Technical Appendix 9.1: Transport Assessment

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1 Site Background

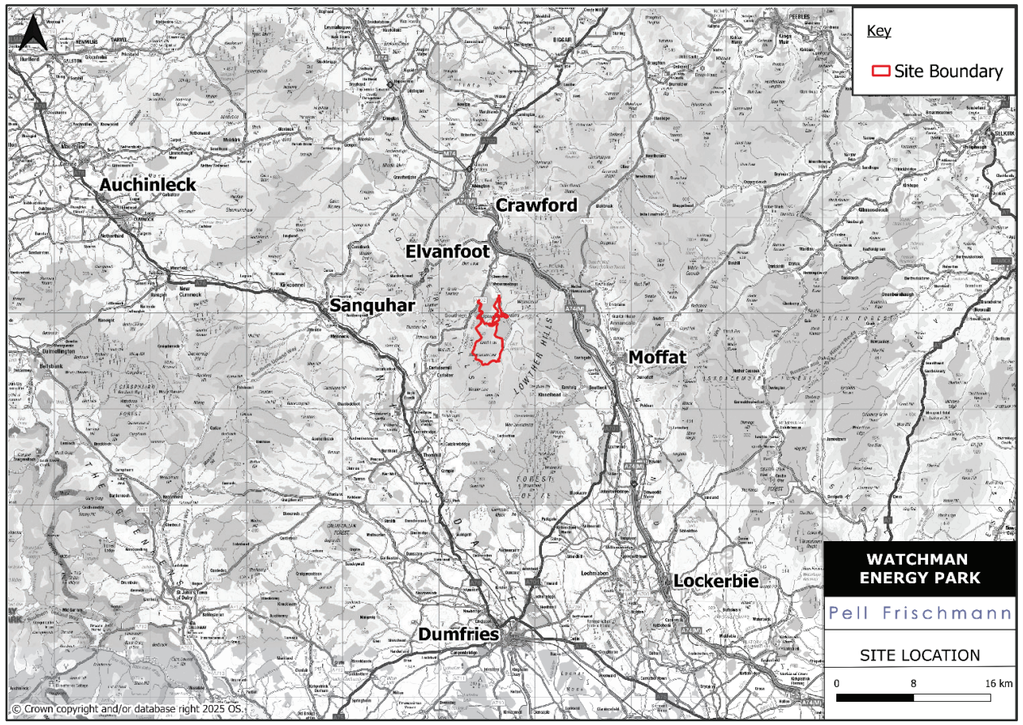
1.1 Site Location

The Site covers an area of approximately 1,089 hectares (ha). The Site is located approximately 10 kilometres (km) south of Crawford, 7 km south of Elvanfoot and 12 km to the west of Moffat and between the valley of the Daer Water and commercial forestry to the north, Daer Reservoir and commercial forestry to the east, open moorland of the Southern Uplands to the south, and further open moorland with the A702 road beyond to the west. The Site is within the administrative boundary of SLC.

The main development area of the Site for the wind turbines mainly consists of upland moorland. The Site is intersected by a section of the Southern Upland Way (SUW), approximately 2 km in length.

The application boundary is shown in **Figure 1**.

Figure 1 Site Location



1.2 Proposed Development

The Proposed Development would comprise the following:

- up to 13 wind turbines with a maximum tip height of 240 metres (m) and with a combined generation capacity of >50 MW;
- permanent foundations supporting each wind turbine, and associated crane hardstanding at each wind turbine base;
- two site accesses for use during construction and operation; the western access from the A702 and the eastern access from the Daer Water road at Wintercleugh, with access points designed to accommodate AILs required for turbine component delivery;

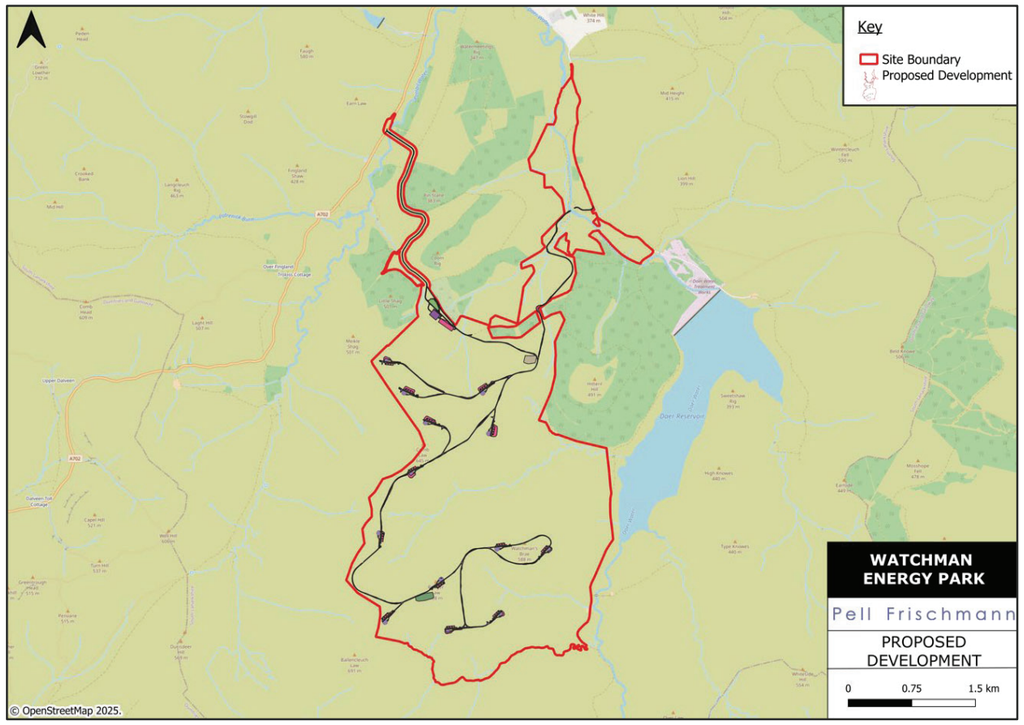
- a series of new and upgraded on-site access tracks with associated watercourse crossings, passing places and turning heads;
- underground power cables, generally laid in trenches alongside access tracks connecting the turbines to the on-site substation;
- an on-site substation and control building;
- a Battery Energy Storage System (BESS) compound which could accommodate approximately 50 MW capacity, based on current technology; and
- temporary construction compound and laydown areas.

In addition, the following ancillary works may be necessary:

- extraction of rock from borrow pits - two borrow pits have been located within the turbine area;
- temporary on-site concrete batching plant – located within the construction compound areas;
- temporary anemometer masts for three to six months during the construction period for calibration purposes;
- habitat management and enhancement areas; and
- a permanent diversion to a short section (approximately 880 m) of the SUW at the point where the western access route enters the main development area of the Site.

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

Figure 2 Proposed Development



A complete description of the Proposed Development is provided in **Chapter 2: Description of Proposed Development (EIAR Volume 2)**.

1.3 Access Arrangements

There are two proposed accesses into the Site:

- Western Access – from the A702 through Watermeetings Forest; and
- Eastern Access – off the Daer Water road to enter the Site at Wintercleugh.

For the purposes of this assessment it has been assumed that all the construction related traffic would enter and exit the Site through the Eastern Access via Daer Water road and AIL deliveries would enter and exit the Site through the Western Access from the A702. However, it should be noted that the final access strategy for both AIL and general construction traffic would be confirmed post consent and can be secured through an appropriately worded planning condition.

Indicative layouts of the proposed access junctions are provided in **Appendix A.**

Access for construction materials would be from the A74(M), via the A702. Where feasible, local materials would be sourced locally which would avoid traffic impacting on local communities as far as practicable.

1.4 Candidate Turbines

The Applicant has indicated that they wish to consider the Siemens Gamesa SG170 blade and a worst-case tower, which is 30 m long and 4.8 m in width for the route assessment (refer to **Table 1)**. Note these are indicative component dimensions at this time and are subject to change.

Table 1 Turbine Component Summary

Component	Length (m)	Width (m)	Height/Min Diameter (m)	Weight (t)
SG170 Blade	83.74	4.186	3.5	29.0
Worst Case Tower	30.00	4.800	4.8	-

There is potential that the lower sections of the tower would be made from concrete and in this situation transport of these would not represent an AIL, however, the worst-case loads for kinematic envelope are therefore the blade and a combined tower load using the maximum width and length of the two sections.

A detailed Route Survey Report (RSR) has been prepared and appends this TA as **Appendix B**.

The selection of the final turbine model and specification would be subject to a commercial procurement process following consent of the application. The assumed dimensions may therefore vary slightly from those assumed as part of this assessment, however the turbine tip height would be no greater than 240 m.

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 route, it has been assumed that all blades would be loaded onto a dolly clamp 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 **Figure 3** and **4**.

Figure 3 Dolly Clamp Trailer

Figure 4 Tower Clamp Trailer

2 Policy Context

2.1 Introduction

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

2.2 National Policy & Guidance

2.2.1 National Planning Framework 4 (NPF4)[1]

The National Planning Framework (NPF) is a long-term plan for Scotland that sets out where development and infrastructure is needed in the country. 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 statutory 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: which relates to Energy makes specific reference to the impacts of construction traffic associated with renewable energy projects. Policy 11 states the following:

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

- *vi. impacts on road traffic and on adjacent trunk roads, including during construction*."

The assessment undertaken as part of this TA and the associated **Chapter 9: Traffic and Transport (EIAR Volume 2)** has taken cognisance of this and has provided appropriate mitigation where necessary.

2.2.2 Planning Advice Note (PAN) 75[2]

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*."

It is noted that on 8th December 2025 a number of Planning Advice Notes were withdrawn by the Scottish Government[3]. This included PAN75. However, this is still noted as relevant guidance for this assessment as it was published guidance at the time of the assessment

[1] Scottish Government (2023), National Planning Framework 4. Available at: https://www.gov.scot/publications/national-planning-framework-4/
[2] Scottish Government (2005), Planning Advice Note (PAN) 75. Available at: https://www.gov.scot/publications/planning-advice-note-pan-75-planning-transport/
[3] Refer to: https://blogs.gov.scot/planning-architecture/2025/12/08/publications-declutter/

2.2.3 Transport Assessment Guidance (2012)[4]

Transport Scotland's (TS) Transport Assessment Guidance was published in 2012. It aims to assist in the preparation of TA for development proposals in Scotland such that the likely transport effects 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 effects, but that the specific scope and contents of a TA will vary for developments, depending on location, scale and type of development.

