Pell Frischmann

Melgarve Cluster Project

Transport Assessment

March 2024

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1 Introduction

1.1 Purpose of the Transport Assessment

Pell Frischmann (PF) has been commissioned by ASH design+assessment, on behalf of Scottish & Southern Electricity Networks Transmission (SSEN), to undertake a Transport Assessment (TA) for the Proposed Development, which comprises of a new 132 kV overhead line (OHL) and associated ancillary development including underground cable (UGC) to connect the consented Cloiche Wind Farm and the proposed Dell Wind Farm to the electricity transmission network at Melgarve substation.

The TA identifies the key transport and access issues associated with the Proposed Development and the likely traffic impacts in the study area. The TA identifies where mitigation works may be required to accommodate the predicted traffic impacts associated with the construction of the Proposed Development, to be developed during detailed design.

1.2 TA Structure

Following this introduction, the TA is structured as follows:

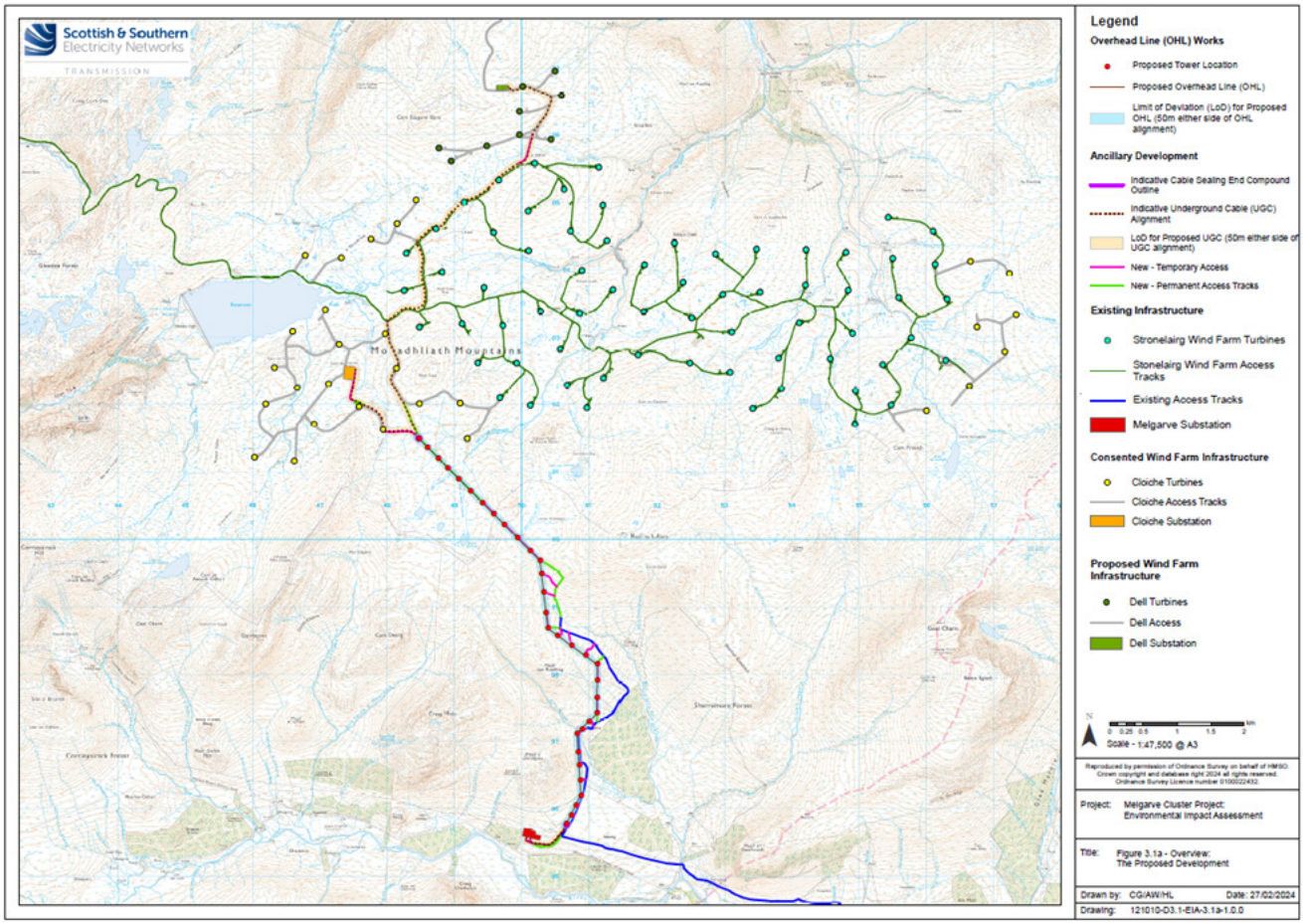
- Chapter Two describes the Site background and Proposed Development;
- Chapter Three reviews the relevant transport and planning policies;
- Chapter Four sets out the methodology used within this assessment;
- Chapter Five describes the baseline transport conditions;
- Chapter Six describes the trip generation and distribution of traffic in the study area;
- Chapter Seven summarises the traffic impact assessment;
- Chapter Eight considers mitigation proposals for development related traffic within the study network; and
- Chapter Nine summarises the findings of the TA and outlines the key conclusions.

