

VOLUME 1: CHAPTER 11: TRAFFIC AND TRANSPORT

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Figures (Volume 2 of this EIA Report)

The relevant figures for this Chapter are contained within the Appendix listed below.

Appendices (Volume 4 of this EIA Report)

Appendix 11.1: Transport Assessment

11. TRAFFIC AND TRANSPORT

11.1 Executive Summary

- 11.1.1 A review of the transport and access issues associated with the Proposed Development has been undertaken.
- 11.1.2 The Proposed Development would lead to a temporary increase in traffic volumes on the road network within the study area during the construction phase.
- 11.1.3 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 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.
- 11.1.4 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.
- 11.1.5 Whilst no significant impact on the study network is predicted, a series of mitigation measures and management plans have been proposed to help mitigate and offset impacts of the traffic flows from the construction phase of the Proposed Development.

11.2 Introduction

- 11.2.1 This Chapter considers the likely significant effects, including cumulative effects, of the Proposed Development on transport and access matters during construction and operation.
- 11.2.2 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.
- 11.2.3 A high-level overview of the effects of the traffic movements has been considered in accordance with the Institute of Environmental Management and Assessment (IEMA) Environmental Assessment of Traffic and Movement (2023). The document is referred to as the IEMA Guidelines in this Chapter.
- 11.2.4 The Chapter is supported by **Appendix 11.1** that contains the Transport Assessment (TA). This is referenced in the body of the text, where relevant.
- 11.2.5 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 **Appendix 5.1: EIA Team**, contained within Volume 4 of this EIA Report.

11.3 Scope of Assessment

- 11.3.1 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.

11.3.2 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.

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

Study Area

11.3.4 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 in **Appendix 11.1** and listed below:

- The A82 at Fort Augustus;
- The B862 between Fort Augustus and the Stronelairg access track;
- The A86 between Spean Bridge and Laggan; and
- The A889 between Laggan and Dalwhinnie.

11.4 Consultation

11.4.1 The scope of the assessment has been determined through a combination of professional judgement, reference to relevant guidance documents (see Section 11.5) and consultation with stakeholders through pre-application advice and a formal EIA scoping process. **Table 11.1** summarises the scoping responses relevant to the transport and access matters and provides information on where and/or how points raised have been addressed in this assessment.

Table 11.1: Consultation Responses – Scoping Stage

Organisation & Date	Summary of Consultation Response	EIA/Design Response to Consultee
Transport Scotland	No response received	No actions
The Highland Council 29/02/2024	The Council's Transport Planning team has not responded (section 3.58).	Noted. The following comments appear to be standard from the planning department with no specialist transport planning input.
	Request for funding works associated with the South Loch Ness Road Improvement Strategy to offset impacts on the B851 and B862.	The B851 is not proposed to be used and the section of B862 proposed has already been extensively upgraded to wind farm and hydro developments. The South Loch Ness Road Improvement Strategy is still in draft since 2014 and has no formal status and as such cannot be used for developer contributions as noted in the Corriegarh 2 Wind Farm determination by the Reporter's Unit ¹ .
	A Transport Statement (TS) would be required and should include cumulative development flows, access junction drawings, swept path drawings, High National Road Traffic Forecast (NRTF), seasonal adjustments and be in compliance with Transport Scotland guidance.	A Transport Assessment has been provided as Appendix 11.1 of this EIA Report covering the appropriately mentioned TS areas. Low NRTF has been used to ensure that the development impact cannot be hidden by higher growth factors. This is a more robust approach.

¹ ECU planning portal <https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00002175&T=6>

Organisation & Date	Summary of Consultation Response	EIA/Design Response to Consultee
		All proposed access junctions are existing and have been previously approved by THC for similar construction works. As such, no drawings are required.
	THC noted that a Travel Plan is required.	A Travel Plan is included as proposed mitigation in Section 11.10 of this Chapter and in Chapter 14 - Schedule of Mitigation .
	THC noted that a framework Construction Traffic Management Plan (CTMP) should be included.	A Framework CTMP is provided in Section 8 of the Appendix 11.1 the TA. Details relating to CTMP are also in Section 11.10 of this Chapter and in Chapter 14 - Schedule of Mitigation .
	THC noted that any requirements for Abnormal Load Routing (AIL) will need to be identified.	There are no AIL proposed in relation to the Proposed Development, so this has not been considered in this EIA Report.
	THC noted that a suitable agreement relating to Section 96 of the Roads (Scotland) Act may be required.	A Wear & Tear agreement is included in as proposed mitigation in Section 11.10 of this Chapter and in Chapter 14 - Schedule of Mitigation .
	THC noted that site compound connection routes should be identified.	Only temporary construction compounds would be required to facilitate construction of the Proposed Development. 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.
	THC noted that details of waste management in new developments should be provided in accordance with THC's planning guidance.	This applies to residential development, not grid connection infrastructure, so it has not been considered in this EIA Report.