2.2.4 Onshore Wind Policy Statement (2022)[5]

The Scottish Government's Onshore Wind Policy Statement was published in December 2022 and sets out an ambition of *"20 GW of installed onshore wind capacity in Scotland by 2030."*

With regards to transport of Abnormal Loads and Police Escorts, the statement notes that:

"*Under the Road Traffic Act 1988, any abnormal load movement on public road in Scotland must be escorted by a specially trained police officer. This puts additional pressure on both Police Scotland and hauliers, as well as the wind energy sector's ability to deploy at scale in Scotland.*

In order to meet our legally-binding net-zero targets, it is estimated that 3400 turbines will be installed in Scotland between now and 2030, this is the equivalent of a new turbine being installed every day between 2025-2030. Given this, and the significant issues surrounding the transportation of components, this issue has been brought into fresh focus, as we consider it could have serious implications on the delivery of our renewable energy pipeline and subsequent threat to our 2030 net-zero targets.

To this end, the Scottish Government is working directly with senior members of Police Scotland and the renewables and haulier industries. We have come together to consider this issue and to determine what actions must be taken, both short term and long-term, to relieve the pressure on Police Scotland resources to ensure turbines components can be efficiently and effectively conveyed to site."

2.3 Local Policy & Guidance

2.3.1 South Lanarkshire Council Local Development Plan 2 (2021)[6]

In Chapter 7: Infrastructure, the LDP notes that:

"*Major proposals for housing, industrial, minerals, waste and other commercial development should be accompanied by a Transport Assessment. This should consider how a proposed development will achieve sustainable travel by encouraging less reliance on private vehicles and facilitating cycling, walking and the use of public transport. Where possible, in relation to minerals and waste, options for rail transportation should be considered.*

The use of the public road network by significant numbers of heavy goods vehicles and their interaction with other road users can lead to a variety of issues, such as spillage, noise, dust and damage to the carriageway. The Council will expect operators to ensure that a drivers code of conduct is in place to mitigate many of these issues."

Within Chapter 7, Policy 18 Renewable

[4] Transport Scotland (2012), Transport Assessment Guidance. Available at: https://www.transport.gov.scot/media/4589/planning_reform_-_dpmtag_-_development_management__dpmtag_ref__17_-_transport_assessment_guidance_final_-_june_2012.pdf
[5] Scottish Government (2022) Onshore Wind: policy statement 2022. Available at: https://www.gov.scot/publications/onshore-wind-policy-statement-2022/
[6] South Lanarkshire Council (2021), Local Development Plan 2. Available at: https://www.southlanarkshire.gov.uk/downloads/file/14534/ldp2_volume_1_document

"*All renewable energy proposals shall be assessed against the relevant criteria and requirements set out in the Assessment Checklist for Renewable Energy Proposals contained in Volume 2*."

In terms of transport, checklist considerations within Volume 2 are as follows:

"*Impact on public access*

The impact from renewable energy developments on core paths, wider access network routes and recreational uses across South Lanarkshire should be fully assessed and if appropriate, mitigation measures require to be identified."

"*Impact on road traffic and trunk roads*

The impact from renewable energy developments on road traffic and trunk roads should be fully assessed and if appropriate, mitigation measures require to be identified and agreed with Transport Scotland and/or SLC Roads and Transportation."

"*Mitigation*

Where proposals are shown to have a significant adverse impact in respect of any of the above criteria, the developer will require to demonstrate that appropriate mitigating measures will be applied."

2.3.2 South Lanarkshire Local Development Plan 2 – Supporting Planning Guidance: Renewable Energy (2021)[7]

In terms of the development management considerations for the impacts on road traffic and on adjacent trunk roads, the LDP Supporting Planning Guidance: Renewable Energy noted that:

"*Road and traffic impacts require to be identified in the application submission. In siting wind turbines close to major roads, it is recommended that pre-application discussions are held with Transport Scotland's Trunk Road and Bus Operations (TRBO). This is also particularly important for the movement of large components (abnormal load routing) during the construction period, periodic maintenance and for decommissioning. Where the trunk road network is to be used to transport turbine components to site then an abnormal load route assessment should be undertaken and submitted to Transport Scotland for consideration. The assessment should identify the preferred route to site and should identify any pinch points on the trunk road network where mitigation measures may be required. Swept path analysis should be included to help identify the nature and extent of the trunk road mitigation required. In terms of siting and design, it is recommended that a minimum set back from roads and railways is one and half times the height to tip of the turbine proposed, though this will be considered in detail on a case-by-case basis.*

For wind farm developments (of three or more turbines) a Transport Assessment will be required. Prior to drafting the Transport Assessment, a Roads and Transportation Transport Assessment/Statement Scoping form is required to be completed and approved to ensure the necessary details are submitted with the application. Details of the development will be required such as programme of works including, junction requirements, phases of development, volume and frequency of vehicles, impact on road network, surveys (including swept path analysis) and travel plan. Where appropriate, the Assessment should demonstrate the likely impacts of the development on the trunk road network. If a proposal involves locating wind turbines close to the Trunk Road Network, approval will be required from Transport Scotland who will require to be satisfied that the proposal will not adversely affect the safety and free flow of the trunk road network. It should be noted that any new or modified direct access from the trunk road network will require approval from Transport Scotland. The design of the new or modified access junction will require to be designed in accordance with the Design Manual for Roads and Bridges (DMRB).

[7] South Lanarkshire Council (2021), Local Development Plan 2 – Supporting Planning Guidance: Renewable Energy. Available at: https://www.google.com/search?q=%E2%80%A2+South+Lanarkshire+Local+Development+Plan+2+%E2%80%93+Supporting+Planning+Guidance%3A+Renewable+Energy

The construction of wind energy developments can have significant short-term impacts on the road network. Access for construction traffic must not compromise road safety, residential amenity or cause significant permanent damage to the environment. Applicants must provide an assessment of the traffic impact during both the construction and operational periods and demonstrate suitability of the transport routes for delivering turbine and other components from their source. It is likely that the developer will be required to enter into a Section 96 Agreement with the Council or agree to an upfront payment for smaller sites. Where appropriate, pre and post construction road surveys will be required to be completed that cover damage to public roads by construction traffic. A bond or guarantee may be required to cover the cost associated with this damage."

2.4 Policy and Guidance Summary

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

3 Study Methodology

3.1 Introduction

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

- Construction Phase;
- Operational Phase; and
- Decommissioning Phase.

3.2 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 would be transported to Site, potentially resulting in a significant increase in traffic on the road network.

The operational 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 some elements of infrastructure, subject to further appraisal of the best environmental option, would be left in place, or partially removed.

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

3.3 Scoping Discussions

The Applicant submitted a request for an EIA Scoping Opinion to SLC and the Energy Consents Unit (ECU) in respect of the EIA which included a section considering access, traffic and transport. The scope of the study has been based on the submitted Scoping Report, and Scoping Opinion received, and a summary of those pertinent points is provided in **Chapter 9: Traffic and Transport (EIAR Volume 2)**.

4 Baseline Conditions

4.1 Study Area Determination

The Study Area has been based on those roads that are expected to experience increased traffic flows associated with the construction of the Proposed Development. The geographic scope was determined through a review of the other developments in the area, Ordnance Survey (OS) plans and an assessment of the potential origin locations of construction staff and supply locations for construction materials.

Strategic access to the Site would be taken from the A74(M), which forms part of the trunk road network, accessed via the A702 and Daer Water road. Construction vehicles delivering loads to and from the Site are likely to originate from quarries along the A74(M).

The likely Port of Entry (POE) used for the discharging of wind turbine components will be Glasgow King George V (KGV) Docks. AILs would likely travel to the Site via the following route:.

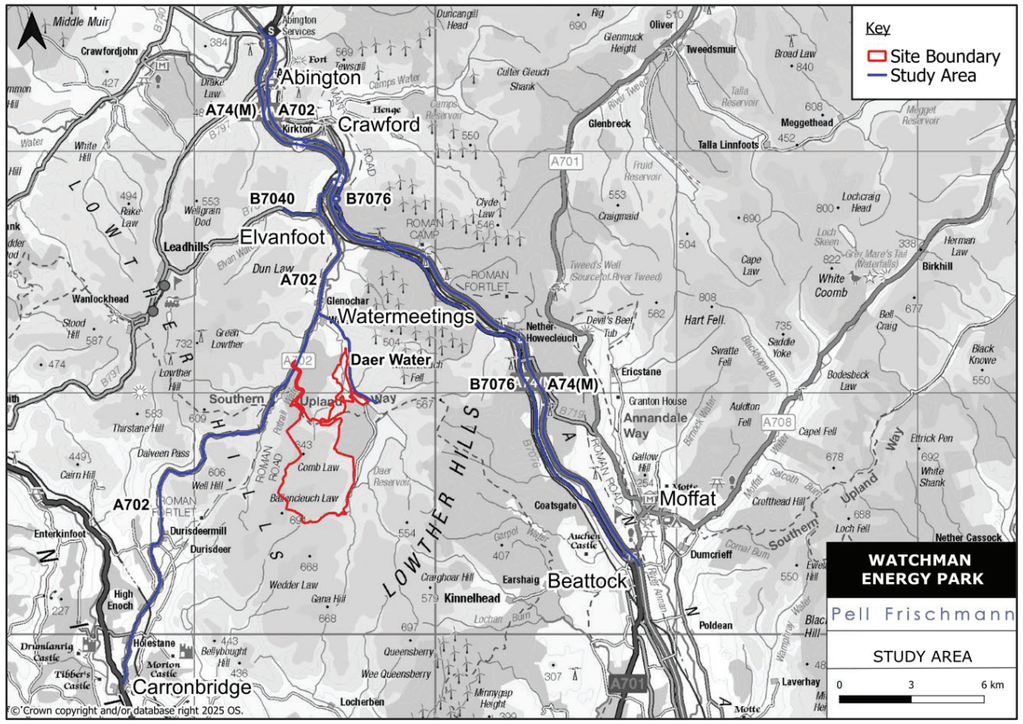
- Loads would exit KGV Dock and travel straight on at three roundabouts continuing on Kings Inch Drive
- westbound;
- Loads would turn left and join M8 eastbound at Junction 25A;
- Loads would exit M8 at Junction 22 and merge onto M74 eastbound;
- Loads would merge from M74 onto A74(M) southbound at Junction 13;
- Loads would merge from A74(M) onto M6 southbound at Junction 45;
- Loads would exit M6 southbound at Junction 42 Golden Fleece Interchange and use the roundabout to re-join the M6 northbound;
- Loads would merge from M6 onto A74(M) northbound at Junction 45; and
- Loads would exit A74(M) at Junction 14 and join A702 southbound at Elvanfoot Interchange and continue to the proposed Site access junction.
-
- As noted earlier, the final access strategy for both AIL and general construction traffic would be confirmed post consent and can be secured through an appropriately worded planning condition.

