included within this EIA Report, based on **Volume 4, Appendix 11.1: Construction Traffic Management Plan**. An outline CTMP has been prepared by the Principal Contractor, who in agreement with the Applicant, has prepared this live working document. This document is subject to change but sets out the mitigation measures which are anticipated to be agreed with Aberdeenshire Council. The final CTMP would set out in full, the agreed mitigation measures which would be implemented during construction. Until this time, it is not possible to finalise the CTMP.

11.3.59 Therefore, based upon information available in relation to mitigation, the traffic and transport assessment within this EIA Report has been based upon reasonable assumptions informed by previous similar projects.

Assessment of Residual Effects

11.3.60 The assessment of residual effects has been undertaken following a similar methodology as for the potential effects but taking into consideration the implementation of the committed mitigation measures.

Assessment of Cumulative Effects

11.3.61 An assessment of potential cumulative effects has been undertaken based on a review of planning applications which are currently in the planning system, including other SSEN developments that are at an earlier stage of application, or have recently been granted permission, in the vicinity of the Proposed Development. A list of cumulative developments considered is set out in **Volume 2, Chapter 5: EIA Process and Methodology, Table 5-2**.

Limitations and Assumptions

11.3.62 The length of the construction programme is expected to be approximately 48 months (four years), with working hours currently anticipated to be between 07:00 to 19:00. These assumptions are an indication at this stage; detailed programming of the works would be the responsibility of the Principal Contractor in agreement with SSEN Transmission.

11.3.63 As identified in the CTMP, it is anticipated that all heavy construction traffic entering and leaving site would be reduced/restricted during peak school times, where practicable, to minimise potential conflict with children and pedestrians.

11.3.64 Additional restrictions would be applied to the AILV deliveries to ensure that these movements are not permitted during peak hours. It is also anticipated that there may be restrictions on movements during the hours of darkness in some rural areas.

11.3.65 The estimated number of traffic movements has been extracted from the CTMP found in **Volume 4, Appendix 11.1: Construction Traffic Management Plan** and are considered appropriate for use as part of the assessment for the Proposed Development.

11.3.66 The information on routing has therefore been based on first principles approach from the traffic numbers provided in **Volume 4, Appendix 11.1: Construction Traffic Management Plan**. Where information has not been available it has been necessary for WSP to make assumptions on the potential construction vehicle generation and distribution, based on experience of similar projects.

11.4 Baseline Conditions

11.4.1 **Volume 3, Figure 11.1: Traffic and Transport Study Area** shows the Site's location in relation to the local road network which is included within the Study Area.

C29S

11.4.2 Access is proposed from the C29S which forms the eastern boundary of the Site. The C29S is a rural single carriageway road and routes for 5.8 km between the B9170 at Oldmill of Allathan via Greens and Asleid and the B9005 near Gight Castle. The C29S forms part of the local unclassified road network and is subject to a 60 mph speed limit.

11.4.3 Within the Study Area, at its northern extent, the C29S connects to the B9170 via a priority junction located approximately 1 km north of the proposed Site access. The junction is of a high standard and in a location which supports good visibility for drivers approaching the junction from the south via the C29S and the east and north via the B9170. The southern extent of the C29S serves the New Deer Substation and connects to the C30S at Burnside, approximately 2.8 km south of the Site access via a priority junction with good visibility to the north and south on the C29S.

11.4.4 The C29S connects the unclassified C121B/C121S which routes from the B9170 to the C26S and has been improved to support larger vehicles accessing the New Deer Substation. The C29S is approximately 6 m in width and is supported by five passing places for 1.5 km at regular intervals, with these provided at a size which is suitable to accommodate HGVs.

C30S

11.4.5 The C30S routes for 6.3 km from the B9005 at Cottown via Millbrex to meet the unclassified C29S at Mains of Asleid then routes via Cairnbanna House, Southfield to the B9170 at Myres of Bedlam. Within the Study Area, between the B9005 and the C29S, the C30S is a rural single carriageway and is subject to a 60 mph speed limit. The C30S is approximately 6 m in width on average, with its width restricted to approximately 4.5 m at its narrowest for around 2.5 km between the C29S and Blackhillock. Six passing places are provided to support its operation.

C121B

11.4.6 The C121B routes for approximately 4.8 km between the B9170 at Hill of Auchreddie to the C26S at Keithen located south-west of the Site. Within the Study Area, the C121B is a rural, unlit, single road subject to a 60 mph speed limit.

11.4.7 The C121B forms a crossroad junction with the C29S with reduced visibility provided for divers approaching the junction from the north. Between the C29S and the B9170, the C121B is approximately 5.5 m in width. Between the C29S and the C26S, the C121B is approximately 4 – 4.5 m in width.

B9170

11.4.8 The B9170 is a rural single carriageway road located approximately 1 km north of the Site access and connects Inverurie to the A947 at Darra, via Old Meldrum, Methlick, New Deer, and Cuminestown. Within the Study Area, the B9170 is approximately 6 m in width and is subject to a 60 mph speed limit which reduces to 30 mph through Cuminestown and New Deer and reduced to 40mph at Oldmeldrum along the bypass before terminating at Oldmeldrum Academy.

11.4.9 Prior to the B9170 entering Cuminestown, approximately 670 m south-east of the Stanryknowe Brae junction with the B9170, the EV1 and EV12 cycle routes share the carriageway with road traffic and continue on the B9170 through Cuminestown High Street.

Stanryknowe Brae

11.4.10 Stanryknowe Brae[13] is located approximately 4.3 km north-east of the Site access and is an unclassified road connecting the B9170 at Cuminestown to the B9027 via the 'Cuminestown Industrial Estate'. The road is an urban single carriageway with footway and street lighting provision on the western side. The road is subject to a 30 mph speed limit from the B9170 for approximately 180 m northbound where the speed limit increases to 60 mph.

B9027

11.4.11 The B9027 provides connection from the Stanryknowe Brae at Cuminestown, north to the A98. The B9027 is a rural single carriageway routing from Auchry Road (the B9170) north of Cuminestown to the A98. The B9027 is approximately 5 m in width and is subject to a 60-mph speed limit which reduces to 30 mph through New Blyth.

11.4.12 Within the Study Area the B9027 provides connection to the A950 through New Blyth which is mostly semi-urban with a few residential houses and one place of worship. Throughout New Blyth the B9027 is lit and has footways either side of the carriageway.

B9028

11.4.13 The B9028 routes from the A948 at Mains of Drum to the A981 at Artamford Crossroads for a total length of 1.8 km. The road is a rural single carriageway of approximately 5 m in width and is subject to a 60-mph speed limit.

11.4.14 The B9028 forms a priority junction with the A948 at its southern extent, with this junction of a high standard and in a location which supports good visibility for drivers approaching the junction from the south and north via the A948.

B9005

11.4.15 The B9005 is located 6.5 km south of the proposed Site access and is a rural single carriageway, connecting Fyvie at the A947 to Ellon and the A96 via Cottown and Woodhead. The B9005 is subject to a 60-mph speed limit which reduces to a 30 mph limit within urban areas. Within the Study Area, between Cottown and the A947, the B9005 is subject to a 60-mph speed limit and through Woodhead and Fyvie the speed limit reduces to 30 mph, with a footway provided adjacent to the carriageway.

A948

11.4.16 The A948 is a rural single carriageway road that connects Burngrains, and the A90 at Ellon to New Deer (Auchreddie road East) via Auchnagatt. The A948 forms a crossroad junction at New Deer with the A981 forming the northern arm, and the B9170 forming the southern and eastern arms of the junction.

11.4.17 Throughout New Deer and through Auchnagatt, the A948 is subject to 30 mph and there are footways and streetlighting provided adjacent to the carriageway. Outside of urban areas, the A948 is subject to a 60-mph speed limit. As the A948 approaches Ellon the speed limit reduces to 50 mph.

11.4.18 The A948 crosses the EV1 / EV12 cycle route at Auchnagatt where it uses the unclassified C112B to join the Formartine and Buchan Way on Core Path and Cycle Way Route: '7LD.03FM.10', separate to the carriageway on the eastern side of the A948 via a dedicated cycle path. At this crossing location the speed limit is 30 mph.

[13] Aberdeenshire Council (2023). Public Roads – North Settlements List. (online). Available at: http://publications.aberdeenshire.gov.uk/dataset/c993f625-37ad-438a-bd28-5afe7ca6a5bc/resource/347c7946-b179-4f33-b43d-fa71cb0773d5/download/northsettlementreport.pdf [Accessed November 2024].

A981

11.4.19 The A981 routes from New Deer at Fordyce Terrace to Fraserburgh via Strichen and Memsie. Within the Study Area, between Artamford Crossroads at the B9028 located to the east of New Deer and the A950, the 4.3 km stretch is a rural single carriageway subject to a 60 mph speed limit.

11.4.20 The A981 crosses the route of the EV1 / EV12 cycle route at Shevado with the unclassified C104B routing from Maud to Fedderate via Shevado.

A950

11.4.21 The A950 is a rural single carriageway road linking the A90 Peterhead Bypass (part of the trunk road network), (T) and the A98, north of New Pitsilgo.

11.4.22 Within the Study Area between the A950 and is a rural two-lane single carriageway subject to a 60 mph speed limit. Within the villages of New Pitsligo, Mintlaw and Longside, the carriageway is lit and subject to a 30 mph speed limit, and footways are provided adjacent to the carriageway.

A920

11.4.23 The A920 routes from the A96 at Ellon via Oldmeldrum to Kirkton of Culsalmond. Within the Study Area, between Oldmeldrum at the B9170, and Kirkton of Culsalmond at the A96, the A920 is of a high standard at approximately 6 m in width and is subject to a 60 mph limit as a rural two-lane single carriageway.

Traffic Flows

11.4.24 As previously outlined in **Paragraphs 11.3.12 - 11.3.15,** three sources of traffic data have been used to establish baseline flows, including ATC surveys, DfT count data and traffic flows from submissions associated with two consented developments.

11.4.25 This data was provided as two-way AADT flows by vehicle type including HGVs, and all data was extrapolated to 2024 to align with the ATC data. A summary of the 2024 two-way flows on the road links contained in the Study Area is provided in **Table 11-9**, with the locations of the traffic count sites shown in **Volume 3, Figure 11.2: Traffic Count Site Locations**.

Table 11-9 2024 Annual Average Daily Two-Way Traffic Flows (24-hour)

Count Site	Location	2024 Two-Way Flows		HGV Proportion (%)
		HGV	Total	
ATC 1	Link 1: C29S between the Site access and Oldmill of Allathan	0	392	0%
ATC 2	Link 2: B9170 between the C29S and the A948	25	1120	2%
1180	Link 3: The A948 between B9170 and the B9028 (section of the A981) (East)	71	973	7%
50860	Link 4: The A948 between the B9028 (section of the A981) and the A90 at Ellon (South East)	113	1904	6%
983081	Link 5: B9170 between the A920 at Oldmeldrum and the New Deer	151	1736	9%
30978	Link 6: A920 between Kirkton of Culsalmond and the B9170	241	2129	11%
41009	Link 7: A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950	97	1442	7%
1181	Link 8: A950 between the A98 and the A981	128	1606	8%
20990	Link 9: A950 between the A981 and Mintlaw	229	2281	10%

Count Site	Location	2024 Two-Way Flows		HGV Proportion (%)
		HGV	Total	
80576	Link 10: A950 between Mintlaw and the A90 (T)	370	8145	5%
ATC 3	Link 11: B9170 between the C29S and the B9027	3	647	0%
ATC 3	Link 12: B9027 between the B9170 and the A98	3	647	0%
ATC 5*	Link 13: The C29S (South) between Site Access and the C30S	101	327	31%
ATC 6**	Link 14: C121B between the C26S and the B9170	55	308	18%
ATC 4	Link 15: The C30S between the C29S and the B9005 to Fyvie (South West)	0	92	0%
ATC 4	Link 16: B9005 between the C30S at Cottown and the A947 at Fyvie.	0	92	0%

*ATC 5 data taken from APP/2023/1454[9] (Green Volt Offshore Windfarm onshore Grid connection south of New Deer) and factored to 2024.
** ATC 6 data taken from APP/2023/1454[10]. (New Deer Substation) and factored to 2024.

