

10 TRAFFIC AND MOVEMENT

10.1 Introduction

- 10.1.1 This chapter considers the likely significant effects on receptors along the transport routes as a result of vehicle movements associated with the proposed Millennium East Wind Farm ('the Proposed Development'). Additional information in relation to the Proposed Development can be found in **Chapter 2**.
- 10.1.2 The specific objectives of the chapter are to:
- Describe the assessment methodology and significance criteria used in the impact assessment;
 - Describe the traffic and movement baseline conditions (including future baseline);
 - Describe any likely impacts and effects of the Proposed Development on the receptors identified through the baseline assessment;
 - Describe the mitigation measures proposed to address any likely significant adverse effects;
 - Assess the residual effects remaining following the implementation of secondary mitigation; and
 - Describe any likely cumulative effects of the Proposed Development combining and interacting with the residual environmental effects of committed development/s.
- 10.1.3 This chapter is supported by the following figures, presented in **Volume 2a** of the EIA Report:
- **Figure 10.1:** Study Area;
 - **Figure 10.2:** Abnormal Indivisible Load Route;
 - **Figure 10.3:** Traffic Count Points;
 - **Figure 10.4:** Traffic Accident Locations;
 - **Figure 10.5:** Construction Traffic Distribution; and
 - **Figure 10.6:** Indicative Site Access Junction Modification.
- 10.1.4 This chapter is also supported by **Technical Appendix 10.1:** Outline Construction Traffic Management Plan and **Technical Appendix 10.2:** Abnormal Load Route Assessment presented in **Volume 3** of the EIA Report.
- 10.1.5 The supporting figures and technical appendices provide further information and are referenced throughout the assessment.
- 10.1.6 The assessment has been informed by the embedded mitigation measures which form part of the Proposed Development. Please refer to **Chapter 2** for further details.

10.2 Statutory and Planning Context

- 10.2.1 This chapter has been prepared in line with the requirements of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations).

Legislation

- 10.2.2 There is no legislation specific to transport assessments that is required to be considered as part of this assessment.

Planning policy

- 10.2.3 This assessment has been undertaken in accordance with policies outlined in the following plans:
- National Planning Framework 4 (2023); and
 - Highland-wide Local Development Plan (2012).

Guidance

- 10.2.4 The following guidelines have been used to inform this assessment:
- Institute of Environmental Management and Assessment, Guidelines for the Environmental Assessment of Traffic and Movement (2023);
 - LA104, Environmental assessment and monitoring, Design Manual for Roads and Bridges (DMRB) (Standards for Highways, 2020);
 - The Highland Council, Roads and Transport Guidelines for New Developments (2013);
 - Scottish Government, Transport Assessment Guidance (2012); and
 - The Highland Council, Guidance on the Preparation of Transport Assessment (2014).

10.3 Consultation Undertaken

- 10.3.1 **Table 10.1** summarises the consultation responses regarding traffic and movement and provides information on where and/or how they have been addressed in this chapter. The following regulatory bodies made comment on traffic and movement matters during scoping discussions held in 2024:
- The Highland Council; and
 - Transport Scotland.

Table 10.1: Traffic and Transport Consultation Summary

Consultee and Date received	Summary of key comments	Action Taken
The Highland Council 13/03/2024	The Council's Transport Planning Team has not-to-date been able to provide comments due to workloads and competing demands no comments for the Scoping Response however below is the Council's generic advice. A Transport Assessment (TA), Construction Traffic Management Plan (CTMP) and an Abnormal Load Assessment will be required within the EIAR. The Highland Council then set out the required Transport Assessment Methodology. When establishing a scope for the assessment consideration should be given to the use of the public roads in this area can be influences significantly by tourist traffic. Transport Planning would expect a Transport Assessment to be submitted with any future planning application and a High National Traffic Forecast be applied.	The Traffic and Movement Chapter of the EIA Report addresses the scoping response in full. High National Traffic Forecast would be used for any roads where the Council are the local roads authority. A Construction Traffic Management Plan is provided in Technical Appendix 10.1. An Abnormal Load Route Assessment is provided in Technical Appendix 10.2.
Transport Scotland 19/02/2024	For the avoidance of doubt, Transport Scotland would request that the thresholds as indicated within the current 2023 Guidelines be used as a screening process for the assessment. These specify that road links should be taken forward for further assessment where the following two rules are breached:	The Traffic and Movement Chapter of the EIA Report addresses the scoping response in full.

Consultee and Date received	Summary of key comments	Action Taken
	Rule 1: Include road links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%). Rule 2: Include road links of high sensitivity where traffic flows have increased by 10% or more. For any trunk road links where the thresholds are breached, Transport Scotland would seek the following list of impacts be assessed: • Severance of communities • Road vehicle driver and passenger delay • Non-motorised user delay • Non-motorised amenity • Fear and intimidation on and by road users • Road user and pedestrian safety • Hazardous/large loads It is noted that “road user and pedestrian safety” and “driver delay” effects require further consideration even if the rules are not exceeded. With regard to base traffic data, the SR indicates that 24-hour Automatic Traffic Count (ATC) data will be obtained from the Department for Transport (DfT), Transport Scotland (TS) or the Highland Council and where not available / suitable, ATC surveys will be undertaken. Transport Scotland is satisfied with this approach and would add that traffic data is available from Traffic Scotland’s National Traffic Data System. The SR states that the count points identified have either data from 2019 (pre COVID-19) or 2022 (or both). Given that 2019 data is now 5 years old, Transport Scotland would request that, where possible, 2022 data and beyond be utilised. We would also state that base traffic data will require to be factored to the peak construction year using National Road Traffic Forecasts (NRTF) Low Growth.	Low National Traffic Forecast would be used for any roads where Transport Scotland are the local roads authority. A preliminary junction layout has been prepared. The proposed Access Junction Design is illustrated in Figure 10.6 Further consultation was undertaken regarding the request for a road safety audit, see below. An Abnormal Load Route Assessment is provided in Technical Appendix 10.2.



Consultee and Date received	Summary of key comments	Action Taken
	It is noted that any impacts associated with the operational and decommissioning phases of the development are to be scoped out of the EIA. We would consider this to be acceptable in this instance. <u>Site Access</u> We note that the existing junction is to be utilised to access the development. If this is to be modified in any way then Transport Scotland would request that 1:500 scale plans are submitted with the application showing the new layout. It is noted that a road safety audit will also be required to accompany any proposal. <u>Abnormal Loads Assessment</u> We note that preliminary routing assessments of the turbine components have been carried out. The Port of Entry (PoE) has been identified as the Port of Kyle of Lochalsh for turbine blades and Corpach Harbour for tower sections and other large components. Routing of the components to the site will include sections of the A87(T), A887(T), A830(T) and A82(T). Transport Scotland will require to be satisfied that the size of Abnormal Indivisible Loads (AIL) used during the transportation of development components can negotiate the selected routes and that their transportation will not have any detrimental effect on structures within the trunk road route path. A full Abnormal Loads Assessment report will be required which identifies key pinch points on the trunk road network. Swept path analysis should be undertaken and details provided with regard to any required changes to street furniture or structures along the route.	
Transport Scotland 20/04/2025	It was confirmed that, as the temporary measures to be implemented are for the movement of abnormal loads, including police escort, these need not be subject to a road safety audit.	A road safety audit is not required for the temporary measures to be implemented at the existing junction for the movement of abnormal loads.

10.4 Scope and Methodology

Scope of Assessment

- 10.4.1 The scope of this assessment has been established through an ongoing scoping process. Further information can be found in **Chapter 4: Environmental Impact Assessment Process**.
- 10.4.2 This section provides an update to the scope of the assessment and re-iterates/updates the evidence base for scoping out matters following further iterative assessment.

Receptors/Matters Scoped Out of Further Assessment

- 10.4.3 **Table 10.2** presents the receptors/matters that are scoped out of further assessment, together with appropriate justification. Where a change has occurred since EIA scoping, this is clearly stated and justified.

Table 10.2 Receptor/Matters Scoped Out of Further Assessment

Receptor/Matter	Phase	Justification	Change since EIA scoping?
Traffic associated with the Operational Phase	Operational Phase	Once operational, the level of traffic associated with the Proposed Development would be minimal. Regular monthly or weekly visits would be made to the Site for maintenance checks. The vehicles used are likely to be 4x4 vehicles and there may also be the occasional need for an HGV to access the Site for maintenance and/or repairs. It is considered that the effects of operational traffic would be negligible and therefore no detailed assessment of the operational phase of the development is proposed.	No. The Scoping Opinion agreed that this matter should be scoped out of further assessment.
Traffic associated with the Decommissioning Phase	Decommissioning Phase	The traffic generation levels associated with the decommissioning phase would be less than those associated with the construction phase as some elements such as	No. The Scoping Opinion agreed that this matter should be scoped out of further assessment.

Receptor/Matter	Phase	Justification	Change since EIA scoping?
		access tracks would be left in place and therefore not need to be constructed again. As such, the construction phase is considered the worst-case assessment from the Proposed Development. An assessment of the decommissioning phase will therefore not be undertaken, although a commitment to reviewing the impact of this phase will be made immediately prior to decommissioning works proceeding.	

Baseline Methodology

Desk Study

10.4.4 The desk study included reviews and identification of the following:

- Relevant transport planning policy;
- Personal injury and accident data;
- Sensitive locations;
- Any other traffic sensitive receptors in the area (core paths, routes, communities, etc.);
- Ordnance Survey (OS) plans;
- Potential origin locations of construction staff and supply locations for construction materials to inform the extent of local area roads network to be included in the assessment; and
- Constraints to the movement of abnormal indivisible loads (AILs) through a route survey including swept path assessments. Route survey included video data collection of the transport routes to the site used in the preparation of the Abnormal Load Route Assessment in **Technical Appendix 10.2**.

