

CHAPTER 12: TRAFFIC, ACCESS AND TRANSPORT

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Figures (Volume 2 of this EIA Report)

There are no figures associated with this Chapter.

Technical Appendices (Volume 4 of this EIA Report)

Technical Appendix 12.1: Transport Assessment

12. TRAFFIC, ACCESS AND TRANSPORT

Executive Summary

- 12.1.1 A review of the transport and access issues associated with the Proposed Development has been undertaken.
- 12.1.2 The Proposed Development would lead to a temporary increase in traffic volumes on the road network within the study area during the construction phase.
- 12.1.3 An assessment of average daily development trips is considered an appropriate method of assessing the impact of the Proposed Development, as this will account for phases of the construction programme that have varying intensities of traffic associated with them. The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development.
- 12.1.4 No link capacity issues are expected on any of the roads assessed due to the additional movements associated with the Proposed Development. The effects of construction traffic are temporary in nature and are transitory.
- 12.1.5 A series of mitigation measures and management plans have been proposed to help mitigate and offset the impacts of the traffic flows from both the construction and operational phases of the Proposed Development. No lasting significant effects are anticipated.

12.2 Introduction

12.2.1 This Chapter considers the potential effects, including cumulative effects, of the Proposed Development on transport and access matters during construction and operation. As described in **Chapter 3: Project Description** it is anticipated that the effects associated with the construction phase could be considered to be representative of a worst-case, when compared to the decommissioning effects on transport matters. As such, a separate assessment of potential decommissioning effects is not included in this Chapter. Where likely significant effects are predicted during construction and operation, appropriate mitigation measures are proposed, and the significance of predicted residual effects are assessed.

12.2.2 The assessment was undertaken by Pell Frischmann Consultants Limited. A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Technical Appendix 4.1: EIA Team**, contained within Volume 4 of this EIA Report.

12.2.3 The specific objectives of the Chapter are to:

- describe the existing access network and transport baseline;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the potential effects, including direct, indirect and any potential cumulative effects;
- describe the mitigation measures proposed to address likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation.

12.2.4 A high-level overview of the effects of the traffic movements has been considered in accordance with the Institute of Environmental Assessment (now Institute of Environmental Management and Assessment (IEMA)) Guidelines for the Environmental Assessment of Road Traffic¹. The document is referred to as the IEMA Guidelines in this Chapter.

12.2.5 The Chapter is supported by **Technical Appendix 12.1** that contains the Transport Assessment. This is referenced in the body of the text, where relevant.

12.3 Scope of Assessment

12.3.1 The assessment has fully considered the transport and access issues arising from the construction phase of the Proposed Development. This Chapter considers effects on the following:

- direct effects during construction on traffic flows in the surrounding study area;
- direct effects upon local road users; and
- effects upon local residents due to an increase in construction traffic.

12.3.2 Where the effects meet the criteria set out in the IEMA guidance, a review of the effects on severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation and accidents / road safety has been undertaken.

12.3.3 The assessment is based on the Proposed Development as described in **Chapter 3: Project Description**.

¹ Institute of Environmental Assessment (1993), Guidelines for the Environmental Assessment of Road Traffic

Study Area

12.3.4 The study area encompasses the area over which all desk-based and field data were gathered to inform the assessment presented in this Chapter. The study area comprises the road links assessed as part of this assessment. These are identified below and illustrated in **Technical Appendix 12.1**:

- A82 between Invermoriston and Spean Bridge;
- U1663 between Fort Augustus and Fort Augustus Substation, Auchterawe; and
- The A87 between Invergarry and Bunloinn.

The Consultation Responses

12.3.5 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 12.1** summarises the scoping and consultation responses relevant to the transport and access matters and provides information on where and/or how points raised have been addressed in this assessment.

12.3.6 Further details on the consultation and scoping responses can be found in **Chapter 5: Scoping and Consultation**, and associated appendices.