11.4.26 The traffic flow data indicates that the traffic and HGV volumes within the Study Area are low.

11.4.27 It is noted that the C29S (South) between the proposed Site Access and the C30S has the highest level of HGV activity within the Study Area. As this site was surveyed in 2023 for the EIA assessment of traffic and transport from the Green Volt Offshore Windfarm onshore grid connection, it is likely that the high percentage of HGVs on this link can be attributed to the construction of New Deer Substation, located south of the Site or the vehicles serving a waste management business operating close to the Site.

11.4.28 To provide a robust assessment, it is assumed that construction would take place over a 12-hour day (between 07:00 and 19:00). A factor has been applied to reduce the AADT flow data to a 12-hour traffic flow to coincide with the typical 12-hour working days. Conversion factors have been derived from DfT Road Traffic Statistics – Table TRA0308: '*Traffic distribution on all roads by time of day and day of the week, for selected vehicle types in Great Britain*' for the latest data available, 2023[14], to convert the DfT and ATC 5 AADT flows to 12-hour flows. The following factors have been derived for cars, light vehicles and HGVs For the ATC survey data, 12-hour flows have been derived from survey outputs:

- cars – 0.809;
- light vehicles – 0.827;
- HGVs – 0.745; and
- all vehicles – 0.794.

11.4.29 **Table 11-10** shows the resulting 12-hour flows following application of the derived factors.

[14] Department for Transport (2023). *Statistical data set Road traffic statistics (TRA) Data on road traffic by road and vehicle type, produced by Department for Transport.* (online). Available at: https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra [Accessed November 2024].

Table 11-10 2024 Annual Average Daily Two-Way Traffic Flows (12-hour)

Count Site	Location	2024 Two-Way Flows		HGV Proportion (%)
		HGV	Total	
ATC 1	Link 1: C29S between the Site access and Oldmill of Allathan	0	340	0%
ATC 2	Link 2: B9170 between the C29S and the A948	22	930	2%
1180	Link 3: The A948 between B9170 and the B9028 (section of the A981) (East)	53	772	7%
50860	Link 4: The A948 between the B9028 (section of the A981) and the A90 at Ellon (South East)	84	1511	6%
983081	Link 5: B9170 between the A920 at Oldmeldrum and the New Deer	112	1378	8%
30978	Link 6: A920 between Kirkton of Culsalmond and the B9170	180	1690	11%
41009	Link 7: A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950	72	1145	6%
1181	Link 8: A950 between the A98 and the A981	95	1274	7%
20990	Link 9: A950 between the A981 and Mintlaw	171	1810	9%
80576	Link 10: A950 between Mintlaw and the A90 (T)	275	6465	4%
ATC 3	Link 11: B9170 between the C29S and the B9027	3	571	0%
ATC 3	Link 12: B9027 between the B9170 and the A98	3	571	0%
ATC 5*	Link 13: The C29S (South) between Site Access and the C30S	75	259	29%
ATC 6**	Link 14: C121B between the C26S and the B9170	43	233	18%
ATC 4	Link 15: The C30S between the C29S and the B9005 to Fyvie (South West)	0	82	0%
ATC 4	Link 16: B9005 between the C30S at Cottown and the A947 at Fyvie.	0	82	0%

11.4.30 The data in **Table 11-10** has been used to support the impact assessment.

Accident Data

11.4.31 PIA data for the most recently available five-year period, covering 2018 to 2022, was obtained for the Study Area links. The locations and severity of the PIAs reported in the Study Area are shown in **Volume 3, Figure 11.3: Accident Locations** and are summarised in

11.4.32 **Table** 11-11. The table also identifies the accident rate associated with each link, comparing this with the national average as identified by the DfT for the road type.

Table 11-11 Personal Injury Accident Summary (2018-2022)

Link No.	Road Type	Slight	Serious	Fatal	Total	PIA Rate (per Million Veh Km)	National Average (per Million Veh Km)*	Above or Below National Average
1	Rural other road	0	0	0	0	0.00	0.20	Below
2	Urban other road	1	1	0	2	0.17	0.40	Below
3	Urban A road	1	0	0	1	0.29	0.43	Below
4	Rural A road	3	6	1	10	0.14	0.12	Above
5	Urban other road	4	5	0	9	0.12	0.40	Below
6	Rural A road	4	4	0	8	0.11	0.12	Below
7	Urban A road	1	0	0	1	0.06	0.43	Below
8	Urban A road	3	3	1	7	0.27	0.43	Below
9	Rural A road	3	0	0	3	0.07	0.12	Below
10	Urban A road	2	1	0	3	0.02	0.43	Below
11	Rural other road	0	0	0	0	0.00	0.20	Below
12	Rural other road	0	0	0	0	0.00	0.20	Below
13	Rural other road	0	0	0	0	0.00	0.20	Below
14	Rural other road	0	0	0	0	0.00	0.20	Below
15	Rural other road	0	0	0	0	0.00	0.20	Below
16	Rural other road	0	0	0	0	0.00	0.20	Below
Total		22	20	2	44			

*The DfT reported road casualties for Great Britain 2021 as presented in RAS0302[15]: national accident rate per million vehicle kms by road classification.

11.4.33 The IEMA guidance recommends that at locations where high levels of PIAs are recorded, accident statistics should be used to provide an estimate of the existing road link's accident rate. The review of PIAs confirms that none of the route sections experience high levels of PIAs.

11.4.34 The results show that no PIAs were recorded over the five-year assessment period on Links 1, 4, 12, 13,15, and 16, on roads C30S, C121B, B9005 and B9027. No accidents were recorded on the C29S, which would provide direct access to the Site. It is observed that Link 4 recorded the greatest number of accidents with ten collisions reported over the five-year period, which averages two accidents per annum.

11.4.35 As can be seen from **Table 11-11**, no Links experience high levels of PIAs. The majority of the road links have annual accident rates that are below the respective national average for each of the road's characteristics, indicating that there are no existing safety concerns on the local road network.

11.4.36 However, as shown, Link 4 is slightly above the national average. Closer analysis of the accidents on this link indicates that five of the ten accidents occurred at junctions; this does not directly compare with the national averages which are calculated through traffic flow counts and road lengths. It is noted that the one fatal accident on this link occurred in Ellon at a junction and was due to the vehicle's defective brakes and therefore not an issue with the road network.

11.4.37 All accidents bar one (serious) on Link 4 can be attributed to driver error. The serious accident occurred in 2019 and involved a motorcyclist and a car colliding on the A948 near a junction with Golf Road north of Ellon. The accident report confirmed that the motorcyclist (heading south) collided with a car turning right, and the road

[15] Department for Transport (2023). *Reported road collisions, vehicles and casualties tables for Great Britain - RAS0302 - Urban and rural roads.* (online). Available at: https://www.gov.uk/government/statistical-data-sets/reported-road-accidents-vehicles-and-casualties-tables-for-great-britain. [Accessed November 2024].

layout was described as being a 'contributary factor' to the accident. However, the accident report states that the driver was reckless and failed to judge the other vehicle's speed and path, hence ultimately while the road layout may have been a factor, the accident was at least partly as a result of driver error.

11.4.38 The accident data review has therefore confirmed that there are no specific safety concerns within the Study Area.

Pedestrian Facilities

11.4.39 Due to the rural location of the Site, there is little in the way of pedestrian facilities throughout the majority of the Study Area. Throughout the villages of Cuminestown, New Blyth, New Deer, Woodhead and Fyvie, at locations such as Stanryknowe Brae, the Main Street (B9027), Auchreddie Road East (the B9170) and Auchreddie Road West (the A948), and on sections of the B9005, there are pedestrian footways adjacent to the carriageway and streetlighting provided. A summary of the provision of pedestrian facilities is provided below in relation to each of the 16 links contained within the Study Area:

- Link 1 – no pedestrian facilities provided on the C29S (north of Site Access);
- Link 2 – pedestrian facilities provided on both sides of the carriageway within New Deer on the B9170;
- Link 3 – pedestrian facilities provided on both sides of the carriageway in New Deer on the A948, no pedestrian facilities outwith New Deer towards the B9028;
- Link 4 – facilities provided on both sides of the carriageway in Auchnagatt and no pedestrian provision other than one section of the A948 across Broomies Burn in Ellon;
- Link 5 – footways provided adjacent to the B9170 bypassing Oldmeldrum, through Methlick, and approaching New Deer residential area, no footway provided at Cairnorrie;
- Link 6 – no pedestrian facilities provided on the A920 between Kirkton of Culsalmond and the B9170;
- Link 7 – no pedestrian facilities provided on the A981 (including the B9028);
- Link 8 – footways provided adjacent to the A950 through New Pitsligo, no footways provided outwith;
- Link 9 – footways provided adjacent to the A950 through Mintlaw residential area, approaching the centre, no facilities provided outwith these locations;
- Link 10 – footways provided adjacent to the A950 through Mintlaw and through Longside, no facilities provided outwith these villages;
- Link 11 – no pedestrian facilities provided on the B9170 (west towards Cuminestown);
- Link 12 – pedestrian facilities provided on one side of the carriageway at Stanryknowe Brae Industrial Estate, and footways provided on both sides of the carriageway in New Blyth on the B9027;
- Link 13 – no pedestrian facilities provided on the C29S between south of the proposed Site Access and the C30S;
- Link 14 – no pedestrian facilities provided on the C121B between the C26S and the B9170.
- Link 15 – no pedestrian facilities provided on the C30S between the C29S and the B9005; and
- Link 16 – footways provided adjacent to the B9005 through Woodhead, and Fyvie, no footways provided outwith these areas.

Core Paths

11.4.40 There are no Core Paths[16] within a 3.5 km radius of the Site entrance. The nearest Core Paths located within or near the Study Area are in New Deer, Cuminestown, New Blyth, Woodhead and Fyvie, with other Core Paths throughout the proposed Study Area. The following Core Paths are noted in order of proximity to the Site:

[16] Aberdeenshire Council (2023). Aberdeenshire Core Paths Interactive Map. (online). Available at: https://gis.aberdeenshire.gov.uk/maps/Map.aspx?MapName=Paths&baselayer=OS%20Greyscale [Accessed November 2024].

