Pell Frischmann

Breezy Hill Energy Project

Technical Appendix 11.1 – Transport Assessment

May 2025

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1 Introduction

1.1 Purpose of the Report

Pell Frischmann Consultants Ltd. (PF) has been commissioned by SLR Consulting Ltd. (SLR) on behalf of Breezy Hill Energy Ltd. (the 'Applicant') to undertake a Transport Assessment (TA) for the proposed Breezy Hill Energy Project (the 'Proposed Development'). The Proposed Development is located in the East Ayrshire Council (EAC) administrative area near the settlement of Rankinston, approximately 13 kilometres (km) south-east of Ayr, and approximately 5.5 km south-west of the town of Cumnock.

The report identifies the key transport and access issues associated with the Proposed Development, including route for Abnormal Indivisible Loads (AILs). The TA identifies where the Proposed Development may require mitigation works to accommodate the predicted traffic; however, the detailed design of these remedial works is beyond the agreed scope of this report. The findings of this report have informed the assessment of traffic and transport related effects in Environmental Impact Assessment (EIA) **Report Volume 1: Chapter 11: Access, Traffic & Transport.**

1.2 Report Structure

Following this introduction, the TA report is structured as follows:

- Chapter Two describes the 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

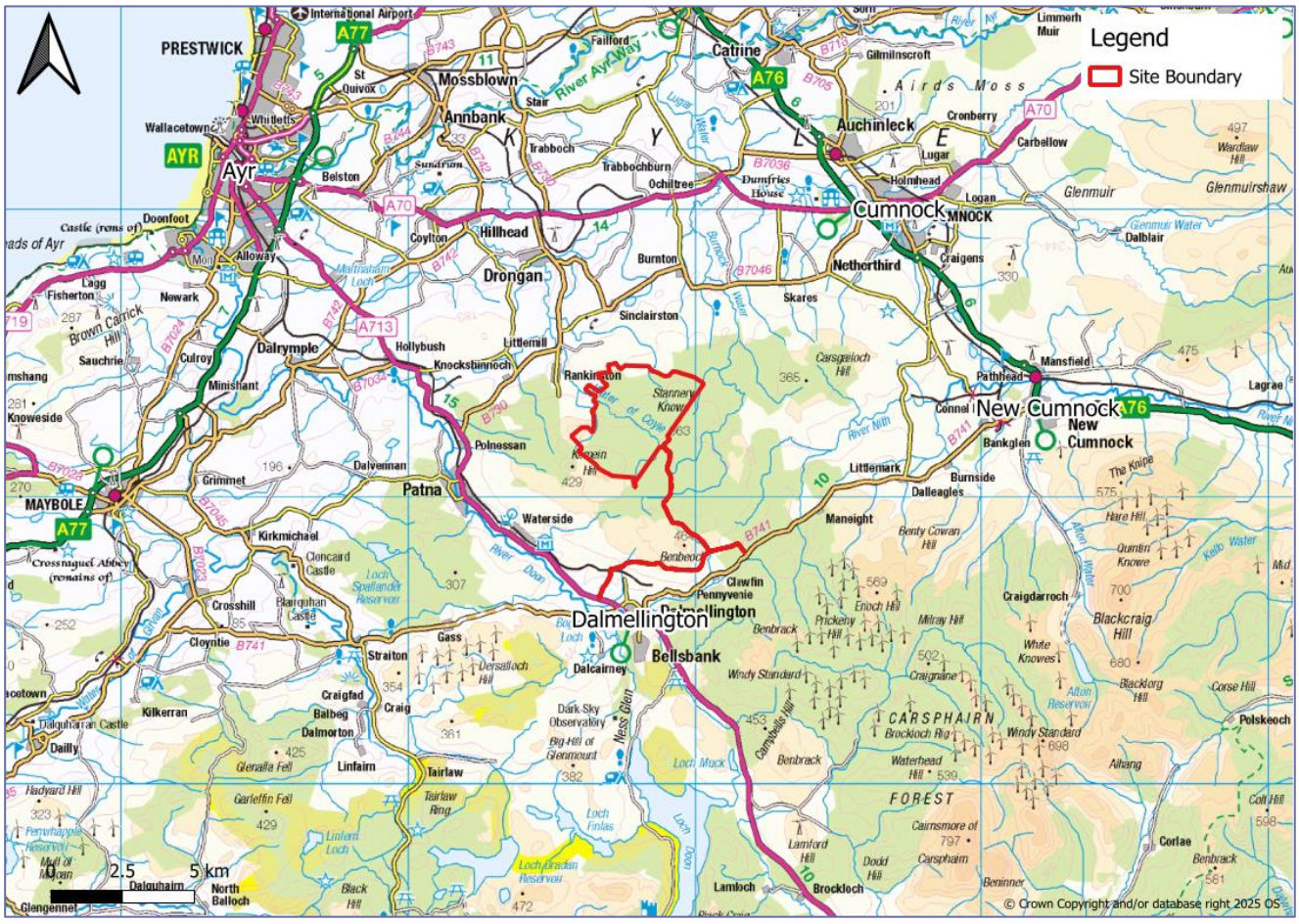
2.1 Site Location

The Proposed Development is located to the east of the settlement of Rankinston, approximately 13 km south-east of Ayr, and approximately 5.5 km south-west of the town of Cumnock, in East Ayrshire.

The Site centre is located in the North Kyle Forest Estate (NKF).The Site is situated in a predominantly rural environment, surrounded by several villages and settlements. There are a number of residential and commercial properties located alongside the A713 which runs north-south, approximately 5 km south-west of the Site through the villages of Waterside and Dalmellington. Additionally, the settlement of Rankinston is located approximately 1.7 km north-west of the Site.

The Site location can be seen in **Figure 1.**

Figure 1 Site Location



2.2 Proposed Development

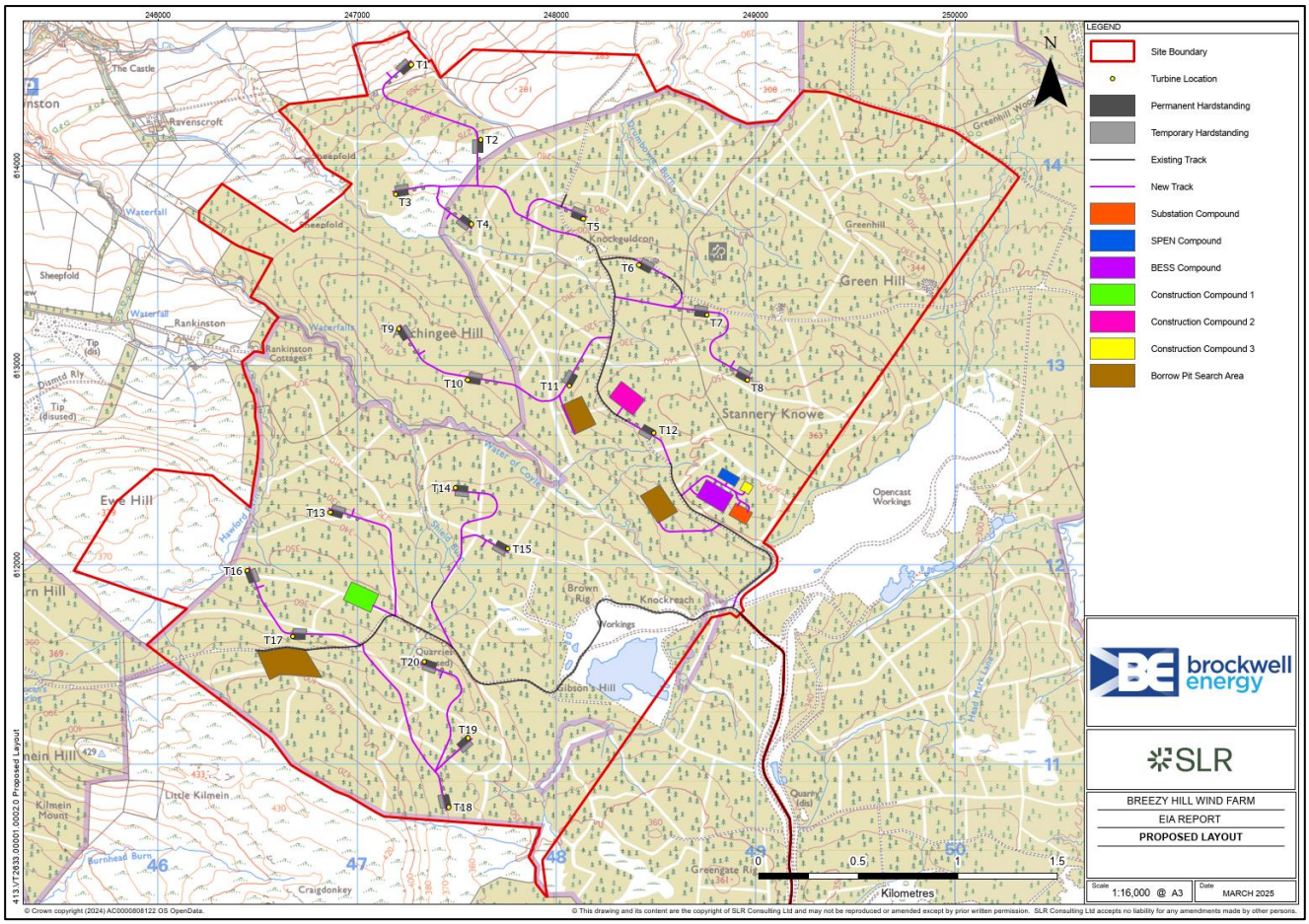
The Proposed Development will comprise the following:

- 20 wind turbines;
- Turbine foundations;
- Crane hardstandings;
- Battery Energy Storage System (BESS) infrastructure;
- Two Site entrances;
- Internal and private access road network;
- Watercourse crossings;

- On-site borrow pit(s) depending on the suitability of site-won materials to provide aggregate for the construction of the Proposed Development;
- Transformers and underground cables;
- On-site substation / switchgear building; and
- Temporary construction compounds.

The Proposed Development is shown in **Figure 2.**

Figure 2 Proposed Development Layout (courtesy of SLR)



A complete description of the Proposed Development is provided in **EIAR Volume 1: Chapter 2, Proposed Development**.

2.3 Access Arrangements

The Proposed Development will be accessed from two existing junctions on the local road network. The first access, which will be used by general construction traffic and AILs, is an existing simple priority junction on the A713, located approximately 650 metres (m) north-west of the junction between the A713 and B741, near Dalmellington. This access, known as the 'Chalmerston access', is an existing mining access, owned and used by Hargreaves Land Ltd. and has recently been used in the construction of the North Kyle Wind Farm.

A detailed Route Survey Report (RSR) has been prepared and appends this TA as **Annex A**. This will identify the necessary access improvements that will be required to enable loads to access the Site via the Chalmerston access in a safe and efficient manner.

The second access, known as the 'Darntaggart entrance', is owned and used by FLS, and is located on the B741, approximately 5.2 km to the east of the junction between the A713 and B741 at Dalmellington. This access would

be used for general construction traffic, for vehicles originating from the east of the Proposed Development, as well as for the export of felled timber.

Material sourced from local suppliers will be used where feasible and traffic will avoid impacting on local communities, as far as possible.

Construction traffic associated with the Proposed Development will generally originate from the north, joining the study area on the A77 and then A713 or from the B741 to the south, accessed from the A76.

All AIL traffic will access from the Port of Entry (PoE) at King George V Docks in Glasgow, utilising sections of proven AIL routes used during the construction of other wind farms in the area, including North Kyle Energy Project.

2.4 Candidate Turbine

The Applicant has indicated that they would like to consider Vestas V136 with a blade tip height of 149.9 m for the purposes of this assessment. The details of the components have been provided by Vestas and are detailed in **Table 1.**

Table 1 Turbine Components Summary

Component	Length (m)	Width (m)	Height / Min Diameter (m)	Weight (t)
Blade	66.770	4.040	2.750	15.701
Nacelle Housing	12.940	3.981	3.387	67.566
Top Tower	29.000	3.350	3.268	41.500
Mid Tower	28.840	3.650	3.350	58.500
Base Tower	21.726	(4.010) 3.650	3.650	73.500

With regards to the equipment used to transport the turbine components, to provide a robust assessment scenario based upon the known issues along the access routes and constraints in moving larger loads, it has been assumed that all blades would be carried on a Superwing Carrier trailer to reduce the need for mitigation in constrained sections of the route.