Field Study

10.4.5 No surveys/site visits have been undertaken to inform the assessment.

Assessment Methodology

10.4.6 The methodology adopted in this assessment involved the following key stages:

- Determine baseline (and future baseline) conditions;
- Review the Proposed Development to identify potential effects including any cumulative effects;

- Evaluate significance of effects on sensitive receptors;
- Identify mitigation where required; and
- Assess residual effects.

10.4.7 As Transport Scotland is the roads authority for all roads within the Study Area, the use of Low National Road Traffic Forecast (NRTF) growth assumptions provides a robust future year assessment scenario to take account of trip generation that may occur as a result of future local development within the Study Area.

10.4.8 The assessment is based on the Proposed Development, as described in **Chapter 2**.

Guidance

10.4.9 A high-level overview of the effects of traffic movements has been considered in accordance with the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Traffic and Movement (2023) (the 'IEMA Guidelines').

Study Areas

10.4.10 The Study Area includes those roads that are expected to experience increased traffic flows associated with the construction of the Proposed Development. The geographic scope was determined through a review of other developments in the area, OS mapping and an assessment of the potential origin locations of construction staff and supply locations for construction materials. Roads forming the study area, as set out in Scoping, are shown in **Figure 10.1** and include:

- The A87 between Broadford Aerodrome and A887;
- The A87 between A887 and A82;
- The A82 between A87 and A830;
- The A830 between A82 and Corpach Harbour;
- The A82 between A87 and A887;
- The A82 between A887 and A831;
- The A887 between A82 and the Site access; and
- The A887 between A87 and the Site access.

10.4.11 The following rules, also taken from the IEMA Guidelines, were used to determine which links within the Study Area should be considered for detailed assessment:

- Rule 1 – Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles (HGV) will increase by more than 30%); and
- Rule 2 – Include highway links of high sensitivity where traffic flows have increased by 10% or more.

10.4.12 Abnormal Indivisible Loads (AILs) associated with the wind turbines will be delivered from the Port of Entry (PoE) at Kyle of Lochalsh or Corpach, depending on the load.

10.4.13 For blades, the proposed access route is as follows:

- Loads would exit Kyle Harbour turning left onto the A87 and continuing over the Skye Bridge to the proposed storage area located at the Skye Aerodrome;

- Loads would exit the Skye Aerodrome and turn left onto the A87;
- Continue on the A87 until the junction with the A887;
- Loads would join the A887 before turning right into the existing Millennium Wind Farm access junction (see **Figure 10.6**); and
- Loads would then proceed to site via the existing and new private access tracks.

10.4.14 All other loads would use the following route:

- Loads would exit Corpach Harbour via the main gate turning right onto the A830;
- Continue on the A830 for 4.5 km before turning left onto the A82;
- Continue on the A82 to Invergarry;
- At Invergarry, loads would turn left and would join the A87 northbound; and
- At the junction of the A87 and A887, loads would turn right and would then proceed eastbound on the A887 to the site access junction; and
- Loads would then proceed to the Site via the existing and new private access tracks.

10.4.15 The AILs routes are shown in **Figure 10.2**.

Value of receptors

10.4.16 In terms of Traffic and Movement impacts, the receptors are the users of the roads within the Study Area and locations through which those roads pass.

10.4.17 The IEMA Guidelines includes guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in **Table 10.3**.

Table 10.3: Receptor value and sensitivity

Receptor	Sensitivity			
	High	Medium	Low	Negligible
Users of Roads	Where the road is a minor rural road, not structured to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.	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.	Where the road is Trunk or A-road class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.	Where roads have no adjacent settlements. Includes new strategic trunk roads that would be little affected by additional traffic and suitable for Abnormal Loads and new strategic road junctions capable of accommodating Abnormal Loads.
Users / Residents	Where a location is a	Where a location is an	Where a location is a small rural	Where a location includes individual

Receptor	Sensitivity			
	High	Medium	Low	Negligible
of Locations	large rural settlement containing a high number of community and public services and facilities.	intermediate sized rural settlement, containing some community or public facilities and services.	settlement, few community or public facilities or services.	dwellings or scattered settlements with no facilities.

10.4.18 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.

Magnitude of impact (change)

10.4.19 The IEMA Guidelines identify the key impacts that are most important when assessing the magnitude of traffic impacts from an individual development. The impacts and levels of magnitude are discussed below.

10.4.20 Based on the IEMA guidelines, the following factors have been identified as being the most discernible potential environmental impacts likely to arise from changes in traffic movements. Therefore, these are considered in the assessment which may arise from changes in traffic flows resulting from the Proposed Development:

10.4.21 **Severance of Communities** - The perceived division that can occur within a community when it becomes separated by major transport infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure.

10.4.22 **Road Vehicle Driver and Passenger Delay** - Traffic delays impacting non-development traffic can occur at points on the road network surrounding a development site including site entrance, roads passing a development site where there is likely to be additional traffic and the flow might be affected by additional parked cars, key intersections along a road and side roads where the availability of gaps between vehicles to circumvent delay are reduced.

10.4.23 **Non-motorised User Delay** - Changes in volume, composition or speed of traffic may affect the ability of people to cross a road. In general, increases in traffic levels are likely to lead to greater increases in delay. This is also dependent on existing level of activity, visibility and general physical conditions of the Site.

10.4.24 **Non-motorised Amenity** - Defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic.

10.4.25 **Fear and Intimidation On and By Road Users** - IEMA guidelines state that measuring the extent of fear and intimidation as a result of development traffic is dependent on the following factors:

- 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.

10.4.26 IEMA guidelines suggest defining the degree of hazard to pedestrians in three stages:

1. Fear & Intimidation (F&I) Degree of Hazard - By calculating average (a) 18hr total traffic flow, (b) 18hr heavy vehicle flow and (c) average speed (Mph). Each with suggested thresholds of traffic number flows and average vehicle speeds. These thresholds in-turn sort the assessment results into a 'degree of hazard' score of 0-30. This is calculated for baseline traffic flows and baseline + development traffic flows.
2. Levels of F&I – Levels of F&I are categorized as: 'Extreme', 'Great', 'Moderate' or 'Small' according to a total hazard score provided by combining the elements of stage 1 - (a)+(b)+(c).
3. F&I Magnitude of Impact – The level of impact is then approximated with reference to the changes in the level of fear and intimidation from baseline conditions. Magnitude of impact is categorized according to 'change in step/traffic flows from baseline conditions as:
 - 'high' (two step changes in level);
 - 'medium' (One step change in level with >400 vehicle increase in average 18hr all traffic flow and/or >500 increase in total 18hr HGV flow);
 - 'low' (one step change in level with <400 vehicle increase in average 18hr total vehicle flow and/or <500 HGV flow increase in total 18hr HGV flow); and
 - 'negligible' (no change in step changes).

10.4.27 **Road User and Pedestrian Safety** - Consists of an approximation of the potential for road safety impacts through the calculation of collision rates (slight, serious and fatal). Collision clusters are identified by a detailed review of the baseline characteristics to determine the road safety sensitivity of discrete areas of the road network.

10.4.28 **Hazardous/Large Loads** - Some developments may involve the transportation of dangerous or hazardous loads by road. Such movements may involve specialist loads that might be involved in the construction or decommissioning phases of the development (e.g. wind turbine generator components).

10.4.29 The magnitude of impact or change has been considered according to the criteria defined in **Table 10.4**.

Table 10.4: Definition of impact magnitude

Impact	Negligible	Low	Medium	High
Severance of Communities	Changes in total traffic flow of less than 30%	Changes in total traffic flow of 30%-60%	Changes in total traffic flow of 60%-90%	Change in total traffic flow over 90%

Impact	Negligible	Low	Medium	High
Road Vehicle Driver and Passenger Delay	< 10 % Increase in traffic	Quantitative assessment of road capacity based on existing traffic flows and predicted future levels.		
Non-Motorised User Delay	< 10 % Increase in traffic	An increase in total hourly traffic of approximately 30% can double the delay experienced by pedestrians attempting to cross a road. Whether or not the increase in traffic results in a significant effect should be determined using professional judgement.		
Non-Motorised Amenity	Assessment of this link is based on a desktop review of non-motorised user facilities on links used by construction traffic.			
Fear and Intimidation on and by road users	Negligible - No change in step changes.	Low - One step change in level, with • <400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or • <500 heavy vehicle increase in total 18hr HV flow	Medium - One step change in level, but with • >400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or • >500 heavy vehicle increase in total 18hr HV flow	High - Two step changes in level.
Road User and Pedestrian Safety	< 10 % Increase in traffic	Professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents. Collision cluster analysis is required. A cluster corresponds to a high concentration of accidents in a specific location (e.g. a specific junction) within the analysed time frame. In this assessment, a collision cluster = 5 accidents within a 100m radius are assumed as specific criteria for collision cluster analysis is not provided in the Council's 'Guidance on the reparation of Transport Assessments'.		
Hazardous/Large Loads	< 30 % increase in traffic	Quantitative assessment of road capacity based on existing traffic flows and predicted future levels.		

Determination of Significance

10.4.30 The approach to determine the significance of effects has been as follows:

- Identify the relevant receptors;
- Derive their value (sensitivity) based on the criteria set out in **Table 10.3**;
- Identify and consider the likely impacts from each activity as set out in **Paragraph 10.4.2010.4.20**;
- Determine the magnitude of impact (change) based on the criteria identified in **Table 10.4**;

- Assess the significance of any effects. Where likely significant effects are identified, develop secondary mitigation measures to reduce effects such that they are no longer significant; and
- Assess the significance of any residual effects following the implementation of secondary mitigation measures.