- **Core Path NCN Route EV1** – the North Sea Cycle Route is over 1000 miles long routing from Dover to John O'Groats, within the Study Area running alongside the B9170, 4.5 km north west of the Site (on Link 11), and crossing the A981 (on Link 7), and the A948 (on Link 4);
- **Core Path 111.01 - 111.02** – the paths are called Blackhill on the western side of the B9027 carriageway and New Blyth Village Path on the eastern side. The routes are 2.6 km and 480 m in length and are both, for the majority, unmade field routes with Core Path 111.01 partly as footway within New Blyth. There is no signage of the route. This Core Path is located near to Link 12;
- **The Formartine and Buchan Way** - The route is a long distance trail atop a dismantled rail line from Dyce (southern portion) via Auchnagatt to Maud (northern portion). The Route is used by walkers, cyclists and horse riders and surface underfoot varies between formal segregated cycle path and unmade path. At its closest, this Core Path and Cycle Way is located on Link 11 between the C127B and Cuminestown approximately 4.5 km from the Site. The route can also be found within the Study Area,11 km north east of the Site where it crosses the A981 at Shevado on the C104B. At Auchnagatt, the route connects from Core Path 7LD.03AE.01 on the south-western side of the A948 carriageway to the 7LD.03FM.10 on the north-eastern side where the path is a shared-surface tarmacked route. On Link 9, the route crossed the A950 at Mintlaw. In summary, the route can be found near or on Links 4, 7, 9 and 11, and nearby on Link 10;
- **Path LR2**: 9.4 km from the Site - Woodhead public path which runs adjacent to the B9005 carriageway via footpath for approximately 400 m. This Core Path is located on Link 16;
- **Path LR8**: 9.3 km from the Site - Woodhead public path which runs along the B9005 for 200 m between School Croft and Auld Kirk Hall. This Core Path is located on Link 16;
- **Core Path 307.02**: 10.5 km from the Site - Fyvie core path running adjacent to the carriageway at Kirkton for approximately 640 m. This Core Path is located on Link 16;
- **Core Path 307.03**: 10.6 km from the Site – Fyvie core path loop route connecting the A947 on the southern extent to the B9005 on the northern and western extent. On the B9005, on the northern extent there is no formal path or footway infrastructure through the residential area, and on the B9005 western extent (Main Street), there is footway provision for the route on both sides of the carriageway until the A947. The route loops back round via made path and crossed the B9005 at Fyvie Parish Church. This Core Path is located on Link 16;
- **Core Path 307.04** - This Core Path routes adjacent to Link 16 from the B9005 north-west via Woodhead School Community Centre to a wooded area. There is no formal path, and the route shares the unnamed carriageway;
- **Core Path 307.02R** - This Core Path shares the B9005 carriageway for 570 m between Sunnyside and Fyvie and is located on Link 16;
- **Core Paths 308.01 -308.02** – On Link 5 at Methlick the Core Paths route from the Village of Methlick to Gight Woods via Polesburn Wood for approximately 2.8 km with a break in the route through the village of Methlick;
- **Core Path 210.07** – located in the western portion of Mintlaw on Link 9, this Core Path routes adjacent to the A950 carriageway from the Formartine and Buchan Way on the southern side of the carriageway to Mintlaw Academy as the 'Nether Aden Road' Path. The route is unmade and crosses through a wooded area;
- **Core Path 210.01** – this Core Path routes adjacent to the A950 carriageway on Link 9 at Mintlaw north towards Dunshillock;
- **Core Path 213.01** – the New Pitsligo to Turlundie Core Path routes adjacent to the A950 carriageway on Link 8 within New Pitsligo through fields past a garage for 1.7 km;

- **Core Path 208.01** – The Longside to Harvest Mill Core Path is 1.4km in length and routes adjacent to the A950 carriageway from Longside through residential land use to agricultural fields as a dirt path. This Core Path is located on Link 10;
- **Core Path 305.04** – The Balmacassie Community Woodland Path is located alongside Link 4 on the southern side of the A948 carriageway at Ellon for 980 m as an unmade dirt path through a semi-wooded area;
- **Core Path 309.01** – the Parock Tree Circular routes in a circular route from Meldrum Roundabout as partly a shared-surface tarmacked path and as an unmade dirt path via Urquart Road, King Street and the B9170;
- **Core Path 309.05** – the Oldmeldrum Roadside Cycle Path routes on the outskirts of Oldmeldrum from Barra Roundabout to Meldrum Roundabout for approximately 2.2 km adjacent to the B9170 carriageway as a shared use cycle facility; and
- **Core Path 309.04P Proposed** – This is a proposed Core Path which is proposed to connect Oldmeldrum and Lochter. The proposed Core Path routes adjacent to the A920 along Link 6 for approximately 800 m between Oldmeldrum and an unnamed road before routing south alongside this minor road for a further 300 m to Lochter.

Cycle Facilities

11.4.41 There are a limited number of cycle routes and lack of formal facilities within the vicinity of the Site or within the Study Area. As previously mentioned in **Paragraphs 11.4.8 and 11.4.20**, the nearest cycle route is the EV1 / EV12 which share the same route in the vicinity of the Study Area. The nearest access to these cycle routes is 3.7 km to the north-west of the Site, on the B9170.

Future Baseline

11.4.42 Construction of the Proposed Development could commence during 2026 if consent is granted, with construction activities likely to take around 48 months.

11.4.43 It is necessary to assess the worst-case scenario for the purpose of this EIA, and therefore the assessment period should cover the peak of construction movements. **Volume 4, Appendix 11.1: Construction Traffic Management Plan** forecasts that the busiest construction period would take place during the main civils works, and the assessment has therefore been undertaken for a 2028 future baseline to coincide with the peak period.

11.4.44 To assess the likely effects during the construction phase, 2028 base year traffic flows were determined by applying a National Road Traffic Forecast 1997 (NRTF97) low growth factor (1.021) to the 2024 traffic flows. Applying NRTF97 low growth factor to background traffic results in a more robust assessment of the predicted percentage increase in the construction traffic, relative to the background traffic.

11.4.45 The resulting 2028 Base traffic flows are presented in **Table 11-12**.

Table 11-12: 2028 Annual Average Daily Two-Way Traffic Flows (12-hour)

Count Site	Location	2028 Two-Way Flows	
		HGV	Total
ATC 1	Link 1: C29S between the Site access and Oldmill of Allathan	0	29
ATC 2	Link 2: B9170 between the C29S and the A948	2	79
1180	Link 3: The A948 between B9170 and the B9028 (section of the A981) (East)	4	66
50860	Link 4: The A948 between the B9028 (section of the A981) and the A90 at Ellon (South East)	7	129
983081	Link 5: B9170 between the A920 at Oldmeldrum and the New Deer	10	117
30978	Link 6: A920 between Kirkton of Culsalmond and the B9170	15	144

Count Site	Location	2028 Two-Way Flows	
		HGV	Total
41009	Link 7: A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950	6	97
1181	Link 8: A950 between the A98 and the A981	8	108
20990	Link 9: A950 between the A981 and Mintlaw	15	154
80576	Link 10: A950 between Mintlaw and the A90 (T)	23	550
ATC 3	Link 11: B9170 between the C29S and the B9027	0	49
ATC 3	Link 12: B9027 between the B9170 and the A98	0	49
ATC 5*	Link 13: The C29S (South) between Site Access and the C30S	6	22
ATC 6**	Link 14: C121B between the C26S and the B9170	4	20
ATC 4	Link 15: The C30S between the C29S and the B9005 to Fyvie (South West)	0	7
ATC 4	Link 16: B9005 between the C30S at Cottown and the A947 at Fyvie.	0	7

11.5 Assessment of Effects, Mitigation and Residual Effects Valuation of Receptors

Construction Phase

11.5.1 The construction process for the Proposed Development would broadly comprise the following elements:

- enabling works;
- site establishment;
- earthworks;
- platform works;
- building works;
- mechanical and electrical works;
- site demobilisation and landscaping; and
- commissioning.

Construction Traffic

11.5.2 Construction traffic associated with the Proposed Development would comprise the following:

- HGVs transporting construction materials, plant and equipment to / from Site;
- AILVs (e.g. for transporting transformers);
- Light Goods Vehicles (LGVs) delivering to / from Site;
- staff travelling to and from the Site; and
- works on or over the public road network (formation of the access junction, widening of the C29S and potential mitigation works for AILV movements).

Construction Working Hours

11.5.3 Construction activities would in general be undertaken during daytime periods. Working hours are currently anticipated between 07.00 to 19.00 Monday to Sunday. Any other out of hours working would be agreed in advance with Aberdeenshire Council.

11.5.4 With regard to weekend working, this would be planned to minimise construction traffic wherever possible.

Abnormal Indivisible Loads

11.5.5 As previously stated, AILV are categorised as vehicles exceeding one or more of the following parameters:

- a weight of more than 44,000 kg;
- an axle load of more than 10,000 kg for a single non-driving axle and 11,500 kg for a single driving axle;
- a width of more than 2.9 m; or
- a rigid length of more than 18.65 m.

11.5.6 Based on these parameters, the CTMP (see **Volume 4, Appendix 11.1: Construction Traffic Management Plan)** provides a summary of the abnormal loads predicted to be required during the construction phase.

11.5.7 AILV movements can be split between those associated with the delivery of the substation infrastructure and those associated with the wider construction activities required as part of the Proposed Development. The substation infrastructure includes equipment such as the transformers and generators and the routing strategy for these is detailed within the AILV Report found in **Volume 4, Appendix 11.1: Construction Traffic Management Plan**.

11.5.8 The AILV Report is based upon the largest of the substation AILV delivery requirements to provide a worst-case scenario. The AILV Report confirms that the port of entry for this AILV will be Peterhead Port (Smith Quay) from where the routing strategy would be as follows:

- A90 (T) – A948 – B9170 – C121B – C29S – Site Access.

11.5.9 As detailed within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**, it is anticipated that there would be AILV movements associated with the wider construction activities required as part of the Proposed Development, including the delivery of rock crushers to Site, as well as for cranes and excavators. These AILVs are smaller in nature and will therefore follow an alternative routing strategy which is identified as:

- A90 (T) – A948 – B9170– C29S – Site Access.

11.5.10 The assessment of transport effects due to large loads is focused on the following study links reflecting the AILVs traveling from the trunk road network: Link 4, Link 3, Link 2, Link 14, and Link 13.

11.5.11 It is expected that these large loads would be transported using either a low loader / flatbed trailer or specialist girder frame HGV and the loads would be transported in convoy (if using the same route to Site).

11.5.12 The AILV details are included in **Volume 4, Appendix 11.1: Construction Traffic Management Plan.** A full AILV route assessment has been completed with swept path analysis undertaken to identify any potential constraints and mitigation works required to accommodate the AIL vehicles.

11.5.13 Prior to the movement of any AILs to the Site, a public awareness campaign will be run to allow residents to plan and time their journey to avoid disruption. The movement of AILs would also be timed to avoid periods of heavy traffic flow to minimise disruption to the public. These include peak summer periods, normal daily morning and evening rush hours, weekends and major public events.

11.5.14 A trial run would be undertaken on the proposed access routes. A temporary frame to simulate the proposed loads would be used during the trial run to confirm the suitability of the route and required mitigation works. The parameters of the trial run would be agreed in advance with Aberdeenshire Council, Police Scotland and Transport Scotland.

Estimated Delivery Volumes

11.5.15 The CTMP (provided within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**), presents an estimate of the total level of construction traffic associated with the delivery of each element of the Proposed Development and this is summarised in **Table 11-13**.

Table 11-13 Predicted Total Traffic Generation Associated with Each Construction Element

Haulage Expected Vehicle	Type	Class	Duration Two-way	Total Movements	Average Movements per day for period
Staff	Cars / Vans	Light	Sep 2025 - Dec 2029	21352	30
Workforce and subcontractor	Cars / Vans	Light	Sep 2025 - Dec 2029	56840	53
Site accommodation and maintenance	Vans	Light	Sep 2025 - Dec 2029	948	1
Delivery of Civils materials	Flatbed lorry / Curtained	LGV (5-10 t)	Sep 2025 – Aug 2029	1292	2
Skips	HGVs / Skip wagon	HGV (>10 t)	Sep 2025 - Dec 2029	1612	2
Plant delivery (plus fuel)	Flatbed lorry	HGV (>10 t)	Sep 2025 - Dec 2029	2836	3
Septic Tank waste removal	HGV	HGV (>10 t)	Sep 2025 - Dec 2029	488	1
Aggregates	Tipper lorry	HGV (>10 t)	Jan 2026 - Apr 2028	31360	56
Ready-Mix concrete	Tipper lorry / Mixer wagon	HGV (>10 t)	Apr 2026 - Aug 2028	2128	4
Pre-cast foundations	Flatbed lorry	HGV (>10 t)	Sep 2025 - May 2027	1280	4
Delivery of Civils materials	Flatbed lorry / Curtained	HGV (>10 t)	Sep 2025 - Aug 2029	5400	6
Substation road construction	HGV / Tipper lorry	HGV (>10 t)	Apr 2028 - Nov 202	640	4
Delivery of M&E materials	Flatbed lorry / Curtained	HGV (>10 t)	Jun 2027 – Dec 2028	1216	4
Delivery of M&E materials	Various	LGV (5-10 t)	Jun 2027 - Dec 2028	2432	7
Cable Drums	Flatbed lorry	HGV (>10 t)	Jul 2028 - Aug 2028	40	1
Misc M&E Ancillaries	Various	LGV (5-10 t)	Jun 2027 - Dec 2028	1140	3
AIL Deliveries			**Deliver to Site**	**Remove from Site**	**Total Movements**	**Average Movements per day for period**
Earthworks	Four 50 t excavators Three rock crushers	Construction AIL	September 2025 - July 2026	September 2027 - January 2028	14	Refer to **Volume 4, Appendix 11.1: Construction Traffic Management Plan.**
Platform Works	Two mobile cranes	Construction AIL	November 2026 - February 2027	June 2028 - September 2028	4	
Building Works	One mobile crane	Construction AIL	November 2026 - January 2027	July 2027 - October 2027	2	
Mechanical and Electrical (M&E) Installation	Four transformers Two generators Two additional covers Two rotors Two totally enclosed water air-cooled units Two flywheels Four mobile cranes	Substation AIL	May 2028 - September 2028	January 2029 - June 2029	16	

11.5.16 The CTMP anticipates that the greatest number of traffic movements would be generated in 2028, in the third year of the construction programme. This assessment has therefore focussed on this period to provide a robust estimate of the impact of construction activities. The peak daily trip generation estimate which is presented in **Table 11-13** and outlined in the CTMP as 630 total vehicle two-way movements per day (including 250 HGV two-way movements) has been used to inform this assessment. All construction vehicles would access and

leave the Site by one new access junction which would be formed on the unclassified C29S, approximately 200 m to the south of the junction of the C29S and the B9170.