Issues Scoped Out of Assessment

11.4.2 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 THC has agreed with in their response to the Scoping Report.

11.4.3 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.

11.5 Legislation, Policy and Guidance

11.5.1 The scope of the assessment has been informed by scoping responses summarised in **Table 11.1** and the following guidelines/policies (further detail is provided in **Appendix 11.1: Transport Assessment**)

- 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).

11.6 Methodology

11.6.1 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

11.6.2 Field surveys were also undertaken and comprised of site visit to review the general study area.

Sensitivity / Importance of Receptors

11.6.3 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.

11.6.4 The IEMA Guidelines² 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 11.2**.

² IEMA (2023), *Environmental Assessment of Traffic and Movement*, Institute of Environmental Management and Assessment.

Table 11.2: 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.

11.6.5 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

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

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

11.6.8 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 Guidance advises that, “The Department for Transport has historically set out a range of indicators for determining the significance of severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law. However, caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic.” (Para 3.16). The Guidelines acknowledge that changes in traffic flows should be used cautiously, stating that

“the assessment of severance should pay full regard to specific local conditions, e.g. sensitivity of adjacent land uses, prevalence of vulnerable people, whether or not crossing facilities are provided, traffic signal settings, etc.” (Para 3.17).

- Driver delay – the IEMA Guidelines note that these 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” (Para 3.20).
- Pedestrian delay (incorporating delay to all non-motorised users) – the IEMA Guidance advises that “pedestrian delay and severance are closely related effects and can be grouped together. Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development site.” (Para 3.24). Furthermore, the guidance advises that “...it is not considered wise to set down definitive thresholds. Instead it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect.” (Para 3.26).
- Non-motorised user amenity - the IEMA Guidance advises that, “The 1993 Guidelines suggest that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law.” (Para 3.30).
- 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 substantial changes respectively in the guidelines. (Para 2.19). As such, this has been used to assess the potential impacts associated with construction activities around fear and intimidation on people in close proximity to the Proposed Development.
- Road safety – professional judgement would be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents. In line with the IEMA Guidance, those areas of collision clusters would be subject to detailed review.
- Road safety audits – It would be proposed to undertake any necessary Road Safety Audits (RSA) post consent and it is considered that this can be secured via a planning condition.
- Large loads – The movement of the AILs associated with the construction of the Proposed Development have been considered in full, within a separate route survey assessment, which identifies physical mitigation measures required to accommodate the predicted loads.

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

Significance of Effect

11.6.10 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)³ and summarised in **Table 11.3** below.

11.6.11 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;

³ Design Manual for Roads & Bridges, National Highways & Transport Scotland

- 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 11.3: 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

11.6.12 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

11.6.13 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).

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

11.7 Baseline Conditions

Existing Baseline

11.7.1 Access to the Proposed Development would be via two access routes. The northern section would be accessed from the operational Stronelairst Wind Farm access track by extending the existing access tracks to the OHL alignment and serving approximately 1/3 of the total OHL length from this access.

11.7.2 The Stronelairst track connects to the A82 trunk road at Fort Augustus via the B862. The B862 has been extensively rebuilt between the A82 and the Stronelairst Wind Farm access junction to accommodate the Stronelairst Wind Farm and Glendoe Hydro project. No upgrade to the access junction on the B862 would be required as part of the OHL project.

11.7.3 The southern section and approximately 2/3 of the total OHL length would be accessed from the existing Melgarve Substation access track. This connects to the A86 trunk road near the Wolftrax Centre and was used in the previous Melgarve Substation, Stronelairst Grid Connection and Beauly to Denny construction works. No upgrade to the access junction on the A86 would be required as part of the OHL project.

11.7.4 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.

11.7.5 The B862 comprises a single carriageway which narrows to a single track in some locations. Passing places are located along the B862 and the road is maintained by THC. The road is mainly subject to the national speed limit.

11.7.6 The A889 is a two-way single carriageway which forms part of the trunk road network and provides a connection between the A9 at Dalwhinnie and the junction with the A86 near Laggan. The A889 is maintained by BEAR Scotland and is generally subject to the national speed limit, which reduces when travelling through Dalwhinnie.