Based on the above, the Study Area for the assessment has therefore been assumed to be:

- Daer Water road, between the A702 and Daer Water Treatment Works;
- The A702, between Junction 14 of the M74 and Carronbridge;
- The B7040, between the A702 and west of Elvanfoot Substation;
- The B7076; between the A702 and Junction 15 of the A74(M); and
- The A74(M) between Junctions 13 and 15.

Effects associated with construction traffic generated by the Proposed Development would be most pronounced in close proximity to the Site 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 5**.

Figure 5 Study Area



Note that the Study Area chosen relates to those roads likely to be subject to the biggest increase in construction traffic i.e. those closest to the Site for which their users could experience significant effects and does not include all roads used in the movement of construction materials and AIL traffic.

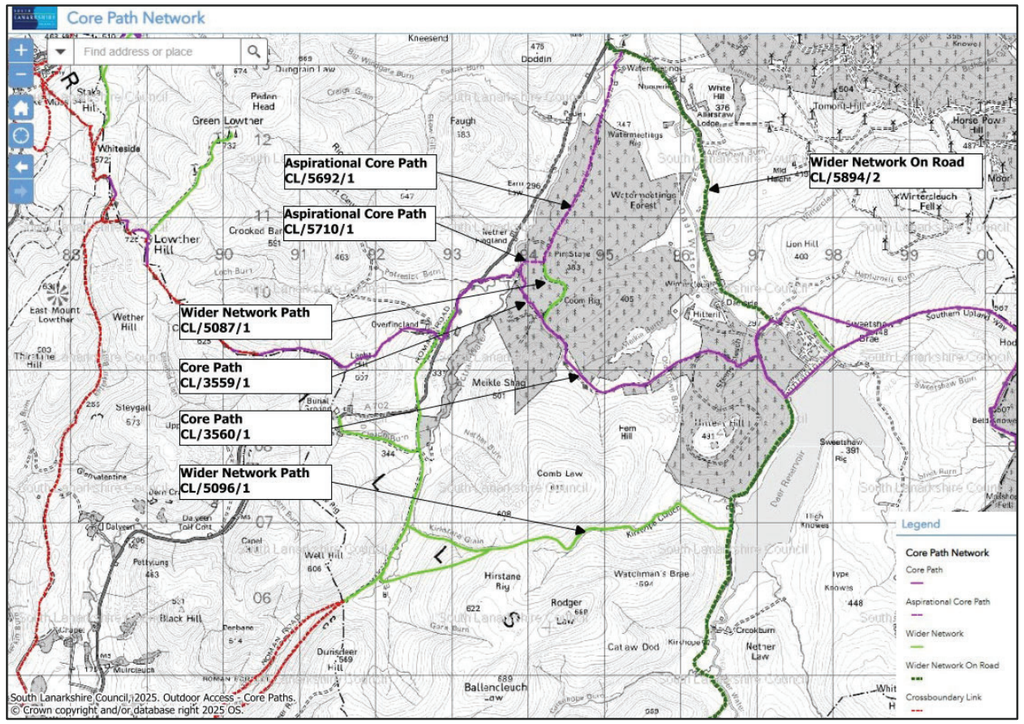
4.2 Pedestrian and Cyclist Networks

There are no dedicated pedestrian facilities such as footways in the immediate vicinity of the Site, reflecting its rural setting.

A review of SLC's Core Path network[8] indicates that there are a number of Core Paths, Aspirational Core Paths and Wider Network Paths within the Site Boundary, which are shown in **Figure 6**.

[8] South Lanarkshire Council, 2025.Outdoor Access – Core Paths. Available at: https://www.southlanarkshire.gov.uk/info/200166/getting_outdoors/1002/outdoor_access/3/

Figure 6 Path Network within the Site Boundary



The SUW is a coast-to-coast long-distance route which runs from Portpatrick on the west coast to Cove on the east coast and is approximately 340 km in length. Sections of the route form part of the Core Path network within the application boundary.

Details of the paths shown in **Figure 6** are outlined below in **Table 2**.

Table 2 Paths within the Site Boundary

Reference	Path Name	Path Type	Total Length (m)
CL/5692/1	Watermeetings – Coom Rig	Aspirational Core Path	2,550*
CL/5710/1	Woodland walk Watermeetings Forest	Aspirational Core Path	400*
CL/5087/1	SL180 Watermeetings forest	Wider Network Path	1,080*
CL/3559/1	Southern Upland Way, Portrail Water-Coom Rig	Core Path	905
CL/3560/1	Southern Upland Way, Hitteril Hill	Core Path	3,523
CL/5096/1	SL171 Potrail Water – Kirkhope Cleuch	Wider Network Path	3,300*
CL/5894/2	Daer Water public road	Wider Network On Road	4,481

* *Approximate measurement – measured from OS mapping*

During their Scoping Opinion response, ScotWays provided information on Heritage Paths, Other Routes, Recorded Public Rights of Way (PRoW) and Scottish Hill Tracks. Upon review, Heritage Paths, Other Routes, PRoWs and Scottish Hill Tracks are located along path routes as described in **Table 2**.

The Heritage Path, Daer Water to Thornhill, runs along the Daer Water public road, while Other Routes path SL/SL180/1 follows the path of the SUW Core Path within the Site Boundary. The PRoW SL/SL171/1 follows the route of Wider Network Path CL/5096/1. From the information provided by ScotWays, Scottish Hill Track SHT(6)

063a appears to mainly follow the path of Wider Network Path CL/5096/1 on the western side of the Site, while on the eastern side of the Site it appears to follow Kirkhope Cleuch stream.

Under the Land Reform (Scotland) Act 2003, walking and dog walking is permitted within the Site. The Scottish Outdoor Access Code provides responsible practices for users.

With regards to cycling, a review of Walk Wheel Cycle Trust's (previously Sustrans) National Cycle Network (NCN) map[9] indicates that the nearest route is NCN Route 74, which connects Strathclyde Country Park and NCN Route 75 north of Hamilton and the village of Crawford to the south, which is approximately 9 km to the north. NCN Route 74 comprises a combination of on-road sections and traffic-free paths. The route continues as a combination of traffic-free routes and on-road routes which are not on the traffic network along and in the vicinity of the A702 and B7076 within the Study Area.

4.3 Road Access

Daer Water

Daer Water, which is the road linking the A702 to Daer Reservoir, is a two-way single track road with passing places. There is a cattle grid located approximately 1,550 m along the road, to the south of its junction with the A702. Daer Water is generally in reasonable condition, however, there are sections of deterioration on the road, which is visible from available online imagery. Daer Water is maintained by SLC.

A702

The A702 is a two-way single carriageway road which is generally subject to the national speed limit (60 miles per hour (mph)), however this reduces to 40 mph through Elvanfoot. The A702 is generally in reasonable condition, however, there are sections of deterioration on the road, which is visible from available online imagery. The A702 is maintained by SLC and Dumfries and Galloway Council (DGC).

B7040

The B7040 is a two-way single carriageway road which is subject to the national speed limit, however this reduces to 40 mph in the vicinity of the B7040 / A702 priority junction. A cattle grid is located approximately 85 m along the B7040 to the west of the B7040 / A702 priority junction and another located to the west of Elvanfoot substation. The B7040 is generally in reasonable condition, however, there are sections of deterioration on the road, which is visible from available online imagery. The B7040 is maintained by SLC.

B7076

The B7076 is a two-way single carriageway road with cycle lanes and is subject to the national speed limit. There are parking areas located along the road. The B7076 is generally in reasonable condition, however, there are sections of deterioration on the road, which is visible from available online imagery. The B7076 is maintained by SLC.

The A74(M)

The A74(M) is a major motorway in Scotland which provides a connection to England. Within the Study Area, the motorway operates with three-lanes in each direction and forms part of the Trunk Road Network. The A74(M) is maintained by Autolink on behalf of Transport Scotland. The A74(M) is subject to a speed limit of 70 mph.

Road Suitability

The Agreed Timber Route Map[10] 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

[9] Walk Wheel Cycle Trust, 2025. The National Cycle Network. Available at: https://www.walkwheelcycletrust.org.uk/national-cycle-network/
[10] Timber Transport Forum (2025). Available at: https://timbertransportforum.org.uk/

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., 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.

A number of the roads within the Study Area form part of the agreed route network used for the extraction of timber and are therefore regularly used by HGV traffic. This includes sections of the A702 (within the SLC administrative area), B7040 and B7076. Daer Water public road is considered a consultation route.

4.4 Existing Traffic Conditions

In order to assess the impact of the Proposed Development construction traffic on the Study Area, Automatic Traffic Counts (ATC) were undertaken over a seven-day period in June and September 2025. To complement the ATC surveys, existing traffic count data was obtained from the Department for Transport (DfT)[11] database and the TS[12] database, with 2024 data utilised, where available.

The traffic count sites used were as follows:

1. Daer Water, Eastern Access (ATC);
2. A702, Western Access (ATC);
3. A702, north of A702 / B7040 junction (ATC);
4. A702, south of A702 / B7040 junction (ATC);
5. B7040, west of Elvanfoot substation (ATC);
6. A702, Durisdeer Mill (DfT Count Point 30878);
7. A74(M), south of Leadmills Road Overpass (TS Count Points ATC6_21N & ATC6_21S);
8. A74(M), south of Junction 14 (TS Count Point ATC6_22N & ATC6_22S); and
9. B7076, north of Auchen Castle (DfT Count Point 811264[13]).

DfT and TS traffic data allow the traffic flows to be split into vehicle classes. The data was summarised into Cars/Light Goods Vehicles (LGVs) and HGVs (all goods vehicles >3.5tonnes gross maximum weight, as well as buses).

A Tempro low growth factor based on the Scottish region was applied to the count sites, to bring the traffic data up to the base year of 2025. The Tempro low growth factor for 2024 to 2025 is 1.012.

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 provided in **Chapter 9: Traffic and Transport (EIAR Volume 2)**.

[11] Department for Transport (2025). Road Statistics. Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints
[12] Access to Traffic Scotland database requires registration/unique login credentials, contact traffic.data@mobiie.co.uk for further details.
[13] There was no available 2024 traffic count data, as such 2019 available data was factored using Tempro growth factors. The Tempro low growth factor for 2019 to 2025 is 1.051.

Figure 7 shows the location of the ATC, DfT and TS survey points, while **Table 3** summarises the Average Daily Traffic (ADT) traffic data collected and used in this assessment.