10.4.31 To determine the overall significance of effects, the results from the receptor sensitivity and magnitude of impact assessments are correlated and classified using a scale set out in LA 104 Revision 1 of the Design Manual for Roads and Bridges (DMRB) and summarised in **Table 10.5**.

Table 10.5: Significance of effect matrix

Sensitivity	Magnitude			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible/minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Negligible/minor	Negligible	Negligible	Negligible

10.4.32 In terms of the EIA Regulations, effects are considered significant where they are assessed to be Major, Major / Moderate or Moderate. Where an effect could be one of Major / Moderate or Moderate / Minor, professional judgement is used to determine which classification should be applicable.

Nature of Effect

10.4.33 In addition to determining the significance of the effect, the assessment process also includes a qualitative description regarding the nature of the effect. The terms described in **Table 10.6** add additional information about how the effect would affect receptors.

Table 10.6: Assessment description

Term	Nature of effect description
Adverse	An effect which has the potential to decrease receptor value or status relative to baseline conditions.
Beneficial	An effect which has the potential to increase receptor value or status relative to baseline conditions.
Short-term	Effects that persist only for a short time, e.g. during the construction (or decommissioning) phase only; includes reversible effects.

Term	Nature of effect description
Medium-term	Effects that may persist until additional mitigation measures have been implemented and become effective.
Long-term	Effects that persist for a much longer time, e.g. for the duration of the operational phase (essentially until the development ceases or is removed/ reinstated); includes effects which are permanent (irreversible) or which may decline over longer timescales.
Temporary	A reversible effect where recovery is possible and for which effects would persist only for a short or medium-term.
Frequent	Refers to a recurring effect that occurs repeatedly; in some cases a lower level of impact may occur with sufficient frequency to reduce the ability of a receptor to recover effectively.

An effect is considered to be significant if it meets any of the following criteria:

- it could lead to an exceedance of defined guidelines or widely recognised levels of acceptable change;
- it is likely that the consenting authority will reasonably consider applying a planning condition, requirement or legal agreement to the consent to require specific additional mitigation to reduce or overcome the effect;
- it threatens or enhances the viability or integrity of a receptor or receptor group of concern; or
- it is likely to be material to the ultimate decision about whether the planning application should be approved.

10.4.34 The significance of effects are discussed below in **Table 10.7**.

Table 10.7: Significance of effects

Level of effect	Description
Major	These effects are considered to be material in the decision-making process.
Moderate	These effects may be important but are not likely to be material factors in decision-making. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a receptor.
Minor	These effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are important in improving the subsequent design of the project.
Negligible	No effects or those that are imperceptible.

Residual Effects

- 10.4.35 Additional environmental mitigation measures are necessary to address likely significant adverse environmental effects. The identification of residual effects should assume only mitigation measures that are incorporated (i.e. embedded) in scheme design and/or can be readily (cost effectively) applied; these being the measures for which delivery and implementation can be secured.

Cumulative Effects

- 10.4.36 An assessment of the cumulative effects on the Study Area of all relevant developments, including local wind farms, in respect to either submitted planning applications or consented developments pending construction, which may utilise the same access routes as the Proposed Development, has been undertaken.

Assessment Limitations and Uncertainties

- 10.4.37 The assessment is based upon average traffic flows during the peak month of construction. During this month, activities at the Site may fluctuate between one day and another and it is not possible at this stage to fully develop a day-by-day traffic flow estimate. External factors can also impact upon activities on a day-by-day basis, such as the weather conditions, availability of materials, time of year, etc.
- 10.4.38 The assessment is based upon an assumed construction programme (**Chapter 2**) for the Proposed Development and is based upon average traffic flows in one-month periods. During the peak construction month there may be localised peak days where construction activity may be higher.

Receptors / Matters Scoped In for Further Assessment

- 10.4.39 **Table 10.8** presents the receptors/matters that are scoped in for further assessment, together with appropriate justification. Where a change has occurred since EIA scoping, this is clearly stated and justified.

Table 10.8 Receptors/Matters Scoped In for Further Assessment

Receptor/Matter	Phase	Justification	Change since EIA scoping?
Local road users and local residents	Construction Phase	The increase in construction traffic associated with the Proposed Development may lead to adverse effects on local road users and local residents. They are therefore included as receptors within the Traffic and Movement assessment.	No. The Scoping Opinion agreed that this receptor/matter should be scoped into further assessment.

10.5 Existing Environment

Access

- 10.5.1 The entrance to the Proposed Development for vehicles delivering construction materials, turbine components, and components for the battery energy storage system (BESS), is proposed from the existing Millennium Wind Farm off the A887. The existing onsite wind farm track network would be used, with new track sections required to access certain infrastructure locations. The required new track sections are illustrated in **Figure 2.2: Site Layout**.
- 10.5.2 Modification would be required to the existing junction layout to allow abnormal load vehicles to access and egress safely / unobstructed. A preliminary junction layout has been prepared. The proposed Access Junction Design is illustrated in **Figure 10.6**.

Existing Traffic Conditions

- 10.5.3 The distribution of general construction traffic from potential material sources to the Site is considered throughout the Study Area. Beyond these routes, general construction traffic would be more dispersed.
- 10.5.4 The A887, A87, A82 and A830 are strategic trunk roads managed by Transport Scotland and its managing agent Bear Scotland.
- 10.5.5 The A887 is a two-way single carriageway which forms part of the trunk road network and links to the A87, at Bun Loyne, to Invermoriston. The A887 is predominantly subject to the national speed limit.
- 10.5.6 The A87 is a two-way single carriageway which runs from Invergarry to Uig, in the north of Skye and is predominantly subject to the national speed limit, however this reduces when travelling through villages along the route. The A87 forms part of the trunk road network.
- 10.5.7 The A82 is a two-way single carriageway which forms part of the trunk road network and links Glasgow to Inverness via Fort William. The A82 is predominantly subject to the national speed limit.
- 10.5.8 The A830 is a two-way single carriageway road which forms part of the trunk road network. The section of the A830 near the access to Corpach Harbour is subject to a speed limit of 40 mph, however the road is generally subject to the national speed limit.
- 10.5.9 Annual traffic statistics for the Study Area have been extracted from the Department for Transport (DfT) traffic count point database which uses either estimations using previous year's Annual Average Daily Traffic (AADT) flows, manual counts or permanent Automatic Traffic Counters (ATCs). These are all maintained by the local and Trunk Road authorities. The use of this data was deemed suitable during Scoping with the Council and Transport Scotland.
- 10.5.10 The locations of the DfT traffic count sites used in this assessment are illustrated in **Figure 12.3**. The extracted data allows the traffic flows to be split into vehicle classes and has been summarised into light goods vehicles (LGVs) and heavy goods vehicles (HGVs).
- 10.5.11 **Table 10.9** summarises the AADT flows for the baseline 2023 for the Study Area.

Table 10.9: Baseline Traffic Data

No.	Link Description	Count Point ID	Cars/LGVs	HGVs	Total Vehicles
1	A82 between A887 and A831	758	2959	384	3343
2	A82 between A86 and A87	40762	3974	218	4192
3	A82 between A87 and B862 Glendoe Road	10760	2284	208	2492
4	A830 between Corpach Harbour and A82	793	8828	519	9347
5	A82 between B862 Glendoe Road and A887	50707	2190	210	2400
6	A87 between Broadford Aerodrome and Stoney Road, Kyle of Lochalsh	80594	4719	262	4981
7	A87 between A887 and A82	30776	1304	98	1402
8	A887 between A87 and A82	40958	1307	119	1426
9	A87 between C-road Shiel Bridge and A87	10770	2423	135	2558
10	A87 between A890 and C-road Shiel Bridge	50772	3412	459	3871
11	A87 between Stoney Road, Kyle of Lochalsh and A890	768	4237	273	4510
12	A82 between A830 and A86	91196	4864	518	5382

Abnormal Loads

- 10.5.12 There are two proposed Port of Entry locations for abnormal load equipment which include Kyle of Lochalsh Port, located to the west of the Site, and Corpach Harbour, near Fort William which is to the south of the Site.
- 10.5.13 The turbine blades would be delivered from Kyle of Lochalsh Port and, due to physical constraints and loading configurations preventing the use of the Port of Entry at Kyle of Lochalsh, the remaining turbine components, including towers, will be delivered from Corpach Harbour.
- 10.5.14 Any modifications to junction layouts would be confirmed through trial run and further surveys, and any modifications or works required to accommodate abnormal loads would be discussed with the respective road authority and the necessary consents and permits would be obtained in advance of any works or delivery periods.

Accident History

- 10.5.15 The time period for the accident analysis includes the five-year period between 2018 and 2022 (inclusive) and is applicable to the current publicly available data from the DfT accident statistics website. ESRI ArcGIS software has been used to interrogate and map the accident locations and severity within the study area. Road Safety Data from 2023 was published in September 2024, however at the time of writing, this was not yet available on the ESRI ArcGIS software. The locations of recorded accidents are shown on **Figure 12.4**.
- 10.5.16 The accident analysis is used to inform the review of the proposed construction route where any deficiencies in the road layout and condition are identified.
- 10.5.17 Injuries are classed under the following categories:
- 'Slight' injury – e.g. slight shock with occurrences of sprains or bruises;
 - 'Serious' injury – e.g. breakages, lacerations, concussion, or hospital admittance; and
 - 'Fatal' injury – e.g. resulted in a mortality / death within 30 days after the accident.
- 10.5.18 The number and severity of accidents recorded in the Study Area is provided in **Table 10.10**.