11.7.7 The A86 is a two-way single carriageway which forms part of the trunk road network and provides a connection between the A9 at Kingussie and the A82 at Spean Bridge. The A86 is maintained by BEAR Scotland and is generally subject to the national speed limit, which reduces when travelling through towns and villages on the route.

11.7.8 Traffic data used in the assessment has been sourced from the following sources:

- A86 West of the site Access - Department for Transport Count Site (Ref 40848);
- A86 Spean Bridge - Transport Scotland Database Count Site (Ref 0000ATC01049);
- A889 North of Dalwhinnie - Transport Scotland Database Count Site (Ref 000000001167);
- A82 at Aberchalder - 2022 ATC Traffic Survey undertaken for SSE Transmission; and
- B862 east of Fort Augustus - Cloiche Wind Farm Application.

11.7.9 The locations of the count points are shown in **Appendix 11.1: Transport Assessment**.

11.7.10 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). The baseline data for 2023 is illustrated in **Table 11.4**.

Table 11.4: 2023 Existing Traffic Conditions (Average Daily Two Way Flows)

Ref. No.	Survey Location	Car & LGV	HGV	Total
1	A86 West of the Southern Site Access	888	71	960
2	A86 Spean Bridge	2149	244	2393
3	A882	927	87	1014
4	A82 Aberchalder – Fort Augustus	2938	199	3137
5	B862 West of the Northern Site Access	633	232	865

Accident Review

11.7.11 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 CrashMap which uses data collected by the police about road traffic crashes occurring on British roads.

11.7.12 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, 19 accidents were noted on the A86, three on the A889 and one on the B862 (between Fort Augustus and the Stronelairg access track).

11.7.13 No accidents have been recorded at the access junction locations.

Active Travel Network

11.7.14 A review of Core Paths directly affected by the Proposed Development has been undertaken. There are no Core Paths located along the Stronelairg access track. There are a number located near to the access to Melgarve Substation from the A86 and these are illustrated in **Appendix 11.1: Transport Assessment**.

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

- LBS 1a: Spey Dam – Creagdubh Lodge;
- UBS 30: Spey Dam – Gorestean, via General Wade’s Military Road;
- UBS 19: Achduchil – Gorstean (parallel to the A86);
- UBS 22: Feagour to General Wade’s Military Road; and
- UBS 23: Achduchil – Spey Dam.

11.7.16 Of these, UBS 23 and LBS 1a form part of the construction access route.

11.7.17 A review of Sustrans’ National Cycle Route (NCR) map (<https://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 Fort Augustus and the Stronelairg junction, NCR 78 comprises of an on-road link between two sections of the NCR.

Future Baseline

11.7.18 Construction of the Proposed Development is expected to commence in 2025, if consent is granted, and the total construction is anticipated to take approximately two years.

11.7.19 To assess the likely effects during the construction and typical operational phase, base year flows were forecast by applying a NRTF low growth factor to the 2023 flows in **Table 11.5**. The NRTF low growth factor for 2023 to 2025 is 1.011.

Table 11.5: Future Baseline Flows (2025 Flows)

Ref. No.	Survey Location	Car / LGV	HGV	Total
1	A86 West of the Southern Site Access	898	72	970
2	A86 Spean Bridge	2172	247	2419
3	A882	937	88	1025
4	A82 Aberchalder – Fort Augustus	2970	201	3171
5	B862 West of the Northern Site Access	640	235	874

Please note minor variances due to rounding may occur.

11.7.20 It has been assumed for the purposes of this assessment that both Cloiche and Dell Wind Farms would be constructed at the same time as the Proposed Development. Their peak construction traffic has therefore been included in the baseline 2025 traffic flows. The Base + Committed Development traffic flows are summarised in **Table 11.6**.

Table 11.6: Future Baseline Flows (2025 Flows)

Ref. No.	Survey Location	Car / LGV	HGV	Total
1	A86 West of the Southern Site Access	898	72	970
2	A86 Spean Bridge	2172	247	2419
3	A882	937	88	1025
4	A82 Aberchalder – Fort Augustus	3012	245	3257
5	B862 West of the Northern Site Access	745	289	1033

Please note minor variances due to rounding may occur.

Summary of Sensitive Receptors

11.7.21 A summary of the sensitive receptors within the study area is presented in **Table 11.7**.

Table 11.7: Summary of Sensitive Receptors

Receptor	Sensitivity	Justification
B862 Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
A82 / A882 / A86 Road Users	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Fort Augustus Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Dalwhinnie Residents	Low	Where a location is a small rural settlement, few community or public facilities or services.
Spean Bridge Residents	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Roy Bridge Residents	Low	Where a location is a small rural settlement, few community or public facilities or services.
Core Path Users	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs.
Residents living along the A82 / A882 / A86	Low	Where a location is a small rural settlement, few community or public facilities or services.