11.5.17 Larger vehicles would be routed to the Site via the classified road network wherever possible to minimise the impact on the rural road network as far as possible. As outlined in the CTMP (found within **Volume 4, Appendix 11.1: Construction Traffic Management Plan)** it has been agreed in consultation with the ACRO, that the preferred routing solutions are as follows:

- **Primary** - from the A90 at Ellon (HGV, car/LGV);
- **Secondary** - from the A947 via the A920 (HGV, car/LGV); and
- **Tertiary** - from the A98 via the A950 (HGV, car/LGV).

11.5.18 The CTMP also confirms that the routing of car / LGV traffic is dependent on the location of temporary accommodation for the construction works and the location of other staff, and therefore it is expected that staff residing in temporary accommodation would be transported to Site by bus. The remaining staff are expected to use the local road network to get to Site.

11.5.19 It is challenging to anticipate the location where smaller construction vehicles are likely to originate from at this stage, and it has therefore been assumed that the following construction traffic route may also be considered for car / LGV construction traffic routing:

- **Fourth Route Option** - from the A90 at Peterhead, (car/LGV only);
- **Fifth Route Option** – from the A98, north of New Blyth, via Cuminestown (car/LGV only); and
- **Sixth Route Option** – from the A947 at Fyvie via the B9005, C30S and the C121B (car/ LGV only).

11.5.20 A summary of the assumed traffic assignment is provided in **Table 11-14.**

Table 11-14 Construction Traffic Assignment

Link Section	HGV Assignment	Non-HGV Assignment
Link 1: C29S between the Site access and Oldmill of Allathan	100.00%	100.00%
Link 2: B9170 between the C29S and the A948	100.00%	95.00%
Link 3: The A948 between B9170 and the B9028 (section of the A981) (East)	65.00%	70.00%
Link 4: The A948 between the B9028 (section of the A981) and the A90 at Ellon (South East)	45.00%	38.00%
Link 5: B9170 between the A920 at Oldmeldrum and the New Deer	35.00%	25.00%
Link 6: A920 between Kirkton of Culsalmond and the B9170	35.00%	25.00%
Link 7: A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950	20.00%	32.00%
Link 8: A950 between the A98 and the A981	20.00%	20.00%
Link 9: A950 between the A981 and Mintlaw	0.00%	10.00%
Link 10: A950 between Mintlaw and the A90 (T)	0.00%	10.00%
Link 11: B9170 between the C29S and the B9027	0.00%	5.00%
Link 12: B9027 between the B9170 and the A98	0.00%	5.00%
Link 13: The C29S (South) between Site Access and the C30S	0.00%	0.00%
Link 14: C121B between the C26S and the B9170	0.00%	2.00%
Link 15: The C30S between the C29S and the B9005 to Fyvie (South West)	0.00%	2.00%
Link 16: B9005 between the C30S at Cottown and the A947 at Fyvie.	0.00%	2.00%

Design Solutions and Assumptions

11.5.21 The assessment of the potential effects has been undertaken assuming a worst-case scenario of the construction phase taking approximately 48 months (4 years). The construction phase includes all activities supporting installation of the substation from establishment of the temporary Site compounds to plant

installation and cabling works. It is anticipated that the busiest time period would be during the civils platform works, construction works, and mechanical & electrical works would run concurrently. The peak construction activities are currently anticipated to occur within 2028.

11.5.22 The Principal Contractor has provided an estimate of the level of HGV and non HGV trips generated by each key construction activity, and this is set out within **Table 11-13**, and is detailed in **Volume 4, Appendix 11.1: Construction Traffic Management Plan.**

Sensitive Receptor Identification

11.5.23 **Table 11-15** provides a summary of the sensitive receptors identified on each link, with the locations of the links shown in **Volume 3, Figure 11.1: Traffic and Transport Study Area**.

11.5.24 It is considered that, when determining the proximity of receptors to the construction traffic which would route along the road link sections, that the following terminology applies:

- **On Route** – means the receptor shares the carriageway;
- **Adjacent to the route** – means the receptor is not on the carriageway, but within 2m of it; and
- **Close to the route** – means the receptor is not on the carriageway and is beyond 2m of it.

11.5.25 It is generally accepted that footways widths should be a minimum of 2 m to allow for 'sufficient distance' between pedestrians and traffic. The presence of street furniture including property boundary walls, fences and guardrails, also play a role in acting as a barrier between pedestrians and traffic. These are therefore considered to reduce the magnitude of impact on transport effects that may otherwise result from increases in traffic flows.

Table 11-15 Sensitive Receptor Identification

Link	Element	Distance from construction traffic route (per road link)	Sensitivity and Likely Effect
1	• Rural Residential Properties • Individual Farm Buildings	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced	**Medium** – Although there are residential properties along this link, these are sufficiently distanced from the carriageway. However, the carriageway is narrow and may be impacted by changes to traffic flow.
2	• Rural Residential Properties • Individual Farm Buildings • Retail Outlet • **New Deer** - Residential Properties, Footways	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced	**Medium** - Although there are residential properties located along this link, they are sufficiently distanced from the carriageway. There is the possibility of an effect on pedestrians on the link section through New Deer where there is pedestrian infrastructure.
3	• **New Deer** - Residential Properties, Footways • Individual Farm Buildings	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced	**Medium** - Although there are residential properties located along this link, they are sufficiently distanced from the carriageway. There is the possibility of effect on the pedestrians on the link section through New Deer where there is pedestrian infrastructure.
4	• Rural Residential Properties • Individual Farm Buildings • Retail Outlets • **Auchnagatt** - Residential Properties, Footways, Post Office	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Close or Adjacent to route • Adjacent to route - sufficiently distanced	**Medium** - Although there are residential properties within Ellon, the A948 is sufficiently distanced from these, acting as a bypass towards the A90 (T). Prescence of the facilities within Ellon indicates that the A948 is

Link	Element	Distance from construction traffic route (per road link)	Sensitivity and Likely Effect
	• Core Path / NCN EV12 & EV1 Cycle routes • Core Path Fortmartine & Buchan Way • Manufacturer • **Ellon** - Residential Properties, Industrial Estate, Tesco Superstore, Park & Ride • Core Path 305.04	• On Route • On Route • Adjacent to route - sufficiently distanced • Close to route • Adjacent to route - sufficiently distanced	accustomed to higher levels of traffic. However, there is the possibility of an effect on pedestrians and cyclists due to the long cycle and Core Path routes that pass through Auchnagatt.
5	• **Oldmeldrum** - Meldrum Academy, bus stops, Footway, Residential Properties, Nature conservation area • Core Paths 309.05 and 309.01 • Recreational Land Use • Rural Residential Properties • Individual Farm Buildings bus stops • **Methlick** - Residential Properties, Footways, Methlick School, Retail, Recreational Land Use, e.g. Oldmeldrum golf course • Core Paths 308.01 -308.02 • **Carinorrie** - School • **New Deer** - Residential Properties, Footways, Retail	• Close or Adjacent to route - sufficiently distanced • Close and Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • On Route • Close or Adjacent to route - sufficiently distanced • Close or Adjacent to route - sufficiently distanced • Core Paths close to route • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced	**Medium** - Carriageway is of a high standard for the majority of the link. Although there are receptors within Oldmeldrum, it is considered that any receptors along this link are sufficiently distanced from the carriageway. Around Methlick, similarly, properties and retail are sufficiently distanced from the carriageway and therefore the effect is likely to be minor. The school at Cairnorrie is small and there are no pedestrian facilities indicating there is little foot traffic. The school is also segregated from the carriageway via a stone wall. As the B9170 approaches New Deer, whilst there are residential properties located either side of the carriageway, they are sufficiently distanced from the carriageway. Ultimately however, in the villages of Methlick, and Oldmeldrum there is the possibility that due to the provision of pedestrian infrastructure that pedestrians using this would be impacted by changes in traffic flows.
6	• Rural Residential Properties • Individual Farm Buildings • Recreational Land Use Industry - Gas Company • Core Path 309.04P Proposed	• Close or Adjacent to route - mostly sufficiently distanced, with fences • Adjacent to route - sufficiently distanced • Close or Adjacent to route • Adjacent to route - sufficiently distanced • Proposed Core Path on route	**Medium** - Carriageway is of a high standard, most of the residential properties along this link are sufficiently distanced from the carriageway. However, there is the possibility of an effect on the Core Path users adjacent to the carriageway.
7	• Rural Residential Properties • Individual Farm Buildings • Core Path / NCN EV12 and EV1 routes • Recreation Centre • Bus stops	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • On Route • Adjacent to route - sufficiently distanced • On Route	**Medium** – Whilst there are bus stops, there is no travel node to travel to, and the lack of pedestrian infrastructure and rural nature of the road indicates low pedestrian activity. There is however the possibility of effect on cyclists routing on the Core Path / NCN EV12 route, as the A981 forms a crossroad with the cycle route. Possibility of conflict with pedestrians due

Link	Element	Distance from construction traffic route (per road link)	Sensitivity and Likely Effect
			to bus stop provision on the A981.
8	• Rural Residential Properties • Individual Farm Buildings • Retail • **New Pitsligo** - Footways, Residential Properties, public realm/ park, bus stops, Retail, New Pitsligo and St. John's School. • Core Path 213.01	• Adjacent to route - sufficiently Distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently segregated from the carriageway • Core Path adjacent to carriageway	**Medium** - In New Pitsligo, although there are residential properties close to the carriageway the footways either side are sufficiently segregated by verges and by on-street car parking throughout. However, there is the possibility of an effect on pedestrians due to the availability of bus stops, retail facilities and a public realm in New Pitsligo.
9	• Rural Residential Properties • Individual Farm Buildings • Recreational Land Use, e.g. this link crosses the Fortmartine & Buchan Way • Core Path 210.07 • **Mintlaw** - Residential Properties, Footways, bus stops, Leisure, Mintlaw Academy, Retail.	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Core Paths cross carriageway at two points and adjacent • Adjacent to route - sufficiently distanced	**Medium** - In Mintlaw, although there are residential properties located either side of the A950, these are set well back from the carriageway. However, there is the possibility of an effect on pedestrians and cyclists due to the availability of bus stops, leisure and retail facilitates which is located adjacent to the A950 carriageway.
10	• Rural Residential Properties • Individual Farm Buildings • Industry - Oil Company, Biogas, NXG Oilfield Services • Retail and leisure • **Mintlaw** - Residential Properties, Footways, bus stops, Mintlaw Primary School • **Longside** - Residential Properties, Footways, Retail, bus stops • Core Path 208.01	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Core Path adjacent to carriageway	**Medium** - Through Mintlaw, properties are set well back from the carriageway. Through Longside, properties are set well back and segregated in parts where there is direct frontage with guardrail. It is noted that the majority of the route is rural in nature. However, this is the possibility of an effect with pedestrians and cyclists due to the location of bus stops, and the leisure and retail facilities provided adjacent to the A950 carriageway.
11	• Rural Residential Properties • Individual Farm Buildings • Core Path / NCN Route EV1	• Close to route • Adjacent to route - sufficiently distanced • On route	**Medium** - The residential properties along this link are far enough from the carriageway. However, there is a Core Path to consider which may be impacted by changes in traffic flow.
12	• Rural Residential Properties • Individual Farm Buildings • **New Blyth** - Residential Properties, Footways, Bus Stop • Core Path 111.01 - 111.02	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - mostly sufficiently distanced • Core Paths cross carriageway	**Medium** - There are no local services within New Blyth and although there are footways there are expected to be few pedestrian movements. Although there are residential properties located along this link, they are sufficiently distanced from the carriageway. There is the possibility of effect due to increase of traffic for pedestrians on the route.