2 Site Background

2.1 Site Location

The Proposed Development is being driven by the requirement to connect the consented Cloiche Wind Farm and the proposed Dell Wind Farm to the National Grid at the existing Melgarve substation, approximately 11 km west of Laggan, in the Highlands of Scotland. The location of the Proposed Development is shown in Figure 1 below:

Figure 1 Site Location



2.2 Proposed Development

The Proposed Development would comprise approximately 7 km of new 132 kV overhead line (OHL). Ancillary development is also required to facilitate its construction and operation. The ancillary development will include the installation of underground cables, cable sealing end compounds, temporary and permanent access tracks.

The Proposed Development will not have a fixed operational life. As explained in later sections, it is considered that the traffic impacts associated with the construction phase of the Proposed Development represents an assessment of the worst case scenario, as the operational phase of a transmission line generates insignificant traffic flows, associated with general maintenance works.

3 Transport Policy Review

3.1 Introduction

This part of the TA provides an overview of the relevant national and local transport planning policy and guidance.

3.2 National Policy and Guidance

3.2.1 3.2.1 National Planning Framework 4 (2023)

The Revised Draft National Planning Framework 4 (RDNPF4) was laid in Parliament on 08 November 2022. The RDNPF4 was approved by Scottish Parliament on 11 January 2023 and was then passed to Scottish Ministers who adopted the National Planning Framework 4 (NPF4) on 13 February 2023.

With regards to traffic and transport and the Proposed Development, Policy 11: Energy within the NPF4 notes that:

"a) Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported. These include:

ii. enabling works, such as grid transmission and distribution infrastructure;

iii. energy storage, such as battery storage and pumped storage hydro;

e) In addition, project design and mitigation will demonstrate how the following impacts are addressed:

iii. public access, including impact on long distance walking and cycling routes and scenic routes;

vi. impacts on road traffic and on adjacent trunk roads, including during construction;

xi. proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;

xiii. cumulative impacts."

3.3 Local Policy and Guidance

3.3.1 Highland-wide Local Development Plan (2012)

The Highland-wide Local Development Plan (HwLDP) was adopted by The Highland Council (THC) in April 2012 and is the established development plan policy for the Highlands. It sets out a settlement strategy and spatial framework as to how THC foresees development occurring in a twenty-year period.

The HwLDP does not contain any specific policy guidance for the Proposed Development. However, Policy 56 is relevant with regards to general transport policy. The relevant transport elements from this policy are:

"Development proposals that involve travel generation must include sufficient information with the application to enable the Council to consider any likely on- and off- Site transport implications of the development and should:

- *incorporate appropriate mitigation on Site and/or off Site, provided through developer contributions where necessary, which might include improvements and enhancements to the walking/cycling network and public transport services, road improvements and new roads; and*
- *incorporate an appropriate level of parking provision, having regard to the travel modes and services which will be available and key travel desire lines and to the maximum parking standards laid out in Scottish Planning Policy or those set by the Council.*

When development proposals are under consideration, the Council's Local Development Strategy will be treated as a material consideration.

The Council will seek the implementation and monitoring of Green Travel Plans in support of significant travel generating developments."

3.3.2 The Inner Moray Firth Local Development Plan (2015)

The Inner Moray Firth Local Development Plan (IMFLDP) was adopted in 2015 and provides guidance for development within Inner Moray Firth area for 20 years. The Transport Appraisal[1] document supports the IMFLDP and notes that the IMFLDP aims to:

- *optimise the use of existing infrastructure;*
- *reduces the need to travel;*
- *facilitates travel by public transport and freight movement by rail or water;*
- *provides safe and convenient opportunities for walking and cycling; and*
- *enables the integration of transport modes.*

3.3.3 Onshore Wind Energy Supplementary Guidance (2016)

The Onshore Wind Energy Supplementary Guidance was adopted by THC in 2016. In relation to traffic and transport interests, the guidance document notes that:

"All proposals should seek to avoid significant adverse effects on the public road network individually and cumulatively with other built and permitted proposals as well as valid planning applications not yet determined (the weight apportioned to each will reflect their position in the planning process).