Figure 7 Traffic Count Locations

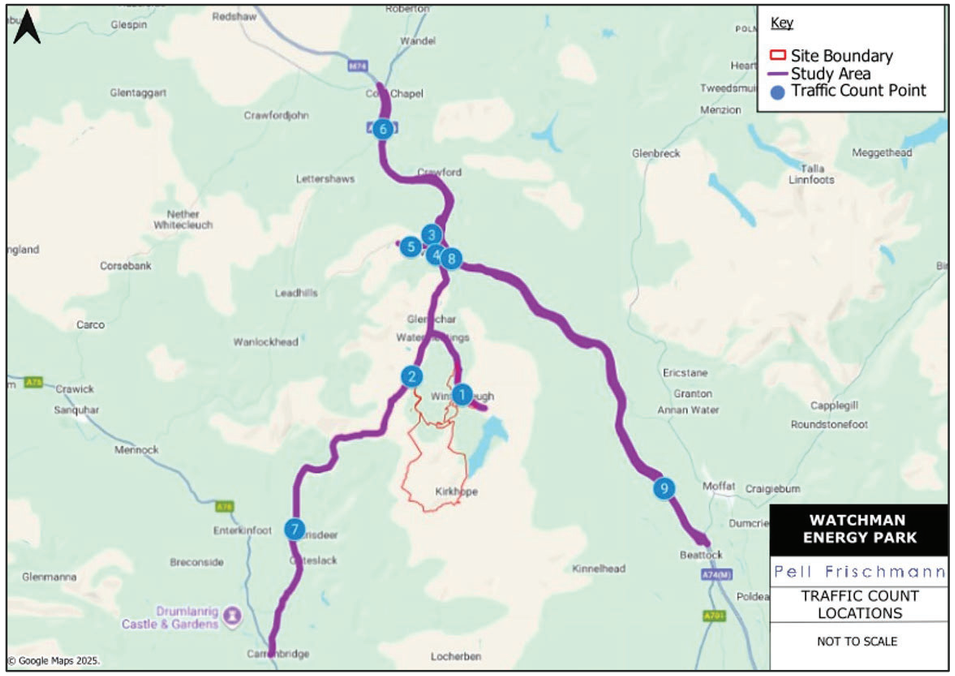


Table 3 24-hour Two-way Average Traffic Data (2025)

No.	Survey Location	Data Source	Cars & Lights	HGV	Total	%HGV
1	Daer Water, Eastern Access	ATC	39	20	59	51%
2	A702, Western Access	ATC	522	168	690	32%
3	A702, north of A702 / B7040 junction	ATC	885	269	1,153	30%
4	A702, south of A702 / B7040 junction	ATC	693	186	879	27%
5	B7040, west of Elvanfoot substation	ATC	150	45	195	30%
6	A702, Durisdeer Mill	DfT	693	61	754	9%
7	A74(M), south of Leadmills Road Overpass	TS	25,228	12,793	38,021	51%
8	A74(M), south of Junction 14	TS	23,091	11,633	34,724	50%
9	B7076, north of Auchen Castle	DfT	375	91	467	24%

Please note minor variances due to rounding may occur.

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 85th percentile speeds observed at the count sites are summarised in **Table 4**.

Table 4 Speed Summary

No.	Survey Location	Data Source	Mean Speed (mph)	85%ile Speed (mph)	Speed Limit (mph)
1	Daer Water, Eastern Access	ATC	30.1	39.7	60
2	A702, Western Access	ATC	47.5	54.9	60
3	A702, north of A702 / B7040 junction	ATC	46.5	54.1	60

No.	Survey Location	Data Source	Mean Speed (mph)	85%ile Speed (mph)	Speed Limit (mph)
4	A702, south of A702 / B7040 junction	ATC	37.8	42.8	40
5	B7040, west of Elvanfoot sub station	ATC	39.8	48.4	60
6	A702, Durisdeer Mill	DfT	-	-	60
7	A74(M), south of Leadmills Road Overpass	TS	67.5	76.5	70
8	A74(M), south of Junction 14	TS	67.8	76.8	70
9	B7076, north of Auchen Castle	DfT	-	-	60

No speed data available from DfT database. Speed data from 2024 TS database to align with traffic flow data

Speed information from **Table 4**, suggests that the speed limits are being adhered to along Daer Water and the A702 in the vicinity of the proposed Site accesses. The 85th percentile speeds recorded marginally above the speed limits at three of the seven locations surveyed which include the A702, south of A702 / B7040 junction in Elvanfoot, A74(M), south of Leadmills Road Overpass and A74(M), south of Junction 14. Police Scotland may wish to consider enforcement spot checks in these areas, if deemed necessary.

4.5 Accident Review

Personal Injury Accident (PIA) data for the five-year period covering 01 January 2020 to 31 December 2024 was obtained from the online resource CrashMap.[14] which uses data collected by the police about road traffic crashes occurring on British roads, where someone is injured.

TA Guidance.[15] requires an analysis of the PIA on the road network in the vicinity of any development to be undertaken for at least the most recent three-year period, or preferably a five-year period, particularly if the Site has been identified as being within a high accident area. Whilst the Study Area has not been identified as having a high accident rate, a five-year review has been undertaken to ensure a comprehensive assessment has been undertaken.

The PIA statistics are categorised into three categories, namely:

- A “Slight” PIA, examples include a sprain, bruise or cut which is not considered to be severe, or slight shock requiring roadside attention;
- A “Serious” PIA, examples include fractures, concussion, internal injuries, crushings, severe cuts and lacerations, severe general shock requiring treatment; and
- A “Fatal” PIA, for those accidents that result in a death.

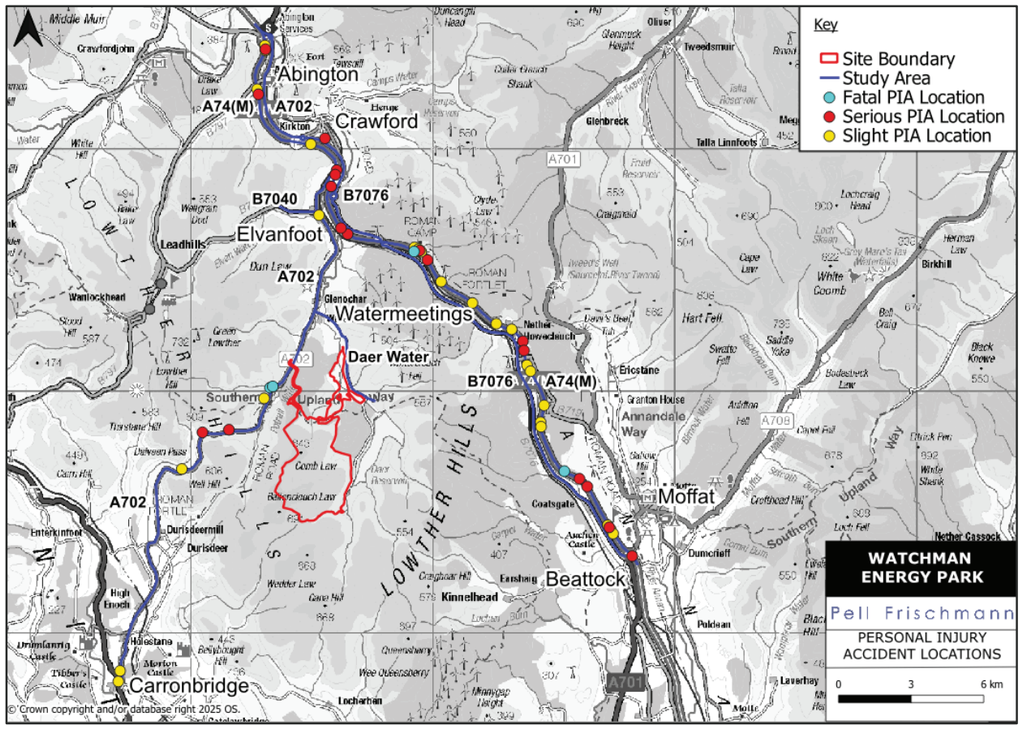
A summary of the PIAs recorded within the Study Area are shown in **Table 5**.

Table 5 Personal Injury Accident Summary (within Study Area)

Location	Slight	Serious	Fatal	HGV Incidents
Daer Water	0	0	0	0
A702	5	3	2	3
B7040	0	0	0	0
B7076	0	0	0	0
A74(M)	19	15	2	12
Total	24	18	4	15
Percentage of total accidents	52%	39%	9%	33%

[14] CrashMap (2025). Available at: https://www.crashmap.co.uk/Search
[15] UK Government (2014) Travel Plans, Transport Assessments and Statements Available at: https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

Figure 8 Accident Locations



A summary analysis of the incidents indicates that:

- A total of 46 accidents were recorded within the Study Area roads within the five-year period;
- Of those 46 accidents, 24 were classed as “slight”, 18 as “serious” and four resulted in fatalities;
- Two fatalities were recorded to the south of the proposed Western Access along the A702, and both involved single motorcycle accidents which occurred on bends;
- Two fatalities were recorded on the A74(M), one of which occurred to the north of Beattock Summit and involved three cars, and one was a single HGV accident which occurred to the north-west of Moffat;
- No accidents were recorded along Daer Water, the B7040 or B7076 within the Study Area;
- A total of six accidents involved motorcycles, of which five were recorded along the A702. Three resulted in “serious” accidents and two resulted in the fatalities, as previously described. One “serious” accident involving a motorcycle was recorded along the A74(M);
- A total of 15 accidents were recorded to involve HGVs, of which three occurred on the A702. Two of these were recorded a “slight” and one was recorded as “serious”; and
- None of the recorded accidents involved cyclists or pedestrians.

In general, there are no clusters of PIAs at any location in the assessed area or high numbers of accidents involving HGVs for example.

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 or within the Study Area that currently require to be addressed or would be exacerbated by the construction of the Proposed Development.

4.6 Future Baseline Traffic Conditions

4.6.1 2035 Traffic Flows

Construction of the Proposed Development is estimated to commence during 2035 if planning permission is granted and is anticipated to last approximately 18 months depending on weather conditions and ecological considerations.

To assess the likely effects during the construction, base year traffic flows were determined by applying a Tempro low growth factor to the surveyed traffic flows. The Tempro low growth factor for 2025 to 2035 is 1.028. These factors were applied to the survey data to estimate the 2035 base traffic flows, as shown in **Table 6**. This forecast forms the baseline for the assessment of traffic and transport related effects in **Chapter 9: Traffic and Transport (EIAR Volume 2)**.