Link	Element	Distance from construction traffic route (per road link)	Sensitivity and Likely Effect
13	• Rural Residential Properties • Individual Farm Buildings • New Deer Substation	• Adjacent to route - some with fences • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced	**Medium** – The presence and scale of the New Deer Substation indicates that the C29S is capable of accommodating a higher level of construction traffic. However, the carriageway is still relatively narrow which may affect motorists should traffic levels change considerably, and there is a possibility of effect on the residential receptors that are closer to the carriageway than others. There is also a junction with the C121B which has poor visibility from this link from the north.
14	• Rural Residential Properties • Individual Farm Buildings • Waste Management Company	• Adjacent to route - sufficient • Adjacent to route - sufficient • Adjacent to route - sufficient	**Low** - The land uses along this link are sufficiently distanced from the carriageway. The carriageway is however relatively narrow and therefore motorists may be substantial sensitive to changes in traffic levels.
15	• Individual Farm Buildings • Rural Residential Properties	• Close and Adjacent to route - some with fences • Close to route • Adjacent to route - sufficiently distanced	**Medium** - Although there are residential properties along the route, there are none with direct access on to the carriageway. However, the carriageway is still relatively narrow and there is a possibility of effect on the motor receptors on the link should traffic flows increase substantially.
16	• Rural Residential Properties • Individual Farm Buildings • **Woodhead** - Footways, Residential Properties • Core Path 307.04, L2R and L8R • **Fyvie** - Footways, Residential Properties, Retail, Bus Stop • Core Path 307.02R, 307.02, and 307.03	• Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently distanced • Adjacent to route - sufficiently segregated • Core Path on or Adjacent to route • Adjacent to route - sufficiently distanced • Core Path on or Adjacent to route	**Medium** - Through Woodhead there are footways either side of the carriageway. There are no footways throughout the B9005 between Woodhead and Fyvie. Through Fyvie there are footways on one side of the B9005. There is the possibility of an effect on pedestrians throughout Woodhead and Fyvie due to the presence of pedestrian infrastructure, and due to the bus stops and single retail facility provided adjacent to the B9005 carriageway in Fyvie.

11.5.26 The results of the classification of receptors on each link reflect the generally rural nature of the local road network, with sensitive receptors noted throughout villages of New Blyth (Link 12), New Deer on the B9170 (Link 2) and A948 (Link 3) east of the Site, Auchnagatt (on Link 4) and Oldmeldrum, Methlick, and New Deer on the B9170 (Link 5 and 6), New Pitsligo (Link 8), and Mintlaw and Longside (Link 9 and 10)., and Woodhead and Fyvie (on Link 16).

11.5.27 Based on professional judgement it can be concluded the following links are subject to **Rule 2** as having '**medium**' sensitivity overall:

- Link 1: C29S between the Site access and Oldmill of Allathan;
- Link 2: B9170 between the C29S and the A948;
- Link 3: The A948 between B9170 and the B9028 (section of the A981) (East);
- Link 4: The A948 between the B9028 (section of the A981) and the A90 at Ellon (South East);
- Link 5: B9170 between the A920 at Oldmeldrum and the New Deer;
- Link 6: A920 between Kirkton of Culsalmond and the B9170;
- Link 7: A981 (including B9028) between the B9028/A948 junction south of New Deer and the A950;
- Link 8: A950 between the A98 and the A981;
- Link 9: A950 between the A981 and Mintlaw;
- Link 10: A950 between Mintlaw and the A90 (T);
- Link 11: B9170 between the C29S and the B9027;
- Link 12: B9027 between the B9170 and the A98;
- Link 13: The C29S (South) between Site Access and the C30S;
- Link 15: The C30S between the C29S and the B9005 to Fyvie (South West); and
- Link 16: B9005 between the C30S at Cottown and the A947 at Fyvie.

11.5.28 Based on professional judgement it can be concluded the following links are subject **to Rule 1** as having '**low**' sensitivity overall:

- Link 14: C121B between the C29S and the B9170.

11.5.29 The results of the classification of receptors on each link reflect the generally rural nature of the local road network, with the greatest amount of sensitivity located at villages along each link.

Mitigation by Design

11.5.30 There are a number of mitigation measures proposed to reduce the significance of effect of construction traffic on the surrounding road network. These measures are either physical (those that require specific works to be undertaken whether on the existing road network or as part of the Proposed Development) or management used to ensure correct contractor behaviours.

Physical Measures

11.5.31 As detailed within the CTMP included within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**, a number of physical measures are proposed within the Study Area to mitigate against the potential impacts of construction traffic associated with the Proposed Development, with these including the following:

- **Site Access** – formation of a new access on the unclassified C29S with visibility provided in accordance with standards;
- **Road Widening Scheme** – the C29S carriageway is to be upgraded to a 6.5 m carriageway width with 2 m wide verges on either side (as stipulated by ACRO on 14 May 2024). For further details please refer to **Volume 4, Appendix 3.3 Public Road Improvements Appraisal** and **Appendix 11.1: Construction Traffic Management Plan**; and
- **Route signage** – temporary construction signage would be erected on the unclassified C29S, C30S and the B9170, in the vicinity of the proposed Site access, and at other locations as considered necessary, to warn drivers of construction activities and the potential to encounter construction vehicles. The exact nature and location of the signage would be agreed with Aberdeenshire Council prior to construction activity on Site.

Good Construction Practices and General Construction Traffic Management

11.5.32 Prior to the commencement of any onsite activities, a finalised CTMP would be prepared and agreed with Aberdeenshire Council. The CTMP would include a number of measures to reduce the effects of the construction of the Proposed Development on local receptors and communities. The CTMP, which is included within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**, is to be treated as a live document and details the mitigation measures, which would be updated as and when additional information becomes available, prior to the publication of the final CTMP.

11.5.33 **Table 11-16** provides a summary of mitigation measures.

Table 11-16 Summary of Mitigation

Reference	Title	Summary
TT1	Physical Measures	These measures are proposed to mitigate against the potential impacts of construction traffic, which include: • Site Access – formation of a new access on the unclassified C29S • Road Widening Scheme – the C29S carriageway will be upgraded to a 6.5 m carriageway with 2 m wide verges on either side. • Route Signage – temporary route signage would be erected in the vicinity of the proposed Site access, and other locations as necessary. Exact nature and location of signage to be agreed with Aberdeenshire Council prior to construction starting.
TT2	Good Construction Practices and General Construction Management	Prior to construction, a finalised CTMP would be prepared and agreed with Aberdeenshire Council. The CTMP would include measures to reduce the effects of construction on local receptors and communities. The CTMP is to be treated as a live document and details the mitigation measures, which would be updated as and when additional information becomes available, prior to the publication of the final CTMP.

Description of Effects

11.5.34 This section provides an assessment of the level of effects generated by vehicles on existing network traffic during the peak construction phase of the Proposed Development.

11.5.35 A detailed assessment has been undertaken to determine the potential level of effect the construction traffic would have on the road network. Error! Reference source not found. quantifies the impact which construction traffic is forecast to have on the operation of each of the links in the Study Area.

Table 11-17 Construction Traffic Impact Assessment Summary

Link	Threshold (HGV or Total)	Scenario	2028 Two-Way Flows			Threshold Triggered?
			HGV	Non-HGV	Total	
Link 1	**10%**	Baseline	0	347	347	Yes (Assessment below)
		Baseline + Construction Traffic	250	727	977	
		% Impact	**100%**	**109.6%**	**181.78%**	
Link 2	**10%**	Baseline	22	927	950	Yes (Assessment below)
		Baseline + Construction Traffic	272	1288	1561	
		% Impact	**1113.47%**	**38.94%**	**64.35%**	
Link 3	**10%**	Baseline	54	734	788	Yes (Assessment below)
		Baseline + Construction Traffic	216	1000	1217	
		% Impact	**301.04%**	**36.22%**	**54.36%**	
Link 4	**10%**	Baseline	86	1457	1542	Yes (Assessment below)
		Baseline + Construction Traffic	198	1601	1799	

Link	Threshold (HGV or Total)	Scenario	2028 Two-Way Flows			Threshold Triggered?
			HGV	Non-HGV	Total	
		% Impact	**131.33%**	9.91%	**16.66%**	
Link 5	**10%**	Baseline	115	1291	1406	Yes (Assessment below)
		Baseline + Construction Traffic	202	1386	1588	
		% Impact	**76.33%**	7.36%	**12.98%**	
Link 6	**10%**	Baseline	183	1541	1725	Yes (Assessment below)
		Baseline + Construction Traffic	271	1636	1907	
		% Impact	**47.73%**	6.16%	**10.58%**	
Link 7	**10%**	Baseline	74	1095	1168	Yes (Assessment below)
		Baseline + Construction Traffic	124	1216	1340	
		% Impact	**67.75%**	**11.11%**	**14.69%**	
Link 8	**10%**	Baseline	97	1203	1301	Yes (Assessment below)
		Baseline + Construction Traffic	147	1279	1427	
		% Impact	**51.36%**	6.32%	9.69%	
Link 9	**10%**	Baseline	174	1673	1848	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	174	1711	1886	
		% Impact	0.00%	2.27%	2.06%	
Link 10	**10%**	Baseline	281	6317	6598	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	281	6355	6636	
		% Impact	0.00%	0.60%	0.58%	
Link 11	**10%**	Baseline	3	580	583	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	3	599	602	
		% Impact	0.00%	3.27%	3.26%	
Link 12	**10%**	Baseline	3	580	583	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	3	599	602	
		% Impact	0.00%	3.27%	3.26%	
Link 13	**10%**	Baseline	76	188	265	No (no further assessment)
		Baseline + Construction Traffic	76	188	265	
		% Impact	0.00%	0.00%	0.00%	
Link 14	**30%**	Baseline	44	194	238	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	44	202	245	
		% Impact	0.00%	3.92%	3.20%	
Link 15	**10%**	Baseline	0	84	84	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	0	92	92	
		% Impact	0.00%	9.04%	9.04%	
Link 16	**10%**	Baseline	0	84	84	No (but this is assessed to be thorough)
		Baseline + Construction Traffic	0	92	92	
		% Impact	0.00%	9.04%	9.04%	

11.5.36 **Table 11-17** shows that, with the exception of Links 1to 8, all of the assessed links experience an increase in the volume of HGV movements of less than 30%, while only Links 1 to 3 experience an increase in total vehicles of more than 30%.

11.5.37 It is observed that Link 13 (south of the Site access on C29S), does not experience any increase to traffic flows which reflects the routing strategy where all non-AILV construction traffic would arrive from the north, from the B9170.

11.5.38 As previously highlighted, the IEMA guidance sets the following thresholds for assessing the impact of generated traffic on a road link:

- **Rule 1**: Include road links where traffic flows would increase more than 30% (or the number of HGVs would increase by more than 30%); and
- **Rule 2**: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

11.5.39 However, as many of the links pass through existing villages, the impact of the Proposed Development has been assessed on all links included in the Study Area and the following sections describe the effects of the temporary increase in traffic.