Table 10.10: Number and Severity of Accidents Summary

Link	Slight	Serious	Fatal
A87 between Kyle of Lochalsh and Broadford Aerodrome	2	1	0
A87 between Kyle of Lochalsh and A887	12	11	2
A887 between A87 and A82	2	2	1
A87 between A887 and A82	9	8	1
A82 between A887 and A831	5	2	2
A82 between A87 and A830	23	19	3

Link	Slight	Serious	Fatal
A82 between A87 and A887	11	8	0

Pedestrian and Cyclist Networks

- 10.5.19 A review of foot and cycle paths that may be affected by the movement of construction traffic was undertaken.
- 10.5.20 The A887 does not have any pedestrian or cyclist infrastructure in the vicinity of the site access junction, reflecting its rural nature.
- 10.5.21 The Highland Council's (the Council's) Interactive Core Paths Map has been used to locate the Core Paths in the vicinity of the Proposed Development.
- 10.5.22 Core Path IN16.16 (Fort Augustus to Glen Moriston by Old Drove Road) runs in a predominantly north to south direction from the A887 towards Fort Augustus. To the north of the A887, Core Path IN05.03 runs in a north to south direction towards Tomich.
- 10.5.23 Along the A87 in Inverinate, Core Path SL13.01 – Inverinate Community Hall to Manse Road comprises a track / constructed path (roadside footway) which is narrow and located next to the road. Users must also cross the road to access Core Path SI13.02 – Inverinate Forest Track and stay on the Core Path network.
- 10.5.24 Core Path LO11.07 South Laggan to Loch Oich on Great Glen Way crosses the A82 in South Laggan. The Core Path is designated a canal towpath / track / tarred track. A formal crossing point comprising of tactile paving, path markings and signage is provided at this location.
- 10.5.25 In Spean Bridge, Core Path LO23.05 – Spean Bridge to Commando Memorial on A82 Pavement comprises a tarred pavement which runs along the A82.
- 10.5.26 Core Path LO07.25 – Lochybridge to Turlundy is situated beside the A82, near Fort William golf course. The Core Path is designated as a track (tar) and sections of the path which are next to the A82 are segregated from the road by bollards.
- 10.5.27 Core Path LO07.29 – Lochybridge to Blar Mhor to Corpach is situated beside the A82 and is separated by a kerb and section of grass.

Sensitive receptors

- 10.5.28 A review of the potential receptors has been undertaken and a summary of receptor sensitivities based upon various criteria noted in **Table 10.3**. This summary is shown in **Table 10.11**.

Table 10.11: Summary of sensitive receptors in the Study Area

Section	Sensitivity	Justification
Users of A87	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.

Section	Sensitivity	Justification
Users of A887	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Users of A82	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Users of A830	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.
Residents in Invermoriston	Low	A small rural settlement, few community or public facilities and services.
Residents in Drumnadrochit	Medium	Immediate sized rural settlement, containing some community or public facilities and services.
Residents in Fort Augustus	Medium	Immediate sized rural settlement, containing some community or public facilities and services.
Residents in Kyle of Lochalsh	Medium	Immediate sized rural settlement, containing some community or public facilities and services.
Residents in Inverinate	Low	A small rural settlement, few community or public facilities and services.
Residents in Shiel Bridge	Low	A small rural settlement, few community or public facilities and services.
Residents in Invergarry	Medium	Immediate sized rural settlement, containing some community or public facilities and services.
Residents in Spean Bridge	Medium	Immediate sized rural settlement, containing some community or public facilities and services.
Residents in Corpach	High	Where a location is a large rural settlement containing a high number of community and public services and facilities.
Core Path Network Users along A87	High	Minor path used by walkers and cyclists, not constructed to accommodate HGV traffic flows.
Core Path Network Users along A82	High	Minor path used by walkers and cyclists, not constructed to accommodate HGV traffic flows.

10.6 Future Baseline

- 10.6.1 To assess the likely effects during the construction period, the construction year future baseline traffic flows were determined by applying a National Road Transport Forecast (NRTF) growth factor to the 2023 flows assuming low growth.

- 10.6.2 Construction of the proposed Development is anticipated to commence at the earliest in 2027 if consent is granted and is anticipated to take approximately 17 months to complete, depending on weather conditions and ecological considerations.
- 10.6.3 **Table 10.12** summarises the AADT flows for the year of construction 2027 with a low growth factor (1.021) applied to the 2023 baseline for the future baseline.

Table 10.12: Future year baseline traffic flows

No.	Link Description	Count Point ID	Cars/LGVs	HGVs	Total Vehicles
1	A82 between A887 and A831	758	3021	392	3413
2	A82 between A86 and A87	40762	4057	223	4280
3	A82 between A87 and B862 Glendoe Road	10760	2332	212	2544
4	A830 between Corpach Harbour and A82	793	9013	530	9543
5	A82 between B862 Glendoe Road and A887	50707	2236	214	2450
6	A87 between Broadford Aerodrome and Stoney Road, Kyle of Lochalsh	80594	4818	268	5086
7	A87 between A887 and A82	30776	1331	100	1431
8	A887 between A87 and A82	40958	1334	121	1456
9	A87 between C-road Shiel Bridge and A87	10770	2474	138	2612
10	A87 between A890 and C-road Shiel Bridge	50772	3484	469	3952
11	A87 between Stoney Road, Kyle of Lochalsh and A890	768	4326	279	4605
12	A82 between A830 and A86	91196	4966	529	5495

10.7 Embedded Mitigation

Design Considerations

- 10.7.1 The assessment has been informed by the embedded mitigation measures which form part of the Proposed Development. Please refer to **Chapter 2** for further details.

- 10.7.2 Existing on-site borrow pits are expected to meet 100% of material requirements for new tracks, hardstandings and compound sub-bases. To provide a robust and worst-case assessment, it has been assumed that 50% of the material requirements will be imported to site

Best Practice measures

- 10.7.3 As part of the traffic and movement chapter, a preliminary Construction Traffic Management Plan (CTMP) has been prepared (**Technical Appendix 10.1**) and it is expected that a planning condition will be applied to any future planning consent for a final CTMP to be prepared post-consent and prior to construction works commencing.
- 10.7.4 The CTMP would be tailored to suit the requirements of the Proposed Development. Embedded mitigation includes best practice measures which would be detailed in the CTMP, regardless of the outcomes of the traffic and movement assessment. These are included in the Proposed Development when determining the sensitivity of receptors. Where traffic effects are assessed as being significant, then additional mitigation measures will be considered to reduce the effects. Additional mitigation measures will then be detailed in the CTMP in addition to the adopted embedded mitigation.
- 10.7.5 The mitigation measures adopted in the CMTP are outlined in **Section 10.9**.

10.8 Potential effects

Potential Construction Impacts

- 10.8.1 During the construction phase, the following traffic would require access to the Site:
- Staff transport, either cars or staff minibuses;
 - Construction equipment and materials, deliveries of machinery and supplies such as concrete raw materials;
 - Components relating to the BESS element, substation components, construction compounds and associated infrastructure;
 - AILs consisting of the wind turbine sections and a heavy lift crane(s); and
 - Escort vehicles for AIL deliveries.
- 10.8.2 Apart from the turbine components, most traffic would be normal construction plant and would include graders, excavators, high-capacity cranes, forklifts and dumper trucks. Most would arrive at the Site as a load on an articulated HGV (low loader).
- 10.8.3 The turbines would be delivered in component sections and assembled on-site. The nacelle, hub, drive train, blade sections and tower sections are classified as AILs due to their weight and/or length, width and height when loaded.
- 10.8.4 In addition to the turbine deliveries, two or more high-capacity erection cranes would be needed to offload some components and erect the turbines. The cranes are likely to be mobile cranes with a capacity up to 1,000 tonnes that would be escorted by boom and ballast trucks to allow full mobilisation on-site. Smaller erector cranes would also be present to allow the assembly of the main cranes and to facilitate overall erection of the turbines.

Construction Traffic Movements

- 10.8.5 The greatest number of vehicle movements are associated with the import of materials associated with construction of new access tracks, substation and BESS foundations and crane hardstandings.
- 10.8.6 Based on the information available from an initial assessment of available stone, it is therefore likely that the majority of stone material would be obtained from the two existing on-site borrow pits. However, an assessment of a worst-case scenario has been included in the environmental assessment of traffic and movement effects, where it is assumed that 50% of the required aggregate is sourced from off-site locations.
- 10.8.7 To enable comparison of the estimated future year baseline traffic movements with total volumes including predicted construction traffic, average daily two-way movements for each month assuming a 22-day working month for deliveries were determined. Traffic movements were also split by vehicle type, in line with the baseline data and the identified peak period for construction traffic. The final daily construction profile is shown in **Table 10.13**.

Table 10.13: Daily construction traffic movements (weekday average two-way flows)

Activity & Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Site mobilisation/demobilisation	300																
Construction of construction compounds and access points		960															
Track and hardstanding construction			1901	1901	1901												
Construction of turbine foundations						1044	1044										
Substation and BESS construction							911	911	911	911							
Excavating trenches and laying electrical and communications cables									22	22	22	22					
Site restoration													20	32			
Turbine delivery and instillation														80	80		
Turbine fit out and grid connection																17	5
Turbine commissioning																10	
General site traffic	660	660	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	660	660
Monthly ALL total	960	1620	3001	3001	3001	2144	3055	2011	2033	2033	1122	1122	1120	1212	1180	687	665



Activity & Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Daily ALL total	44	74	138	138	138	98	140	92	94	94	52	52	52	56	54	32	32
Monthly HGV total	300	960	1901	1901	1901	1044	1955	911	933	933	22	22	20	112	80	27	5
Daily HGV total	14	44	88	88	88	48	90	42	44	44	2	2	2	6	4	2	2

- 10.8.8 The maximum traffic movements associated with construction of the Proposed Development are predicted to occur in month 7 in **Table 10.13**. The average daily movements during the peak month are summarised for HGV, LGV and AIL movements in **Table 10.14**.