The proposals for the use of the public roads and mitigation works will require the approval of the Roads Authority. Developers will be required to enter into a Section 96 (Roads Scotland Act) agreement with the Council to cover damage to the public roads by construction traffic and may be required to provide a bond as surety.

Developers will be required to undertake a Transport Assessment to establish the transport impacts of the construction traffic associated with the development, the suitability of the existing road network, the impact on existing road users and adjacent communities, and the requirements for any mitigation works."

3.3.4 Guidance on the Preparation of Transport Assessments (2014)

THC has prepared guidance on how TA should be prepared for development Sites within the Highlands. The guidance was published by THC in November 2014.

This TA has been prepared having noted the guidelines and it provides the required assessment in accordance with the guidelines.

3.3.5 Roads and Transport Guidelines for New Developments (2013)

This THC document outlines the guidance and standards for the provision of infrastructure within the Council area, which includes the design and construction of all new roads associated with development proposals.

THC's Roads and Transport Guidelines for New Developments document provides guidance in relation to transport implications of onshore wind farm developments. Whilst the development proposals are not for the development of a wind farm, elements of the policy are applicable, namely:

[1] The Highland Council (2013), Inner Moray Firth Proposed Local Development Plan, Transport Appraisal

"…a developer should be aware that the Council will require a Transportation Assessment (TA) to be submitted that must consider the existing road network, transportation constraints and potentially sensitive routes or communities.

A wind farm vehicular Site access must provide appropriate visibility splays and suitable surface water drainage. Within the Site, the wind turbines are likely to be located some distance from the nearest public road, requiring internal access tracks to be constructed. As the access tracks need to accommodate abnormal loads, they have to be of a suitable width. These tracks are normally constructed from hard-core material and the developer will usually be encouraged/allowed to use material obtained from borrow pits within the Site area, to reduce construction traffic. On-Site concrete batching should also be considered, as this can also result in a reduction of associated vehicles on the local road network.

A suitable turning area must be constructed within the Site, to accommodate abnormal load delivery vehicles, construction vehicles and future maintenance vehicles. During the construction period, a wheel-wash system shall be provided."

3.4 Conclusion

The above summaries of policy statements are considered the most relevant to this TA.

4 Study Methodology

4.1 Introduction

The two key phases of the life of the Proposed Development are as follows:

- The Construction Phase; and
- The Operational Phase.

4.2 Project Phases – Transport Overview

Of the aforementioned phases, the construction phase is considered to have the greatest impacts in terms of transport. Construction plant, bulk materials and construction materials will be transported to Site, and these movements may potentially cause a significant increase in traffic on the network within the study area. It should be noted however that the construction effects are temporary and transitory in nature.

The operational phase is restricted to trips associated with the occasional maintenance of the Proposed Development which would generate significantly lower volumes of traffic, and which are not considered to be in excess of daily traffic variation levels on the road network. Therefore, no separate assessment for the operational phase is considered to be required.

4.3 Scoping Discussions

The Applicant submitted a request for a Scoping Opinion to the Scottish Ministers which included a section considering traffic and transport. A full review of the Scoping Opinion and other consultation responses received is provided in **Chapter 4 – Scope and Consultation** of the EIA Report.

5 Baseline Conditions

5.1 Study Area

Access to the Proposed Development will be via two access routes. The northern section of the OHL will be accessed from the operational Stronelairg 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.