Table 6 24-hour Two-way Average Traffic Data (2035)

No.	Survey Location	Cars & Lights	HGV	Total
1	Daer Water, Eastern Access	40	20	60
2	A702, Western Access	537	173	709
3	A702, north of A702 / B7040 junction	910	276	1,186
4	A702, south of A702 / B7040 junction	713	192	904
5	B7040, west of Elvanfoot substation	154	47	201
6	A702, Durisdeer Mill	712	62	775
7	A74(M), south of Leadmills Road Overpass	25,937	13,152	39,089
8	A74(M), south of Junction 14	23,740	11,960	35,700
9	B7076, north of Auchen Castle	386	94	480

Please note minor variances due to rounding may occur.

4.7 Committed Developments

4.7.1 Onshore Wind Farm and Energy Related Planning Applications

A review of SLC’s online planning portal[16], Scottish Borders Council’s (SBC’s) planning portal[17] in addition to the Scottish Government’s Energy Consents Unit portal[18] was undertaken to identify any consented developments within the vicinity of the Proposed Development which would generate significant traffic.

TA Guidance[19] 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.

The findings of this review are detailed in **Table 7**.

[16] South Lanarkshire Council (2025) Planning – Simple Search. Available at: https://publicaccess.southlanarkshire.gov.uk/online-applications/
[17] Scottish Borders Council (2025). Planning – Simple Search. Available at: https://eplanning.scotborders.gov.uk/online-applications/
[18] Energy Consents Unit (2025). Available at: https://www.energyconsents.scot/ApplicationSearch.aspx?T=1
[19] UK Government (2014) Travel Plans, Transport Assessments and Statements Available at: https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

Table 7 Surrounding Wind Farm Planning Applications

Reference	Name	Distance from Proposed Development's Application Boundary (approx.)	Status	Included as Cumulative Development
CL/13/0206 P/20/0751	Crookedstane Wind Farm	3 km	Consented 2021 (S42)	No - Even if construction commences at the end of the consent period, the development would be completed prior to the commencement of the Proposed Development.
CL/13/0205 P/20/0752	Lion Hill Wind Farm	1 km	Consented 2021 (S42)	No - Even if construction commences at the end of the consent period, the development would be completed prior to the commencement of the Proposed Development.
P/19/1803	Priestgill Wind Farm	13 km	Under Construction	No - development would be completed prior to the commencement of the Proposed Development.
ECU00002090	Whitelaw Brae	13 km	Under Construction	No - development would be completed prior to the commencement of the Proposed Development.

Traffic flows associated with the consented wind farm developments detailed above have not been included in the 2035 Baseline Flows as the construction trips associated with the consented wind farms are temporary in nature and unlikely to be constructed concurrently with the Proposed Development. Also, the inclusion of these traffic flows in the baseline would dilute the potential impact of Proposed Development. The approach taken is therefore considered to be an overly robust assessment.

It should be noted that any crossover of traffic with the Proposed Development flows would be addressed via an overarching Traffic Management and Monitoring Plan, secured by planning condition on the Proposed Development's consent.

Projects in scoping or not yet determined cannot be included in cumulative assessments as they have yet to be determined. As traffic impacts are short lived for construction projects, the potential traffic impact is highly speculative and as such, cannot be included in the assessment.

4.7.2 Other Planning Applications

A review of the SLC's online planning portal was also undertaken for other any other developments with planning consent, 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 10%).

The review did not identify any other significant traffic generating developments in the Study Area that may occur during the construction period associated with the Proposed Development.

It should be noted that the use of low Tempro growth assumptions has provided a basis for general local development growth within the Study Area.

5 Trip Generation and Distribution

5.1 Construction Phase

5.1.1 Trip Derivation

During the 18-month construction period, the following traffic would be required 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;
- AILs consisting of the wind turbine sections and heavy lift cranes; and
- Escort vehicles for AIL deliveries.

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 and will not significantly affect the outcomes.

5.1.2 Construction Staff

Staff would arrive in non-HGV vehicles and where possible would be encouraged to car share. The workforce on-site would depend on the activities undertaken, but, based on previous wind farm construction site experience for a project of this scale, which suggests three staff per wind turbine during the short peak period of construction is likely, the maximum number of staff expected on-site could be around 39 per day.

For the purposes of estimating traffic movements, it was assumed that 40% of staff would be transported by minibus and 60% 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 52 vehicle movements (26 inbound trips and 26 outbound trips) per day during the peak period of construction.

5.1.3 Abnormal Indivisible Load Deliveries

The wind turbines are broken down into components for transport to the Site. The nacelle, blade and tower sections are classified as AILs due to their weight, length, width and height when loaded. For the purposes of the assessment, the 'worst case' numbers of components requiring transport are illustrated in **Table 8**.

As noted earlier, the lower sections of the tower would be made from concrete and as such do not represent an AIL.

Table 8 Turbine Components

Component	Number of Components per Turbine
Rotor Blades	3
Tower Sections	2
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 wind turbine deliveries, up to 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 wind 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 35 convoys on the network (excluding cranes), with a total of approximately 212 escort vehicle movements (106 inbound trips and 106 outbound trips).

Wind turbine components that do not classify as AILs, would be delivered in addition to these, resulting in a further approximate 38 movements (19 inbound trips and 19 outbound trips). All of these deliveries are expected to occur over a period of approximately six months.

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

5.1.4 General Deliveries

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

Timber Extraction

No timber extraction is expected from Site as such materials as a result of felling would be chipped or otherwise disposed of on-site (refer to **Technical Appendix 2.3, EIAR Volume 4**).

5.1.5 Material Deliveries

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

The Site is large enough to warrant on-site batching of concrete. The assessment assumes that all wind turbine lower towers, wind turbine foundations, substation foundation concrete would be mixed on-site, with deliveries of cement powder, water and sand and aggregates being delivered by HGV. For the purpose of this assessment, it is assumed that the cement powder and water would be delivered from local concrete suppliers via the A74(M). It is assumed that sand and aggregate would be delivered by tipper HGV and is expected to come from local quarries via the A74(M).

The estimated total volume of concrete required on site is 39,227 m³, based upon expected wind turbine lower sections, wind turbine foundations, substation foundation and miscellaneous uses across the Proposed Development. The individual deliveries associated with the raw materials have been estimated and result in inbound trips of 86 cement tankers, 1,242 sand and aggregate tippers, and 498 water tankers. It may be possible to extract some aggregate for use in concrete production from borrow pits within the Site, however 100% of the concrete aggregate has been assumed to be delivered to Site to present a worst-case scenario.

Steel reinforcement required in the foundations across the Proposed Development for wind turbine lower towers, wind turbine foundations, substation etc. are estimated to total 5,431 tonnes, resulting in a total of 364 vehicle movements (182 inbound trips and 182 outbound trips).

The proposed access tracks are generally 6 m in width and would be designed to accommodate 13 tonne axle loads. In addition to the access tracks, crane hardstands would be constructed to enable the wind turbine erection process. While it is anticipated that 100% of these aggregate requirements would be sourced from extraction of materials related to construction of site infrastructure (e.g. BESS and substation compounds) and on-site borrow

pits, as a worst-case assessment, it is estimated that 100% of the aggregate material requirements would be imported to the Site. It is assumed that the aggregate material would arrive to Site from quarries via the A74(M).

The estimate of imported material is detailed in **Table 9**.

Table 9 Aggregate Material Deliveries

Element	Volume / Installation (m³)	Total Weight (t)	Lorry Capacity (t)	Inbound Trips	Total Movements
Track, Hardstanding and Compound	104,999	230,997	20	11,550	23,100
Substation and BESS	12,250	26,950	20	1,348	2,696

Geotextile would be delivered to Site in rolls. A total of 316 large rolls may be required at Site and would be delivered by HGV which would result in 32 vehicle movements (16 inbound trips in and 16 outbound trips).

Cables would connect each wind turbine to the substation compound. Trip estimates for the cable materials are provided below in **Table 10** and **11**. Three cables are to be provided within each cable trench and these would be backfilled with cable sand. Ducting deliveries would comprise 28 vehicle movements (14 inbound trips and 14 outbound trips).

Table 10 Cable Trip Estimate

Element	Total Cable Length (m)	Length per Drum (m)	Number of Drums	Inbound Trips	Total Movements
Cables	13,207	500	79	9	18

Table 11 Cable Sand Trip Estimate

Element	Volume (m^3)	Total Weight (t)	Lorry Capacity (t)	Inbound Trips	Total Movements
Cable Sand	4,457	7,132	20	357	714

One substation building would be constructed on the Site. This would require deliveries of building materials, structural elements and components and would result in 240 vehicle movements (120 inbound trips in and 120 outbound trips). BESS deliveries would result in a further 148 HGV vehicle movements for battery, invertor and cabin / building deliveries etc (38 inbound trips in and 38 outbound trips).

The resulting traffic generation estimates have been plotted onto the indicative 18-month 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)

Activity	Class	Month																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Site mobilisation	HGV	40	40	40	20	20	20												
General Site Deliveries	HGV	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Aggregate Deliveries	HGV		2,150	2,150	2,150	2,150	2,150	2,150	2,150	2,150	2,150	2,150	2,150	2,150					
Concrete Deliveries	HGV						731	731	731	731	731	731							
Reinforcement Deliveries	HGV						73	73	73	73	73	73							
Substation and BESS	HGV							78	78	78	78	116	39						
Cabling & Ducting Deliveries	HGV									15	31								
Cabling Sand	HGV										179	179	179	179					
Geotextile Deliveries	HGV		8			8			8		8	8							
AIL Cranage	HGV											20							20
AIL Deliveries	HGV												97	97	97				
AIL Escorts	Car & LGV												73	73	73				
Reinstatement	Car & LGV																30	30	30
Testing and Commissioning	Car & LGV																	60	60
Staff	Car & LGV	572	858	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	858	572
Total HGV		80	2,238	2,230	2,210	2,218	2,210	3,013	3,079	3,071	3,265	3,347	2,504	2,465	137	40	40	30	30
Total Cars / LGV		572	858	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,217	1,217	1,217	1,144	1,174	948	662
Total Movements		652	3,096	3,374	3,354	3,362	3,354	4,157	4,223	4,215	4,409	4,491	3,721	3,683	1,354	1,184	1,214	988	722
Total HGV per Day		4	102	101	100	101	100	137	140	140	148	152	114	112	6	2	2	2	3
Total Cars / LGV per Day		26	39	52	52	52	52	52	52	52	52	52	55	55	55	52	53	43	30
Total per Day		30	141	153	152	153	152	189	192	192	200	204	169	167	62	54	55	45	33

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 11 when there will be a total of 204 vehicle movements per day, comprising 152 two-way HGV movements and 52 two-way car / LGV movements.