Table 10.14: Peak daily construction traffic movements³⁵

Cars/LGVs (two-way)	HGV (two-way)	AIL	
		To Site as AILs	From Site as HGVs
50	90	0	0

Construction Traffic Distribution

- 10.8.9 The origin of vehicle traffic would depend on the location of staff accommodation and the source of materials being imported. It is likely that staff would be accommodated across a wide area and the origin of car/LGV traffic would depend on the location of staff accommodation. The highest volume of traffic would be generated by the requirement for concrete source materials for the turbine foundations and other permanent structures, and aggregate associated with the access track construction. Information on the potential sources of suitable materials near the Proposed Development is provided in **Table 10.15**.

Table 10.15: Nearby quarries

Quarry	Location	Distance from Site	Materials
Banavie Quarry – Breedon Group	Fort William – access from the A830	69 km by road to the south-west	Ready-mixed concrete Aggregates
Torlundy Quarry – Leiths Group	Fort William – access from the A82	64 km by road to the south	Ready-mixed concrete Aggregates
Dunain Mains Quarry - Tarmac	Inverness – access from the A82	65 km by road to the north-east	Aggregates

- 10.8.10 The choice of HGV route was based upon identifying the most suitable route between the access to the Proposed Development and the primary Trunk or A-class road network. The choice of LGV route (staff origins) has been based on the locations of population centres outside the study area. The assumed distribution of construction traffic is summarised in **Table 10.16** and illustrated in **Figure 12.5**.

³⁵ **Assumptions:** Turbine components will be delivered on AIL vehicles. After delivery, when the AIL vehicle leaves the Site, it is classed as an HGV. Calculations take this into account. In this instance, no AIL movements occur during the peak month of construction.

Table 10.16: Distribution of construction traffic

No.	Link Description	Count Point ID	Cars/ LGVs	HGVs
1	A82 between A887 and A831	758	10%	0%
2	A82 between A86 and A87	40762	60%	90%
3	A82 between A87 and B862 Glendoe Road	10760	10%	0%
4	A830 between Corpach Harbour and A82	793	70%	90%
5	A82 between B862 Glendoe Road and A887	50707	10%	0%
6	A87 between Broadford Aerodrome and Stoney Road, Kyle of Lochalsh	80594	10%	0%
7	A87 between A887 and A82	30776	70%	90%
8	A887 between A87 and A82	40958	80%	90%
9	A87 between C-road Shiel Bridge and A87	10770	10%	0%
10	A87 between A890 and C-road Shiel Bridge	50772	10%	0%
11	A87 between Stoney Road, Kyle of Lochalsh and A890	768	10%	0%
12	A82 between A830 and A86	91196	60%	90%

Predicted Construction Effects

- 10.8.11 To estimate the total trips on the road network within the study area during the construction phase, daily construction traffic flows were combined with the future year baseline traffic data. The resulting figures were compared with the weekday future year baseline traffic.
- 10.8.12 **Table 10.17** shows the increase in total traffic over future year baseline traffic, as a result of construction traffic.

Table 10.17: Increase in total traffic generation (daily average two-way flows)

Link Description			2027 Baseline		2027 Baseline + Development Traffic		Percentage Increase	
No.	Link Description	Count Point ID	HGVs	Total	HGVs	Total	HGVs	Total
1	A82 between A887 and A831	758	392	3413	392	3419	0.00%	0.18%
2	A82 between A86 and A87	40762	223	4280	305	4392	36.84%	2.62%
3	A82 between A87 and B862 Glendoe Road	10760	212	2544	212	2550	0.00%	0.24%
4	A830 between Corpach Harbour and A82	793	530	9543	612	9661	15.47%	1.24%
5	A82 between B862 Glendoe Road and A887	50707	214	2450	214	2456	0.00%	0.24%
6	A87 between Broadford Aerodrome and Stoney Road, Kyle of Lochalsh	80594	268	5086	268	5092	0.00%	0.12%
7	A87 between A887 and A82	30776	100	1431	182	1549	81.95%	8.24%
8	A887 between A87 and A82	40958	121	1456	203	1578	67.49%	8.38%
9	A87 between C-road Shiel Bridge and A87	10770	138	2612	138	2618	0.00%	0.23%

Link Description			2027 Baseline		2027 Baseline + Development Traffic		Percentage Increase	
No.	Link Description	Count Point ID	HGVs	Total	HGVs	Total	HGVs	Total
10	A87 between A890 and C-road Shiel Bridge	50772	469	3952	469	3958	0.00%	0.15%
11	A87 between Stoney Road, Kyle of Lochalsh and A890	768	279	4605	279	4611	0.00%	0.13%
12	A82 between A830 and A86	91196	529	5495	611	5607	15.50%	2.04%

10.8.13 Any results in **Table 10.17** that are subject to 'Rule 1' or 'Rule 2' of the IEMA Guidelines, which requires a full assessment of effects if the locations breach these rules, are highlighted.

10.8.14 Whilst the predicted increase in construction traffic would be temporary and short-term in duration, the following receptors, summarised in **Table 10.18**, have been taken forward to an assessment of the significance of effect.

Table 10.18: Receptors for further assessment

Link No.	Receptor	Sensitivity
7	Users of A87	Low
8	Users of A887	Low
2	Users of A82	Low
7	Residents in Invergarry	Medium
7	Core Path Network Users along A87	High
2	Core Path Network Users along A82	High

10.8.15 In this assessment, a review of the existing road capacity has been undertaken using the Design Manual for Roads and Bridges, Volume 15, Part 5 "The NESA Manual". The theoretical road capacity has been estimated for each of the road links taken forward for further assessment for a 12-hour period. The results are summarised in **Table 10.19**.

Table 10.19: Peak traffic flow capacity review

Link No.	Link description	2027 Baseline	2027 Baseline + Construction	Theoretical Road Capacity (12 hr)	Spare Road Capacity (%)
1	A82 between A887 and A831	3413	3419	21600	84%
2	A82 between A86 and A87	4280	4392	21600	80%
3	A82 between A87 and B862 Glendoe Road	2544	2550	21600	88%
4	A830 between Corpach Harbour and A82	9543	9661	28800	66%
5	A82 between B862 Glendoe Road and A887	2450	2456	21600	89%
6	A87 between Broadford Aerodrome and Stoney Road, Kyle of Lochalsh	5086	5092	21600	76%
7	A87 between A887 and A82	1431	1549	21600	93%
8	A887 between A87 and A82	1456	1578	21600	93%
9	A87 between C-road Shiel Bridge and A87	2612	2618	21600	88%
10	A87 between A890 and C-road Shiel Bridge	3952	3958	21600	82%
11	A87 between Stoney Road, Kyle of Lochalsh and A890	4605	4611	21600	79%
12	A82 between A830 and A86	5495	5607	21600	74%

10.8.16 The results indicate there are no road capacity issues with the addition of construction traffic associated with the construction of the Proposed Development and ample spare capacity exists within the local road network to accommodate all construction phase traffic.

10.8.17 The significance of the predicted effects on the above receptors has been determined using the rules and thresholds previously outlined in **Section 0**.

10.8.18 **Table** 10.20 summarises the significance of effect on the identified receptors for the construction phase.

Table 10.20: Construction phase effects assessments

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
Users of A87	Low	Severance	Medium	Minor (Not Significant)	Change in HGV traffic flow would be between 30% - 60%.
		Driver Delay	Low	Minor (Not Significant)	The IEMA Guidelines note that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. No existing capacity issues. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. This is unlikely to lead to a significant delay for existing road users.
		Pedestrian Delay	Low	Minor (Not Significant)	Relatively wide pedestrian footpaths at either side of the road as the A87 leaves Invergarry. The majority of the A87 in this location has no dedicated footpaths or cycling infrastructure. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. Based on professional judgement, it is considered that this would not result in a perceivable issues to existing users or in a material change to the provision offered to pedestrians.
		Non-motorised User Amenity	Low	Minor (Not Significant)	Percentage increase in HGV traffic is 82%. The majority of the A87 has no footpaths and no dedicated cycling infrastructure. Minimal amenity destinations that non-motorised users would travel to on this link as a whole.
		Fear and Intimidation	Negligible	Negligible (Not Significant)	No change in F&I level from baseline