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

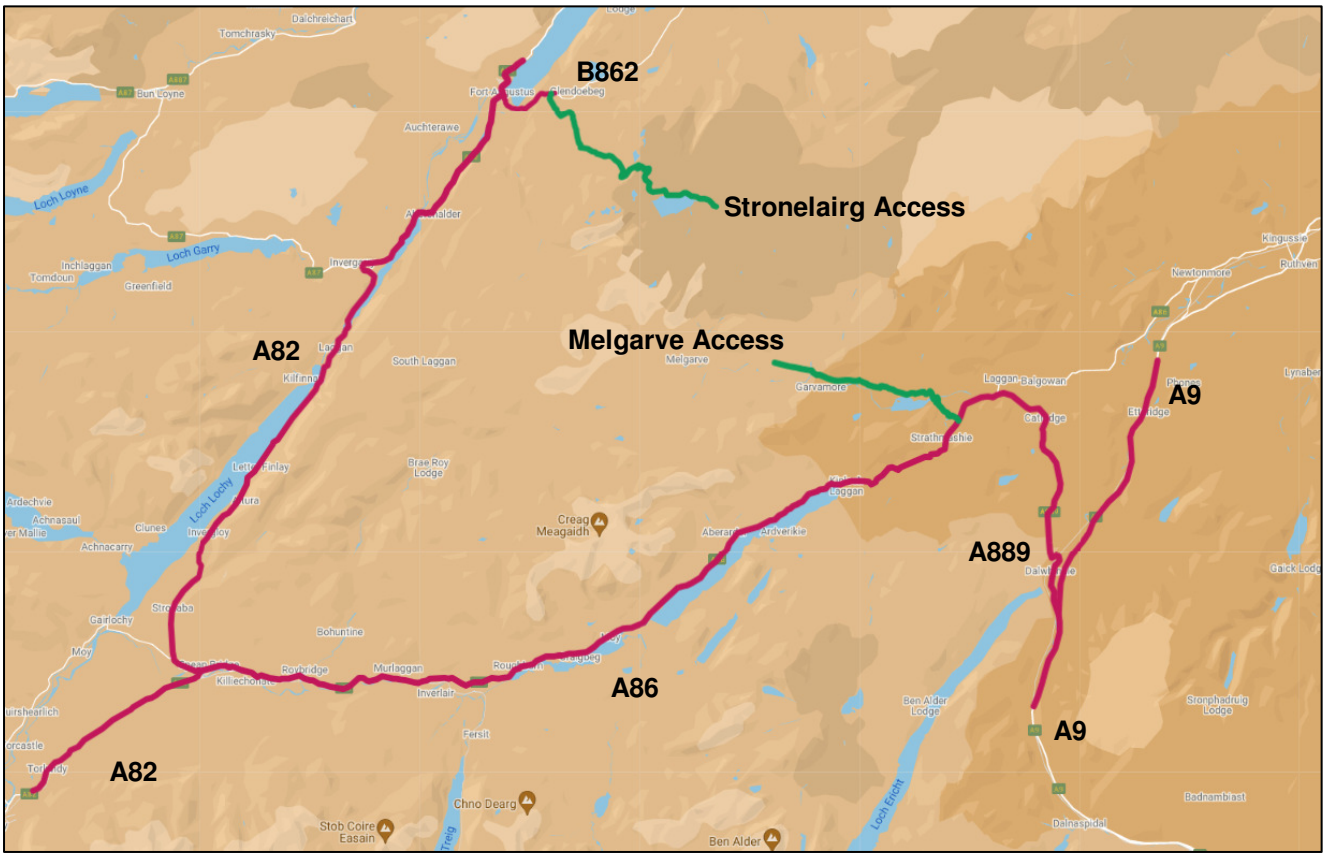
The southern section and approximately 2/3 of the total OHL length will be accessed from the existing Melgarve Substation access track. This connects to the A86 trunk road near the Wolftrax centre and was used in the previous Melgarve substation construction works. No upgrade to the access junction on the A86 will be required as part of the OHL project.

The proposed study area is based upon the road network required to access the Proposed Development and based upon potential trunk road routes that would be used to allow the delivery of construction materials. The proposed study area is as follows:

- 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.

The extent of the study area is defined by the red lines in Figure 2. The two access tracks are shown in green.