This would equate to approximately 17 two-way total vehicles movements or 13 two-way HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile, where traffic arrived and departed the Site equally throughout the working 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 would travel to and from the Site during the peak month of activity. It is expected that 100% of these aggregate requirements would be sourced from on-site extraction of materials related to construction of site infrastructure (e.g. BESS and substation compounds) and from on-site borrow pits.

In a scenario whereby 100% of aggregate material would be won on-site, with the exception of sand and aggregates required for on-site cement batching, the peak of construction activity is expected to occur in month 11 where there would be a total of 106 vehicle movements per day, comprising 54 two-way HGV movements and 52 two-way car / LGV movements.

This would equate to approximately 9 two-way total vehicles movements or 5 two-way HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile, where traffic arrived and departed the Site equally throughout the working day.

5.1.6 Distribution of Construction Trips

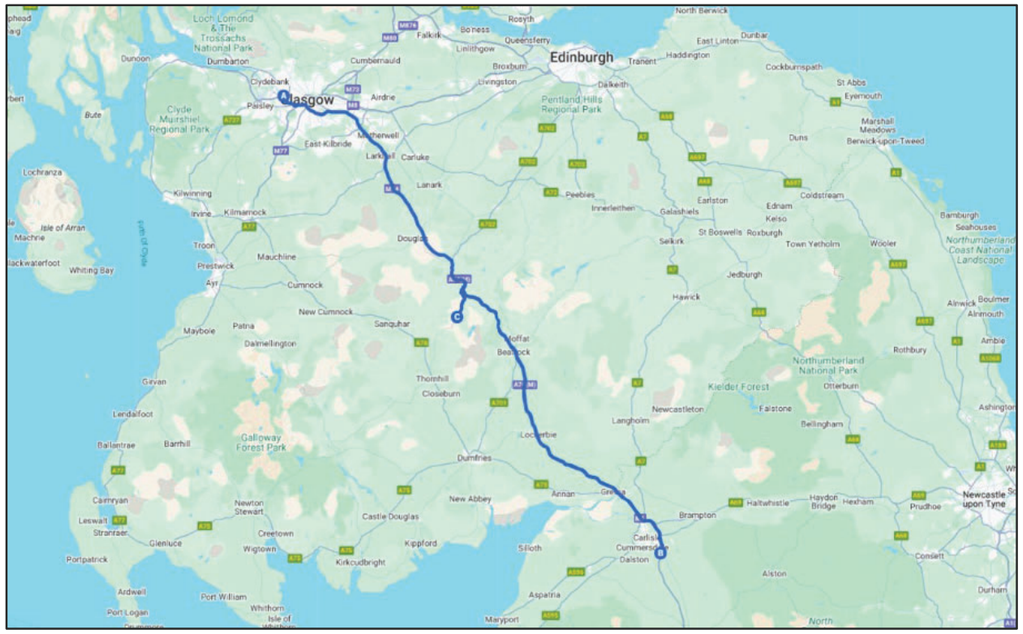
The distribution of Proposed Development construction traffic on the network would vary depending on the types of loads being transported. The assumptions for the distribution of construction traffic during the construction phase are as follows:

- All general construction traffic enters the Site via the Eastern Access, off Daer Water road at Wintercleugh;
- Deliveries associated with concrete materials, such as sand, aggregate, cement powder and water, would be sourced from concrete suppliers, which for the purpose of this assessment would originate from the A74(M). As a worst-case assessment, it is assumed that 100% of materials would come from both the north and south of the A74(M);
- For the purpose of this assessment it is proposed that 100% of access track and hardstand aggregate requirements would be sourced from local quarries, which are assumed to originate from the A74(M), travelling through to the Site via the A702 and Daer Water road. As a worst-case assessment, it is assumed that 100% of materials would come from both the north and south of the A74(M);
- HGV deliveries associated with batteries, cabling and associated materials, etc. would arrive via the A74(M) from the north and would travel through to the Site via the A702 and Daer Water road;
- Staff working at the Site are likely to be based locally. It is assumed that 15% would come from Leadsmill, 15% would come from Carronbridge, and the remaining 70% would be split equally between the north and south via the A74(M); and
- General site deliveries would be from the south via the A74(M) and would travel through to the Site via the A702 and Daer Water road.

For the purposes of preparing **Chapter 9: Traffic and Transport (EIAR Volume 2)** and this TA, it has been assumed that all AIL traffic would access the Site from KGV Docks by travelling southbound along the M74 (A74(M)) and M6, where it would then turn at the Golden Fleece Interchange and travel northbound until it reaches Junction 14 on the A74(M). The AIL traffic would then join the A702 and travel southbound towards the Western Access junction, where it will turn into the Site.

The above route is shown in **Figure 9**.

Figure 9 AIL Component Delivery Route



The above route has been considered in detail, within the AIL RSR, provided in **Appendix B**.

5.1.7 Peak Construction Traffic

Following the distribution and assignment of traffic flows to the Study Area network, the resultant daily traffic during the peak of construction (month 11) are summarised in **Table 13**.

Table 13 Peak Daily Construction Traffic

No.	Survey Location	Cars & Lights	HGV	Total
1	Daer Water, Eastern Access	52	152	204
2	A702, Western Access	8	-	8
3	A702, north of A702 / B7040 junction	36	152	188
4	A702, south of A702 / B7040 junction	44	152	196
5	B7040, west of Elvanfoot substation	8	-	8
6	A702, Durisdeer Mill	8	-	8
7	A74(M), south of Leadmills Road Overpass	18	152	170
8	A74(M), south of Junction 14	18	152	170
9	B7076, north of Auchen Castle	-	-	-

Please note that variances may occur due to rounding.

Note, where road links show no construction traffic, this is due to those road links not being used during the peak month of construction activity.

5.2 Operational Phase

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

5.3 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.

6 Traffic Impact Assessment

6.1 Construction Impact

The peak month (month 11) traffic data was combined with the future baseline year (2035) traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is illustrated in **Table 14**.

Table 14 2035 Baseline + Construction Development – Flows and Impact

Ref No.	Survey Location	Cars & LGV	HGV	Total Traffic	Cars & LGV % Increase	HGV % Increase	Total Traffic % Increase
1	Daer Water, Eastern Access	92	172	264	130.65%	743.70%	338.49%
2	A702, Western Access	545	173	717	1.45%	0.00%	1.10%
3	A702, north of A702 / B7040 junction	946	428	1,374	4.00%	54.96%	15.87%
4	A702, south of A702 / B7040 junction	757	343	1,100	6.20%	79.27%	21.68%
5	B7040, west of Elvanfoot substation	162	47	208	5.06%	0.00%	3.89%
6	A702, Durisdeer Mill	720	62	783	1.09%	0.00%	1.01%
7	A74(M), south of Leadmills Road Overpass	25,955	13,304	39,259	0.07%	1.15%	0.43%
8	A74(M), south of Junction 14	23,758	12,112	35,870	0.08%	1.27%	0.48%
9	B7076, north of Auchen Castle	386	94	480	0.00%	0.00%	0.00%

Please note minor variances due to rounding may occur.

The total traffic movements are predicted to increase by a maximum of 338.49% on the Daer Water, where the proposed Eastern Access junction is located and all non-AIL construction traffic would use. Along the A702, near where the proposed Western Access junction is located, the total increase in traffic will be 1.10% during the peak month.

Table 14 shows that highest HGV traffic movements increase would occur on the Daer Water road, where it is estimated to increase by 743.70%, and whilst this increase could be considered statistically high, it is generally caused by the low HGV flows on the road at this location. To put the increase into perspective, the Daer Water road would see an additional 152 HGV movements per day or 13 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 A702, south of A702 / B7040 junction, with a 79.27% increase. To put the increase in to perspective, the A702 will also see an additional 152 HGV movements per day or 13 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 using The NESA Manual[20], 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 15**.

[20] Department for Transport (2013), Design Manual for Roads and Bridges, Volume 15, Part 5 "The NESA Manual". Available at: http://www.sias.com/2013/TS/201303NesaManual.pdf

Table 15 2035 Peak Traffic Flow Capacity Review

Ref. No.	Survey Location	2035 Baseline Flow	2035 Base + Development Flows	Theoretical Road Capacity (12hr)	Spare Road Capacity %
1	Daer Water, Eastern Access	60	264	3,360	92%
2	A702, Western Access	709	717	21,600	97%
3	A702, north of A702 / B7040 junction	1,186	1,374	21,600	94%
4	A702, south of A702 / B7040 junction	904	1,100	21,600	95%
5	B7040, west of Elvanfoot substation	201	208	21,600	99%
6	A702, Durisdeer Mill	775	783	21,600	96%
7	A74(M), south of Leadmills Road Overpass	39,089	39,259	136,800	71%
8	A74(M), south of Junction 14	35,700	35,870	136,800	74%
9	B7076, north of Auchen Castle	480	480	21,600	98%

The results indicate there are no road capacity issues with the addition of construction traffic associated with the Proposed Development.

7 Proposed Traffic Mitigation Measures

7.1 Construction Traffic

7.1.1 Construction Traffic Management Plan (CTMP)

During the construction period, a project website, blog or social media feed would be regularly updated to provide the latest information relating to traffic movements associated with vehicles accessing the Site. This would be agreed with SLC.

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

- Agree AIL route modifications and improvements with SLC, TS and other relevant stakeholders. Works which would be required to facilitate turbine deliveries are outlined in the RSR, which is presented in **Appendix B**;
- Where possible, the detailed design process would 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 SLC;
- Normal Site working hours will be limited to between 0700 and 1900 Monday to Friday and 0700 and 1300 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 would be put in place on the A702 and Daer Water road leading through to the Site, to avoid conflict with general traffic, subject to the agreement of SLC. Typical measures would include HGV turning and crossing signs and / or banksmen at the Site access and warning signs;
- Provide construction updates on the project website, 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 A702 and Daer Water road in the vicinity of the Site access junction and at other locations to be agreed with SLC;
- All drivers would be required to attend an induction to include:
    - A toolbox talk safety briefing;
    - The need for appropriate care and speed control;
    - A briefing on driver speed reduction agreements (to slow Site traffic at sensitive locations through the villages); and
    - Identification of the required access routes and the controls to ensure no departure from these routes.

SLC may request that an agreement to cover the cost of abnormal wear and tear on its road network is made. Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route would be recorded to provide a baseline of the condition of the road prior to any construction work commencing. This baseline would provide evidence of any change in the road condition during the construction phase. Any necessary repairs would be coordinated with SLC's roads team. Any damage caused by traffic associated with the Proposed Development during the construction period, which would be hazardous to public traffic, would be repaired immediately.