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Medium	Minor (Not Significant)	9 'slight' accidents, 8 'serious' accidents and 1 'fatal' accident occurred on the A87 between A887 and A82 between 2018 and 2022. The 'fatal' accident occurred on a Monday morning in December 2018 in the vicinity of the Allt a' Bhiora crossing. Conditions were wet or damp. 1 car was involved and there was 1 casualty (driver). No collision clusters identified on this section.
Users of A82	Low	Severance	Low	Minor (Not Significant)	Change in HGV traffic flow would be between 30% - 60%.
		Driver Delay	Low	Minor (Not Significant)	The IEMA Guidelines note that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. No existing capacity issues. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. This is unlikely to lead to a significant delay for existing road users.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Pedestrian Delay	Medium	Minor (Not Significant)	Relatively wide pedestrian footpath on one side of the road as the A82 leaves Invergarry and as the road passes Loch Oich Car Park through to the junction with the Great Glen Way. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. Based on professional judgement, it is considered that this would not result in a perceivable issues to existing users or in a material change to the provision offered to pedestrians.
		Non-motorised User Amenity	Medium	Minor (Not Significant)	Percentage increase in HGV traffic is 37%. Pedestrian footpath on one side of the road as the A82 leaves Invergarry and as the road passes Loch Oich Car Park through to the junction with the Great Glen Way. Minimal amenity destinations that non-motorised users would travel to on this link as a whole.
		Fear and Intimidation	Negligible	Negligible (Not Significant)	No change in F&I level from baseline.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Medium	Minor (Not Significant)	11 'slight' accidents, 9 'serious' accidents and 1 'fatal' accident occurred on the A82 between the A87 and Spean Bridge between 2018 and 2022. The 'fatal' accident occurred on a Monday evening in October 2020 to the north of Glen Goy Road. Conditions were wet or damp and dark. 2 vehicles were involved (one van and one heavier goods vehicle) and there was 1 casualty (driver). No collision clusters identified on this section.
Users of A887	Low	Severance	Medium	Minor (Not Significant)	Change in HGV traffic flow would be between 60% - 90%.
		Driver Delay	Low	Minor (Not Significant)	The IEMA Guidelines note that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. No existing capacity issues. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. This is unlikely to lead to a significant delay for existing road users.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Pedestrian Delay	Medium	Minor (Not Significant)	No dedicated pedestrian footpaths or cycling infrastructure on the A887 in the vicinity of the site access. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. Based on professional judgement, it is considered that this would not result in a perceivable issues to existing users or in a material change to the provision offered to pedestrians.
		Non-motorised User Amenity	Low	Minor (Not Significant)	Percentage increase in HGV traffic is 68%. No dedicated pedestrian footpaths or cycling infrastructure on the A887 in the vicinity of the site access. No amenity destinations that non-motorised users would travel to on this link as a whole.
		Fear and Intimidation	Negligible	Negligible (Not Significant)	No change in F&I level from baseline.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Low	Minor (Not Significant)	2 'slight' accidents, 2 'serious' accidents and 1 'fatal' accident occurred on the A887 between A87 and A82 between 2018 and 2022. The 'fatal' accident occurred on a Wednesday afternoon in September 2022. Conditions were dry and dark. 1 vehicle was involved and there was 1 casualty (driver). No collision clusters identified on this section.
Residents in Invergarry	Medium	Severance	Medium	Moderate (Significant)	Change in HGV traffic flow would be between 60% - 90%.
		Driver Delay	Low	Minor (Not Significant)	The IEMA Guidelines note that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. No existing capacity issues. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. This is unlikely to lead to a significant delay for existing road users.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Pedestrian Delay	Medium	Moderate (Significant)	Relatively wide pedestrian footpath on either side of the road through Invergarry, serving Invergarry Hotel, Invergarry Primary School and a number of residential properties. No formal pedestrian crossings present. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour. Based on professional judgement, it is considered that this would not result in a perceivable issues to existing users or in a material change to the provision offered to pedestrians.
		Non-motorised User Amenity	Medium	Moderate (Significant)	Percentage increase in HGV traffic is 82%. Pedestrian footpaths on either side of the road through Invergarry, serving Invergarry Hotel, Invergarry Primary School and a number of residential properties. No formal pedestrian crossings present. Small number of amenity destinations that non-motorised users would travel to on this link as a whole.
		Fear and Intimidation	Negligible	Minor (Not Significant)	No change in F&I level from baseline.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Low	Minor (Not Significant)	1 'slight' accident and 1 'serious' accident occurred in Invergarry between 2018 and 2022. The 'serious' accident occurred outside Glengarry Shinty Club in 2021 and involved 2 vehicles. The 'slight' accident occurred outside Invergarry Primary School in 2018 and involved 2 vehicles. No collision clusters identified on this section.
Core Path Network Users along A87	High	Severance	Medium	Major (Significant)	Change in HGV traffic flow would be between 60% - 90%.
		Driver Delay	Negligible	Minor (Not Significant)	Users of Core Path include walkers and cyclists. Effects on driver delay are not relevant in this instance.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Pedestrian Delay	Low	Moderate (Significant)	The Great Glen Way (Laggan Locks to Fort Augustus) and River Garry Paths (LO11.01) form part of / cross the A87 in the vicinity with the A82 / A87 junction. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour.
		Non-motorised User Amenity	Low	Moderate (Significant)	Percentage increase in HGV traffic is 82%. The Great Glen Way (Laggan Locks to Fort Augustus) and River Garry Paths (LO11.01) form part of / cross the A87 in the vicinity with the A82 / A87 junction.
		Fear and Intimidation	Negligible	Minor (Not Significant)	No change in F&I level from baseline.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Low	Moderate (Significant)	1 'slight' accident and 1 'serious' accident occurred in Invergarry in the vicinity of The Great Glen Way (Laggan Locks to Fort Augustus) and River Garry Paths (LO11.01) between 2018 and 2022. The 'serious' accident occurred outside Glengarry Shinty Club in 2021 and involved 2 vehicles. The 'slight' accident occurred outside Invergarry Primary School in 2018 and involved 2 vehicles. No collision clusters identified on this section.
Core Path Network Users along A82	High	Severance	Low	Moderate (Significant)	Change in HGV traffic flow would be between 30% - 60%.
		Driver Delay	Negligible	Minor (Not Significant)	Users of Core Path include walkers and cyclists. Effects on driver delay are not relevant in this instance.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Pedestrian Delay	Medium	Major (Significant)	The Great Glen Way (Laggan Locks to Fort Augustus) and River Garry Paths (LO11.01) form part of / cross the A82 in the vicinity with the A82 / A87 junction. Cycle Track - North Laggan (LO11.01), South Laggan to Loch Oich on Great Glen Way (LO11.07) and The Great Glen Way (Laggan Locks to Fort Augustus) cross the A82 north of Laggan. Spean Bridge to Commando Memorial on A82 Pavement (LO23.05) also utilises a section of the A82 at Spean Bridge. During the peak of construction, there would be an additional 82 two-way HGVs using this link each day. This is equivalent to approximately an additional 8 two-way HGVs per hour.
		Non-motorised User Amenity	Medium	Major (Significant)	Percentage increase in HGV traffic is 37%. The Great Glen Way (Laggan Locks to Fort Augustus) and River Garry Paths (LO11.01) form part of / cross the A82 in the vicinity with the A82 / A87 junction. Cycle Track - North Laggan (LO11.01), South Laggan to Loch Oich on Great Glen Way (LO11.07) and The Great Glen Way (Laggan Locks to Fort Augustus) cross the A82 north of Laggan. Spean Bridge to Commando Memorial on A82 Pavement (LO23.05) also utilises a section of the A82 at Spean Bridge.
		Fear and Intimidation	Negligible	Minor (Not Significant)	No change in F&I level from baseline.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
		Road Safety	Medium	Moderate (Significant)	2 'serious' accidents occurred on the A82 to the north of Spean Bridge between 2018 and 2022 in the vicinity of the Spean Bridge to Commando Memorial on A82 Pavement (LO23.05). Similarly, although no collision clusters were identified on this section, a number of 'slight' and 'serious' accidents have occurred on the A82 in the vicinity of South Lagan Forest where Cycle Track - North Laggan (LO11.01), South Laggan to Loch Oich on Great Glen Way (LO11.07) and The Great Glen Way (Laggan Locks to Fort Augustus) cross the A82 north of Laggan.
Abnormal Load Route – Users of A87, Users of A887 and Users of A82	Highest sensitivity of abnormal load route = Low	Hazardous / large loads	High	Moderate (Significant)	The route from Kyle of Lochalsh / Corpach to the Proposed Development Site is considered suitable for the movement of assumed abnormal loads (wind turbine generator components - nacelles, tower sections, blades etc.), subject to the potential need for facilitate movements. Any modifications to junction layouts would be confirmed through a trial run and further surveys, and any modifications or works required to accommodate abnormal loads would be discussed with the respective road authority and the necessary consents and permits would be obtained in advance of any works or delivery periods. For blades, the proposed access route is as follows: • Loads would exit Kyle Harbour turning left onto the A87 and continuing over the Skye Bridge to the proposed storage area located at the Skye Aerodrome; • Loads would exit the Skye Aerodrome and turn left onto the A87; • Continue on the A87 until the junction with the A887; • Loads would join the A887 before turning right into the existing Millennium Wind Farm access junction; and • Loads would then proceed to site via the existing and new private access tracks.

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
					All other loads would use the following route: • Loads would exit Corpach Harbour via the main gate turning right onto the A830; • Continue on the A830 for 4.5 km before turning left onto the A82; • Continue on the A82 to Invergarry; • At Invergarry, loads would turn left and would join the A87 northbound; • At the junction of the A87 and A887, loads would turn right and would then proceed eastbound on the A887 to the site access junction; and • Loads would then proceed to the Site via the existing and new private access tracks. Transportation of wind turbine generator components would lead to the following effects: • The rolling closures of roads and footways causing temporary driver and pedestrian delay; • The perceived effect to pedestrians and vulnerable road users caused by the movement of large turbine components in proximity to property and infrastructure. The severity of these impacts is considered as follows: • Delays due to lane/road closures would be inevitable, although abnormal loads would be timed to avoid peak hours and, therefore, abnormal loads would have a temporary minor adverse effect; and • The perceived effect to residents is subjective and it is possible that the transport of abnormal loads close to properties could lead to local objection, fear and

Receptor	Receptor Sensitivity	Potential Impact	Magnitude	Significance of Effect	Notes
					intimidation. The delivery of turbines will not occur during the peak month of construction. It is estimated that the delivery of wind turbine components would generate a total of 80 abnormal load deliveries, which would then leave the site as HGVs post-delivery, across a period of two months. When split across the construction period, these abnormal load deliveries would be equal to less than a 30 percent increase in traffic. Consideration would be given to abnormal load deliveries being undertaken overnight where appropriate to reduce the potential for disruption and delay, subject to approval by Transport Scotland, the Council and local police. However, this would depend on the type of transport vehicle used and only by agreement with the relevant authorities. At night, the impact of transporting the abnormal loads would not be significant. Details of the abnormal load transportation route are illustrated in Figure 12.2 and an Abnormal Load Route Assessment is provided in Technical Appendix 10.2. The sensitivity of users of links used for AIL delivery is high, and the magnitude of impact, following the additional mitigation considerations above, is negligible. Therefore, in terms of hazardous and large loads, the significance of effect is minor, which is considered to be not significant.