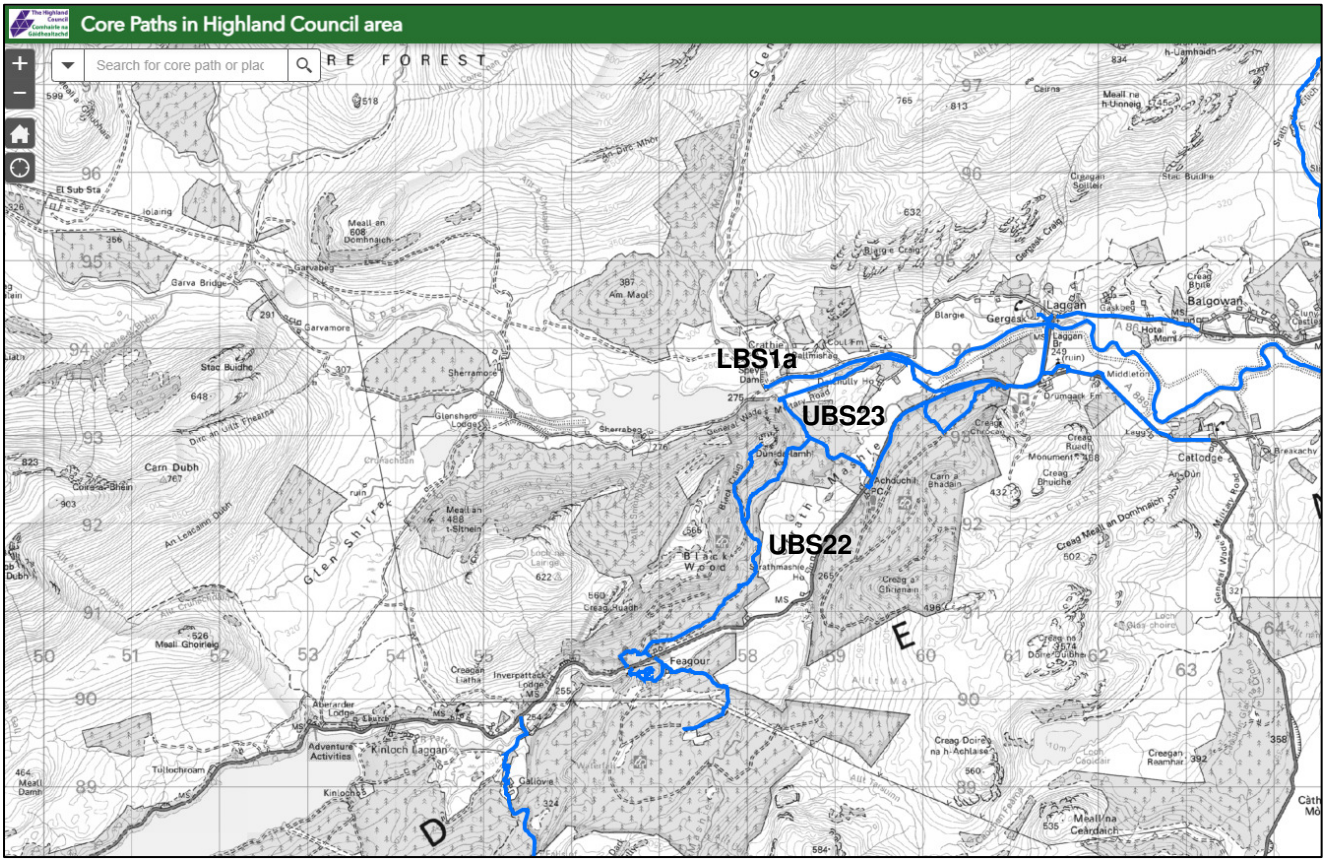
Figure 2 Study Area



5.2 Pedestrian and Cyclist Networks

A review of Core Paths directly affected by the proposed OHL works has been undertaken. There are no Core Paths located along the Stronelairg access track. There are a number located near the Melgarve access and these are illustrated in Figure 3.

Figure 3 Core Path Plan[2] (The Highland Council)



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.

Of these, UBS23 and LBS1a form part of the construction access route.

A review of Sustrans' National Cycle Route (NCR) map[3] 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.

[2] The Highland Council, Paths in the Highlands https://highland.maps.arcgis.com/apps/webappviewer
[3] Sustrans, https://www.sustrans.org.uk/national-cycle-network)

5.3 Road Access

A82 (T)

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.

B862

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.

A889

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.

A86

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.

5.4 Existing Traffic Conditions

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

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

The locations of the count points are shown in Figure 4. The traffic data was factored using NRTF low growth factors to create the 2023 traffic flows.

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).

A summary of the 24-hour average daily traffic for each of the count sites is presented in Table 1. All data excludes data collected during Covid restrictions.