Table 12.1: Consultation Responses

Consultee	Consultation Type	Response	Action
Transport Scotland (TS)	Pre-Application	Access works should be discussed with the Trunk Road Manager.	The developer will undertake these discussions with TS.
		A Transport Statement is required. Road links should be taken forward for assessment if: <ul style="list-style-type: none"> • Traffic flows will increase by more than 30 %, or • The number of HGVs will increase by more than 30 %, or • Traffic flows will increase by 10 % or more in sensitive areas. TS is satisfied that that no further assessment is required if the above thresholds are not exceeded.	A Transport Assessment is provided in Technical Appendix 12.1 . None of the proposed thresholds are exceeded.
		An Abnormal Load assessment is required where AIL traffic is anticipated.	No AIL traffic is anticipated with the Proposed Development.
Transport Scotland	Scoping Response	The proposed assessment methodology is satisfactory. The operational phase can be scoped out.	Noted
		Trunk road modifications and crossings should be discussed and approved with Transport Scotland through the technical approval process.	Noted. The Applicant will engage with TS through the technical approval process.
		1:500 scale drawings of road modifications and trunk road crossing should be provided.	Drawings of the proposed access junctions and trunk road crossings will be provided post determination

Consultee	Consultation Type	Response	Action
			through the technical approval process.
		An AIL assessment should be provided if any abnormal loads are required.	No AIL traffic is required for the construction phase.
The Highland Council (THC)	Pre-Application	A Transport Assessment is required.	A Transport Assessment is provided in Technical Appendix 12.1 .
		Access on the U1035 should be considered in conjunction with active travel users and the proposed Coire Glas Pumped Storage site.	No access on the U1035 is proposed.
		U1163 access should also consider the expansion of the substation that is proposed.	The expansion proposals of the substation are addressed in a separate planning application and this will be considered in that later application.
		The assessment needs to consider the impacts in Invergarry and Fort Augustus	The assessment covers both areas and notes that the thresholds for assessment are not exceeded. Mitigation measures, whilst not required however are proposed.
		Traffic generation assumptions should be provided.	These are set out in Technical Appendix 12.1 .
		An Abnormal Load assessment is required where AIL traffic is anticipated.	No AIL traffic is anticipated with the Proposed Development.
		A Framework CTMP should be provided.	Framework CTMP proposals are provided in Technical Appendix 12.1 .
		A Section 96 Agreement to cover abnormal Wear and Tear should be provided.	A Wear & Tear agreement is provided for in the mitigation schedule.
		Access drawing details should be provided.	All access junctions would be designed and constructed in accordance with TS and THC design standards.
		Access track details and compound location should be provided as well as what tracks are temporary.	Access track details are shown in Figure 3.1: Overview of the Proposed Development with further details provided in Chapter 3: Project Description . The final location and design of temporary site compounds would be confirmed by the Principal Contractor and separate planning permissions would be sought as required.
		The Proposed Development will impact on a number of Core Paths	Details of the affected Core Paths are provided along with a framework

Consultee	Consultation Type	Response	Action
			Outdoor Access Management Plan (See Technical Appendix 15.3).

Issues Scoped Out of Assessment

Operational Effects

12.3.8 The potential for the Proposed Development to give rise to traffic impacts would be limited to the construction phase only. No impacts are anticipated during the operational phase as the Proposed Development would not generate any new traffic, apart from during infrequent maintenance activities. On this basis, an operational traffic assessment is scoped out of this assessment in its entirety, which TS has agreed with in their consultation responses to date.

12.4 Legislation, Policy and Guidance

Policy Context and Technical Guidance

12.4.1 The scope of the assessment has been informed by consultation responses summarised in Table 12.1 and the following guidelines/policies:

- National Planning Framework 4 (2023);
- Highland-wide Local Development Plan (2012);
- The West Highlands and Islands Local Development Plan (2019);
- Onshore Wind Energy Supplementary Guidance (2016);
- Guidance on the Preparation of Transport Assessments (2014); and
- Road and Transport Guidelines for New Developments (2013).

12.5 Methodology

Desk Study

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

- relevant transport policy;
- accident data;
- sensitive locations;
- any other traffic sensitive receptors in the area (core paths, routes, communities, etc.);
- Ordnance Survey (OS) plans; and
- potential origin locations of construction staff and supply locations for construction material to inform extent of local area roads network to be included in the assessment.

Field Survey

12.5.2 Field surveys were also undertaken and comprised the following:

- a site visit to review the general study area; and
- collection of traffic flow data.

Assessment of Effects

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

- determine the existing baseline established from desk studies, field survey and consultation;
- outline the potential effects arising from the works associated with the Proposed Development;
- evaluate the significance of effects on receptors;
- identify any mitigation measures to prevent, minimise, reduce or offset possible significant effects; and
- assess residual effects.