Road Capacity Assessment

11.5.40 A capacity assessment has been undertaken to determine the effects of the temporary increase in traffic flow generated by construction activities, on the capacity of all links within the Study Area.

11.5.41 Theoretical road capacities are based on the DMRB[6], Volume 13, Section 1, Part 5: Speeds on Links 2002[17]. The theoretical road capacity equates to the maximum traffic volumes which a road can accommodate. Above this level, traffic conditions would become unstable and queuing along the road section would occur. The impact of the Proposed Development on the capacity of the road network is expected to create temporary, short to medium term, **Negligible** transport effects.

11.5.42 Capacity assessments have been conducted under the worst-case construction traffic levels that occur and the results of the assessment can be seen in **Table 11-18.**

Table 11-18 Road Capacity Assessment

Road Network Route Section	2028 Two-Way Hourly Flows (12-hour)			
	Total Base Traffic Flows	Theoretical Road Capacity (12 hour period)	Base + Construction Traffic Flows	Spare Capacity
Link 1	347	3360	399	70.9%
Link 2	950	21600	1000	93.2%
Link 3	788	21600	824	94.9%
Link 4	1542	21600	1564	91.8%
Link 5	1406	21600	1421	92.6%
Link 6	1725	28800	1740	93.3%
Link 7	1168	21600	1183	94.2%
Link 8	1301	21600	1311	93.7%

[17] DMRB, (2002). *Volume 13, Section 1, Part 5: Speeds on Links - May 2002.* (online). Available at: http://www2.westsussex.gov.uk/handt/poe/n.pdf [Accessed November 2024].

Road Network Route Section	2028 Two-Way Hourly Flows (12-hour)			
	Total Base Traffic Flows	Theoretical Road Capacity (12 hour period)	Base + Construction Traffic Flows	Spare Capacity
Link 9	1848	19200	1851	90.3%
Link 10	6598	21600	6601	69.4%
Link 11	583	21600	585	96.8%
Link 12	583	19200	585	96.4%
Link 13	265	3360	265	92.1%
Link 14	238	3360	238	92.9%
Link 15	84	3360	85	97.5%
Link 16	84	19200	85	99.6%

11.5.43 The results in **Table 11-18** show that with the addition of the worst-case construction traffic levels, there would be significant spare capacity on all of the links.

11.5.44 As such, it is considered that the temporary increase in traffic during the worst-case scenario would not result in a noticeable change in road capacity on the road network. Therefore, based on the results of the road capacity assessment, during the construction phase it is considered that the sensitivity of the capacity of the traffic network to changes in traffic flows is low and the magnitude of impact is predicted to be **Negligible** compared to the link capacities. Therefore, the impact of the Proposed Development on the capacity of the road network is expected to create temporary, short to medium term, **Negligible** transport effects.

Severance

11.5.45 The predicted change in severance on the links has been evaluated based on the percentage increase in total traffic levels expected during the construction phase, in line with IEMA guidance. The significance of the predicted change in severance has been determined based on factors including the road conditions, traffic flows and level of pedestrian activity. **Table 11-19** sets out the sensitivity grading of receptors as per Error! Reference source not found. and the magnitude of impact due to construction traffic in relation to the results of the severance assessment.

Table 11-19 Severance Assessment

Link	Total Base Traffic Flows	Base + Construction Traffic Flows	Percentage HGV Traffic Increase	Percentage Total Traffic Increase	Sensitivity of Receptor to Change	Magnitude of Impact	Effect*
Link 1	347	977	181.78%	100%	Medium	High	**Negligible***
Link 2	950	1466	64.35%	1113.47%	Medium	High	Minor Adverse, **Not Significant***
Link 3	788	1103	54.36%	301.04%	Medium	High	**Negligible***
Link 4	1542	1769	16.66%	131.33%	Medium	High	**Negligible***
Link 5	1406	1607	12.98%	76.33%	Medium	Medium	Minor Adverse, **Not Significant***
Link 6	1725	1926	10.58%	47.73%	Medium	Low	**Negligible***

Link	Total Base Traffic Flows	Base + Construction Traffic Flows	Percentage HGV Traffic Increase	Percentage Total Traffic Increase	Sensitivity of Receptor to Change	Magnitude of Impact	Effect*
Link 7	1168	1256	14.69%	67.75%	Medium	Medium	**Negligible***
Link 8	1301	1370	9.69%	51.36%	Medium	Low	**Negligible***
Link 9	1848	1867	2.06%	0.00%	Medium	Negligible	**Negligible***
Link 10	6598	6617	0.58%	0.00%	Low	Negligible	**Negligible***
Link 11	583	697	3.26%	0.00%	Medium	Negligible	**Negligible***
Link 12	583	697	3.26%	0.00%	Medium	Negligible	**Negligible***
Link 13	265	265	0.00%	0.00%	Medium	Negligible	**Negligible***
Link 14	238	238	3.20%	0.00%	Medium	Negligible	**Negligible***
Link 15	84	84	9.04%	0.00%	Medium	Negligible	**Negligible***
Link 16	84	84	9.04%	0.00%	Medium	Negligible	**Negligible***

*Please read a further nuanced assessment below which details why these effects are not significant.

11.5.46 While the assessment suggests that all links could experience an impact on severance, the IEMA guidelines note that the original 30, 60, 90% DfT thresholds for assessment do not take into account instances where there are low baseline flows and the local context of the link. The thresholds are therefore applied above as a starting point for the assessment.

11.5.47 The IEMA Guidelines recommend use of professional judgement to determine significance. The following assessment explains the significance of the construction traffic impact on each link:

- **Link 1**: As indicated in **Table 11-19,** the increase in construction HGV traffic triggers the 'High' severance threshold. The link is rural in nature, with no pedestrian facilities, or Core Paths, indicating a low desirability for pedestrians to cross the road. As shown in **Table 11-12**, with a baseline average of 29 total vehicles per hour (no HGVs), this indicates low existing traffic flows. The anticipated increase of 53 total construction vehicle trips (181.78% increase), and an increase in 21 HGV trips (100%+ increase) per day equates to approximately four total trips and two HGV trips every five minutes (one inbound HGV and one outbound HGV). This is not anticipated to create severance and due to the expected low pedestrian activity and low traffic activity, the impact is considered **Negligible**, therefore the severance effect is **Negligible.**
- **Link 2**: **Table 11-19** indicates that the impact of total construction traffic triggers a 'High' severance threshold due to increase of HGV related construction traffic, though as shown in **Table 11-9**, this is due to a low level of existing HGV traffic. While a proportion of Link 2 passes through New Deer where there are footways either side of the road, there are no formal cycle facilities, or crossings provided in the residential section of the Link. It is therefore considered that there is a general low desirability for pedestrians to cross the road. **Table 11-12** indicates a low baseline average of 79 vehicles per hour (two HGVs). The anticipated increase of 51 total construction vehicle trips (64.35% increase), and an increase in 21 HGV trips (1113.47% increase) per 12 hour working day, equates to approximately four total trips and two HGV trips every five minutes (one inbound HGV and one outbound HGV). This is not expected to increase the level of difficulty of crossing for any persons located along this link substantially, therefore the impact is considered **low**, therefore the severance effect is **Minor Adverse**, and the effect is **Not Significant.**
- **Link 3**: **Table 11-19** indicates a 'High' severance due to the increase of construction traffic due to HGV flows. Along Link 3 through New Deer, although there are footways are provided either side of the

carriageway, there are no services, crossing facilities and no bus stop. These factors indicate that there is a low desirability to cross the carriageway. **Table 11-12** indicates a low baseline average of 66 vehicles per hour (four HGVs). The anticipated increase of 36 total construction vehicle trips (39.90% increase), and an increase in 14 HGV trips (301.04% increase) per 12 hour working day, equates to approximately three total trips including one HGV trip every five minutes (one inbound HGV movement, and one inbound and one outbound non-HGV movement). This is not expected to increase the level of difficulty of crossing for any persons located along this link substantially, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.

- **Link 4**: Along Link 4, while the A948 passes through Ellon and Auchnagatt, through New Deer there are only footways either side of the carriageway through Auchnagatt, which is a rural hamlet with few residential properties and one convenience retail shop. There are no crossing facilities, and no bus stops provided on the link. These factors indicate that while there is a moderate desirability to cross the carriageway, the rural village setting indicates that the frequency in which a crossing is likely to be initiated, is low. The addition of nine HGV trips per hour (five inbound HGVs and four outbound HGVs) or one single inbound/outbound HGV trip every 10 minutes is not expected to create severance, therefore the impact is **Negligible** within Auchnagatt. Within Ellon the A948 acts as a bypass for the village, with agricultural land use north of the carriageway and no footways on either side of the A948. This indicates a low desirability to cross the carriageway and the impact within Ellon is anticipated to be **Negligible**, therefore the severance in both locations is **Negligible**.
- **Link 5**: The B9170 routes through Methlick and around Oldmeldrum on Link 5. Through Methlick, the B9170 provides footways either side of the carriageway and bus stops. There are no pedestrian crossings or cycle facilities within Methlick, however there are footways either side of the carriageway. The B9170 forms a ring road around Oldmeldrum, beyond with is agricultural land. Adjacent to the carriageway on the bypass there are Core Paths which also provide a shared-use cycle facility. The Oldmeldrum Roundabout provides uncontrolled pedestrian crossing facilities on three of its four arms. Methlick is more rural in character than Oldmeldrum, and it is anticipated that there is more likely to be pedestrian crossings made in Oldmeldrum. Construction traffic along this link is expected to experience the same increase the number of vehicles as Link 6, by a total of 15 vehicles per hour (or one single inbound vehicle trip every five minutes). Given the rural character of the link and due to the presence of crossing facilities in Oldmeldrum, the impact of the construction traffic at Oldmeldrum is considered **Low**, therefore the severance effect is **Minor Adverse**, and the effect is **Not Significant**. Within Methlick, the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 6**: The A920 routes from Oldmeldrum to Kirkton of Culsalmond and is located adjacent to core paths which accommodate a shared-use cycle facility on the edge of Oldmeldrum. There is agricultural land use either side of the carriageway for the entirety of this link, indicating low pedestrian traffic and a similar likelihood of crossings. Construction traffic along this link is expected to generate an increase of 15 total construction vehicle trips per hour (10.58% increase) and seven HGV trips (47.73% increase), equating to one total construction traffic trip and one HGV trip every five minutes (one inbound HGV movement). As such, the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 7**: The B9028 between the A948 and the A981 is a single carriageway with agricultural fields either side. There are no pedestrian facilities throughout its length and no other services. These factors indicate that there is a low desirability to cross the carriageway. The addition of 14 total construction traffic vehicles (14.69% increase) and four HGVs (67.75% increase) per hour. Within a period of 15 minutes there is anticipated to be one inbound trip and one outbound trip for HGVs and for Car / LGV classifications. This level of increase is not expected to create severance therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 8**: The A950 passes through New Pitsligo where there are footways either side of the carriageway, bus stops and retail services provided within the village centre in a civic public realm. While there are services,

there are no pedestrian crossing facilities, and this is reflective of the rural location and expected low level of pedestrian activity. Construction traffic along this link is expected to increase the total number of vehicles by 11 total construction vehicles (9.69% increase) and four HGV vehicles (51.36%%) per hour, equating to one complete (round trip) car / LGV delivery and one complete (round trip) HGV delivery every 25 minutes. This is not expected to create severance, and as such, the impact of the construction traffic is considered **Negligible**, therefore the severance effect is **Negligible**.