Towers would be carried in a 4+7 clamp adaptor style trailer, whereas loads such as the hub, nacelle housing, and top towers would be carried on a six-axle step frame trailer.

Examples of the vehicles and trailers that are likely to transport loads are shown in **Figures 3** - **4 and 5.**

Figure 3 Superwing Carrier Trailer

Figure 4 Six-Axle Step Frame Trailer

Figure 5 Tower Trailer

3 Policy Context

3.1 Introduction

An overview of relevant transport planning policies has been undertaken and is summarised below for national and local government policies.

3.2 National Policy

3.2.1 National Planning Framework 4 (2023)

The National Planning Framework 4 (NPF4) was approved by Scottish Parliament on 11 January 2023 and was adopted by Scottish Ministers on 13 February 2023. NPF4 sets out the Government's plan looking forward to 2045 that will guide spatial development, set out national planning policies, designate national developments and highlight regional spatial priorities. It is part of the development plan and so influences planning decisions across Scotland.

NPF4 puts the climate and nature crises at the heart of the Scottish planning system and was adopted in February 2023.

Policy 11: Energy within the NPF4 notes that: *"Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported. These include:*

- Wind farms including repowering, extending, expanding and extending the life of existing wind farms; and
- Energy storage, such as battery storage and pumped storage hydro.
- In addition, project design and mitigation will demonstrate how the following impacts are addressed:
- Impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;
- Public access, including impact on long distance walking and cycling routes and scenic routes;
- Impacts on road traffic and on adjacent trunk roads, including during construction; and
- Cumulative impacts."

The assessment undertaken as part of this TA and the associated **EIAR Chapter 11** has taken cognisance of this and provided appropriate mitigation where necessary.

3.2.2 Planning Advice Note (PAN) 75

Planning Advice Note (PAN) 75: Planning for Transport provides advice on the requirements for Transport Assessments. The document notes that:

"… transport assessment to be produced for significant travel generating developments. Transport Assessment is a tool that enables delivery of policy aiming to integrate transport and land use planning."

"All planning applications that involve the generation of person trips should provide information which covers the transport implications of the development. The level of detail will be proportionate to the complexity and scale of the impact of the proposal...For smaller developments the information on transport implications will enable local authorities to monitor potential cumulative impact and for larger developments it will form part of a scoping exercise for a full transport assessment. Development applications will therefore be assessed by relevant parties at levels of detail corresponding to their potential impact."

3.2.3 Transport Assessment Guidance (2012)

Transport Scotland's (TS) Transport Assessment Guidance was published in 2012. It aims to assist in the preparation of TAs for development proposals in Scotland such that the likely transport impacts can be identified and dealt with as early as possible in the planning process. The document sets out requirements according to the scale of development being proposed.

The document notes that a TA will be required where a development is likely to have significant transport impacts but that the specific scope and contents of a TA will vary for developments, depending on location, scale and type of development.

3.2.4 Onshore Wind Turbines: Online Renewables Planning Advice (2014)

The most recent Scottish Government advice note regarding onshore wind turbines was published in 2014. The advice note identifies the typical planning considerations in determining applications for onshore wind turbines including landscape impact, impacts on wildlife and ecology, shadow flicker, noise, ice throw, aviation, road traffic impacts, cumulative impacts and decommissioning.

In terms of road traffic impacts, the guidance notes that in siting wind turbines close to major roads, pre-application discussions are advisable as this is important for the movement of abnormal indivisible loads during the construction period, ongoing planned maintenance and for decommissioning (if applicable).

3.3 Local Policy & Guidance

3.3.1 East Ayrshire Local Development Plan 2 (LDP2), 2024

East Ayrshire Council's Local Development Plan 2 (LDP2) was adopted in April 2024. In relation to wind energy, *Policy RE1: Renewable Energy* within the LDP states that:

"All applications for renewable energy proposals should be accompanied by detailed supporting information to allow a detailed assessment to be made against the criteria, both in terms of the impacts of the development itself and the cumulative impacts when considered alongside other developments."

"Proposals for renewable energy must consider decommissioning and restoration proposals as part of their applications. The need for planning conditions relating to the decommissioning of developments, including ancillary infrastructure, and site restoration will be considered, as will the need for planning obligations to achieve site restoration."

In relation to transport, *Policy T1: Transport requirements in new developments* states that:

"Where a development proposal will generate a significant increase in the number of person trips, a transport assessment will be required to be undertaken in accordance with the relevant guidance."

"Development proposals that have the potential to affect the operation and safety of the Strategic Transport Network will be fully assessed to determine their impact. Where it has been demonstrated that existing infrastructure does not have the capacity to accommodate a development without adverse impacts on safety or unacceptable impacts on operational performance, the cost of the mitigation measures required to ensure the continued safe and effective operation of the network should be met by the developer."

3.4 Policy Summary

The Proposed Development can align with the stated policy objectives and the design of the Site and proposed mitigation measures will ensure compliance with national and local objectives.

4 Study Methodology

4.1 Introduction

There are three phases of the Proposed Development which have been considered in this assessment and are as follows:

- The Construction Phase;
- The Operation Phase; and
- The Decommissioning Phase.

4.2 Project Phases – Transport Overview

Of the three phases, the construction phase is considered to have the greatest impact in terms of transport and potential impacts on the road network and sensitive receptors. Construction plant, bulk materials and wind turbine components will be transported to Site, potentially resulting in a significant increase in traffic on the study network.

The operation phase is restricted to occasional maintenance operations which generate significantly lower volumes of traffic that are not considered to be in excess of daily traffic variation levels on the road network.

The decommissioning phase involves fewer trips on the road network than the construction phase, as minor elements of infrastructure are likely to be left in place, adding to local infrastructure that can potentially be used for further agricultural or leisure uses in the future.

It should be noted, however, that construction effects are short lived and transitory in nature, whilst the operation phase assessment has been assumed to be based on typical operating conditions with occasional operation and maintenance traffic.

4.3 Scoping Discussions

The Applicant submitted a scoping report to the Energy Consents Unit (ECU) in respect of the EIA which included a section considering traffic and transport. A full review of that scoping opinion and other correspondence relating to the scope of the study including pre-application advice is provided in the **EIAR Chapter 11: Access, Traffic & Transport.**

5 Baseline Conditions

5.1 Study Area Determination

The study area includes local roads that are likely to experience increased traffic flows resulting from the Proposed Development. The geographic scope was determined through a review of Ordnance Survey (OS) plans and an assessment of the potential origin locations of construction staff and supply locations for construction materials. Locally sourced material will be used where feasible and traffic will avoid impacting on local communities as far as is possible.

Construction traffic associated with the Proposed Development will generally originate from the north, joining the study area on the A77 and then A713, or from the B741 to the south accessed from the A76.

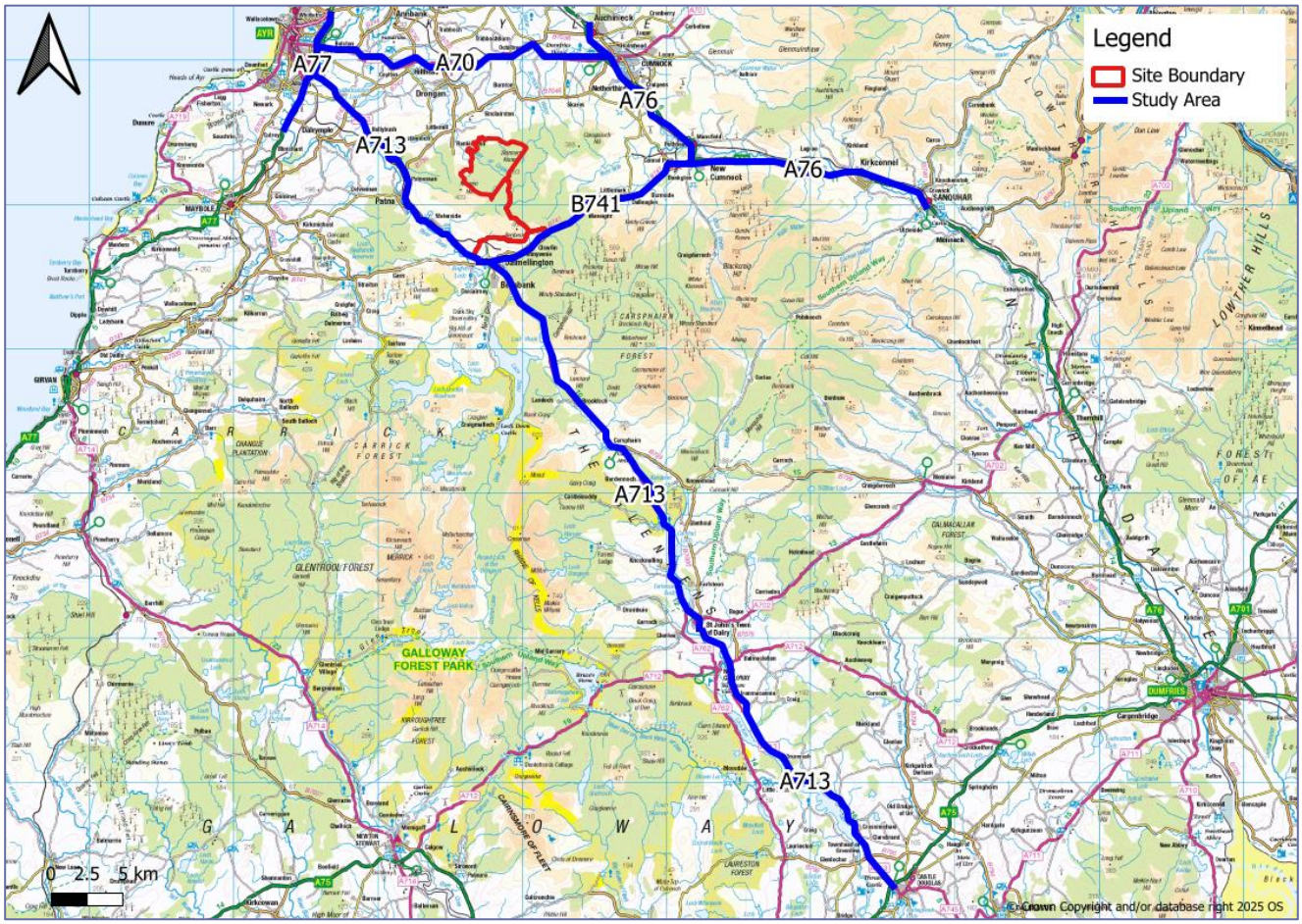
As previously highlighted, the likely PoE used for the discharging of wind turbine components will be King George V Docks in Glasgow. Full details of the AIL route are provided later in the report and within **Annex A.**

Based on the above, the study area for this assessment is as follows:

- A713 between its junction with the A77 and Dalmellington;
- A713 between its junction with Dalmellington and A75;
- B741 between its junctions with the A713 and A76;
- A70 between its junctions with the A77 and A76;
- A76 between Auchinleck and Sanquhar; and
- A77 between St Quivox and Nether Auchindrane.

Effects associated with construction traffic generated by the Proposed Development would be most pronounced in close proximity to the Site access junction and on the final approaches to the Site. As vehicles travel away from the Proposed Development, they would disperse across the wider road network, thus diluting any potential effects. It is therefore expected that the effects relating to construction traffic are unlikely to be significant beyond the study area identified above. The study area is shown in **Figure 6.**

Figure 6 Study Area



5.2 Pedestrian and Cyclist Networks

There are no dedicated pedestrian facilities in the immediate vicinity of the Site or in the vicinity of the proposed Site access locations. The closest settlement to the Proposed Development is Dalmellington, which is located approximately 3.8 km to the south (from the centre of the Site) and there are pedestrian facilities within the settlement. There are pedestrian footways on one or both sides of the carriageway, on the majority of the roads within Dalmellington, including on the A713, which is the main road passing through the town. There are no dedicated crossing facilities within the town, however a number of roads are traffic calmed, making them conducive to walking and cycling.

Further away from the Proposed Development in the wider study area, there are pedestrian facilities within the larger settlements like Cumnock and Ayr, and some of the smaller settlements, including Patna and New Cumnock.

The level of pedestrian infrastructure in the immediate vicinity of the Site is commensurate with the scale of the local settlements and their rural setting.