Sensitivity / Importance of Receptors

12.5.4 The IEMA 'Guidelines for Environmental Impact Assessment' (2005) notes that the separate 'Guidelines for the Environmental Assessment of Road Traffic' (1993) document should be used to characterise the environmental traffic and transport effects (off-site effects) and the assessment of significance of major new developments. The guidelines intend to complement professional judgement and the experience of trained assessors.

12.5.5 In terms of traffic and transport impacts, the receptors are the users of the roads within the study area and the users of, and residents within, locations through which those roads pass.

12.5.6 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 12.2.

Table 12.2: Classification of Receptor Sensitivity

Receptor	Sensitivity			
	High	Medium	Low	Negligible
Users of Roads	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.	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-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 trunk road junctions capable of accommodating Abnormal Loads.
Users/ Residents of Locations	Where a location is a large rural settlement containing a high number of community and public services and facilities.	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.	Where a location is a small rural settlement, few community or public facilities or services.	Where a location includes individual dwellings or scattered settlements with no facilities.

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

Magnitude of Effect

12.5.8 The following rules, also taken from the IEMA Guidelines are used to determine which road links within the study area should be considered for detailed assessment:

- Rule 1 – include highway links where traffic flows are predicted to increase by more than 30 % (or where the number of heavy goods vehicles is predicted to increase by more than 30 %); and
- Rule 2 – include any other specifically sensitive areas where traffic flows are predicted to increase by 10 % or more.

12.5.9 Examples of sensitive areas are presented in the IEMA Guidelines as hospitals, churches, schools, historical buildings.

12.5.10 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:

- Severance – the IEMA Guidelines states that “severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery.” Further, “changes in traffic of 30 %, 60 %, and 90 % are regarded as producing ‘slight’, ‘moderate’, and ‘substantial’ [or minor, moderate, and major] changes in severance respectively”. However, the Guidelines acknowledge that “the measurement and prediction of severance is extremely difficult”. (Para 4.28);
- Driver delay – the IEMA Guidelines note that these delays are likely to be “significant [or major] when the traffic on the network surrounding the development is already at, or close to, the capacity of the system.” (Para 4.32);
- Pedestrian delay – the delay to pedestrians, as with driver delay, is likely only to be major when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. An increase in total traffic of approximately 30 % can double the delay experienced by pedestrians attempting to cross the road and would be considered major;
- Pedestrian amenity – the IEMA Guidelines suggests that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or its lorry component) is halved or doubled (Para 4.39). It is therefore considered that a change in the traffic flow of -50 % or +100 % would produce a major change in pedestrian amenity;
- Fear and intimidation – there are no commonly agreed thresholds for estimating levels of fear and intimidation, from known traffic and physical conditions. However, as the impact is considered to be sensitive to traffic flow, changes in traffic flow of 30 %, 60 % and 90 % are regarded as producing minor, moderate and major changes respectively; and
- Accidents and safety – professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents.

12.5.11 While not specifically identified as more vulnerable road users, cyclists are considered in similar terms to pedestrians.

Significance of Effect

12.5.12 To determine the overall significance of effects, the results from the receptor sensitivity and magnitude of change assessments are correlated and classified using a scale set out in Table 2.4 of Volume 11, Section 2, Part 5 of the Design Manual for Roads and Bridges (DMRB) and summarised in Table 12.3 below.

12.5.13 The DMRB defines the potential changes in effect as follows:

- Large: 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;
- Slight: 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; and
- Neutral: No effects or those that are imperceptible.

Table 12.3: Significance of Effects

Receptor Sensitivity	Magnitude of Impact			
	Major	Moderate	Minor	Negligible
High	Large	Large / Moderate	Moderate / Slight	Slight
Medium	Large / Moderate	Moderate	Slight	Slight / Neutral
Low	Moderate / Slight	Slight	Slight	Slight / Neutral
Negligible	Slight	Slight	Slight / Neutral	Neutral

12.5.14 In terms of the EIA Regulations, effects would be considered of significance where they are assessed to be Large or Moderate. Where an effect could be one of Large / Moderate or Moderate / Slight, professional judgement would be used to determine which significance criterion should be applicable.

Limitations to the Assessment

12.5.15 The assessment is based upon average traffic flows. During the construction period, activities at the site may fluctuate between one day and another and it is not possible to develop fully a day-by-day traffic flow estimate as no Principal Contractor has been appointed and external factors can impact upon activities on a day-by-day basis (weather conditions, availability of materials, time of year, etc).