- **Link 9**: The A950 passes through Mintlaw which comprises parts of Links 9 and 10. In Mintlaw, the A950 provides footways either side of the carriageway, bus stops, and a zebra crossing, located east of 'The Square'. As shown in **Table 11-12**, with a baseline average of 154 total vehicles per hour (including 15 HGVs), this indicates generally low existing traffic flows. The anticipated increase of three total construction vehicle trips (2.06% increase), and no increase in HGV trips per day equates to approximately one inbound car / LGV vehicle trip and one outbound car / LGV vehicle trip every 30 minutes. This is not anticipated to create severance, especially with the provision of a zebra crossing which can facilitate safe crossing, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 10**: Longside is also located on the A950 on Link 10 where it is anticipated that an additional two car / LGV vehicle trips per hour would route through the village. Within Longside there are footways either side of the carriageway, bus stops, a few services and residential properties. There are, however, no pedestrian crossing facilities indicating a minimal desire to cross the carriageway. The addition of two car / LGV two-way vehicle trips per hour is not expected to create severance, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 11**: On Link 11, the construction route follows the B9170 towards Cuminestown from the C29S which shares the carriageway with the Core Path / NCN EV12 cycle route. The existing traffic flows on this road indicate an average of 49 total vehicles per hour (no HGVs). The addition of two cars / LGV construction traffic trips per hour (1 trip every 30 minutes) is not expected to create severance, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 12**: Between the B9170 and the B9027 on Stanryknowe Brae the construction route passes next to the Cuminestown Industrial Estate on the eastern edge of Cuminestown. The presence of the estate indicates a high likelihood of existing traffic activity. While there are footways on one side of the carriageway, there are agricultural fields on the other, with there are no crossing facilities provided throughout the section's length. This indicates a low desirability to make a crossing. Therefore, the addition of two light construction vehicle movements per hour (or one inbound car / LGV movement every 30 minutes) is not expected to create severance, therefore, through the Cuminestown Industrial Estate, the impact is considered **Negligible**, therefore the severance effect is **Negligible**. On Link 12, through New Blyth, footways are provided either side of the carriageway, and a religious centre is provided on one side. Whilst there are facilities and bus stops, the rural village setting indicates that the frequency in which a crossing is likely to be initiated is low. The addition of one car / LGV movement every 30 minutes is not expected to create severance, therefore, through New Blyth the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 14**: The C121B along Link 14 is rural in nature with few rural farm buildings, and a waste management company. There are no Core Paths or facilities for pedestrians or cyclists. The addition of one construction traffic vehicle movement per hour is not expected to create severance, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible**.
- **Link 15**: On the C30S from the C29S junction, the C30S is rural in nature with agricultural land use either side of the carriageway. There are no pedestrian facilities throughout its length and no other services. These factors indicate that there is a low desirability to cross the carriageway. It is anticipated that construction traffic along this link is expected to increase the number of vehicles by one vehicle per hour, and as such, the impact is considered **Negligible**, therefore the severance effect is **Negligible**.

- **Link 16:** Fyvie is located on the B9005 on Link 16, where footways are provided on either side of the carriageway along with bus stops. Fyvie has one local retail shop, and the carriageway predominantly serves a residential community. The average traffic flow per hour on this road is one car / LGV vehicles in total, the addition of one construction traffic vehicle movement per hour is not anticipated to create severance where there are such low flows already, therefore the impact is considered **Negligible**, therefore the severance effect is **Negligible.**

11.5.48 The assessment confirms that the potential for increased severance of communities on all links is either **Negligible** or **Minor** due to the forecast marginal temporary increase in construction traffic volumes. Therefore, the greatest significance that is anticipated throughout the Study Area is found on Link 2 in New Deer, and on Link 5 at Oldmeldrum, which all have a 'medium' sensitivity and where the impact of the construction traffic is considered **Low**, therefore the severance effect is to have (at worst) temporary, short to medium term, **Minor Adverse**, and **Not Significant** effects.

Road vehicle driver and passenger delay

11.5.49 The proposed form of the Site access junction would result in minimal driver delay being generated when vehicles are accessing the Site. The IEMA guidance states that driver delay is only likely to be significant when traffic on the network surrounding the Proposed Development is already at, or close to, the capacity of the system. As established in **Table 11-19**, there are no links that are forecast to operate close to capacity following the addition of traffic generated by construction activities, with significant spare capacity available and therefore the impact in driver delay is considered to be **Negligible**.

11.5.50 Construction activities would also be supported by AILV deliveries which are generated throughout the 48-month construction programme. The largest abnormal loads would be transported from Peterhead Port to the Site via the trunk road network via Link 4, 3, 2, 14, and 13, as detailed within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**.

11.5.51 It is recognised that movement of AILs may impact driver delay. However, the movements would be timed following a public awareness campaign, and they would be undertaken outwith major events and the morning and evening peaks of the local road network's operation. It is therefore considered that construction traffic would have an incrementally low impact. The AILV movements would only effect Links 4, 3, 14, and 13, which all have medium sensitivity apart from Link 14 which has low sensitivity. Therefore, the effect of road vehicle driver and passenger delay would have a temporary, short to medium term**, Minor Adverse** effect on all links, including Link 14, are therefore considered **Not Significant**.

Pedestrian and Non-Motorised User Delay

11.5.52 As detailed in the severance assessment, while there are pedestrian facilities provided within the villages, the Site is in a rural location, with no pedestrian facilities provided on the majority of the proposed construction traffic access routes. As such, whilst the sensitivity for all links except Link 14 is **Medium** (primarily due to the villages), the general number of pedestrians in this rural Study Area is expected to be low. Additionally, as there is only one controlled crossing facility throughout the entirety of the 150.45 km Study Area, it is impossible to determine pedestrian visibility where crossings would be made in the rural context.

11.5.53 Consequently, in the absence of concrete data, as pedestrian delay also depends on the changes to volume, composition and speed of traffic on a road, the sensitivity of the Links to pedestrian delay has been determined by comparing these changes in **Table 11-17**. As indicated by the severance assessment, the relative increases in traffic flows when quantified in the context of time periods is considered to have a similar impact as the severance assessment. The severance assessment concluded that on Links 2, and 5 (which all have a 'medium' sensitivity) that the impact of the construction traffic is considered **Low**, therefore the pedestrian delay effect is to have (at worst) temporary, short to medium term, **Minor Adverse**, and **Not Significant** effects.

Pedestrian and Non-Motorised User Amenity

11.5.54 When considering the effect of pedestrian amenity, it is considered a starting point to compare whether traffic flows have halved or doubled. **Table 11-17** indicates that on Links 1, 2, 3, and 4 there is a significant increase in HGV flows, however when considering the total increase, there is only one link (Link 1) where the total traffic flows on the link have doubled. It is notable that this is at the Site Access on the C29S where 100% of construction traffic would enter the Site.

11.5.55 It is estimated that there would be a maximum of 250 two-way HGV trips generated on a daily basis during the most intensive period of construction activities. This equates to less than 21 two-way HGV movements per hour over a 12 hour working day (or one inbound and outbound HGV trips every five minutes). It is also notable that the increase is only greater on Links 2 and 3 as this is a 'combined route section' for all three preferred routes for HGV traffic. Beyond this Section through New Deer, this increase would be spread across the Study Area, with the impact on the majority of links being far less than this.

11.5.56 Based on the expected low pedestrian movements, and the expected low impact on these medium sensitivity links, in the impact of construction traffic on pedestrian amenity is predicted to be low. Therefore, the effect on pedestrian delay is to have (at worst) temporary, short to medium term, **Minor Adverse**, and **Not Significant** effects.

Fear and Intimidation

11.5.57 To assess fear and intimidation, IEMA guidelines suggest thresholds based on 18-hour daily flow and vehicle speeds, indicating that an average traffic 18-hr flow of over 1,800 vehicles and 1,000 HGVs per hour using a road subject to at 60 mph speed limit would be considered a great degree of hazard.

11.5.58 The peak construction phase is expected to generate a maximum of 630 two-way vehicle movements and 250 two-way HGV movements within a 12 hour working day and distributed between the road links as per vehicle type, indicated in Error! Reference source not found.. **Table 11-20** summarises the comparison of the 18-hour baseline with a threshold for level of fear score assigned to each link and the magnitude of impact as a result of the forecast increase in vehicle movements on each link.

Table 11-20 Fear and Intimidation Assessment

Road Link Number	18 hr Base – Daily Trips		Degree of Hazard Score	Level of Fear score	18hr Base + Peak Construction Daily Trips		Degree of Hazard Score	Level of Fear score	Significance
	Vehicles	HGVs			Vehicles	HGVs			
Link 1	380	0	30	Moderate	1010	250	30	Moderate	Negligible, neutral
Link 2	1085	25	30	Moderate	1696	275	30	Moderate	Minor, Adverse
Link 3	943	69	40	Moderate	1372	231	40	Moderate	Minor, Adverse
Link 4	1845	109	60	Great	2102	222	50	Great	Minor, Adverse
Link 5	1682	146	40	Moderate	1864	234	40	Moderate	Negligible, neutral
Link 6	2063	234	60	Great	2246	321	60	Great	Negligible, neutral
Link 7	1398	94	50	Great	1569	144	40	Moderate	Minor, Beneficial
Link 8	1556	124	40	Moderate	1682	174	30	Moderate	Negligible, neutral
Link 9	2210	222	50	Great	2248	222	50	Great	Negligible, neutral
Link 10	7893	358	50	Great	7931	358	50	Great	Negligible, neutral
Link 11	627	3	40	Moderate	646	3	40	Moderate	Negligible, neutral

Road Link Number	18 hr Base – Daily Trips		Degree of Hazard Score	Level of Fear score	18hr Base + Peak Construction Daily Trips		Degree of Hazard Score	Level of Fear score	Significance
	Vehicles	HGVs			Vehicles	HGVs			
Link 12	627	3	30	Moderate	646	3	30	Moderate	Negligible, neutral
Link 13	317	97	30	Moderate	317	97	30	Moderate	Minor, Adverse
Link 14	299	53	30	Moderate	306	53	30	Moderate	Minor, Adverse
Link 15	90	0	30	Moderate	97	0	30	Moderate	Negligible, neutral
Link 16	90	0	20	Small	97	0	20	Small	Negligible, neutral

11.5.59 The results in **Table 11-20** show that with the addition of the worst case construction traffic levels, there would be no adverse step changes in level of fear on all of the links due to the planned implementation of a route signage and speed reduction strategy. As such, it is considered that the temporary increase in traffic during the worst-case scenario would not result in a change in the impacts on road fear and intimidation, on the road links contained within the Study Area.

11.5.60 Based on the estimated construction traffic generated, there would be a requirement for substation infrastructure AILV movements to deliver transformers via Link 4, 3, 2, 14, and 13, as detailed within **Volume 4, Appendix 11.1: Construction Traffic Management Plan**.

11.5.61 As per **Paragraph 11.3.29**, it is recognised that movement of AILs may heighten the perception of fear and intimidation. When considering the impact of the AILV movements the extent of fear and intimidation may be lessened by the speed at which the AILV travels at, the proximity of vehicles to people. Furthermore, the movements would be timed following a public awareness campaign, and that they would be undertaken outwith major events and the morning and evening peaks of the local road network's operation, there is unlikely to be a high number of receptors during this time, and the impact is expected to be **Low**.

11.5.62 As such, the AILV movements would only effect Links 4, 3, 2, 14, and 13, which all have medium sensitivity apart from Link 14 which has low sensitivity. Therefore, the effect of road vehicle driver and passenger delay would all have a temporary, short to medium term, **Minor Adverse** effect on which all links including Link 14, and which is considered **Not Significant**.

Road User and Pedestrian Safety

11.5.63 As shown in

11.5.64 Table 11-11 there is no requirement to introduce specific casualty reduction measures as a low number of PIAs have been reported on the local road network in the most recently available five year period. There were no PIAs reported within 400 m of the B9170 junction with the unclassified C29S. It is noted there were two fatalities on the A948 and the A950 and that both can be attributed to driver error.