Receptor	Sensitivity	Justification
Residents living along the B862	Low	Where a location is a small rural settlement, few community or public facilities or services.

11.7.22 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.

11.7.23 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:

- Spean Bridge; and
- Fort Augustus.

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

11.8 Potential Effects

11.8.1 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: The Proposed Development**.

Construction Effects

11.8.2 Traffic generation for the Proposed Development, including ancillary works, is presented in **Appendix 11.1**.

11.8.3 The peak traffic flows indicate 28 Car / Light Goods Vehicle (LGV) and 50 Heavy Goods Vehicle (HGV) two way movements are predicted per day, at the peak of construction activity.

11.8.4 The construction traffic was compared against the future baseline traffic to estimate the increase in traffic associated with the Proposed Development. **Table 11.8** illustrates the potential traffic impact of the peak month of construction activity.

Table 11.8: Traffic Impact Summary

Ref. No.	Survey Location	Car / LGV	HGV	Total	Car / LGV % Increase	HGV % Increase	Total % Increase
1	A86	912	84	996	1.56%	16.63%	2.68%
2	A86 Spean Bridge	2174	247	2421	0.09%	0.00%	0.08%
3	A882	949	100	1049	1.28%	13.61%	2.34%
4	A82 Aberchalder – Fort Augustus	3026	283	3309	0.46%	15.50%	1.60%
5	B862	759	327	1085	1.88%	13.16%	5.03%

Please note minor variances due to rounding may occur.

11.8.5 The total traffic movements are not predicted to increase by more than 5.03 % 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.

11.8.6 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

11.8.7 The operational phase effects are scoped out of the assessment as per **section 11.4.2**.

11.9 Cumulative Effects

11.9.1 The baseline traffic flows already include the committed developments of Cloiche and Dell Wind Farm, in line with accepted transport planning guidelines.

11.9.2 There are no other significant, consented planning applications noted within the study area. The imposition of further 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.

11.9.3 It is proposed that a Construction Traffic Management Plan (CTMP) is developed to include the wider impacts of any further projects in the area that are eventually consented and have similar construction timescales to this project. This would be agreed with THC and Transport Scotland (TS).

11.10 Mitigation

Mitigation During Construction

Construction Traffic Management Plan

11.10.1 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.

11.10.2 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;
- Explore whether onsite borrowpits and concrete facilities located within the Cloiche and Dell Wind Farm sites could be used to reduce or eliminate the need for external sources of aggregate and concrete, thus reducing the traffic accessing the site from the north;
- 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 entrance, 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 – 7 days a week;
- October to February – 07:30 to 17:00 (or within daylight) – 7 days a week
- Appropriate traffic management measures would be put in place on the A86 and B862 to avoid conflict with general traffic, subject to the agreement of the Transport Scotland and THC.
- 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 Core Path sections of the southern access;
- All drivers would be required to attend an induction to include:
 - A tool box 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.

11.10.3 THC and Transport Scotland may require an agreement to cover the cost of abnormal wear and tear on roads in close proximity to the access junctions and on the section of Core Path used in the southern access route. 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.

11.10.4 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.

11.10.5 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.

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

11.10.7 It is not anticipated that abnormal load components would be required to be delivered to the Site. Access for an erection crane would be required, however there are no physical restrictions for these loads on either the northern or southern access routes.

Public Information

11.10.8 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

- 11.10.9 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 an Outdoor Access Management Plan (OAMP). A draft is provided in **Appendix 12.1**.
- 11.10.10 The Principal Contractor would ensure that speed limits are 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.
- 11.10.11 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.
- 11.10.12 On Core Paths UBS23 and LBS1a, pedestrian refuges will be provided at regular intervals to provide a safe passing place for construction traffic and path users. This will take the form of a mills barrier (or similar) placed at regular locations in the verge or edge of track where pedestrians can wait for traffic to pass and vice versa.
- 11.10.13 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.

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.

- 11.10.14 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.

Operational Phase Mitigation

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

11.11 Residual Effects

11.11.1 As stated in paragraph 11.8.6, the Proposed Development does not have a significant impact on the study network and does not trigger any of the required thresholds for detailed assessment.

11.12 Summary and Conclusions

11.12.1 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.

11.12.2 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 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.

11.12.3 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.

11.12.4 The increase in traffic has been assessed as not significant in EIA terms as 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.