12.5.16 Please note that variances may occur in the calculations due to rounding. These variances are not considered significant.

12.6 Baseline Conditions

Existing Baseline

12.6.1 Access to the Proposed Development would be via a combination of new and existing access tracks. Access would be taken from the A87, A82 and from the U1163 leading from Fort Augustus to Auchterawe using existing and upgraded access junctions.

12.6.2 The A82 (T) is a two-way single carriageway which forms part of the trunk road network and provides a connection between Glasgow and Inverness, via Fort William. The A82 (T) is maintained by Bear Scotland and is generally subject to the national speed limit, which reduces when travelling through towns and villages. An advisory speed limit of 40 miles per hour (mph) is recommended along this route for vehicles which are 7.5 T and over.

12.6.3 The A87 (T) is a two-way single carriageway which links Invergarry to Uig and forms part of the trunk road network. The A87 (T) is maintained by Bear Scotland and is generally subject to the national speed limit, however, this reduces when travelling through towns and villages.

- 12.6.4 The U1163 is a narrow road which commences in Fort Augustus in a residential area. Within Fort Augustus the road is subject to a speed limit of 30 mph however outwith Fort Augustus to the west the road is subject to the national speed limit and has passing places.
- 12.6.5 Traffic data used in the assessment has been sourced from the assessment undertaken as part of the Skye Reinforcement Project (ECU Planning Ref: ECU000043395), promoted by the Applicant and prepared by Pell Frischmann.
- 12.6.6 One Automatic Traffic Count (ATC) Site was used on the U1163 between Thursday 28 April and Thursday 12 May 2022. Other traffic data used in this assessment has been sourced from historic traffic count data provided by the UK Department for Transport (DfT). The count sites for the traffic data obtained from the DfT are as follows:
- 1: A82, South of Invermoriston (DfT Count Point 50707);
 - 2: U1663 (ATC Traffic Survey, 2022);
 - 3: A82, Aberchalder (DfT Count Point 10760);
 - 4: A82, Laggan (DfT Count Point 40762); and
 - 5: A87, South of Bunloinn (DfT Count Point 30776).
- 12.6.7 The locations of the count points are shown in **Technical Appendix 12.1**
- 12.6.8 The traffic count data allowed the traffic flows to be split into vehicle classes and the data has been summarised into cars / light goods vehicles (LGV) and heavy goods vehicles (HGVs) (i.e., all goods vehicles >3.5 tonnes gross maximum weight).
- 12.6.9 A summary of the 24-hour average daily traffic for each of the count sites is presented in **Table 12.4**.

Table 12.4: 2022 Existing Traffic Conditions (Average Two Way Flows)

Ref. No.	Survey Location	Car & LGV	HGV	Total
1	A82 South of Invermoriston	2608	183	2791
2	U1663	329	71	400
3	A82 Aberchalder	2923	198	3121
4	A82 Laggan	4072	263	4335
5	A87 South of Bunloinn	1460	77	1537

Accident Review

- 12.6.10 Road traffic accident data for the five-year period commencing 01 January 2017 through to the 31 December 2021 was obtained from the online resource www.crashmap.co.uk which uses data collected by the police about road traffic crashes occurring on British roads.
- 12.6.11 The statistics are categorised into three categories, namely “slight” for damage only incidents, “serious” for injury accidents and “fatal” for accidents that result in a death. In total, 28 “slight” accidents, 15 “serious” accidents and one “fatal” accident were noted. No accidents were noted on the U1163 and HGV traffic was involved in two “slight” and one “serious” accident.

12.6.12 No accidents have been recorded at the proposed access junction locations. One “slight” accident involving a motorcycle rider was reported near the junction of the A87 and Glengarry Timber Limited’s premises and involved a car in September 2017.

Cycle & Pedestrian Network

12.6.13 There are a number of Core Paths which are located within the study area of the Proposed Development. These are illustrated in **Technical Appendix 12.1**.