Figure 4 Traffic Count Location Points

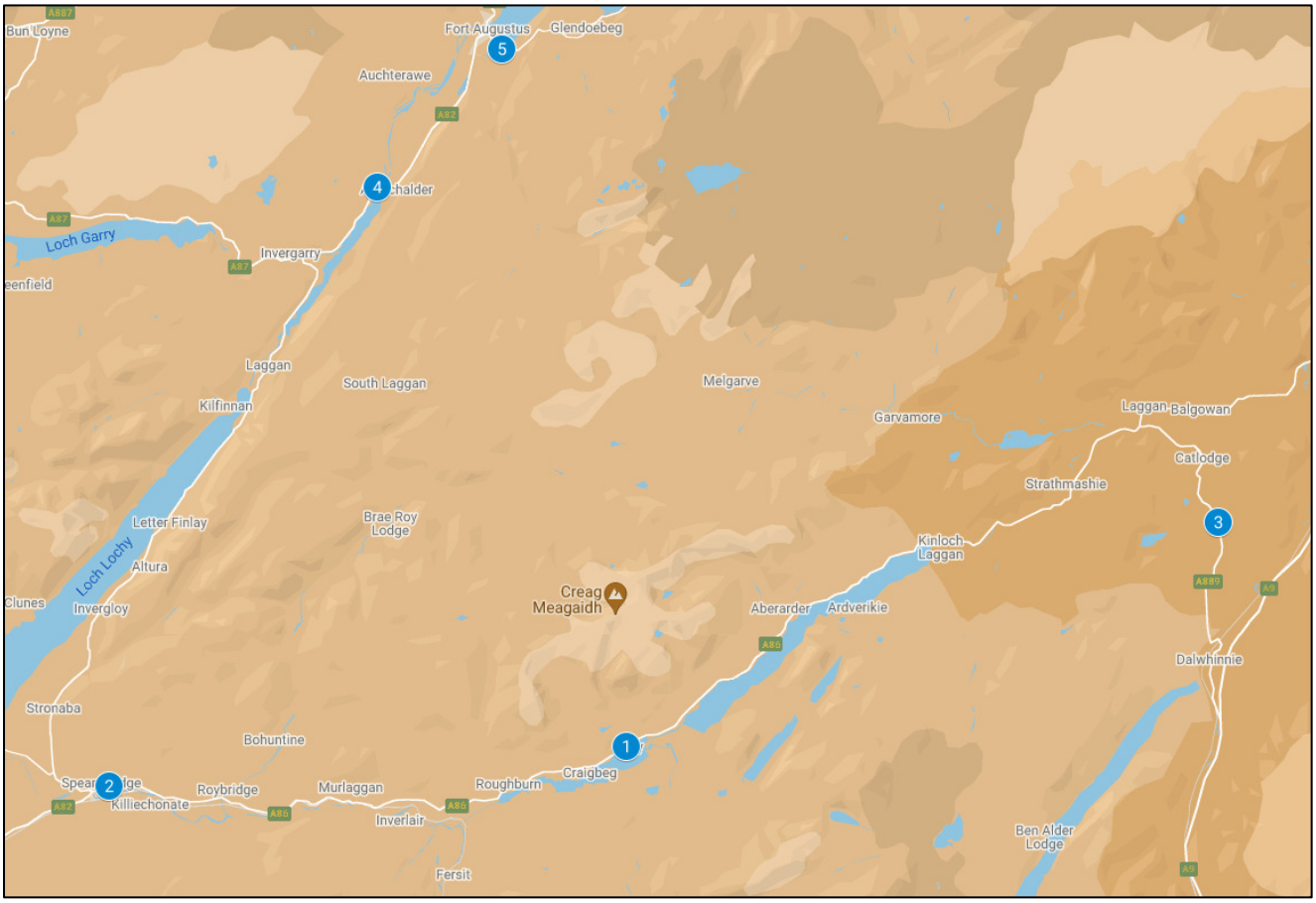


Table 1 24-hour Average Daily Traffic Data (2023)

Site Ref.	Survey Location	Cars & 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

5.5 Accident Review

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[4] which uses data collected by the police about road traffic crashes occurring on British roads.

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. These are summarised in Table 2 for the two roads with the proposed access junctions. A review of the A889 has also been undertaken given historic commentary on its accident history.

[4] CrashMap: www.crashmap.co.uk

Table 2 Accident Summary

Survey Location	Slight	Serious	Fatal	HGV Incidents
A86 (Laggan – Spean Bridge)	7	12	0	4 (2 slight & 2 serious)
A889	2	1	0	1 (slight)
B862	1	0	0	1 (slight)

No accidents have been recorded at either of the two proposed access junction locations. The majority of accidents on the A86 occurred to the west of Aberarder, with six serious incidents involving motorcycles or young drivers.

Based on the information available, it has been established that there are no specific road safety issues within the immediate vicinity of the Proposed Development that currently require addressing or would be exacerbated by the construction of the Proposed Development.