A review of EAC Core Path Map[1] indicates there are no Core Paths located within the Site boundary, however there are a small number of Core Paths in the vicinity of the Site and on sections of the study area which could be impacted by construction vehicles routing to the Site. Those Core Paths sufficiently set back from the road network are excluded. The relevant Core Paths are provided below:

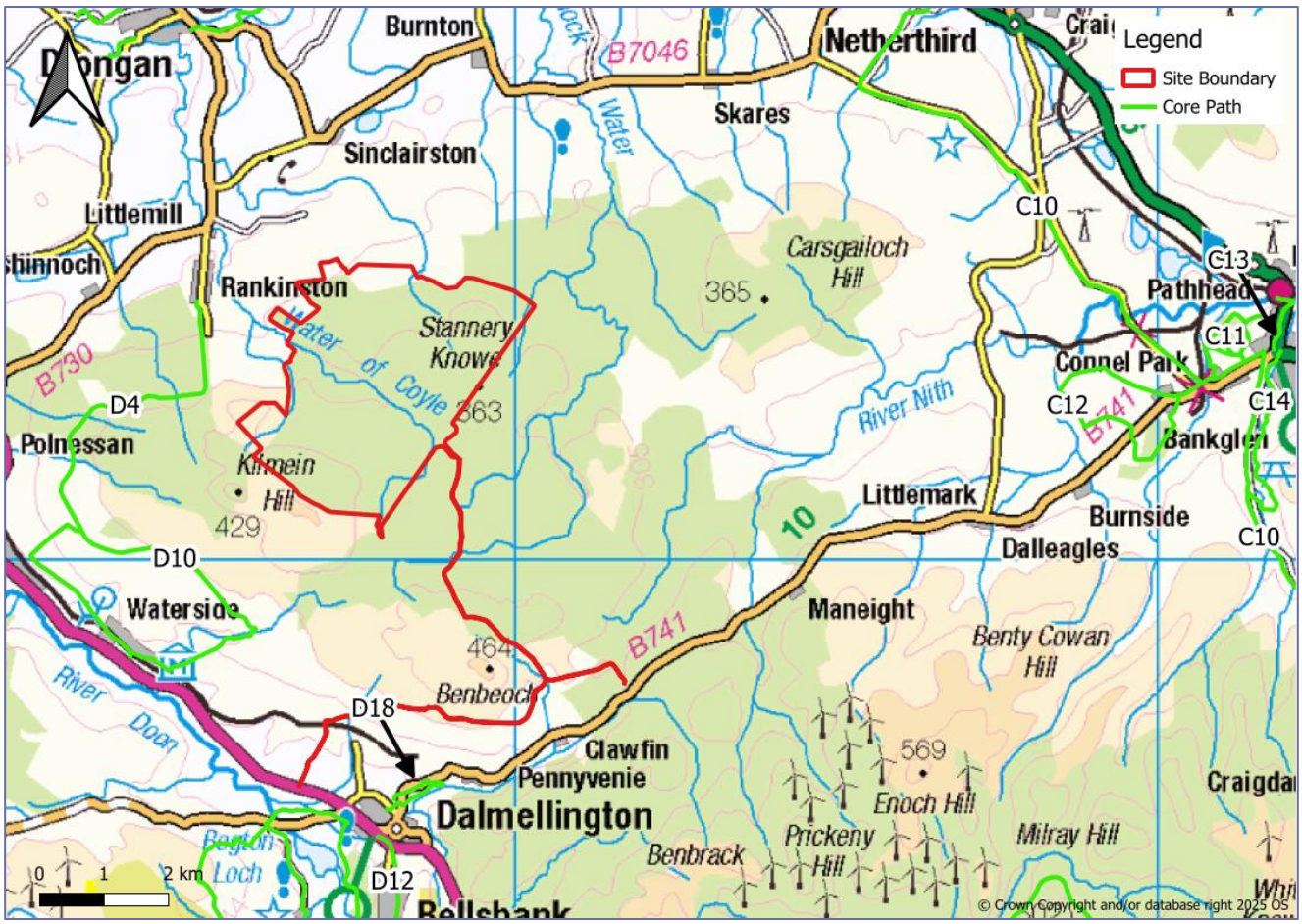
- Core Path D4: Patna to Rankinston;
- Core Path D10: Patna and Waterside Circular;

[1] https://eastayrshireleisure.com/countryside-outdoor/routes-in-east-ayrshire/core-path-plan/ [Accessed April 2025]

- Core Path D12: Dalmellington to Bogton Plantation;
- Core Path C10: Coalfield Cycle Route;
- Core Path C11: Knockshinnoch Lagoons;
- Core Path C12: New Cumnock Circular;
- Core Path C13: Castle Path;
- Core Path C14: Glen Afton; and
- Core Path D18: Carmlarg.

The Core Path Network within the vicinity of the Site can be seen in **Figure 7.**

Figure 7 Core Path Network



A review of the Sustrans National Cycle Network (NCN) map[2] indicates that the closest cycle route to the Site is NCN Route 7, located approximately 15 km west of the Proposed Development and does not overlap with the Proposed Development study area. NCN Route 7 spans over 965 km and links Inverness with Sunderland, passing through Ayr to the west of the Site. There are no NCN routes within the vicinity of the Proposed Development.

5.3 Road Access

A713

The A713 is a major road of approximately 64 km in length and 6.5 m in width. It is a two-way single carriageway road connecting Ayr and Castle Douglas. The road is generally subject to a 60 miles per hour (mph) speed limit,

[2] https://www.sustrans.org.uk/national-cycle-network [Accessed April 2025]

reducing through settlements, with speeds ranging from 30 mph, 40 mph and 50 mph. The A713 in the vicinity of the Site is maintained by the Ayrshire Roads Alliance (ARA) on behalf of EAC.

B741

The B741 is a two-way single carriageway B-road through East Ayrshire approximately 50 km in length. It starts at a junction on the A76 in New Cumnock and ends at a T-junction on the A77 north of Girvan. The B741 within the study area is maintained by the ARA and appears to be in a reasonable condition. The road is subject to a 60mph speed limit in rural areas, reducing to 30 mph in settlements.

A70

The A70 is a major road which runs for a total of 120 km from Edinburgh, where it begins as Dalry Road, to Ayr, where it ends as Miller Road. The A70 is approximately 7.3 m in width and links the A77 to the A76. The A70 is maintained by the ARA within the study area and appears to be in good condition. The road is mainly subject to a 60mph speed limit which reduces to 30 mph through settlements, for example Ochiltree and Coylton. In the vicinity of schools, the speed limit reduces to a part-time 20 mph limit.

A76

The A76 is a major trunk road within East Ayrshire, to the east / north-east of the Site. The road runs for a total of 90 km from Kilmarnock, where it starts at the Belfield Interchange running to Cuckoo Bridge Roundabout in Dumfries. The A76 is maintained by Amey on behalf of TS and sits within the South West Unit of the Trunk Road network. The road for the most part is subject to a 60 mph speed limit outwith towns and settlements, where it reduces to speeds ranging from 30 mph, 40 mph and 50 mph.

A77

The A77 is a major trunk road approximately 148 km in length. It runs from Glasgow to Portpatrick and passes through Kilmarnock, Ayr, and Stranraer. The A77 is maintained by Amey on behalf of TS and sits within the South West Unit of the Trunk Road network. The road for the most part is subject to a 60mph speed limit outwith towns and settlements, where it reduces to speeds ranging from 30 mph, 40 mph and 50 mph.

General Road Suitability

The Agreed Timber Route Map[3] has been developed by The Timber Transport Forum who are a partnership of the forestry and timber industries, local government, national government agencies, timber hauliers and road and freight associations. One of the key aims of the forum is to minimise the impact of timber transport on the public road network, on local communities and the environment and a way of achieving this is to categorise the roads leading to forest areas in terms of their capacity to sustain the likely level of timber haulage vehicles i.e. Heavy Goods Vehicles (HGVs). The routes are categorised into four groups, namely; ‘Agreed Routes’, ‘Consultation Routes’, ‘Severely Restricted Routes’ and ‘Excluded Routes’.

‘Agreed Routes’ are categorised as routes used for timber haulage without restriction as regulated by the Road Traffic Act 1988. A-roads are classified as ‘Agreed Routes’ by default unless covered by one of the other road classifications. Those links classed as ‘Consultation Routes’ are categorised as a route which is key to timber extraction, but which are not up to ‘Agreed Route’ standard. Consultation with the local authority is required, and it may be necessary to agree limits of timing, allowable tonnage etc. before the route can be used. B-roads are classified as ‘Consultation Routes’ by default unless covered by one of the other classifications. ‘Severely Restricted Routes’ are not normally to be used for timber transport in their present condition. These routes are close to being Excluded Routes. Consultation with the local authority is required prior to use. Finally, ‘Excluded Routes’ should not be used for timber transport in their present condition. These routes are either formally restricted, or are close to being formally restricted, to protect the network from damaging loads.

[3] https://timbertransportforum.org.uk/ [Accessed April 2025]

Roads within the study area form part of the route network used for the extraction of timber and are therefore regularly used by HGV traffic. This includes sections of the A713, A70, A76, and A77 which are 'Agreed Routes' and the B741 which is a 'Consultation Route'.

5.4 Existing Traffic Conditions

In order to assess the impact of development traffic on the study area, Automatic Traffic Counters (ATC) were deployed along the A713 and the B741, in the vicinity of the proposed Site access junctions over a seven-day period in June 2024, in order to collect vehicle volumes, composition and speed per direction per hour.

To compliment the ATC survey, existing traffic count data was obtained from the Transport Scotland (TS) database, with 2024 data utilised for all locations with the exception of location eight, where there was insufficient data for 2024. As such 2023 data for this location has been used.

The traffic count sites used are as follows:

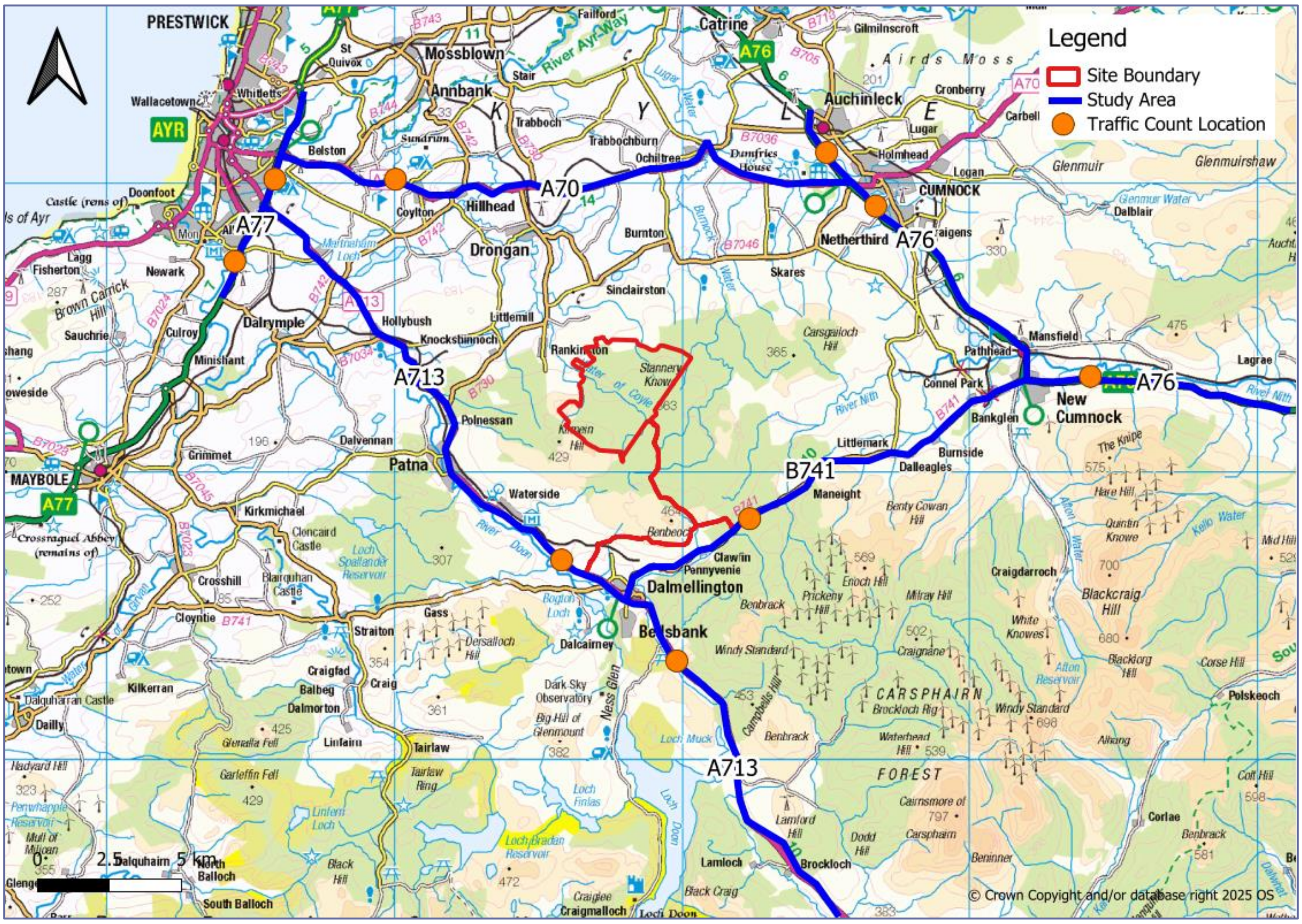
1. A713, north-west of Dalmellington (Commissioned ATC Survey);
2. A713, south-east of Dalmellington (Commissioned ATC Survey);
3. B741, east of Dalmellington (Commissioned ATC Survey);
4. A70, west of Coylton (TS Counter: ATC00322);
5. A76, south of Cumnock (TS Counter: ATCSW004);
6. A76, north of Cumnock (TS Counter: ATCSW005);
7. A76, New Cumnock (TS Counter: JTC00537);
8. A77, north of A713 junction (TS Counter: JTC00109); and
9. A77, south of A713 junction (TS Counter: JTC00110).