12.6.14 These Core Paths comprise a combination of constructed paths (roadside footway), tar tracks or grass / earth tracks and include:

- Aldernaig Burn to Loch Lundie (LO11.02) (PRoW HL32);
- Cycle Track – Bridge of Oich (LO11.03);
- Bridge of Oich to Invergarry by Loch Lundie (IN16.09);
- Torr Dhuin to River Oich (IN16.13);
- Torr Dhuin Fort Walk (IN16.12);
- Auchteraw Woods Paths (IN16.14);
- Jenkins Park to Great Glen Way (IN16.03);
- Caledonian Canal Tow Path;
- Whitebridge Forest Track (LO11.08);
- River Garry Paths (LO11.01);
- Bridge of Oich to Loch Lundie (IN16.09); and
- Bridge of Oich to Torr Dhuin (IN16.10).

12.6.15 A review of Sustrans’ National Cycle Route (NCR) map (www.sustrans.org.uk/national-cycle-network) indicates that NCR 78 forms The Caledonia Way and comprises a combination of traffic-free and on-road cycle route. Between Laggan and Fort Augustus, NCR 78 comprises a traffic-free route while a section of the cycle route through Laggan is on-road.

Future Baseline

12.6.16 Construction of the Proposed Development is expected to commence in 2024, if consent is granted, and the total construction is anticipated to take approximately two years to construct.

12.6.17 To assess the likely effects during the construction and typical operational phases, base year flows were forecast by applying a NRTF low growth factor to the 2022 flows in **Table 12.4**. The NRTF low growth factor for 2022 to 2024 is 1.011. The estimated Future Baseline Flows are shown in **Table 12.5**. This will be used in the Construction Peak Traffic Impact Assessment.

Table 12.5: Future Baseline Flows (2024 Flows)

Ref. No.	Survey Location	Car / LGV	HGV	Total
1	A82 South of Invermoriston	2637	185	2822
2	U1663	333	71	404
3	A82 Aberchalder	2955	200	3156

Ref. No.	Survey Location	Car / LGV	HGV	Total
4	A82 Laggan	4116	266	4382
5	A87 South of Bunloinn	1477	77	1554

Please note minor variances due to rounding may occur.

Summary of Sensitive Receptors

12.6.18A summary of the sensitive receptors within the study area is presented in **Table 12.6**.

Table 12.6: Summary of Sensitive Receptors

Receptor	Sensitivity	Justification
U1163 Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
A82 (T) / A87 (T) Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Invergarry Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Fort Augustus Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Invermoriston Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Spean Bridge Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
A82 / A87 Residents	Low	Where a location is a small rural settlement, few community or public facilities or services.
U1163 Residents	Low	Where a location is a small rural settlement, few community or public facilities or services.

12.6.19 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.

12.6.20 Based on the examples of sensitive areas (e.g., hospitals, churches, schools, historical buildings), as outlined in the Magnitude of Effect section earlier in this Chapter, the following areas are considered sensitive and will be subject to 'Rule 2' of the IEMA Guidelines which requires a full assessment of effects if the locations are subject to an increase in 10 % of traffic:

- Invergarry;
- Fort Augustus;
- Invermoriston; and
- Spean Bridge.

12.6.21 All other locations within the study area are subject to 'Rule 1' and are assessed if traffic flows (or HGV flows) on highway links increase by more than 30 %.

12.7 Potential Effects

12.7.1 This section considers the potential impacts and associated effect significance of the construction, of the Proposed Development based on the typical activities described in **Chapter 3: Project Description**.

Construction Effects

12.7.2 Traffic generation for the Proposed Development is presented in **Technical Appendix 12.1**. At the peak of construction, the Proposed Development is predicted to generate 26 Car / LGV trips and 28 HGV trips per day in the peak month of construction (month 3).

12.7.3 The construction traffic was compared against the future baseline traffic to estimate the increase in traffic associated with the Proposed Development. **Table 12.7** illustrates the potential traffic impact of the peak month of construction activity.

Table 12.7: Traffic Impact Summary

Ref. No.	Survey Location	Car / LGV	HGV	Total	Car / LGV % Increase	HGV % Increase	Total % Increase
1	A82 South of Invermoriston	2649	185	2834	0.46%	0.00%	0.43%
2	U1663	345	75	420	3.60%	5.61%	3.96%
3	A82 Aberchalder	2959	216	3176	0.14%	7.98%	0.63%
4	A82 Laggan	4130	316	4446	0.34%	18.83%	1.46%
5	A87 South of Bunloinn	1487	121	1608	0.68%	56.78%	3.47%

Please note minor variances due to rounding may occur.