5.6 Future Baseline

Construction of the project is expected to commence in 2025, if consent is granted, and is anticipated to take 24 months, depending on weather conditions and ecological considerations.

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 1. The NRTF low growth factor for 2023 to 2025 is 1.011.

Table 3 24-hour Average Daily Traffic Data (2025)

Site Ref.	Survey Location	Cars & 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.

Both Cloiche and Dell Wind Farms are considered to be committed developments and as they will be constructed at the same time as the Proposed Development, their peak construction traffic has been included in the baseline 2025 traffic flows. The Base + Committed Development traffic flows are summarised in Table 4. These flows will be used in the Construction Peak Traffic Impact Assessment.

Table 4 24-hour Average Daily Traffic Data (2025) Base + Committed Development

Site Ref.	Survey Location	Cars & 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.

6 Construction Trip Generation and Distribution

6.1 Trip Derivation

During the construction period, the following traffic will require access to the to the Proposed Development and Associated Development sites:

- Staff transport, in either cars or staff minibuses; and
- Construction equipment and materials, deliveries of machinery and supplies such as concrete and crushed rock.

The traffic generation associated with the OHL element has been based upon similar scale projects. The OHL traffic generation is detailed in Table 5.

Whilst the construction phase is expected to last for 24 months, a reduction to 20 months has been used to account for winter shutdowns.

Table 5 Construction Traffic Programme – OHL Elements (per day)

Month	1	2	3	4	5	6	7	8	9	10
Cars & Light Goods Vehicles (LGV)	12	12	18	18	18	18	12	12	12	12
Heavy Goods Vehicles (HGV)	6	2	16	16	16	16	5	5	5	5
Total Traffic	19	15	34	34	34	34	18	18	18	18

Month	11	12	13	14	15	16	17	18	19	20
Cars & Light Goods Vehicles (LGV)	12	12	12	12	4	4	4	4	4	4
Heavy Goods Vehicles (HGV)	5	5	5	5	2	2	4	4	6	10
Total Traffic	18	18	18	18	6	6	8	8	10	14

6.2 Ancillary Works (UGC)

The UGC works would be undertaken concurrently with the OHL works. Access to the UGC elements would be split between the northern access (via Stronelairg) and the southern access (via Melgarve) and separate traffic estimates have been established for each, taking into account the need for an access track, cable trench, cabling sand and restoration works. The two sets of traffic generation are set out below in Table 6 and 7.

Table 6 Construction Traffic Programme – UGC North Section (per day)

Month	1	2	3	4	5	6	7	8	9	10
Cars & Light Goods Vehicles (LGV)	10	10	10	10	10	10	10	10	10	10
Heavy Goods Vehicles (HGV)	34	34	34	34	34	34	34	34	34	35
Total Traffic	44	44	44	44	44	44	44	44	44	45

Month	1	2	3	4	5	6	7	8
Cars & Light Goods Vehicles (LGV)	10	10	10	10	10	10	10	10
Heavy Goods Vehicles (HGV)	21	21	21	25	6	6	21	21
Total Traffic	31	31	31	35	16	16	31	31

Table 7 Construction Traffic Programme – UGC South Section (per day)

Month	1	2	3	4	5	6	7	8	9	10	11	12
Cars & Light Goods Vehicles (LGV)	8	8	8	8	8	8	8	8	8	8	8	8
Heavy Goods Vehicles (HGV)	7	7	7	7	7	8	4	4	4	8	6	6
Total Traffic	15	15	15	15	15	16	12	12	12	16	14	14

The combined OHL and UGC development peak traffic flows are illustrated in Table 8.

Table 8 Construction Traffic Programme – OHL + UGC

Month	1	2	3	4	5	6	7	8	9	10
Cars & Light Goods Vehicles (LGV)	12	12	28	28	28	28	22	30	30	30
Heavy Goods Vehicles (HGV)	6	2	50	50	50	50	39	55	55	55
Total Traffic	19	15	78	78	78	78	62	62	62	62

Month	11	12	13	14	15	16	17	18	19	20
Cars & Light Goods Vehicles (LGV)	30	30	30	26	18	18	22	20	10	4
Heavy Goods Vehicles (HGV)	55	56	42	39	35	39	26	24	20	10
Total Traffic	62	63	49	49	37	41	24	24	10	14

6.3 Peak Traffic Flows

The peak traffic flows indicate 28 Car / Light Goods Vehicle (LGV) and 50 Heavy Goods Vehicle (HGV) two way movements are predicted per day. This would occur in months 3 to 6.