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

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

Before the AILs traverse the proposed delivery route, the following tasks would 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.

7.2 Abnormal Load Traffic

7.2.1 Abnormal Load Transport Management Plan

There are a number of traffic management measures that could help reduce the effect of AIL convoys.

All AIL deliveries would be undertaken at appropriate times (to be discussed and agreed with the local authority, TS and the police) 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.

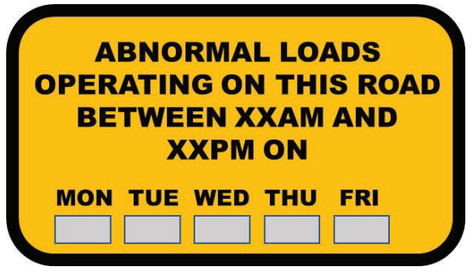
The majority of potential conflicts between construction traffic and other road users would occur with AIL traffic. General construction traffic is not likely to come into conflict with other road users as the vehicles are smaller and road users are generally more accustomed to them.

Potential conflicts between the AILs and other road users can occur at a variety of locations and circumstances. The main potential conflicts are likely to occur:

- On sections of single carriageway road or narrow road sections, for example on the A702;
- 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 would 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 10**. Flip up panels (shown in grey) would be used to mask over days where convoys would not be operating. When no convoys are moving, the sign would be covered by the Traffic Management contractor.

Figure 10 Example Information Sign



This signage would 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 would be agreed post consent and would form part of the Traffic Management Proposal for the project.

The Abnormal Load Transport Management Plan would 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 such as local events;
- 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 group to ensure the smooth management of the project / public interface with the applicant, the construction contractors, the local community, and if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.

7.2.2 Public Information

Information on the wind turbine convoys would be provided to local media outlets such as local papers and local radio to help assist the public.

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

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

7.2.3 Convoy System

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

The AIL convoys would 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.

7.3 Outdoor Access Management Plan (OAMP)

Within the Site, consideration has been given to pedestrians, cyclists and horse riders alike due to potential interactions between construction traffic, Core Paths, PRoWs and paths. The outline OAMP in Technical **Appendix 9.2 (EIAR Volume 4)** provides a number of measures that could help reduce the effect of AIL convoys and general construction traffic on the recreational path network.

7.4 A Staff Travel Plan

A Staff Travel Plan would 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.

7.5 Operational Phase Mitigation

The A702, Western Access and Daer Water, Eastern Access Site entrances would be well maintained and monitored during the operational life of the Proposed Development. Regular maintenance would be undertaken to keep the access track drainage systems fully operational and to ensure there are no run-off issues onto the public road network.

8 Summary and Conclusions

Pell Frischmann Consultants Limited has been commissioned by Ramboll UK Limited, on behalf Watchman Energy Park Limited to undertake a TA for the proposed Watchman Energy Park), which is located within the South Lanarkshire Council administrative area.

There are two accesses into the Site, which are as follows:

- Western Access – from the A702 through Watermeetings Forest; and
- Eastern Access – off Daer Water road to enter the Site at Wintercleugh.

This assessment assumes that the construction related traffic would enter and exit the Site through the Eastern Access via Daer Water road and AIL deliveries would enter and exit the Site through the Western Access from the A702.

The final access strategy for both AIL and general construction traffic would be confirmed post consent and would be secured through an appropriately worded planning condition.

Construction traffic associated with the Proposed Development would approach from the A74(M) and all AIL traffic would access from the POE at Glasgow King Geroge V Docks, utilising the proven AIL route used during the construction of other wind farms in the area.

Existing traffic data from the DfT and TS was supplemented by new ATC surveys for the Study Area, with the data used to establish a base point for determining the impact during the construction phase. This was factored to future levels (2035) to help determine the impact of construction traffic on the local road network.

The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development. A worst-case assessment has been undertaken which assumes that 100% of materials for tracks, hardstandings and compounds would be imported to Site. The peak of construction activity is therefore expected to occur in month 11 when there would be a total of 204 vehicle movements per day, comprising 152 two-way HGV movements and 52 two-way car / LGV movements.

However, it is expected that 100% of the aggregate materials for construction would be sourced on-site, either from construction of on-site infrastructure (e.g. BESS and substation compounds) or from on-site borrow pits. In the actual scenario whereby 100% of aggregate material would be won on-site, with the exception of sand and aggregates required for on-site cement batching, the peak of construction activity is expected to occur in month 11 where there would be a total of 106 vehicle movements per day, comprising 54 two-way HGV movements and 52 two-way car / LGV movements.

This would equate to approximately 9 two-way total vehicles movements or 5 two-way HGV movements per hour, across a typical 12-hour day, assuming a flat traffic profile, where traffic arrived and departed the Site equally throughout the working day.

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 abnormal loads associated with the delivery of the turbine components. It is considered that these can be secured by condition with SLC.

The Proposed Development would 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 construction of the Proposed Development Site.

Appendix A Indicative Site Access Junctions Layouts

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Project

WATCHMAN ENERGY PARK

Drawing Title

WESTERN ACCESS JUNCTION
GENERAL ARRANGEMENT

Drawing Status

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	Name	Date	Status Code
Drawn	J.STIRRAT	20.02.2026	S0
Designed	C.NOREMBERG	20.02.2026	Scale 1:250 @ A1
Eng Chk	S.MCGARVA	20.02.2026	Revision P01
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WESTERN ACCESS JUNCTION
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2.4m x 215m VISIBILITY SPLAY

SECTION OF WALL TO BE RELOCATED BEHIND VISIBILITY SPLAY

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EASTERN ACCESS JUNCTION
GENERAL ARRANGEMENT

Drawing Status

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Revision: P01

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Drawing Title

EASTERN ACCESS JUNCTION
SWEPT PATH ANALYSIS

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SPEED SURVEY CONDUCTED IDENTIFIED 85th PERCENTILE SPEEDS OF 40MPH AT THIS LOCATION

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Pell Frischmann

Watchman Wind Farm

Abnormal Indivisible Load Route Survey

February 2026

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Executive Summary

Pell Frischmann Consultants Ltd (PF) has been commissioned by Ramboll UK Ltd (Ramboll) to undertake a Route Survey Review (RSR) on behalf of RenewCo (the Developer) to examine the issues associated with the transport of wind turbine Abnormal Indivisible Loads (AIL) associated with the development of Watchman Wind Farm, located to the south of Elvanfoot, in the South Lanarkshire Council (SLC) administrative area.

This report identifies the key points and issues associated with the proposed routes and outlines the issues that will need to be considered for successful delivery of the components.

The access review has been based upon Siemens Gamesa SG170 wind turbine components and has been undertaken on the basis of the blade components loaded onto a dolly clamp trailer; and the tower sections loaded onto a tower clamp trailer.

Due to the transport configurations being classified as Special Order, in accordance with the Water Preferred Policy, King George V (KGV) Dock has been considered as Port of Entry (POE) for the project as it is the closest marine facility to site capable of dealing with this size of cargo. Also, due to the Special Order classification of the loads, full Police escort will be required along the length of all routes from KGV Dock to site.

The route travels south from KGV Dock to M6 Jct 42 Golden Fleece Interchange where the loads will exit the southbound carriageway, travel around the roundabout and re-join the M6 northbound in order to enable the loads to join the A702 southbound en route to the proposed site access point.

A review of the current structural capability of the route has been carried out; however, responses had not been received from Amey (South West Scotland), Network Rail and SLC at the time of writing this report, therefore, the route has not been confirmed as structurally capable of accommodating the AILs. M6DBFO and National Highways North West Region (NHNW) have approved the use of their structural assets; and M8 DBFO have approved the use of their structural assets under operational cautions. Loads are to cross structure no. M74 6-5 75 Raith straddling lanes one and two with no other traffic on the structure at the same time.

The route from KGV Dock to Elvanfoot is considered negotiable with tree and vegetation clearance and pruning; street furniture removals, areas of temporary load bearing surface, use of existing AIL crossings and special manoeuvres. Third-party land uptake is required at the Kings Inch Drive / M8 Jct 25A junction, Elvanfoot Interchange and at the left-hand bend over Network Rail structure no. WCM1/B/282 with the potential requirement for ground works to accommodate the loads. Land searches are required to confirm the extent of the adopted highway at these locations.

The existing carriageway alignment of the A702 over structure no. A702/09 Elvanfoot is not negotiable for the blade loads carried on dolly clamp trailer, therefore, a bypass is to be designed and constructed including a new structure over Elvan Water. The design of this bypass is being undertaken separate to this report, but the carriageway alignment has been used as the basis for a Swept Path Assessment (SPA) and is negotiable with third-party land uptake, ground works, carriageway surfacing, Overhead Line (OHL) removals and street furniture removals.

A SPA of the existing carriageway alignment of the A702 over structure no. A702/09 Elvanfoot considerate of the tower loads has been undertaken, which shows that due to minimal clearance between the loads and the bridge parapets, topographical survey is required and the SPA repeated in order to confirm negotiability. Third-party land uptake is required throughout the S-bend. Also, OHL removals are required, both High-Voltage (HV) and telecom OHLs; along with ground works, areas of temporary load bearing surface, street furniture removals and tree clearance. Land searches are required to confirm the extent of the adopted highway at this location. At the time of writing this report, SLC were yet to comment on the structural feasibility of structure no. A702/09 Elvanfoot, therefore, it not yet known whether the structure can accommodate the anticipated ground loadings of the tower loads.

Should the design and construction of a new structure over Elvan Water not be selected, investigation could be made into transhipping the blades from the dolly clamp trailer onto a blade lifter prior to Elvanfoot for onward delivery to site; however, this option has not been considered as part of this report.

The remainder of the route to the proposed site access junction is considered negotiable with third-party land uptake, OHL removals, street furniture removals, tree and vegetation clearance and pruning; ground works, areas of temporary load bearing surface, removal of utility boxes and oversail of bridge parapets.

SPA of the A702 / site access junction has been carried out, and the proposed junction design is to be amended to accommodate the loads.

No consideration has been given to the on site design requirements as part of this report, however, this is being undertaken as part of the wider Environmental Impact Assessment (EIA) process.

The report is presented to Ramboll for consideration. Various road modifications and interventions are required to successfully access the site. If these are assessed, approved and undertaken, access to the site is considered feasible.