The traffic counters allowed the traffic flows to be split into vehicle classes and the data has been summarised into cars / light good vehicles (LGVs) and HGVs (all goods vehicles >3.5 tonnes gross maximum weight).

These sites were identified as being areas where sensitive receptors on the access routes would be located. A full receptor sensitivity and effect review is prepared in **EIAR Chapter 11**.

The locations of the traffic count sites are illustrated in **Figure 8.**

Figure 8 Traffic Count Locations



A National Road Traffic Forecast (NRTF) Low growth factor has been applied to the survey data to bring it up to the base year of 2025. The NRTF Low growth factors applied were 1.011 and 1.005 for 2023 and 2024, respectively. The 24-hour two-way average traffic flows for each of the traffic count locations for 2025 are presented in **Table 2.**

Table 2 24-Hour Two Way Average Traffic Data (2025)

Site ID	Survey Location	Count Source	Cars & LGVs	HGVs	Total
1	A713, north-west of Dalmellington	Commissioned ATC	3,822	103	3,925
2	A713, south-east of Dalmellington	Commissioned ATC	1,716	77	1,793
3	B741, east of Dalmellington	Commissioned ATC	881	33	915
4	A70, west of Coylton	TS	10,156	1,151	11,306
5	A76, south of Cumnock	TS	5,198	1,108	6,305
6	A76, north of Cumnock	TS	7,321	1,337	8,658
7	A76, New Cumnock	TS	3,026	755	3,781
8	A77, north of A713 junction	TS	22,337	1,849	24,186
9	A77, south of A713 junction	TS	16,832	1,984	18,816

The ATC and TS survey locations which provided traffic volume data were also used to obtain speed statistics. The two-way seven-day average and 85^{th} percentile speeds observed at the count sites are summarised in **Table 3.**

Table 3 Speed Summary Table

Site ID	Survey Location	Count Source	Mean Speed (mph)	85%ile (mph)	Speed Limit (mph)
1	A713, north-west of Dalmellington	Commissioned ATC	55.5	63.4	60
2	A713, south-east of Dalmellington	Commissioned ATC	42.4	49.3	60
3	B741, east of Dalmellington	Commissioned ATC	37.8	45.3	60
4	A70, west of Coylton	TS	49.1	56.4	60
5	A76, south of Cumnock	TS	51.7	58.1	60
6	A76, north of Cumnock	TS	58.5	65.9	60
7	A76, New Cumnock	TS	25.7	30.4	30
8	A77, north of A713 junction	TS	47.0	54.4	60
9	A77, south of A713 junction	TS	40.8	48.8	60

Speed data for TS Count Sites obtained April 2025

The speed information indicates that for the most part, speed limits are being adhered to within the study area, with the exception of the 85th percentile on the A713 north-west of Dalmellington, and the A76 north of Cumnock and in New Cumnock. The 85th percentile speeds on the A713 north-west of Dalmellington are approximately 6% above the posted speed limit of 60mph, while on the A76, they are 1% above the posted speed limit of 30mph at New Cumnock and 10% above the posted speed limit of 60mph north of Cumnock.

5.4.1 Accident Review

Personal Injury Accident (PIA) data for the three-year period commencing 01 January 2021 through to the 31 December 2023 was obtained from the online resource CrashMap[4] which uses data collected by the police about road traffic crashes occurring on British roads, where someone is injured.

TA Guidance[5] requires an analysis of the accident data on the road network in the vicinity of any development to be undertaken for at least the most recent three-year period. For the purposes of the assessment, PIA data was analysed for the following road links within the immediate vicinity of the Proposed Development:

- A713, between Patna and Dalmellington;
- A713, between Dalmellington and Eriff; and
- B741, between Dalmellington and New Cumnock.

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 fatality.

The locations and severity of the recorded accidents within the study area are summarised in **Table 4** while **Figure 9** shows their locations.

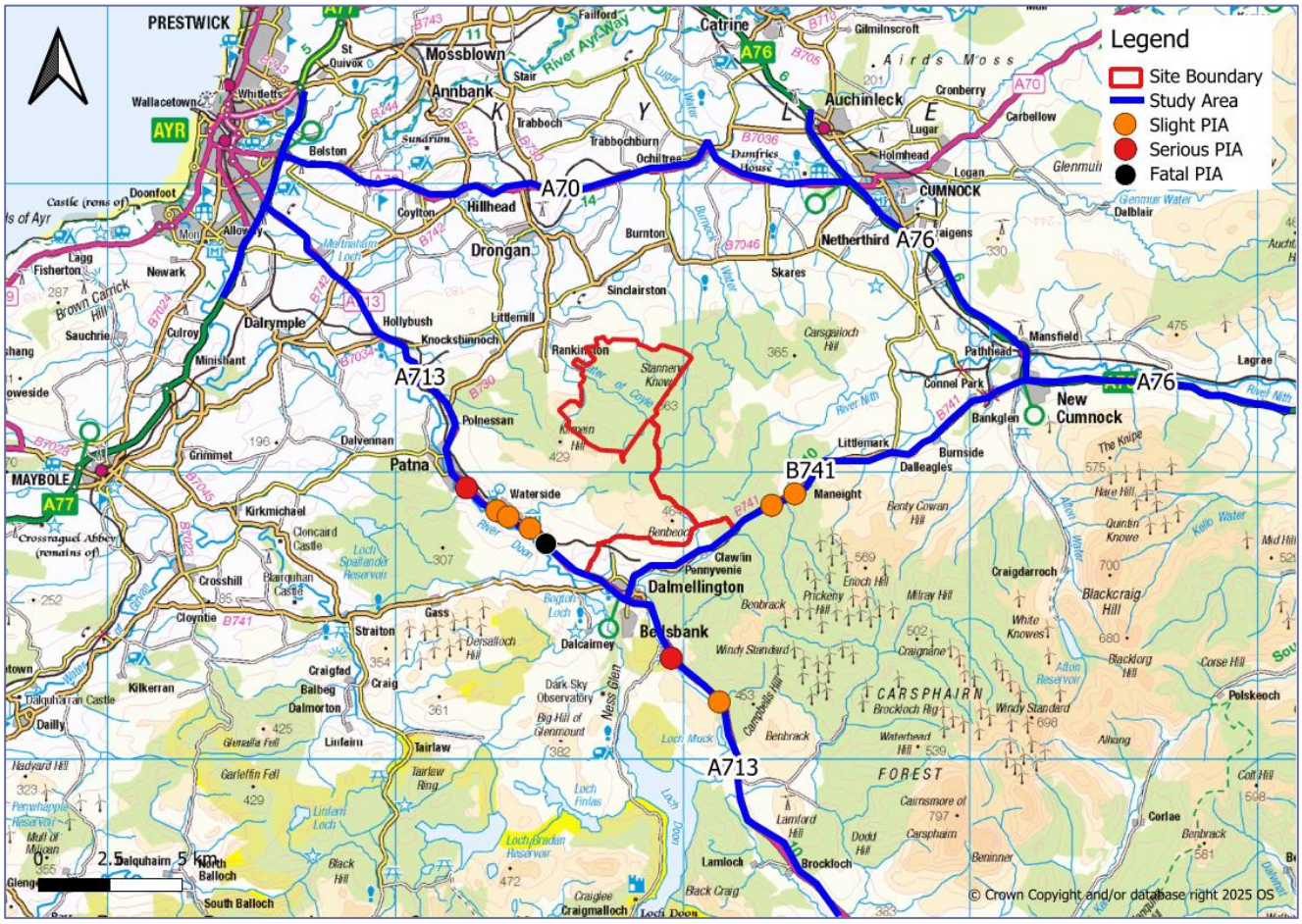
Table 4 Personal Injury Accident Summary

Road Link	Slight	Serious	Fatal	HGV
A713 between Patna and Dalmellington	3	1	1	0
A713 between Dalmellington and Eriff	1	1	0	0
B741 between Dalmellington and New Cumnock	2	0	0	0
Total	**6**	**2**	**1**	**0**
Percentage of total accidents	**67%**	**22%**	**11%**	**-**

[4] https://www.crashmap.co.uk [Accessed March 2025]

[5] https://www.transport.gov.scot/media/4589/planning_reform_-_dpmtag_-_development_management__dpmtag_ref__17__-_transport_assessment_guidance_final_-_june_2012.pdf

Figure 9 Personal Injury Accident Summary



A general summary of the accidents is as follows:

A713 from Patna to Dalmellington

- There were a total of five PIAs on the A713 at this location, three slight, one serious and one fatal.
- The single fatality occurred at a bend on the carriageway to the east of Waterside and involved four vehicles, all of which were cars. The accident resulted in a total of six casualties, two of which were fatalities.
- Two of the recorded accidents involved a young driver (under 25), both of which were classified as slight.
- Three of the five accidents occurred at junctions (two slight and one serious) and two occurred at bends on the carriageway (one slight and one fatality).
- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV or motorcycle.
- There were no accidents recorded in the immediate vicinity of the Site access.

A713 from Dalmellington to Eriff

- There were a total of two PIAs on the A713 at this location, one slight and one serious.
- The serious accident was a single vehicle accident and involved a motorcycle on a bend on the carriageway.
- The slight accident was a single vehicle accident and involved a car on approach to a junction.
- None of the accidents involved a young driver (under 25).
- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV.

B741

- There were a total of two PIAs on the B741 at this location, both of which were slight.
- Both accidents were single vehicle accidents and occurred on bends on the carriageway.
- None of the accidents involved a young driver (under 25).

- None of the recorded accidents involved a child, pedestrian or cyclist casualty.
- None of the recorded accidents involved an HGV or motorcycle.
- There were no accidents recorded in the immediate vicinity of the Site access.

PIA Summary

The analysis indicates that there were a total of nine PIA incidents within the most recent three year period. Most recorded accidents are categorised as being “slight” (67%) with “serious” accidents representing approximately 22% of all accidents. One accident resulted in a fatality.

None of the recorded incidents within the study area involved an HGV. There were no clusters of PIAs to raise a safety concern and there were no pedestrian, child, or cyclist incidents within the most recent three-year period. There were no accidents within the immediate vicinity of either of the Site access locations.

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 to be addressed or will be exacerbated by construction activities associated with the Proposed Development.

5.5 Future Baseline

Construction of the Proposed Development is expected to commence in 2026 if planning permission is granted and it is expected to take between 18 to 24 months to construct, with the grid connection currently estimated for October 2028. For the purposes of the assessment, an 18 month construction programme has however been assumed, to allow for a suitably robust assessment to take place, whereby all construction activity occurs over a shorter timeframe.

Taking account of the construction trip generation provided further in the TA in **Section 6** of the report, it can be seen that the peak month occurs in month eight of the 18 month construction programme and working back from the estimated grid connection date in October 2028, this would put the peak month of construction activity in 2027, and as such this has been used as the future year baseline for the assessment.