It is assumed that all aggregate and concrete materials for use in the construction of access tracks, hardstands and access junctions would be sourced from quarry suppliers located on the A9 for access from the south and from suppliers on the A82 for the northern access.

Staff working during the construction programme have been assumed to be based locally, with northern site access staff being based in Fort Augustus and south access staff based in Spean Bridge, Dalwhinnie and Newtonmore.

Construction traffic has been assigned to the study area network. The resulting traffic flows are summarised in Table 9.

Table 9 Peak Construction Traffic Flows

		Northern Access			Southern Access		
Site Ref.	**Survey Location**	**Car & LGV**	**HGV**	**Total**	**Car & LGV**	**HGV**	**Total**
1	A86	0	0	0	14	12	26
2	A86 Spean Bridge	0	0	0	2	0	2
3	A882	0	0	0	12	12	24
4	A82 Aberchalder – Fort Augustus	14	38	52	0	0	0
5	B862	14	38	52	0	0	0

Please note minor variances due to rounding may occur.

7 Construction Traffic Impact Assessment

The peak month traffic data for the Proposed Development was combined with the future year (2025) traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is illustrated in Table 10.

Table 10 2025 Base + Proposed Development Traffic Volumes and Impact

Survey Location	Cars & LGV	HGV	Total	Cars & LGV	HGV	Total
A86	912	84	996	1.56%	16.63%	2.68%
A86 Spean Bridge	2174	247	2421	0.09%	0.00%	0.08%
A882	949	100	1049	1.28%	13.61%	2.34%
A82 Aberchalder – Fort Augustus	3026	283	3309	0.46%	15.50%	1.60%
B862	759	327	1085	1.88%	13.16%	5.03%

Please note minor variances due to rounding may occur.

The total traffic movements are not predicted to increase by more than 5.03% on the whole study area network. This is significantly less than the average daily variance in traffic flows (+ / -10%) that naturally occurs. The construction phase is transitory in nature and the peak of construction activities is short-lived.

A review of existing road capacity has been undertaken using the Design Manual for Roads and Bridges, Volume 15, Part 5 "The NESA Manual" [5]. The theoretical road capacity has been estimated for each of the road links for a 12-hour period that makes up the study area. The results are summarised in Table 11.

Table 11 2025 Daily Traffic Capacity Review

Site Ref.	Survey Location	2025 Baseline Traffic Flows	2025 Base + Proposed Development Traffic Flows	Theoretical Road Capacity (12hour)	Spare Road Capacity (%)
1	A86	970	996	21600	95.4%
2	A86 Spean Bridge	2419	2421	21600	88.8%
3	A882	1025	1049	19200	94.5%
4	A82 Aberchalder – Fort Augustus	3257	3309	21600	84.7%
5	B862	1033	1085	19200	94.3%

The results indicate there are no road capacity issues with the combined development and ample spare capacity exists within the trunk and local road network to accommodate construction phase traffic.

Whilst no capacity issues are predicted, there are mitigation measures that can be used to reduce the impact of the construction traffic on other road users and nearby residents. These are outlined in the following chapter.

[5] Design Manual for Roads and Bridges (DMRB) Volume 15 Part 5: Traffic Modelling in NESA (Network Evaluation from Surveys and Assignment), Chapter 3. July 2005. Highways Agency

8 Framework Traffic Mitigation Measures

8.1 Construction Phase

The following measures would be implemented through a Construction Traffic Management Plan (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 located within the Cloiche and Dell Wind Farm sites could be used to reduce or eliminate they 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 hours) – 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.

THC 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.

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.

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.

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

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.

8.2 Public Information

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

8.3 Outdoor Access Management Plan

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.

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.

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.

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.

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.

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.

8.4 Operational Phase Mitigation

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 operation and to ensure there are no run-off issues onto the public road network.

9 Summary & Conclusions

Pell Frischmann (PF) has been commissioned by ASH design+assessment, on behalf of Scottish & Southern Electricity Networks Transmission (SSEN), to undertake a Transport Assessment for the Proposed Development, which comprises of a new 132 kV overhead line to connect the proposed Cloiche and Dell Wind Farms to the electricity transmission network at Melgarve substation.

An assessment of average daily development trips is considered an appropriate method of assessing the impacts of the Proposed Development on the study area roads. The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development.

A series of mitigation measures and management plans have been proposed to help mitigate and offset the impacts of both the construction and operational phase traffic flows.

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.