12.7.4 The total traffic movements are not predicted to increase by more than 4 % across the whole study area network. This is significantly less than the average daily variance in traffic flows (+ / -10 %) that naturally occur. The construction phase is transitory in nature and the peak of construction activities is short-lived.

12.7.5 There is no need to undertake any further assessment as the Proposed Development does not have a significant impact on the study network and does not trigger any of the required thresholds.

Operational Effects

12.7.6 The operational phase effects are scoped out of the assessment as per section 12.3.6.

Cumulative Effects

12.7.7 With regards to transport impacts, only committed schemes, i.e., those that have planning approval can be considered in a cumulative effects review. There are a number of significant traffic generating consented schemes that are committed and are located close to or located within the study area. These are:

- Coire Glas Pumped Storage Scheme (Planning Refs ECU0003164 (original scheme) and ECU00000577 (revised scheme));

- Bhlaraidh Wind Farm Extension (Planning Ref: ECU00001900); and
- Dell Wind Farm (Planning Ref: ECU00003440).

12.7.8 In addition, whilst these cannot be considered as committed development, the Associated Works (see Section 3.5 of **Chapter 3: Project Description**) related to the Proposed Development would also lead to increases in traffic flow on the study area network. These include:

- The proposed Coire Glas Switching Station (pre-application); and
- The proposed Loch Lundie Substation (pre-application).

12.7.9 There are also other schemes in the planning system, that whilst not determined, would also increase traffic volumes on the study area network. These include:

- Cloiche Wind Farm (Planning Ref: ECU00002054);
- Bhlaraidh Wind Farm Extension Grid Connection (Planning Ref: ECU00004639); and
- Skye Grid Reinforcement Project (Planning Ref: ECU000043395).

12.7.10 The imposition of committed development traffic into the baseline to undertake a cumulative assessment dilutes the potential traffic impact that the Proposed Development would have. The level of traffic generation associated with the Proposed Development is such that it, combined with the committed development and the future proposed development traffic, would not impact on the road link capacity.

12.7.11 Instead of a cumulative assessment, it is proposed that a network wide Construction Traffic Management Plan (CTMP) is developed to review the wider impacts of all SSEN projects and other concurrent developments in the area. This would be agreed with THC and Transport Scotland (TS).

12.7.12 Until such time as the wider SSE CTMP is prepared, a Proposed Development CTMP has been considered and is described in the Mitigation section of this assessment.

12.8 Mitigation

Mitigation During Construction

Construction Traffic Management Plan

12.8.1 A CTMP is proposed to help reduce the negligible traffic impact of the construction phase on the study area. This is not required under the assessment but is proposed to further reduce any transport and access issues on the network.

12.8.2 The following measures would be implemented through a CTMP during the construction phase. The CTMP would be agreed with THC prior to construction works commencing:

- Where possible the detailed design process 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 work site (including pick up and drop off times);
- 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;
- Wheel cleaning facilities may be established at the Site entrances, depending on the views of THC;
- Normal Site working hours would be limited to between the following hours:

- March to September – 07:00 to 19:00 Weekdays and 07:00 to 16:00. Weekend working could also be proposed with slightly reduced working hours (i.e. works to cease at 16.00); and
- October to February – 07:30 to 17:00 (or within daylight hours) Weekdays and 08:00 to 16:00. Weekend working could also be proposed with slightly reduced working hours (i.e. works to cease at 16.00).
- Appropriate traffic management measures would be put in place on the A87 and A82 to avoid conflict with general traffic, subject to the agreement of the TS. Typical measures would include HGV turning and crossing signs and / or banksmen at the Site access and warning signs;
- Provide construction updates on the project website and or a newsletter to be distributed to residents within an agreed distance of the Site;
- Adoption of a voluntary speed limit of 20 mph for all construction vehicles travelling through local villages and towns;
- Adoption of a maximum speed limit of 15 mph for all construction vehicles travelling on the U1163 and tracks;
- All drivers would be required to attend an induction to include:
 - A toolbox talk safety briefing;
 - The need for appropriate care and speed control;
 - A briefing on driver speed reduction agreements (to slow Site traffic at sensitive locations through the villages); and
 - Identification of the required access routes and the controls to ensure no departure from these routes.

Road Condition Survey

12.8.3 THC and TS may require an agreement to cover the cost of abnormal wear and tear on roads within the study area. Video footage of the pre-construction phase condition of the construction vehicles route would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This baseline would inform any change in the road condition during the construction stage of the Proposed Development. Any necessary repairs would be coordinated with the Roads Authority. Any damage caused by traffic associated with the Proposed Development, during the construction period that would be hazardous to public traffic, would be repaired immediately.