To assess the likely effects during the construction phase, base year traffic flows were determined by applying a NRTF Low growth factor to the surveyed traffic flows. The NRTF Low growth factor for 2025 to 2027 is 1.010. This factor was applied to the 2025 traffic data presented in **Table 2** to estimate the 2027 future baseline traffic flows presented in **Table 5.**

Table 5 Future Baseline Daily Two-Way Traffic (2027)

Site ID	Survey Location	Cars & LGVs	HGVs	Total
1	A713, north-west of Dalmellington	3,860	104	3,964
2	A713, south-east of Dalmellington	1,733	78	1,811
3	B741, east of Dalmellington	890	33	924
4	A70, west of Coylton	10,257	1,162	11,419
5	A76, south of Cumnock	5,250	1,119	6,368
6	A76, north of Cumnock	7,395	1,350	8,745
7	A76, New Cumnock	3,056	762	3,819
8	A77, north of A713 junction	22,561	1,868	24,428
9	A77, south of A713 junction	17,000	2,004	19,004

Please note minor variances due to rounding may occur.

5.6 Committed Developments

5.6.1 Onshore Wind Farm and Energy Related Planning Applications

A review of EAC's online planning portal[6] and Scottish Governments ECU portal[7] was undertaken to identify any consented developments within the vicinity of the Proposed Development which would generate significant traffic within the same study area and should be included within the assessment.

TA Guidance[8] advises that only those projects with extant planning permission or local development plan allocations within an adopted or approved plan require to be included in any assessment. Those projects in scoping or at the application stage should not be included in cumulative assessments as they have yet to be determined. When considering traffic impacts specifically in relation to the construction phase of a project, the potential traffic impact is highly speculative and as such, cannot be included in the assessment.

Table 6 shows the consented wind farm schemes that have been given further consideration.

Table 6 Committed Development Review

Planning Reference	Scheme Name	Status	Included as Committed Development
ECU00001950	North Kyle Energy Project (36 month construction phase)	Consented 8 December 2021 – Commencement of development no later than six years from date of consent.	No – Currently under construction and current information indicates that this will be completed in the next 12 to 18 months. The development would be completed prior to the commencement of the Proposed Development.
PPA-190-2080	Overhill Wind Farm (13 month construction phase)	Consented at Appeal 16 September 2020 – Commencement of development no later than five years from the date of consent.	No – Even if construction commences at the end of the commencement period, the development would be completed prior to the commencement of the Proposed Development.
EC00005256	Enoch Hill 2 Wind Farm (12 month construction phase)	Consented 8 December 2021 – Commencement of development no later than six years from date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
PPA-170-2179	Manquhill Wind Farm (12 month construction phase)	Consented at Appeal 8 July 2024 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
PPA-170-2160	Cornharrow Wind Farm (12 month construction phase)	Consented at Appeal 6 July 2022 – Commencement of development no later than three years from the date of consent.	No – Even if construction commences at the end of the commencement period, the development would be completed prior to the commencement of the Proposed Development.
23/1686/S42	Glenshimmeroch Hill Wind Farm (12 month construction phase)	Consented 12 December 2023 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.

[6] https://eplanning.east-ayrshire.gov.uk/online/ [Accessed March 2025]
[7] https://www.energyconsents.scot/ApplicationSearch.aspx?T=1 [Accessed March 2025]
[8] https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

Planning Reference	Scheme Name	Status	Included as Committed Development
PPA-170-2153 PPA-170-2178 (Combined due to falling within same site boundary)	Margree Area Wind Farm (12 month construction phase) Divot Hill Wind Farm (12 month construction phase)	Consented at Appeal on 21 March 2022 – Commencement of development no later than three years from the date of consent. Consented at Appeal on 10 July 2024 respectively – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
23/2600/S36	Windy Standard III Wind Farm (15 month construction phase)	Consented 30 May 2024 – Commencement of development no later than six years from date of consent.	Yes – Potential for construction phases to overlap if construction of the Proposed Development is consented and begins construction in 2027 or soon thereafter.
ECU00001785	Troston Loch Wind Farm (15 month construction phase)	Consented 18 December 2020 – Commencement of development no later than six years from date of consent.	No – Even if construction commences at the end of the commencement period, the development would be completed prior to the commencement of the Proposed Development.
ECU00001773	Benbrack Wind Farm (12 month construction phase)	Consented 5 November 2019 – Commencement of development no later than five years from date of consent.	No – Even if construction commences at the end of the commencement period, the development would be completed prior to the commencement of the Proposed Development.
15/P/2/0337	Lorg Wind Farm (12 month construction phase)	Consented 18 July 2019 – Commencement of development no later than five years from date of consent.	No – The commencement period has now lapsed. It is acknowledged that a new varied application has been submitted, however this has yet to be determined and therefore cannot be included.
ECU00001801	Sanquhar II Wind Farm (24 month construction phase)	Consented 31 August 2023 – Commencement of development no later than five years from date of consent.	Yes – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027.
22/0221/S42	Knockman Hill Wind Farm (12 month construction phase)	Consented 28 January 2025 – Commencement of development no later than three years from date of consent.	No – Potential for construction phases to overlap if construction commences at the end of the commencement period and the Proposed Development is consented and begins construction in 2027, however there is no available information on construction trip generation or study area for the scheme.
PPA-170-2146	Fell Wind Farm (12 month construction phase)	Consented at Appeal 2 November 2021 – Commencement of development no later than three years from the date of consent.	No – The commencement period has now lapsed. It is acknowledged that a new varied application has been submitted, however this has yet to be determined and therefore cannot be included.
ECU00000735	Shepherds' Rig Wind Farm (21 month construction phase)	Consented 21 August 2023 – Commencement of development no later than five years from the date of consent.	Yes – Potential for construction phases to overlap if construction of the Proposed Development is consented and begins construction in 2027. It is also noted that a revised application will be made in relation to varying the consented scheme.
ECU00002221 / ECU00001856	Lethan Wind Farm / Lethan Wind Farm Extension	Consented 18 June 2020 – Commencement of development no later than six years from the date of consent and consented 8 August	Yes – Potential for construction phases to overlap if construction of the Proposed Development is

Planning Reference	Scheme Name	Status	Included as Committed Development
		2024 – Commencement of development no later than five years from the date of consent.	consented and begins construction in 2027.

Based on the information provided in **Table 6** above, the following projects will be considered further within the cumulative development assessment within **Chapter 11: Access, Traffic & Transport.**

- Enoch Hill 2 Wind Farm;
- Manquhill Wind Farm;
- Glenshimmeroch Hill Wind Farm;
- Margree Area Wind Farm & Divot Hill Wind Farm;
- Windy Standard III Wind Farm;
- Sanquhar II Wind Farm;
- Shepherds' Rig Wind Farm; and
- Lethan Wind Farm and Lethan Wind Farm Extension.

Should the above or any other schemes be consented and constructed at the same time as the Proposed Development, the Applicant would welcome the opportunity to engage with other developers in consultation with EAC to ensure appropriate traffic management measures would be implemented to minimise any cumulative impacts. In the event of all the sites being constructed at the same time it is suggested this would be mitigated through the use of an overarching Traffic Management and Monitoring Plan (TMMP) for all of the sites and by introducing a phased delivery plan which would be agreed with EAC and Police Scotland.

Furthermore, it is extremely unlikely that peak traffic conditions would occur should more than one scheme be constructed at the same time, due to differences in construction programmes, material supplies and developer resources. All abnormal load deliveries cannot occur at multiple separate sites on the same day due to restrictions on the numbers of loads moving on the network at the same time set by Police Scotland.

5.6.2 Other Planning Applications

A review of local online planning applications on the EAC planning applications website was undertaken to determine committed developments which should be considered within this assessment. The review examined consented developments whose trips are considered significant in scale (i.e., has associated traffic impact of over 30%).

The review did not identify any other significant traffic generating developments in the study area that may occur during the construction phase associated with the Proposed Development.

It should be noted that the use of NRTF growth assumptions has provided a basis for general local development growth within the study area.

6 Trip Generation and Distribution

6.1 Construction Phase

6.1.1 Trip Derivation

During the 18-month construction period, the following traffic will require access to the Site:

- Staff transport, in either cars or staff minibuses;
- Construction equipment and materials, deliveries of machinery and supplies such as concrete materials and crushed rock;
- Components relating to the BESS element, substation components and associated infrastructure; and
- AILs consisting of the wind turbine sections and heavy lift cranes.

Average monthly traffic flow data was used to establish the construction trips associated with the Proposed Development, based on the assumptions detailed in the following sections. It should be noted that there may be variations in the following calculations due to rounding, which are not considered significant.

6.1.2 Construction Staff

Staff will arrive in non-HGV vehicles and where possible will be encouraged to car share. The workforce on-site will depend on the activities undertaken, but, based on previous wind farm construction site experience for a project of this scale which suggests four staff per turbine during the short peak period of construction is likely, the maximum number of staff expected on-site could be around 80 per day.

For the purposes of estimating traffic movements, it was assumed that 60% of staff would be transported by minibus and 40% would arrive by car (single car occupancy was assumed as the worst case at this stage with potentially fewer movements through car sharing).

Based on these assumptions, staff transport cars and light vehicles would account for a maximum of 72 vehicle movements (36 inbound trips and 36 outbound trips) per day during the peak period of construction.

6.1.3 Abnormal Indivisible Loads

The turbines are broken down into components for transport to the Site. The nacelle, blade and tower sections are classified as AIL due to their weight, length, width and height when loaded. For the purposes of the report, the 'worst case' numbers of components requiring transport are illustrated in **Table 7**.

Table 7 Turbine Components

Component	Number of Components per Turbine
Rotor Blades	3
Tower Sections	3
Nacelle	1
Hub	1
Drive Train	1
Nose Cone	1
Transformer	1
Ancillary	1
Site Parts	0.25 (parts shared between 4 wind turbines on one delivery)

In addition to the turbine deliveries, two high-capacity erection cranes would be needed to offload a number of components and erect the turbines. The cranes are likely to be mobile cranes with a capacity up to 1,000 tonnes that are escorted by boom and ballast trucks to allow full mobilisation on-site. Smaller erector cranes would also be present to allow the assembly of the main cranes and to ease the overall erection of the turbines.

Escort vehicles would accompany the AIL convoys to support the traffic management measures. Up to three vehicles would be deployed and it is assumed that three AIL turbine component loads would be delivered per convoy. This would result in 61 convoys on the network (including cranes), with a total of approximately 364 escort vehicle movements (182 inbound trips and 182 outbound trips).

Wind turbine components that do not classify as AILs would be delivered in addition to these, resulting in a further approximate 130 movements (65 inbound trips and 65 outbound trips). All of these deliveries are expected to occur over a period of approximately five months depending on weather conditions.

The escort vehicles have been assumed to be police cars and light goods vehicles. Motorcycles may be deployed, depending upon police resources.

6.1.4 General Deliveries

Throughout the construction phase, general deliveries will be made to the Site by HGV. These would include fuel, Site office supplies and staff welfare. At height of construction, it is assumed that up to 40 vehicle movements to Site are made (20 inbound trips and 20 outbound trips) per month.

6.1.5 Timber Extraction

There will be a requirement for timber felling and extraction associated with the construction of the Proposed Development. It is currently estimated that there will be in the order of 12,000 tonnes (t) of timber to be felled and extracted from the Site.

It has been assumed that the felling will commence in month one of the construction programme and will occur over a period of four months. Note this is subject to change following the preparation of a detailed felling plan.

For the purposes of the assessment, it has been assumed that all timber extracted will be done using a dedicated timber articulated lorry, which has a payload capacity of approximately 25 t.

Based on the above, it is therefore assumed that a total of 960 vehicle movements (480 inbound trips and 480 outbound trips) will be required to extract the timber from the Site.

6.1.6 Material Deliveries

Various materials will need to be delivered to Site to form the site-based infrastructure. At the outset, HGV deliveries will deliver plant and initial material deliveries to the Site to enable the formation of the Site compound and to deliver construction machinery.

The Proposed Development in terms of scale and the on-site infrastructure requirements is large enough to warrant on-site batching of concrete. All turbine and substation foundation concrete will be mixed on-site, with deliveries of cement powder, water (if not sourced from Site), sand and aggregates being delivered by HGV from local suppliers, most likely located to the north-east of the Proposed Development.