11.5.65 As indicated in

11.5.66 **Table** 11-11, while the total number of accidents on the majority of the Study Area is far below the national average for the respective type of road, the A948 experiences a higher number of accidents on Link 4. As previously stated, 50% of accidents on this link occurred at junctions and therefore the annual PIA rate is not comparable with national averages which is calculated through traffic flow counts and road lengths. The analysis concludes that there are not any inherent road safety or accident concerns. The temporary traffic flow increase during the construction period is not expected to have an impact on road safety, therefore, the impact is considered to be **Negligible** on all Links, except for (Links 1 to 8) which are forecast to experience an increase of HGV construction traffic of over 30% and are considered to have a low impact. Therefore, as all links except for Link 14 have a medium sensitivity, the effect of road user and pedestrian safety would have a temporary, short to medium term, **Negligible** effect on which all links including Link 14, and a temporary, short to medium term, **Minor Adverse** effect on Links 1 to 8. All effects are considered **Not Significant**.

Summary of Likely Effects Generated by Construction Traffic

11.5.67 The greatest significance of the effect generated by construction traffic is considered to have temporary, short to medium term, **Minor Adverse** and **Not Significant** transport effects when compared to the seven key criteria and it is not intended to assess the construction impacts further as part of this EIA.

11.5.68 All of the impacts would be generated at a local level.

Residual Effects

11.5.69 Subject to the successful implementation and monitoring of the CTMP, it is considered that any residual effects associated with the construction of the Proposed Development would be of a temporary nature and the magnitude of any residual effects would be of the same or lesser significance. The implementation of the CTMP would address any specific issues on the proposed access routes, thus ensuring the impact on local residents and existing road users is appropriately mitigated.

11.5.70 A summary of the residual effects associated with the Proposed Developments construction following the implementation of the mitigation measures identified within the CTMP is summarised in **Table 11-21**.

Table 11-21 Residual Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Residual Effects and Significance (Post Mitigation)	
	Significance	Beneficial/ Neutral/ Adverse		Significance	Beneficial/ Neutral/ Adverse
Road Capacity	Negligible	Neutral	Implementation of a CTMP to include a range of measures which would mitigate the impact of construction traffic on the operation of the local road network.	Negligible	Neutral
Severance	Minor	Adverse		Negligible	Neutral
Driver Delay	Minor	Adverse		Negligible	Neutral
Pedestrian Delay	Minor	Adverse		Negligible	Neutral
Pedestrian Amenity	Minor	Adverse		Negligible	Neutral
Fear and Intimidation	Minor	Adverse		Negligible	Neutral

Accidents and Safety	Minor	Adverse		Negligible	Neutral

Cumulative Effects

11.5.71 A review of the Aberdeenshire Council planning portal and the Energy Consent Unit's website has been undertaken to determine what cumulative developments should be considered with regards to the Proposed Development.

11.5.72 While there are a number of proposals which are currently being progressed in the area, a large proportion are currently at the scoping stage and therefore do not provide information relating to vehicle trips which can be used in this study. Some of these developments are being delivered by SSEN Transmission and where possible, this would provide opportunity for construction activities to be coordinated to minimise the effects generated by construction traffic.

11.5.73 It is noted that in the Scoping response within **Volume 4, Appendix 6.4: Scoping Opinion,** that there are wider Pathway to 2030 projects being promoted by SSEN Transmission which have the potential to result in significant effects in combination with those arising from the Proposed Development. SSEN Transmission are committed to managing the impacts of these cumulative developments.

11.5.74 Other developments identified as having the potential for cumulative effects on the Study Area in combination with the Proposed Development as discussed in **Section 5.5**, have been detailed in **Table 11-22** which identifies the level of daily vehicle trips forecast to be generated by each. As stated in **Volume 2, Chapter 5**, developments marked with an asterisk are a Stage 1 cumulative development.

Table 11-22 Cumulative Development

Planning application reference	Description	Status / Location	Comments
ENQ/2023/0739	National Development for Electrical Transmission Infrastructure Comprising Transition Joint Bays, Underground Cable Circuits Within a Cable Corridor, Substation and Ancillary Works	Decided-PAC Agreed as Specified in Notice Passes through the Site	**Caledonia Offshore Windfarm**, Ocean Winds (OW) – In 2022, OW published a scoping report which details that the project proposes to use the A947, A97, A95, and A98 in routing construction traffic for the project. While the developments construction traffic will use roads within the Study Area, there are not currently any construction traffic data estimates for the minor roads to be used. Therefore, it is not intended to assess this cumulative effect further.
ENQ/2022/1845	Installation of Underground Cable at substation near New Deer Peterhead Aberdeenshire	Awaiting decision 1.4 km Southeast	**Underground Cable (UGC)** - No available data. Therefore, it is not intended to assess this cumulative effect further.
APP/2023/1454	National for Formation of Onshore Landfall Point, Laying of Underground Cable and Erection of Substation	Approved 2.3 km Southeast	**GreenVolt**, Flotation Energy Plc (FE) – In 2023 FE published an EIA traffic and transport chapter which concluded that the increases in peak construction traffic (during 2025) were insignificant. The Road Capacity Assessment found no road operating with less than 69% of available capacity. Therefore, as construction is not intended to take place at the same time, and as there is

Planning application reference	Description	Status / Location	Comments
			significant road capacity spare, it is not intended to assess this cumulative effect further.
ENQ/2021/1180	Erection of a Synchronous Compensator to Provide Grid Stability Services and Associated Works	Decided-PAC Agreed as Specified in Notice 1.6 km South	**Thermal Generation**, SSE - No available data. Therefore, it is not intended to assess this cumulative effect further.
APP/2023/2102	Prior Notification is sought for a forestry private way formation at the land at Callies Wood, Fyvie. The plans submitted with the present application demonstrate one proposed private way to provide access to several parts of the Callies Wood.	Decided-Prior Approval Required 4.9 km Southwest	**Access Track**, Bartholomew Partnership Ltd – Is expected to generate minimal construction traffic movements. Therefore, no cumulative effects are anticipated.
APP/2022/2571	Full planning permission is sought for the formation of a footpath around Lendrum, Turriff. Approximately 3 kilometres of semi-bound finished path is proposed over an area of approximately 73 hectares. The path has three access points to the public road network, two onto the road between South Redbriggs and Birkenhill and one opposite Lendrum Farm.	Approved 4.8 km Southwest	**Access Path**, E + I Pirrie - Is expected to generate minimal construction traffic movements. Therefore, no cumulative effects are anticipated.
APP/2021/2773	A path circuit of approximately 982 metres is proposed to run inside the perimeter of a triangular 6-hectare field immediately north of Moss Side Farm, which lies on the single-track public road between Monquhitter School in Cuminestown and the B9170 public road. The path would be 1.8 metres in width and consist of a compacted sub-base between 100 to 200 millimetres in depth depending on ground conditions.	Approved 1.3 km North	**New Footpath**, I & L Anderson - Is expected to generate minimal construction traffic movements. Therefore, no cumulative effects are anticipated.
APP/2022/0034	Approximately 1 kilometre of path over an area of 2.9 hectares would be formed at Hillhead of Teuchar, around the perimeter of the farm's northernmost field. The path would largely follow the field boundary except approximately 90 metres from the bottom of the field on its north-west side, whereupon it would turn to cut across. There are five access points	Approved 1.4 km Northwest	**Footpath,** Mr Alex MacLean-Bullen - Is expected to generate minimal construction traffic movements. Therefore, no cumulative effects are anticipated.

Planning application reference	Description	Status / Location	Comments
	for the footpath, as follows. The path would be 1800 millimetres wide with a minimum height above ground level of 100 millimetres.		
APP/2022/0076	This application seeks full planning permission for the formation of a foot/cycle path on land to the west of the Cuminestown to Crudie road, approximately 1 km north of Cuminestown. The path will be approximately 2km in length and measure 1.8 m in width and be constructed with a 150mm stone base and a 20mm wearing course. A post and wire stockproof fence will separate the path from the agricultural land.	Approved 4.1 km Northwest	**Footpath**, Colin G Mair & Partners - Is expected to generate minimal construction traffic movements. Therefore, no cumulative effects are anticipated.
ECU00005004	The Proposed Development comprises the construction and operation of an energy storage facility with a capacity greater than 50 MW, and therefore falls under Section 36 of the Electricity Act 1989.	Pre-Application 4.9 km East	**8.5ha Battery Energy Storage System (BESS)**, E Grid Services – In 2023 E Grid Services published a Screening Request. At present there is no available data. Therefore, it is not intended to assess this cumulative effect further.
ECU00005129	The project involves the development of a 480MW BESS site, on a parcel of land measuring 37Ha within the vicinity of Cuminestown and New Deer, Aberdeenshire.	Pre-Application 1.9 km North	**Monquhitter 480MW Battery Energy Storage System (BESS)**, ETP UK 2 Ltd - In 2024 ETP UK 2 Ltd published a Screening Request. At present there is no available data. Therefore, it is not intended to assess this cumulative effect further.
TBC*	This project involves the connection from Greens Substation to the existing New Deer Substation.	Pre-Application Adjacent	**Greens Underground Cable Connection,** SSEN – At present there is no available trip generation data for Greens underground cable connection, therefore, it is not intended to assess this cumulative effect further. **Beauly to Blackhillock to New Deer to Peterhead 400 kV Connection**, SSEN Transmission – In July 2024 SSEN Transmission published an EIA Scoping Report. The Traffic and Transport chapter specified that the following roads (relevant to this assessment) that may be used in construction are as follows: • The A981 and A948 in the vicinity of New Deer; and • The A950 and A90 which will support construction vehicles accessing the Proposed
ECU00005165*	Section 37 application for the construction of a new double circuit steel structure 400 kV OHL between Beauly, Blackhillock, New Deer and Peterhead, approximately 194km in length, including the diversion of an existing 400kV OHL into a proposed new Coachford 400kV substation near Blackhillock, removal of the existing 132kV OHL from Beauly to Knocknagael substations, and rationalisation and crossings of the existing transmission network.	Pre-Application Adjacent	

Planning application reference	Description	Status / Location	Comments
			Development to the west of Peterhead. At present there is no construction traffic data estimates for the road network. From previous project experience, OHL projects do not generate substantial movements as access points to tower locations are spread across the road network surrounding the OHL route. With this in mind, no cumulative effects are anticipated and it is not intended to assess this cumulative effect further.

11.5.75 The CTMPs implemented to support the Proposed Development and committed developments would implement measures to mitigate the impact of construction traffic as far as possible and it is therefore considered that the cumulative effect would be temporary, short to medium term, **Minor Adverse** and **Not Significant**.

11.6 Summary

11.6.1 This Traffic and Transport chapter has set out the methods used to assess the likely significant effects, the baseline conditions currently existing at the Site, the potential direct and indirect effects of the Proposed Development arising from traffic generated by its construction the mitigation measures required to prevent, reduce, or offset the identified significant effects and the residual effects.

11.6.2 Operational traffic is considered to be so low that its effect would be negligible and has therefore been scoped out of further assessment.

11.6.3 Baseline traffic flows were gathered, and sensitive receptors identified for the construction traffic route to the Site and an assessment undertaken. The overall increase in vehicle trips compared to the existing capacity of the road, has been assessed to be low. It is therefore considered that the existing road network can accommodate the anticipated temporary increase in traffic generated by construction activities and that the effects are not significant. Seven key IEMA criteria were assessed against thresholds identified by guidance and using professional judgement, with the greatest significance found to have temporary, short to medium term, **Minor Adverse** and **Not Significant** transport effects.

11.6.4 In relation to the cumulative impact of the Proposed Development with local developments, it is considered that the coincidence of the construction phases is not predicted to result in significant cumulative traffic effects on the road network. The study has demonstrated that there is spare capacity on the local road network to accommodate the predicted level and type of vehicles associated with the various schemes. It is considered that the cumulative effect would be temporary, short to medium term, **Minor Adverse** and **Not Significant.**

11.6.5 Construction traffic would be managed through the implementation of a CTMP and the residual effect has been determined to be **Negligible** when assessed in relation to the seven key IEMA indicators as identified in **Paragraph 11.3.17**.