12.8.4 Any damage to road infrastructure caused directly by construction traffic would be made good, and street furniture that is removed on a temporary basis would be fully reinstated.

12.8.5 There would be a regular road edge review and any debris and mud would be removed from the public carriageway to keep the road clean and safe during the initial months of construction activity, until the construction junction and immediate access track works are complete.

12.8.6 Overhead high voltage crossing points would be identified prior to the commencement of construction activities and appropriate actions would be undertaken to highlight these.

Access Improvements

12.8.7 All access junctions would be designed and constructed in accordance with TS and THC design standards.

Public Information

12.8.8 The Applicant would also ensure information was distributed through its communication team via the project website, local newsletters and social media.

Outdoor Access Management Plan

- 12.8.9 Consideration would be given to pedestrians and cyclists alike due to potential interactions between construction traffic and users of the core path network. These measures would be formulated into a Outdoor Access Management Plan (see **Technical Appendix 15.3**).
- 12.8.10 The Principal Contractor would ensure that speed limits are always adhered to by their drivers and associated subcontractors. This is particularly important within close proximity to the core path network and at crossing points. Advisory speed limit signage would also be installed on approaches to areas where core path users may interact with construction traffic.
- 12.8.11 Signage would be installed on the Site exit that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians and cyclists in the area. This would also be emphasised in weekly toolbox talks.
- 12.8.12 The British Horse Society has made recommendations on the interactions between HGV traffic and horses. Horses are normally nervous of large vehicles, particularly when they do not often meet them. Horses are flighty animals and will run away in panic if really frightened. Riders will do all they can to prevent this but, should it happen, it could cause a serious accident for other road users, as well as for the horse and rider.
- 12.8.13 The main factors causing fear in horses in this situation are:
- Something approaching them, which is unfamiliar and intimidating;
 - A large moving object, especially if it is noisy;
 - Lack of space between the horse and the vehicle;
 - The sound of air brakes; and
 - Anxiety on the part of the rider.
- 12.8.14 The British Horse Society recommends the following actions that will be included in the Site training for all HGV staff:
- On seeing riders approaching, drivers must slow down and stop, minimising the sound of air brakes, if possible;
 - If the horse still shows signs of nervousness while approaching the vehicle, the engine should be shut down (if it is safe to do so);
 - The vehicle should not move off until the riders are well clear of the back of the HGV;
 - If drivers are wishing to overtake riders, please approach slowly or even stop in order to give riders time to find a gateway or lay by where they can take refuge and create sufficient space between the horse and the vehicle. Because of the position of their eyes, horses are very aware of things coming up behind them; and
 - All drivers delivering to the Site must be patient. Riders will be doing their best to reassure their horses while often feeling a high degree of anxiety themselves.

Mitigation During Operation

- 12.8.15 Site entrance roads would be well maintained and monitored during the operational life of the development. Regular maintenance would be undertaken to keep the Site access track drainage systems fully operation and to ensure there are no run-off issues onto the public road network.

12.9 Residual Effects

12.9.1 This section considers the potential residual effects and associated effect significance of the construction of the Proposed Development, following the implementation of the mitigation measures and also considers cumulative effects.

Construction Residual Effects

12.9.2 There are no residual construction effects.

Operation Residual Effects

12.9.3 There are no residual operational effects.

Cumulative Residual Effects

12.9.4 There are no residual cumulative effects.

12.10 Summary and Conclusions

12.10.1 The Proposed Development would lead to a temporary increase in traffic volumes on the road network within the study area during the construction phase. Traffic volumes would fall outside the peak period of construction.

12.10.2 An assessment of average daily development trips is considered an appropriate method of assessing the impact of the Proposed Development on each Section within the study area, as this will account for peaks and troughs during the construction programme. The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development.

12.10.3 No link capacity issues are expected on any of the roads assessed due to the additional movements associated with the Proposed Development. The effects of construction traffic are temporary in nature and are transitory.

12.10.4 The increase in traffic has been assessed as not significant in EIA terms and no thresholds for undertaking further assessments were met. A series of complementary mitigation measures and management plans have been proposed to help further reduce the impacts of the traffic flows from both the construction and operational phases of the Proposed Development.