The estimated total volume of concrete required on-site is 20,868 m³, based upon expected wind turbine foundation, substation foundation and miscellaneous uses across the Proposed Development. The individual deliveries associated with the raw materials for the production of concrete have been estimated and detailed in **Table 8** below (note, aggregates are included in **Table 9**).

Table 8 Concrete Material Deliveries

Element	Volume / Installation (m³)	Inbound Trips	Total Movements
Cement	5,519	46	92
Sand	2,436	218	436
Water	7,947	265	530

Steel reinforcement required in the foundations across the Proposed Development for wind turbines, substation etc. are estimated to total 4,200 tonnes, resulting in a total of 282 vehicle movements (141 inbound trips and 141 outbound trips).

The proposed access track widths will vary on-site but will generally be in the order of 6 m in width and would be designed to accommodate 13 tonne axle loads. In addition to the access tracks, crane hardstands will be constructed to enable the wind turbine erection process. The borrow pit assessment undertaken has confirmed that the volume of material suitable to be used on Site is in excess of the volume of material required, with a surplus of material estimated to be in excess of 6,000 m^3. Nevertheless, as per the requirements set out within the Scoping Opinion by EAC a worst-case assessment has been undertaken whereby all aggregate materials are imported to the Site from local quarries, with potential suppliers located to the north-east of the Proposed Development. The estimate of imported material is detailed in **Table 9**.

Table 9 Aggregate Material Deliveries

Element	Volume / Installation (m^3)	Total Weight (t)	Lorry Capacity (t)	Inbound Trips	Total Movements
Stone / Aggregates	203,378	447,431	20	22,372	44,744

Note, this includes aggregate materials required for the on-site concrete batching requirements

Geotextile will be delivered to Site in rolls. A total of 313 large rolls may be required at Site and will be delivered by HGV which will result in 32 vehicle movements (16 inbound trips in and 16 outbound trips).

Cables will connect each wind turbine to the substation compound. Trip estimates for the cable materials are provided below in **Table 10** and **11**. Two cables are to be provided within each cable trench and will be backfilled with cable sand.

Table 10 Cable Trip Estimate

Element	Total Cable Length (m)	Length per Drum (m)	Number of Drums	Inbound Trips	Total Movements
Cables	36,014	500	72	8	16
Cable Ducting	2,701	5	540	27	54

Table 11 Cable Sand Trip Estimate

Element	Volume (m^3)	Total Weight (t)	Lorry Capacity (t)	Inbound Trips	Total Movements
Cable Sand	6,077	9,723	20	487	974

One substation building will be constructed on the Site. This will require deliveries of building materials and structural elements and will result in 250 vehicle movements (125 inbound trips in and 125 outbound trips). Battery storage deliveries will result in a further 180 HGV vehicle movements for battery, invertor and cabin / building deliveries etc (90 inbound trips in and 90 outbound trips).

The resulting traffic generation estimates have been plotted onto the indicative construction programme to illustrate the peak journeys on the network. **Table 12** illustrates the trip generation throughout the construction programme for each month, showing two-way construction vehicle movements, i.e. an inbound and outbound trip.

Table 12 Construction Traffic Profile (Two-Way Trips) – Scenario 1: 100% Import of Aggregate Materials

Activity	Class	Month													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Site Establishment & Remediation	HGV	60	40												
Plant Deliveries	HGV	40	30												
Timber Felling	HGV	240	240	240	240										
General Site Deliveries	HGV	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Bulk Material Deliveries	HGV		4,972	4,972	4,972	4,972	4,972	4,972	4,972	4,972	4,972				
Concrete Batching Deliveries	HGV							124	124	124	124	124			
Reinforcement	HGV						141		141						
Cable & Ducting Deliveries	HGV								23	23	23				
Cabling Sand	HGV							244	244	244	244				
Geotextile Deliveries	HGV			11		11		11							
Substation	HGV									63		63		63	
AIL Cranage	HGV												20		
AIL Deliveries	HGV												98	98	98
AIL Escorts	Car & LGV												73	73	73
Battery Storage	HGV											60	60	60	
Commissioning & Testing	Car & LGV														
Staff	Car & LGV	792	792	1,188	1,188	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584
Total HGV	HGV	380	5,322	5,264	5,252	5,024	5,154	5,392	5,544	5,466	5,404	288	218	262	138
Total Cars / LGV	Car & LGV	792	792	1,188	1,188	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,658	1,658	1,658
Total Movements		**1,172**	**6,114**	**6,452**	**6,440**	**6,608**	**6,738**	**6,976**	**7,128**	**7,050**	**6,988**	**1,872**	**1,876**	**1,918**	**1,796**
Total HGV per Day		**18**	**242**	**240**	**240**	**230**	**236**	**246**	**252**	**250**	**246**	**14**	**10**	**12**	**8**
Total Cars / LGV per Day		**36**	**36**	**54**	**54**	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**76**	**76**	**76**
Total per Day		**54**	**278**	**294**	**294**	**302**	**308**	**318**	**324**	**322**	**318**	**86**	**86**	**88**	**82**

Please note minor variances due to rounding may occur.
Calculations assume that there are 22 working days per month.
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Activity	Class	Month			
		15	16	17	18
Site Establishment & Remediation	HGV				60
Plant Deliveries	HGV			40	30
Timber Felling	HGV				
General Site Deliveries	HGV	40	40	40	40
Bulk Material Deliveries	HGV				
Concrete Batching Deliveries	HGV				
Reinforcement	HGV				
Cable & Ducting Deliveries	HGV				
Cabling Sand	HGV				
Geotextile Deliveries	HGV				
Substation	HGV	63			
AIL Cranage	HGV		20		
AIL Deliveries	HGV	98	98		
AIL Escorts	Car & LGV	73	73		
Battery Storage	HGV				
Commissioning & Testing	Car & LGV		60	60	40
Staff	Car & LGV	1,584	1,188	792	792
Total HGV	HGV	202	158	80	130
Total Cars / LGV	Car & LGV	1,658	1,322	852	832
Total Movements		**1,858**	**1,480**	**932**	**962**
Total HGV per Day		**10**	**8**	**4**	**6**
Total Cars / LGV per Day		**76**	**62**	**40**	**38**
Total per Day		**86**	**68**	**44**	**44**

Please note minor variances due to rounding may occur.
Calculations assume that there are 22 working days per month.

The peak of construction activity is expected to occur in month eight when there will be a total of 7,128 vehicle movements, which equates to 324 vehicle movements per day, comprising 252 two-way HGV movements and 72 two-way car / LGV movements.

This would equate to approximately 27 total vehicles movements per hour or 21 HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile i.e. vehicles distributed evenly across the day.

It should however be noted that the Proposed Development's trip generation assumes that 100% of all aggregate materials would be imported to the Site from nearby quarries and should therefore be considered a significant over estimate of the number of HGV movements that will travel to and from the Site during the peak month of activity. As previously advised, the borrow pit assessment undertaken has confirmed that the volume of material suitable to be used on-site is in excess of the volume of material required, with a surplus of material estimated to be in excess of 6,000 m^3.

The resulting traffic generation, whereby on-site borrow pits are used to provide the on-site aggregate materials, with the exception of the sand aggregates to be used within concrete batching have been plotted onto the indicative construction programme to illustrate the peak journeys on the network, to allow a comparison to be made, given that this is what will actually take place. **Table 13** illustrates the trip generation throughout the construction programme for each month, showing two-way construction vehicle movements, i.e. an inbound and outbound trip, utilising on-site borrow pits.

Table 13 Construction Traffic Profile (Two-Way Trips) – Scenario 2: Utilising On-site Borrow Pits

Activity	Class	Month													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Site Establishment & Remediation	HGV	60	40												
Plant Deliveries	HGV	40	30												
Timber Felling	HGV	240	240	240	240										
General Site Deliveries	HGV	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Bulk Material Deliveries	HGV						107	107	107	107	107				
Concrete Batching Deliveries	HGV							124	124	124	124	124			
Reinforcement	HGV						141		141						
Cable & Ducting Deliveries	HGV								23	23	23				
Cabling Sand	HGV							244	244	244	244				
Geotextile Deliveries	HGV			11		11		11							
Substation	HGV									63		63		63	
AIL Cranage	HGV												20		
AIL Deliveries	HGV												98	98	98
AIL Escorts	Car & LGV												73	73	73
Battery Storage	HGV											60	60	60	
Commissioning & Testing	Car & LGV														
Staff	Car & LGV	792	792	1,188	1,188	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,584
Total HGV	HGV	380	350	292	280	52	290	526	680	602	540	288	218	262	138
Total Cars / LGV	Car & LGV	792	792	1,188	1,188	1,584	1,584	1,584	1,584	1,584	1,584	1,584	1,658	1,658	1,658
Total Movements		**1,172**	**1,142**	**1,480**	**1,468**	**1,636**	**1,874**	**2,110**	**2,264**	**2,186**	**2,124**	**1,872**	**1,876**	**1,918**	**1,796**
Total HGV per Day		**18**	**16**	**14**	**14**	**4**	**14**	**24**	**32**	**28**	**26**	**14**	**10**	**12**	**8**
Total Cars / LGV per Day		**36**	**36**	**54**	**54**	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**76**	**76**	**76**
Total per Day		**54**	**52**	**68**	**68**	**76**	**86**	**96**	**104**	**100**	**98**	**86**	**86**	**88**	**82**

Please note minor variances due to rounding may occur.
Calculations assume that there are 22 working days per month.
Continues over the page.

Activity	Class	Month			
		15	16	17	18
Site Establishment & Remediation	HGV				60
Plant Deliveries	HGV			40	30
Timber Felling	HGV				
General Site Deliveries	HGV	40	40	40	40
Bulk Material Deliveries	HGV				
Concrete Batching Deliveries	HGV				
Reinforcement	HGV				
Cable & Ducting Deliveries	HGV				
Cabling Sand	HGV				
Geotextile Deliveries	HGV				
Substation	HGV	63			
AIL Cranage	HGV		20		
AIL Deliveries	HGV	98	98		
AIL Escorts	Car & LGV	73	73		
Battery Storage	HGV				
Commissioning & Testing	Car & LGV		60	60	40
Staff	Car & LGV	1,584	1,188	792	792
Total HGV	HGV	202	158	80	130
Total Cars / LGV	Car & LGV	1,658	1,322	852	832
Total Movements		**1,858**	**1,480**	**932**	**962**
Total HGV per Day		**10**	**8**	**4**	**6**
Total Cars / LGV per Day		**76**	**62**	**40**	**38**
Total per Day		**86**	**68**	**44**	**44**

Please note minor variances due to rounding may occur.
Calculations assume that there are 22 working days per month

The peak of construction activity in the scenario where on-site borrow pits are used, will still occur in month eight, when there will be a total of 2,264 vehicle movements, which equates to 104 vehicle movements per day, comprising 28 HGV movements per hour and 72 car / LGV movements per hour.

This would equate to approximately eight total vehicles movements or approximately two HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile i.e. vehicles distributed evenly across the day.

This would equate to a reduction in 4,864 total vehicle movements in the peak month, or 220 per day.