Cumulative Effects Assessment

- 10.8.19 The assessment of cumulative traffic and movement effects only considers wind farms and other major developments that are consented but not yet under construction, and submitted as planning applications but pending decision or at appeal. There is no potential for significant cumulative effects to occur from those wind farms which are operational due to the minimal vehicle trips attributed to the operational phase of a wind farm development.
- 10.8.20 This assessment has identified the following potential cumulative developments identified for the Landscape and Visual Impact Assessment (LVIA) (see **Chapter 5: Landscape and Visual Impact Assessment**), summarised in **Table 10.21**.
- 10.8.21 A review of the Council's planning portal and Scottish Government Energy Consents Unit (ECU) portal was undertaken to identify any developments within the vicinity of the Proposed Development which would generate significant traffic. Details of the estimated construction vehicle trip generation, the affected road links and construction programmes were extracted for each development from the relevant EIA Report chapter.
- 10.8.22 Due to a number of the identified cumulative developments being consented but delayed post-consent, an assumption has been made that construction of these developments would commence prior to the timescales of the Proposed Development. These developments have therefore been excluded from the cumulative assessment.
- 10.8.23 Only developments which would impact on the same Study Area (road network) as the Proposed Development have been included in the cumulative assessment.
- 10.8.24 One development with the potential to result in cumulative effects was identified during this process. Details of the estimated peak construction vehicle trip generation and affected road links were extracted for the cumulative developments from the relevant EIA Report chapter from the ECU online portal.
- 10.8.25 Combining these with the respective links flows from the Assessment of Effects provides the following cumulative assessment, summarised in **Table 10.22**.

Table 10.21 Cumulative developments

Cumulative Development	Planning reference	Development details	Distance from Proposed Development	Application Stage	Comments
Developments that are in planning / consented and are included in the Cumulative Assessment					
Fort Augustus Substation Extension	24/03150/FUL	Auchterawe Substation extension - comprising platform extension, erection of substation buildings, associated plant and infrastructure, associated ancillary development, drainage infrastructure, temporary construction compound and laydown area(s).	3 km	In planning	Construction phase of the development is expected to commence in April 2025 and will last approximately 32 months. Cumulative effects are therefore possible.
Bhlaraidh Wind Farm Extension	21/04080/S36	Bhlaraidh wind farm extension - Erection and Operation of Wind Farm for period of 50 years, comprising of 15 Wind Turbines with maximum blade tip height 180m, access tracks, borrow pits, substation, control building, and ancillary infrastructure.	14.7 km	Consented August 2022	Construction phase of the development is expected to commence in 2025. As construction is yet to start, cumulative effects are therefore possible.
Cloiche Wind Farm	20/01796/S36	Cloiche Wind Farm - Erection and Operation of a Wind Farm comprising 29 Wind Turbines (maximum blade tip height of 149.9m), access tracks, LiDAR, borrow pits, temporary construction compounds (inclusive of concrete batching area), substation and operations building.	17.1 km	Consented November 2023	Construction phase of the development was expected to commence in 2024. As construction is yet to start, cumulative effects are therefore possible.
Bunloinn Wind Farm	22/01760/S36	Bunloinn Wind Farm - Erection and operation of a wind farm for a period of 35 years, comprising 10 wind turbines	9.5 km	Consented March 2024	Construction phase of the development was expected to commence

Cumulative Development	Planning reference	Development details	Distance from Proposed Development	Application Stage	Comments
		with a maximum blade tip height of 230m, access tracks, borrow pits, battery energy storage system, substation, control building, and ancillary infrastructure.			in 2026. As construction is yet to start, cumulative effects are therefore possible.
Loch Liath Wind Farm	23/02462/S36	Loch Liath Wind Farm - Erection and operation of a wind farm for a period of 35 years, comprising a total of 13 wind turbines with Turbines 2, 3, 4, 5, 8, 9, 10, 11, 12, and 13 having a maximum blade tip height of 200m, and Turbines 1, 6 and 7 having a maximum blade tip height of 180m, access tracks, borrow pit, substation, control building, anemometer mast, and ancillary infrastructure.	16.4 km	In planning	Construction phase of the development was expected to commence in 2027 and therefore cumulative effects are therefore possible.
Tomchrasky Wind Farm	22/05955/S36	Tomchrasky Wind Farm - Erection and operation of a wind farm comprising 14 wind turbines with a maximum blade tip height of 185m, up to 50 battery storage units, anemometer mast, access tracks, four borrow pits and associated infrastructure.	5.8 km	In planning	Construction phase of the development was expected to commence in 2026. As construction is yet to start, cumulative effects are therefore possible.
Developments that are in planning / consented and are not included in the Cumulative Assessment					
Beinneun 2 Wind Farm	23/05636/SCO P	Beinneun 2 wind farm - Erection and operation of Wind Farm for period of 40 years, comprising up to 19 Wind Turbines with maximum blade tip height 200m as an extension to the existing operational 32 turbine Beinneun WF, with	1 km	Planning submission Q4 2025	Construction phase of the development is expected to commence in 2030 lasting approximately 18 months. As the planned

Cumulative Development	Planning reference	Development details	Distance from Proposed Development	Application Stage	Comments
		associated BESS, access tracks, substation, and ancillary infrastructure.			construction start date is 2030 which is beyond the planned completion of the Proposed Development, cumulative effects are unlikely.
Corriegarth 2 Wind Farm	21/00101/S36	Corriegarth 2 Wind Farm - Erection and Operation of a Wind Farm for a period of 30 years, comprising of 16 Wind Turbines with a maximum blade tip height of 149.9m, access tracks, borrow pits, substation, control building, and ancillary infrastructure.	25.1 km	Consented December 2023	Construction traffic does not share the same routes as those of the Proposed Development and therefore cumulative effects are unlikely.
Aberarder Wind Farm	15/00737/FUL	Aberarder Wind Farm - Erection of 12 wind turbines (130m in height) including and associated works.	35.8 km	Under construction	As the development is already under construction, this will likely be complete prior to the timescales of the Proposed Development and therefore cumulative effects are unlikely.
Culachy Wind Farm	23/05579/S36	Culachy Wind Farm - Erection and operation of a wind farm for a period of 35 years, comprising 8 wind turbines with a maximum blade tip height of 200m, access tracks, underground cabling, substation, maintenance building,	10 km	In planning	Construction of this development is anticipated to commence in 2030 and will therefore take place after the timescales of

Cumulative Development	Planning reference	Development details	Distance from Proposed Development	Application Stage	Comments
		batching plant, borrow pits and ancillary infrastructure.			the Proposed Development. Cumulative effects are unlikely.
Dell 2 Redesign Wind Farm	24/00933/S36	Dell 2 Wind Farm (Re-design) - Erection and operation of a wind farm for a period of 35 years, comprising of 9 wind turbines, 4 with a maximum blade tip height of 180m and 5 with a maximum blade tip height of 200m, access tracks, borrow pits, substation, control building, and ancillary infrastructure	18.8 km	In planning	Construction traffic does not share the same routes as those of the Proposed Development and therefore cumulative effects are unlikely.
Developments in Screening/Scoping (and/or do not share the same construction routes as the Proposed Development) that are not included in the Cumulative Assessment					
Chrathiach Wind Farm – 21/02152/SCOP Clune Wind Farm – 24/00690/SCOP Fiodhag (formerly Fanakyle) Wind Farm – 19/05046/SCOP Highland Wind Farm – 24/01107/SCOP Lynemore Wind Farm – 24/01633/SCOP					

Table 10.22: Cumulative construction trip assessment

Count ID	Link	Baseline		Proposed Development		Fort Augustus Substation		Bhlaraidh Wind Farm Extension		Cloiche Wind Farm		Bunloinn Wind Farm		Loch Liath Wind Farm		Tomchras ky Wind Farm		Cumulative		% Change	
		Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV
758	A82 between A887 and A831	3413	392	6	0	0	0	50	17	0	0	0	0	108	77	146	86	3723	572	9%	45.9%
40762	A82 between A86 and A87	4280	223	112	82	0	0	26	16	25	6	108	85	0	0	146	86	4589	413	7%	85.4%
10760	A82 between A87 and B862 Glendoe Road	2544	212	6	0	120	228	26	16	32	8	0	0	10	0	0	0	2738	464	8%	118.7%
793	A830 between Corpach Harbour and A82	9543	530	118	82	0	0	0	0	0	0	100	77	10	0	0	0	9671	612	1%	15.5%
50707	A82 between B862 Glendoe Road and A887	2450	214	6	0	120	228	26	16	72	9	0	0	10	0	0	0	2684	467	10%	118.0%
80594	A87 between Broadford Aerodrome and Stoney	5086	268	6	0	0	0	0	0	0	0	0	0	0	0	146	86	5238	354	3%	32.1%