6.1.7 Distribution of Construction Trips

The distribution of construction traffic on the network will vary depending on the types of loads being transported. The assumptions for the distribution of construction traffic during the construction phase are as follows:

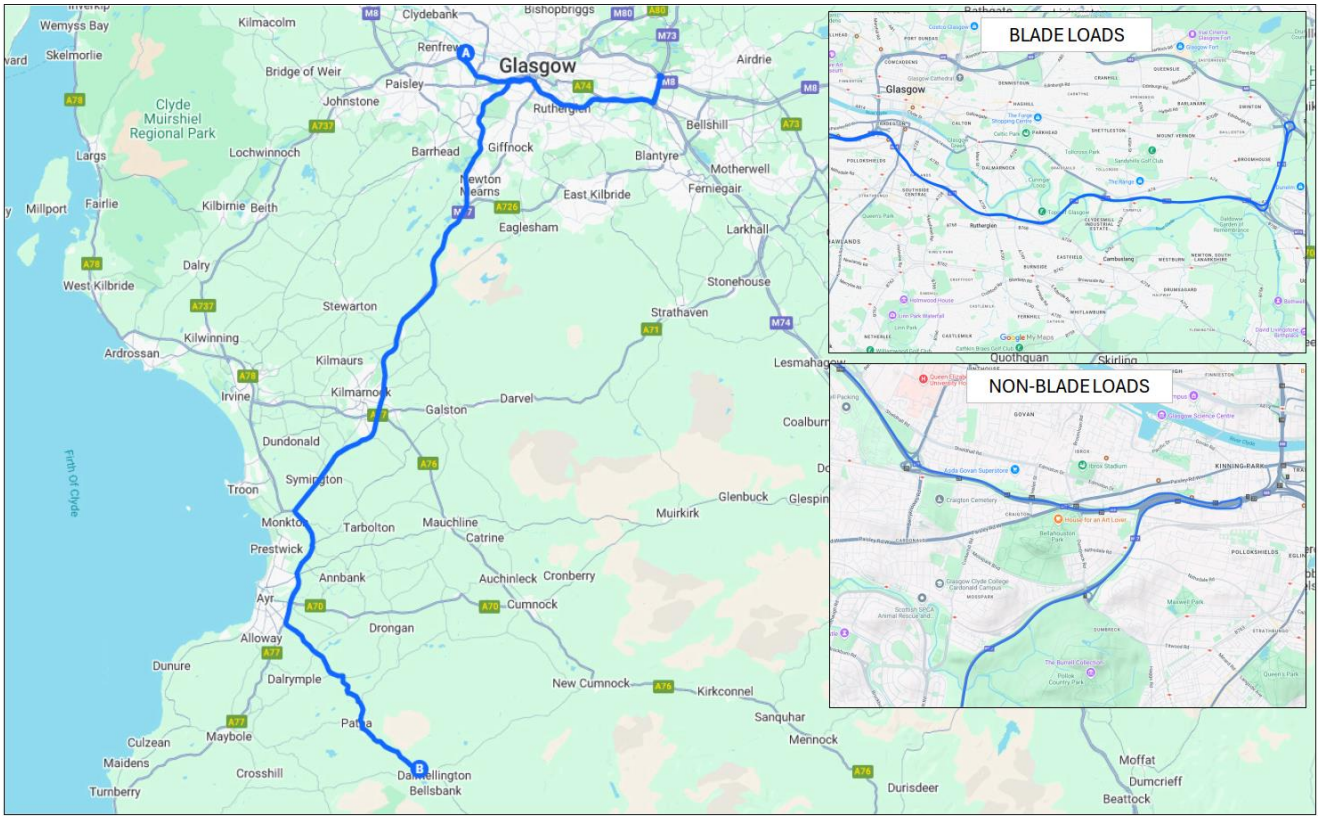
- All construction traffic enters the Site via the A713 for deliveries originating from the north-west or south-west or the B741 for deliveries originating from the north-east or south-east;
- AIL deliveries will access the Site via the A713 access only;
- Deliveries associated with concrete materials, such as cement powder and water, will be sourced from concrete suppliers, which for the purpose of this assessment will originate from the A76 to the north of Cumnock, travelling through to the Site via the A76 and B741. The contractor will confirm final quarry and material sourcing with EAC in the Construction Traffic Management Plan (CTMP);
- For the purpose of this assessment, it is proposed that 100% of access track aggregate, hardstanding aggregate, concrete aggregate and sand requirements will be sourced from local quarries, which are assumed to originate from the A76 to the north of Cumnock, travelling through to the Site via the A76 and B741. The contractor will confirm final quarry and material sourcing with EAC in the CTMP;
- HGV deliveries associated with cabling and associated materials, etc. will arrive from the north, travelling through to the Site via the M77, A77 and A713;
- Staff working at the Site are likely to be based locally. It is assumed that 60% will come from the north, from Ayr and the surrounding area, 30% will come from the south, from the Dumfries area and 10% will come from the north-east from the New Cumnock area;
- General Site deliveries will be from the north from Ayr via the A713 to the Site. These are generally smaller rigid HGV vehicles;
- The destination of timber is unknown at this time, however for the purposes of the assessment, it has been assumed that this would depart the Site via the A713, with 50% heading north on the A713 and 50% south.

For the purposes of preparing **EIAR Chapter 11** and this TA, it has been assumed that all AIL traffic will access the Site via the following routes:

- Loads would depart the KGV Docks and proceed to exit the roundabout onto Kings Inch Drive;
- At the roundabout loads would take the second exit and stay on Kings Inch Drive;
- Loads would merge onto the M8 via the ramp to Glasgow;
- Blade loads will continue east on the M8 / M74 before departing at Junction 4 and continue northbound on the M73, continuing to Junction 8 between the M73 and M8;
- At Junction 8, the loads will circumnavigate the roundabout, before rejoining the M73 southbound;
- Loads will then rejoin the M74 at Junction 4 continuing westbound. They will travel west before joining the southbound carriageway of the M77 at Junction 22 of the M8;
- Non-blade loads will use the Seaward Street Interchange to U-turn and access the M77 from the M8;
- Loads will continue south on the M77 / A77 to Bankfield Roundabout to the east of Ayr, taking the first exit and joining the A713; and
- Loads would continue on the A713 to the north of Dalmellington where they would access the Proposed Development via an existing Site access junction, previously used for North Kyle Wind Farm.

The proposed AIL access route is illustrated in **Figure 10** and has been considered, within the AIL RSR, provided in **Annex A**.

Figure 10 AIL Component Delivery Routes



6.1.8 Peak Construction Traffic

Following the distribution and assignment of traffic flows to the study area, the resultant daily traffic during the peak of construction (month eight) are summarised in **Table 14** for the scenario whereby 100% of aggregate materials are brought to the Site, while **Table 15** illustrates the scenario with the use of on-site borrow pits. Note for locations where no construction traffic has been assigned, this is due to those construction activities that are taking place within the peak month not utilising those routes.

Table 14 Peak Construction Traffic (month eight) – Scenario 1: 100% Import of Aggregate Materials

Site ID	Survey Location	Cars & LGVs	HGVs	Total
1	A713, north-west of Dalmellington	44	10	54
2	A713, south-east of Dalmellington	22	-	22
3	B741, east of Dalmellington	8	244	252
4	A70, west of Coylton	-	-	-
5	A76, south of Cumnock	8	244	252
6	A76, north of Cumnock	8	244	252
7	A76, New Cumnock	8	244	252
8	A77, north of A713 junction	44	10	54
9	A77, south of A713 junction	-	-	-

Please note that variances may occur due to rounding.

Table 15 Peak Construction Traffic (month eight) – Scenario 2: Utilising On-site Borrow Pits

Site ID	Survey Location	Cars & LGVs	HGVs	Total
1	A713, north-west of Dalmellington	44	10	54
2	A713, south-east of Dalmellington	22	-	22
3	B741, east of Dalmellington	8	22	30
4	A70, west of Coylton	-	-	-
5	A76, south of Cumnock	8	22	30
6	A76, north of Cumnock	8	22	30
7	A76, New Cumnock	8	22	30
8	A77, north of A713 junction	44	10	54
9	A77, south of A713 junction	-	-	-

Please note that variances may occur due to rounding.

6.2 Operational Phase

In the operational phase, it is envisaged that the level of traffic associated with the Proposed Development will equate to on average two vehicle trips per week which is considered negligible and therefore no detailed assessment of the operation phase of the development is proposed.

6.3 Decommissioning Phase

Prior to decommissioning of the Site, a traffic assessment would be undertaken, and appropriate traffic management procedures followed.

The decommissioning phase would result in fewer trips on the road network than the construction or operational phase as it is considered likely that elements of infrastructure such as access tracks would be left in place and structures may be broken up on Site to allow transport by a reduced number of HGVs.

7 Traffic Impact Assessment

7.1 Construction Impact – Scenario 1: 100% Import of Aggregate Materials

The peak month (month eight) traffic data was combined with the future year (2027) traffic data to allow a comparison between the baseline results to be made, for the scenario whereby 100% of aggregate materials are imported to the Site. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is illustrated in **Table 16**.

Table 16 2027 Baseline + Construction Development – Flows and Impact (Scenario 1: 100% Import of Materials)

Site ID	Survey Location	Cars & LGV	HGV	Total Traffic	Cars & LGV % Increase	HGV % Increase	Total Traffic % Increase
1	A713, north-west of Dalmellington	3,904	114	4,018	1.14%	9.66%	1.36%
2	A713, south-east of Dalmellington	1,755	78	1,833	1.27%	0.00%	1.21%
3	B741, east of Dalmellington	898	277	1,176	0.90%	728.43%	27.28%
4	A70, west of Coylton	10,257	1,162	11,419	0.00%	0.00%	0.00%
5	A76, south of Cumnock	5,258	1,363	6,620	0.15%	21.81%	3.96%
6	A76, north of Cumnock	7,403	1,594	8,997	0.11%	18.07%	2.88%
7	A76, New Cumnock	3,064	1,006	4,071	0.26%	32.01%	6.60%
8	A77, north of A713 junction	22,605	1,878	24,482	0.20%	0.54%	0.22%
9	A77, south of A713 junction	17,000	2,004	19,004	0.00%	0.00%	0.00%

The total traffic movements are predicted to increase by a maximum of 27.28% on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. On the rest of the study area, the highest total traffic increase is 6.60%, which occurs on the A76 at New Cumnock.

Table 16 shows that highest HGV traffic movements increase will occur on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. At this location, it is estimated to increase by 728.43%. Whilst this increase could be considered statistically significantly high, this is due to the low level of HGVs currently using this road. To put the increase into perspective, the B741 will see an additional 244 HGV movements per day or approximately 20 HGV movements per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows and highly unlikely to occur in practice.

The next highest HGV traffic movement increase would occur on the A76 at New Cumnock, where it is estimated to increase by 32.01%. To put the increase into perspective, the A76 will see an additional 244 HGV movements per day or approximately 20 HGV movements per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows.

A review of existing theoretical road capacity has been undertaken for Scenario 1 using The NESA Manual, formerly part of the Design Manual for Roads and Bridges, Volume 15, Part 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 17**.

Table 17 2027 Peak Traffic Flow Capacity Review (Scenario 1: 100% Import of Aggregate Materials)

Site ID	Survey Location	2027 Baseline Flow	2027 Base + Development Flows	Theoretical Road Capacity (12hr)	Spare Road Capacity %
1	A713, north-west of Dalmellington	3,964	4,018	21,600	81.4%
2	A713, south-east of Dalmellington	1,811	1,833	21,600	91.5%
3	B741, east of Dalmellington	924	1,176	19,200	93.9%
4	A70, west of Coylton	11,419	11,419	21,600	47.1%
5	A76, south of Cumnock	6,368	6,620	21,600	69.3%
6	A76, north of Cumnock	8,745	8,997	21,600	58.3%
7	A76, New Cumnock	3,819	4,071	21,600	81.2%
8	A77, north of A713 junction	24,428	24,482	28,800	15.0%
9	A77, south of A713 junction	19,004	19,004	28,800	34.0%

The results indicate there are no road capacity issues with the addition of construction traffic associated with Scenario 1 the Proposed Development and significant spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

7.2 Construction Impact – Scenario 2: Utilising On-site Borrow Pits

The peak month (month eight) traffic data was combined with the future year (2027) traffic data to allow a comparison between the baseline results to be made, for the scenario whereby on-site borrow pits will be used to source aggregate materials. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is illustrated in **Table 18**.

Table 18 2027 Baseline + Construction Development – Flows and Impact (Scenario 2: Utilising On-site Borrow Pits)

Site ID	Survey Location	Cars & LGV	HGV	Total Traffic	Cars & LGV % Increase	HGV % Increase	Total Traffic % Increase
1	A713, north-west of Dalmellington	3,904	114	4,018	1.14%	9.66%	1.36%
2	A713, south-east of Dalmellington	1,755	78	1,833	1.27%	0.00%	1.21%
3	B741, east of Dalmellington	898	55	954	0.90%	65.68%	3.25%
4	A70, west of Coylton	10,257	1,162	11,419	0.00%	0.00%	0.00%
5	A76, south of Cumnock	5,258	1,141	6,398	0.15%	1.97%	0.47%
6	A76, north of Cumnock	7,403	1,372	8,775	0.11%	1.63%	0.34%
7	A76, New Cumnock	3,064	784	3,849	0.26%	2.89%	0.79%
8	A77, north of A713 junction	22,605	1,878	24,482	0.20%	0.54%	0.22%
9	A77, south of A713 junction	17,000	2,004	19,004	0.00%	0.00%	0.00%

The total traffic movements are predicted to increase by a maximum of 3.25% on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. On the rest of the study area, the highest total traffic increase is 1.36%, which occurs on the A713, north-west of Dalmellington.