Count ID	Link	Baseline		Proposed Development		Fort Augustus Substation		Bhlaraidh Wind Farm Extension		Cloiche Wind Farm		Bunloinn Wind Farm		Loch Liath Wind Farm		Tomchras ky Wind Farm		Cumulative		% Change	
		Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV	Total	HGV
	Road, Kyle of Lochalsh																				
30776	A87 between A887 and A82	1431	100	118	82	0	0	0	0	7	2	124	84	0	0	146	86	1702	270	19%	169.9%
40958	A887 between A87 and A82	1456	121	122	82	0	0	80	35	0	0	4	0	10	0	146	86	1814	324	25%	167.1%
10770	A87 between C-road Shiel Bridge and A87	2612	138	6	0	0	0	3	2	0	0	4	0	10	0	0	0	2631	140	1%	1.5%
50772	A87 between A890 and C-road Shiel Bridge	3952	469	6	0	0	0	0	0	0	0	4	0	0	0	146	86	4104	555	4%	18.4%
768	A87 between Stoney Road, Kyle of Lochalsh and A890	4605	279	6	0	0	0	0	0	0	0	4	0	10	0	0	0	4621	279	0%	0.0%
91196	A82 between A830 and A86	5495	529	112	82	0	0	0	0	0	0	100	77	10	0	0	0	5617	611	2%	15.5%

- 10.8.26 When considering the cumulative construction phase, both the total traffic and HGV traffic flows assessment results indicate an increase on all links within the study area, including large increases on the links previously taken forward for assessment of effect significance, namely the A82, A887 and A87.
- 10.8.27 It is highly unlikely that the peak construction period associated with the cumulative developments in the area would overlap with the peak period of construction of the Proposed Development. This is due to several factors, including:
- the applications are at different stages of the planning process;
 - it is unlikely that all applications will be consented, or all consented developments will be constructed;
 - developments have differing grid connection dates dictating their respective construction periods; and
 - each development has varying lengths of construction period.
- 10.8.28 Furthermore, during the construction phase, the high traffic generating activities, such as the importation of stone and concrete, tend only to occur over a few months of the whole construction period. It is also unlikely that the local capacity for concrete and stone production could supply several developments under construction at once, therefore, high traffic generating activities would inevitably be staggered.
- 10.8.29 Should the construction of committed developments take place at the same time as the Proposed Development, it would be mitigated through the use of an overarching Traffic Management Plan (TMP) for all of the sites and by introducing a phased delivery plan which would be agreed with the local roads departments and Police Scotland. Police escort arrangements are a limiting factor on the frequency and timing of abnormal load deliveries. Currently experienced issues with police escort capacity mean it is not possible for more than one abnormal load convoy to be on the same road network in any 24-hour period.
- 10.8.30 It should be noted that the construction period of a renewable development is transitory in nature and all impacts are short lived and temporary. It should also be noted that the inclusion of additional traffic flows (cumulative traffic and traffic growth) in the baseline will dilute the potential impact that the Proposed Development will have. The approach taken is therefore considered to be a suitably robust assessment.

10.9 Additional Mitigation and Residual Effects

Additional Mitigation

Construction Phase Mitigation

- 10.9.1 A Construction Traffic Management Plan (CTMP) would be in place during the construction period to actively mitigate the effects as discussed above. An outline CTMP has been prepared as part of the Planning Application which identifies the mitigation measures proposed during the construction stage. This is provided as **Technical Appendix 10.1**.
- 10.9.2 The following measures would be implemented through a CTMP during the construction phase. The CTMP would be agreed with the Council prior to construction works commencing:

- Where possible, further detailed design processes would minimise the volume of material to be imported to Site to help reduce HGV numbers;
- A Site worker transport and travel arrangement plan, including transport modes to and from the Site (including pick up and drop off times);
- A Traffic Management Plan to control the operation of the access junctions;
- All materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Should there be evidence of this following this commencement of construction, suitable measures would be implemented within the Site to ensure deleterious materials are not transferred onto the highway;
- Road cleaning would take place, if required, to remove any deleterious materials that are carried from the Site;
- Normal Site working hours would be limited to between 07:00 - 19:00 Monday to Friday and 08:00 – 13:00 on Saturdays, unless otherwise agreed with the Council, though component delivery and turbine erection may take place outside these hours;
- Provide construction updates on the project website and or a newsletter to be distributed to residents within an agreed distance of the Site; and
- All drivers would be required to attend a detailed induction prior to undertaking any works on the Site.

- 10.9.3 Advance warning signs would be installed on the approaches to the affected road network. Information signage would be installed to help improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).
- 10.9.4 The location and numbers of signs would be agreed post-consent and would form part of the wider traffic management proposals for the Proposed Development.
- 10.9.5 The Applicant would also ensure information would be distributed through its communication team via project website, local newsletters and social media.
- 10.9.6 Post-consent, the Applicant would establish a Community Liaison Forum, in collaboration with the Council and local Community Councils. The forum would allow the community to be kept up to date with project progress and allow communication on the provision of transport-related mitigation and publicise the timings of turbine component deliveries. The Community Liaison Forum would be maintained until construction is complete and the Proposed Development is operational.
- 10.9.7 The Applicant would enter into a Roads (Scotland) Act 1984, Section 96 (wear and tear) Agreement or a suitable alternative for the local adopted roads / routes to be used by construction vehicles. A pre-construction works inspection of the roads would be carried out with both parties in attendance with their condition recorded. Following completion of construction of the Proposed Development, a further inspection would be carried out by both parties with repairs being agreed to return the roads to their pre-construction condition, to be carried out in a timely manner for approval by the Council. Notwithstanding this, the Applicant would carry out regular monitoring of the carriageway condition during the construction of the Proposed Development. Necessary repair works would be carried out in a timely manner to

prevent further deterioration of the carriageway during the works. Priority would be given to any damage which would be dangerous to users of the road affected.

Abnormal Load Transport Management Plan

- 10.9.8 An Abnormal Load Transport Management Plan (ATMP) would be prepared in advance of construction to cater for all AIL movements to and from the Site. This would include:
- Procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay over areas to allow overtaking;
 - A diary of proposed delivery movements to liaise with the communities to avoid key dates such as popular local events, etc.;
 - A protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic; and
 - Proposals to establish a Community Liaison Group to ensure the smooth management of the project / public interface with the Applicant, the construction contractors, the local community and, if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.
- 10.9.9 A Police Scotland escort would be required to facilitate the delivery of the AILs. The police escort would be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort would warn oncoming vehicles ahead of the convoy, with one escort staying with the convoy at all times. The escorts and convoy would remain in radio contact at all times, where possible.
- 10.9.10 The AIL convoys would be no more than three vehicles long, or as otherwise advised by Police Scotland, to permit safe transit along the delivery route and to allow limited overtaking opportunities for following traffic where it is safe to do so.
- 10.9.11 The times in which the convoys would travel would need to be agreed with Police Scotland who have sole discretion on when loads can be moved.

Residual effects

- 10.9.12 Given the temporary nature of the construction programmes and with the implementation of mitigation measures through a CTMP and ATMP, all effects can be effectively managed and no significant residual effects are predicted.

10.10 Summary of Effects

- 10.10.1 **Table 10.23** provides a summary of the conclusions of the impact assessment taking into consideration embedded and any additional mitigation measures.

Table 10.23 Summary of Traffic and Movement Effects

Potential Impact	Significance of Effect Pre Mitigation	Proposed Mitigation	Residual Effects
Severance	Residents in Invergarry – Moderate (Significant)	Implementation of mitigation measures in CTMP. Provision of information to local residents and users of amenities, to involve the community in the safe operation of the CTMP and to alleviate stress and anxiety.	Minor (Not Significant)
	Core Path Network Users along A87 – Major (Significant)		Minor (Not Significant)
	Core Path Network Users along A82 – Major (Significant)		Minor (Not Significant)
Pedestrian Delay	Residents in Invergarry – Moderate (Significant)	Implementation of mitigation measures in CTMP. Improved road signage. Provision of information to local residents and users of amenities, to involve the community in the safe operation of the CTMP and to alleviate stress and anxiety.	Minor (Not Significant)
	Core Path Network Users along A87 – Moderate (Significant)		Minor (Not Significant)
	Core Path Network Users along A82 – Major (Significant)		Minor (Not Significant)
Non-motorised User Amenity	Residents in Invergarry – Moderate (Significant)	Implementation of mitigation measures in CTMP. Improved road signage. Provision of information to local residents and users of amenities, to involve the community in the safe operation of the CTMP and to alleviate stress and anxiety.	Minor (Not Significant)
	Core Path Network Users along A87 – Moderate (Significant)		Minor (Not Significant)
	Core Path Network Users along A82 – Major (Significant)		Minor (Not Significant)
Road Safety	Core Path Network Users along A87 – Moderate (Significant)	Implementation of mitigation measures in CTMP. Improved road signage. Provision of information to local residents and users of amenities, to involve the community in the safe operation of the CTMP and to alleviate stress and anxiety. Good construction	Minor (Not Significant)
	Core Path Network Users along A82 – Moderate (Significant)		Minor (Not Significant)

Potential Impact	Significance of Effect Pre Mitigation	Proposed Mitigation	Residual Effects
		practices including wheel wash and careful loading.	
Large Loads	Abnormal Load Route – Users of A87, Users of A887 and Users of A82 – Moderate (Significant)	Traffic Management Plan (TMP) for the movement of AILs. Trial run for AILs prior to commencement of construction. Road condition survey (including assessment of existing structures as appropriate) prior to the commencement of construction and a similar assessment following completion of the works.	Minor (Not Significant)

10.11 References

Institute of Environmental Management and Assessment, Guidelines for the Environmental Assessment of Traffic and Movement (2023);
LA104, Environmental assessment and monitoring, Design Manual for Roads and Bridges (DMRB) (Standards for Highways, 2020);
The Highland Council, Roads and Transport Guidelines for New Developments (2013);
Scottish Government, Transport Assessment Guidance (2012);
The Highland Council, Guidance on the Preparation of Transport Assessment (2014);
The Highland Council, Highland-wide Local Development Plan (2012); and
Scottish Government, National Planning Framework 4 (2023).