Table 18 shows that highest HGV traffic movements increase will occur on the B741, east of Dalmellington, where the majority of construction vehicles associated with the movement of bulk aggregate materials would route to the Site. At this location, it is estimated to increase by 65.68%. Whilst this increase could be considered statistically high, this is due to the low level of HGVs currently using this road. To put the increase into perspective, the B741 will see an additional 22 HGV movements per day or approximately 2 HGV movements per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows.

The next highest HGV traffic movement increase would occur on the A713, north-west of Dalmellington, where it is estimated to increase by 9.66%. To put the increase into perspective, the A713 will see an additional 10 HGV movements per day or less than one HGV movement per hour over the course of a typical 12-hour shift. This is not considered significant in terms of overall traffic flows.

A review of existing theoretical road capacity has been undertaken for Scenario 2 using The NESA Manual, formerly part of the Design Manual for Roads and Bridges, Volume 15, Part 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 19**.

Table 19 2027 Peak Traffic Flow Capacity Review (Scenario 2: Utilising On-site Borrow Pits)

Site ID	Survey Location	2027 Baseline Flow	2027 Base + Development Flows	Theoretical Road Capacity (12hr)	Spare Road Capacity %
1	A713, north-west of Dalmellington	3,964	4,018	21,600	81.4%
2	A713, south-east of Dalmellington	1,811	1,833	21,600	91.5%
3	B741, east of Dalmellington	924	954	19,200	95.0%
4	A70, west of Coylton	11,419	11,419	21,600	47.1%
5	A76, south of Cumnock	6,368	6,398	21,600	70.4%
6	A76, north of Cumnock	8,745	8,775	21,600	59.4%
7	A76, New Cumnock	3,819	3,849	21,600	82.2%
8	A77, north of A713 junction	24,428	24,482	28,800	15.0%
9	A77, south of A713 junction	19,004	19,004	28,800	34.0%

The results indicate there are no road capacity issues with the addition of construction traffic associated with Scenario 2 the Proposed Development and significant spare capacity exists within the trunk and local road network to accommodate all construction phase traffic.

8 Proposed Mitigation Measures

8.1 Construction Phase

8.1.1 Construction Traffic Management Plan (CTMP)

During the construction phase, a project website, blog or X (Twitter) feed will be regularly updated to provide the latest information relating to traffic movements associated with vehicles accessing the Site. This would be agreed with EAC and TS.

The following measures will be implemented during the construction phase through the CTMP:

- Agree AIL route modifications and improvements with EAC and TS. Works which will be required to facilitate turbine deliveries are outlined in the RSR, which is presented in **Annex A**;
- Where possible, the detailed design process will minimise the volume of material to be imported to Site to help reduce HGV numbers;
- A Staff Travel Plan, including transport modes to and from the worksite (including pick up and drop off times);
- A Transport Management Plan for AIL deliveries;
- 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 EAC;
- Normal Site working hours will be limited to between 0700 and 1900 Monday to Friday and 0700 and 1900 on Saturdays though component delivery and turbine erection may take place outside these hours i.e. depending on when police escort is available;
- Appropriate traffic management measures will be put in place on the A713 and B741 leading through to the Site, to avoid conflict with general traffic, subject to the agreement of EAC. Typical measures will include HGV turning and crossing signs and / or banksmen at the Site access and warning signs;
- Provide construction updates on the project website, social media feeds and a newsletter to be distributed to residents within an agreed distance of the Site;
- Adoption of a voluntary reduced speed limits, for example on the B741 and at other locations to be agreed with EAC;
- All drivers will 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.

EAC is likely to request that an agreement to cover the cost of abnormal wear on its network is made. Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route will be recorded to provide a baseline of the condition of the road prior to any construction work commencing. This baseline will inform any change in the road condition during the construction phase. Any necessary repairs will be coordinated with EAC and the ARA. Any damage caused by traffic associated with the Proposed Development during the construction phase that would be hazardous to public traffic will be repaired immediately.

Damage to road infrastructure caused directly by construction traffic will be repaired and street furniture that is removed on a temporary basis will be fully reinstated.

There will be a regular road review and any debris and mud will be removed from the carriageway using an on-Site road sweeper to ensure road safety for all road users.

Before the AILs traverse the route, the following tasks will be undertaken to ensure load and road user safety:

- Ensure any vegetation which may foul the loads is trimmed back to allow passage;
- Confirm there are no roadworks or closures that could affect the passage of the loads;
- Check no new or diverted underground services on the proposed route are at risk from the abnormal loads; and
- Confirm the police are satisfied with the proposed movement strategy.

8.2 Abnormal Load Traffic

8.2.1 Abnormal Load Management Plan

There are a number of traffic management measures that can help reduce the effect of abnormal load convoys.

All abnormal load deliveries will be undertaken at appropriate times (to be discussed and agreed with EAC / ARA, TS and Police Scotland) with the aim to minimise the effect on the local road network. It is likely that the abnormal load convoys would travel in the early morning periods, before peak times while general construction traffic would generally avoid the morning and evening peak periods.

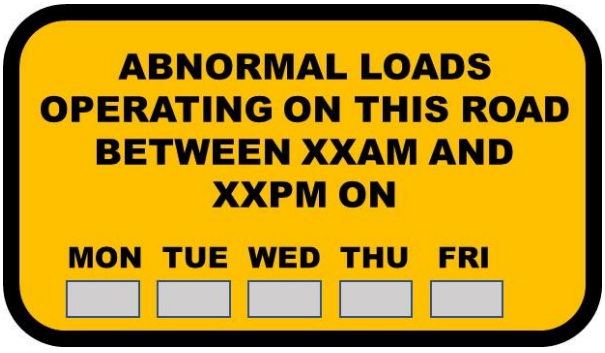
The majority of potential conflicts between construction traffic and other road users will occur with abnormal load traffic. General construction traffic is not likely to come into conflict with other road users as the vehicles are smaller and road users are generally more accustomed to them.

Potential conflicts between the abnormal loads and other road users can occur at a variety of locations and circumstances.

- On sections of single carriageway road or narrow road sections;
- At locations where there are significant changes in the horizontal alignment of the carriageway, requiring the loads to use the full carriageway width;
- Where traffic turns at a road junctions, requiring other traffic to be restrained on other approach arms; and
- In locations where high speeds of general traffic are predicted.

Advance warning signs will be installed on the approaches to the affected road network. Information signage could be installed to help assist drivers and an example is illustrated in **Figure 11**. Flip up panels (shown in grey) will be used to mask over days where convoys would not be operating. When no convoys are moving, the sign will be bagged over by the Traffic Management contractor.

Figure 11 Example Information Sign



This signage will assist in helping improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).

The location and numbers of signs will be agreed post consent and will form part of the wider Traffic Management Proposal for the project.

The Abnormal Load Transport Management Plan will also include:

- Procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay over areas to allow overtaking;
- A diary of proposed delivery movements to liaise with the communities to avoid key dates;
- A protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic; and
- Proposals to establish a construction liaison committee to ensure the smooth management of the project / public interface with the applicant, the construction contractors, the local community, and if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.

8.2.2 Public Information

Information on the wind turbine convoys will be provided to local media outlets such as local papers and local radio to help assist the public's understanding of ongoing activities.

Information will relate to expected vehicle movements from the PoE through to the Site access junction. This will assist residents in understanding the timing of the convoy movements and may help reduce any potential conflicts.

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

8.2.3 Convoy System

A police escort will be required to facilitate the delivery of the predicted AILs. The police escort will be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort will warn oncoming vehicles ahead of the convoy, with one escort staying with the convoy at all times. The escorts and convoy will remain in radio contact at all times where possible.

The AIL convoys will be no more than three AILs vehicles long, or as advised by the police, to permit safe transit along the delivery route, and to allow limited overtaking opportunities for following traffic where it is safe to do so.

The times in which the convoys will travel will need to be agreed with Police Scotland who have sole discretion on when loads can be transported.

8.3 Outdoor Access Management Plan (OAMP)

Within the Site, consideration has been given to pedestrians and cyclists alike due to potential interactions between construction traffic and users of paths, cycle routes and public roads. An Outdoor Access Management Plan (OAMP) will be developed and secured via a planning condition.

Users of paths etc. will be separated from construction traffic wherever possible. Crossing points will be provided where required, with path users having right of way and temporary diversions will be provided where necessary. Appropriate Traffic Signs Manual Chapter 8[9] compliant temporary road signage will be provided to assist at these crossings for the benefit of all users.

The principal contractor will ensure that speed limits are always adhered to by their drivers and associated subcontractors. This is particularly important within close proximity to any paths or crossing points. Advisory speed limit signage will also be installed on approaches to areas where path users may interact with construction traffic.

[9] https://assets.publishing.service.gov.uk/media/5a74adeaed915d7ab83b5ab2/traffic-signs-manual-chapter-08-part-01.pdf

Signage will be installed on the Site exits that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians and cyclists in the area. This will also be emphasised in the weekly toolbox talks.

A scoping response has not been received from The British Horse Society; however consideration will be given to measures implemented on similar schemes as part of the Proposed Development. These measures are predominantly focused around the interactions between HGV traffic and horses. Horses are normally nervous of large vehicles, particularly when they do not often meet them. Horses are flight animals and will run away in panic if 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 has previously recommended 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 Staff Travel Plan

A Staff Travel Plan will be deployed where necessary, to manage the arrival and departure profile of staff and to encourage sustainable modes of transport, especially car-sharing. A package of measures could include:

- Appointment of a Travel Plan Coordinator (TPC);
- Provision of public transport information;
- Mini-bus service for transport of Site staff;
- Promotion of a car sharing scheme;
- Car parking management; and
- Restrictions on parking, for example on the public road network and verges in the vicinity of the Site entrance.

8.5 Operational Phase Mitigation

Site entrance roads will be well maintained and monitored during the operational life of the Proposed Development. Regular maintenance will 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 and Conclusions

Pell Frischmann has been commissioned by SLR on behalf of Breezy Hill Energy Limited (the Applicant) to undertake a Transport Assessment for the proposed Breezy Hill Energy Project located in the East Ayrshire Council administrative area. The Proposed Development is located to the east of the settlement of Rankinston, approximately 13 km south-east of Ayr, and approximately 5.5 km south-west of the town of Cumnock, in East Ayrshire.

The Proposed Development will be accessed from two existing junctions on the local road network. The first access, which will be used by general construction traffic and AILs, is an existing simple priority junction on the A713, located approximately 650 m northwest of the junction between the A713 and B741, near Dalmellington.

The second access is located on the B741, approximately 5.2 km to the east of the junction between the A713 and B741 at Dalmellington. The access would be used for general construction traffic only, for vehicles originating from the east of the Proposed Development.

Existing traffic data from TS was supplemented by new ATC surveys, with the data used to establish a base point for determining the impact during the construction phase and was factored to future levels (2027) to determine the impact of construction traffic on the road network.

The peak of construction activity is expected to occur in month eight when there will be a total of 7,128 vehicle movements, which equates to 324 vehicle movements per day, comprising 252 two-way HGV movements and 72 two-way car / LGV movements.

It should however be noted that the Proposed Development's trip generation assumes that 100% of all aggregate materials would be imported to the Site from nearby quarries and should therefore be considered a significant overestimate of the number of HGV movements that will travel to and from the Site during the peak month of activity. As previously advised, the borrow pit assessment undertaken has confirmed that the volume of material suitable to be used on-site is in excess of the volume of material required, with a surplus of material estimated to be in excess of 6,000 m^3. Should that be the case there would be a total of 104 vehicle movements per day, comprising 32 two-way HGV movements and 72 two-way car / LGV movements.

In addition, a review of the theoretical road capacity was undertaken for the study area which showed that with the addition of construction traffic associated with the Proposed Development, there was significant spare capacity within the road network.

A series of mitigation measures and management plans have been proposed to help mitigate and offset the impacts of the construction phase traffic flows for both general construction traffic and AILs associated with the delivery of the turbine components. It is considered that these can be secured by condition with East Ayrshire Council.

The Proposed Development will lead to a temporary increase in traffic volumes within the study area during the construction phase only, however this can be appropriately and effectively managed. It is therefore concluded that there are no transport related matters which would preclude the consenting and construction of the Proposed Development Site.