Further Actions

The following actions are recommended to pursue the transport and access issues further:

- Undertake topographical survey and land searches at the identified locations and repeat the swept path assessments to confirm mitigation measures;
- Obtain responses from Amey (South West Scotland), Network Rail and SLC on current structural capability of the routes to accommodate proposed AILs;
- Conduct a test run to confirm negotiability and identified mitigation measures;
- Undertake discussion with the affected utility providers and roads agencies;
- Prepare detailed mitigation design proposals to help inform the land option / consultee discussions;
- Obtain the necessary land options;
- Obtain the necessary statutory licences to enable the mitigation measures; and
- Develop a detailed operational Transport Management Plan to assist in transporting the proposed loads.

1 Introduction

Pell Frischmann Consultants Ltd (PF) has been commissioned by Ramboll UK Ltd (Ramboll) to undertake a Route Survey Review (RSR) to examine the issues associated with the transport of wind turbine Abnormal Indivisible Loads (AIL) associated with the development of Watchman Wind Farm, located to the south of Elvanfoot, in the South Lanarkshire Council (SLC) administrative area.

The RSR has been prepared to help inform Ramboll on the likely issues associated with the development of the site with regards to off-site transport and access for AIL traffic and examines the issues associated with transport along the whole of the access route from the port to the site access junction.

The access review identifies the key issues associated with AIL deliveries and notes that remedial works, either in the form of physical works or as traffic management interventions will be required to accommodate the predicted loads.

The detailed assessment and subsequent designs of any remedial works are beyond the agreed scope of works between PF and Ramboll at this point in time.

It is the responsibility of the turbine supplier to ensure that the entirety of the proposed access route is suitable and meets with their satisfaction (depending upon contract). The turbine supplier will be responsible for ensuring that the finalised proposals meet with the appropriate levels of health and safety consideration for all road users and are in line with the relevant legislation at the time of delivery.

2 Definitions & Terminology

2.1 Definition of Abnormal Indivisible Load

The Department for Transport, of which National Highways (NH) is an executive agency, state that the strict definition of an AIL refers to a load which cannot, without undue expense or risk of damage, be divided into two or more loads for the purpose of carriage on roads which, owing to its dimensions or weight, cannot be carried on a vehicle which complies with the 'standard vehicle regulations' as follows:

- The Road Vehicles (Construction and Use) Regulations 1986 (as amended)
- The Road Vehicles (Authorised Weight) Regulations 1998 (as amended)
- The Road Vehicles Lighting Regulations 1989 (as amended)

All equipment should be stripped of its ancillaries before they are transported. NH will only accept that further dismantling is not required where it cannot be economically achieved due to the requirement for its construction within factory environments or where extremely high tolerances have to be maintained.

2.2 Legislation

Conventional heavy goods vehicles have an operating weight limit of 44 tonnes. The category known as AIL covers those vehicles where the gross weight exceeds 44 tonnes. An AIL is defined as that which cannot be carried under Construction and Use (C&U) Regulations. Items which, when loaded on the load carrying vehicle, exceed the weights encompassed by the C&U Regulations, but do not exceed Special Order Permission Limits are governed by Special Types General Order (STGO) Categories 1 to 3 depending on size.

Where dimensions exceed 6,100 mm in width, 30,000 mm in rigid length or 150 tonnes gross weight, a Special Order from NH is required.

Special Order category AIL movements are authorised by the NH Abnormal Loads team, an executive agency of the Department for Transport, based in Birmingham.

2.3 Water Preferred Policy

The Department for Transport has adopted a ‘water-preferred’ policy for the transport of AILs. This means that, where an application is sought for the movement of a Special Order or VR1 category load (more than 5.0 m width) by road, the Department, via NH and Transport Scotland (TS), will turn down the application where it is feasible for a coastal or inland waterway route to be used instead of road.

NH advise that this decision is based on a number of factors including whether the load is divisible, the availability of a suitable route, the amount of traffic congestion that is likely to be caused and the justification for the load to be moved.

The NH Abnormal Loads Team is the department responsible for the authorisation of Special Order AILs and government policy is that the closest available port of access should be used for the delivery of such oversized items.

2.4 Third-Party Land & Land Ownership

A review of third-party land should be undertaken by the client to ensure that no additional land rights are required to enable deliveries or mitigation works. PF accepts no responsibility for the accuracy of land ownership assumptions, all of which should be confirmed across the entire access route by a qualified land agent.

The limits of road adoption can vary depending upon the location of the site and the history of the road agencies involved. The adopted area is generally defined as land contained within a clear boundary where the road agency holds the maintenance rights for the land. In urban areas, this is usually defined as the area from the edge of the footway across the road to the opposing footway back edge.

In rural areas, the area of adoption can be open to greater interpretation as defined boundaries may not be clearly identifiable. In these locations, the general rule is that the area of adoption is between established field boundary lines or a maximum 2 m from the road edge. This can vary between area and location.

2.5 Abbreviations

AIL	Abnormal Indivisible Load
C&U	Construction and Use
DGC	Dumfries and Galloway Council
EIA	Environmental Impact Assessment
ESDAL	Electronic Service Delivery for Abnormal Loads
HV	High-Voltage
KGV	King George V
LHA	Local Highway Authority
NH	National Highways
NHNW	National Highways North West Region
OHL	Overhead Line
OS	Ordnance Survey
PF	Pell Frischmann Consultants Ltd
POE	Port Of Entry
Ramboll	Ramboll UK Ltd
RSR	Route Survey Review
SLC	South Lanarkshire Council
SPA	Swept Path Assessment
STGO	Special Types General Order
SWC	Super Wing Carrier
TS	Transport Scotland

3 Candidate Turbine

Ramboll have indicated that they wish to consider a Siemens Gamesa SG170 blade and a worst-case tower, which is 30 m long and 4.8 m in width for the route assessment and are detailed in **Table 3-1** below.

Table 3-1: Turbine Component Summary

Component	Length [m]	Width [m]	Height / min. Diameter [m]	Weight [te]
SG170 Blade	83.74	4.186	3.5	29.0
Worst Case Tower	30.0	4.8	4.8	-

4 Port of Entry

As the loads are classified as Special Order, due to a rigid length in excess of 30 m, in accordance with the Water Preferred Policy, KGV Dock, Glasgow has been considered POE for the site and all routes assessed within this report originate here.

The port has sufficient quay and storage space and is well located for the strategic trunk road network.

Loads can be offloaded by geared vessel or onshore mobile cranes, and this port has been used for the delivery of components for a number of wind farms / electrical infrastructure projects and is therefore well-proven as being capable of dealing with AILs of the size considered in this RSR.

5 Site Location

The proposed development site is located to the south of Elvanfoot, South Lanarkshire. **Figure 5-1** illustrates the site location.

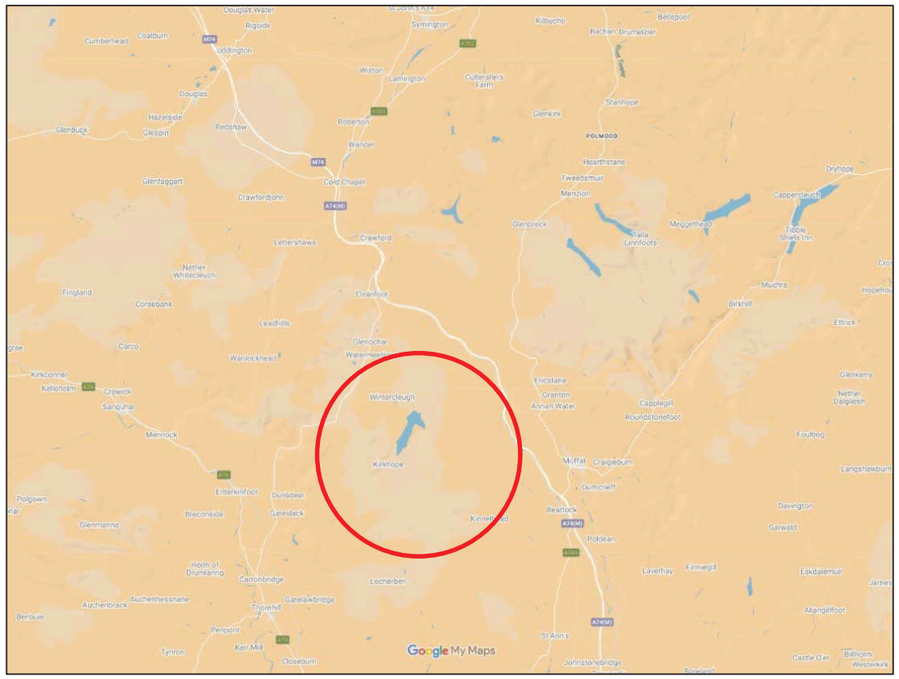


Figure 5-1: Site Location Plan

6 Weight Review

A weight review has been undertaken via the Electronic Service Delivery for Abnormal Loads (ESDAL) contacts database using the National Highways website www.esdal.com.

All of the relevant Local Highway Authorities (LHA) are noted in **Table 6-1**, and all have been contacted to ascertain if there are any relevant constraints that should be noted. Where comments are received, these are included within **Table 9-1** and **Appendix C**. Where no comments have been received, this does not confirm the suitability or otherwise of the structures and a full review will be required with the LHAs.

Table 6-1: ESDAL Contacts

Organisation	Email Address
Amey (South West Scotland)	swabloads@amey.co.uk
M6 DBFO (Autolink M6 ROM)	abnormal.loads@m6dbfo.co.uk
Cumbria Constabulary	AbnormalLoads@cumbria.pnn.police.uk
M8 DBFO (Scottish Roads Partnership)	m8dbfo.abloads@amey.co.uk
National Highways North West Region	nwabnormalloadsenquiries@nationalhighways.co.uk
Network Rail	abnormalloadsenquiries@networkrail.co.uk
Police Scotland	OSDAbnormalLoadsScotland@scotland.police.uk
South Lanarkshire Council	Abnormalloads@southlanarkshire.gov.uk
Transport Scotland	abnormalloads@transport.gov.scot

7 Access Routes

7.1 Route 1

The proposed access route to the western site access junction is as follows:

- Loads will exit KGV Dock and travel straight on at three roundabouts continuing on Kings Inch Drive westbound;
- Loads will turn left and join M8 eastbound at Junction 25A;
- Loads will exit M8 at Junction 22 and merge onto M74 eastbound;
- Loads will merge from M74 onto A74(M) southbound at Junction 13;
- Loads will merge from A74(M) onto M6 southbound at Junction 45;
- Loads will exit M6 southbound at Junction 42 Golden Fleece Interchange and use the roundabout to re-join the M6 northbound;
- Loads will merge from M6 onto A74(M) northbound at Junction 45;
- Loads will exit A74(M) at Junction 14 and join A702 southbound at Elvanfoot Interchange and continue to the proposed site access junction.

The proposed access route is illustrated in **Figure 7-1**.

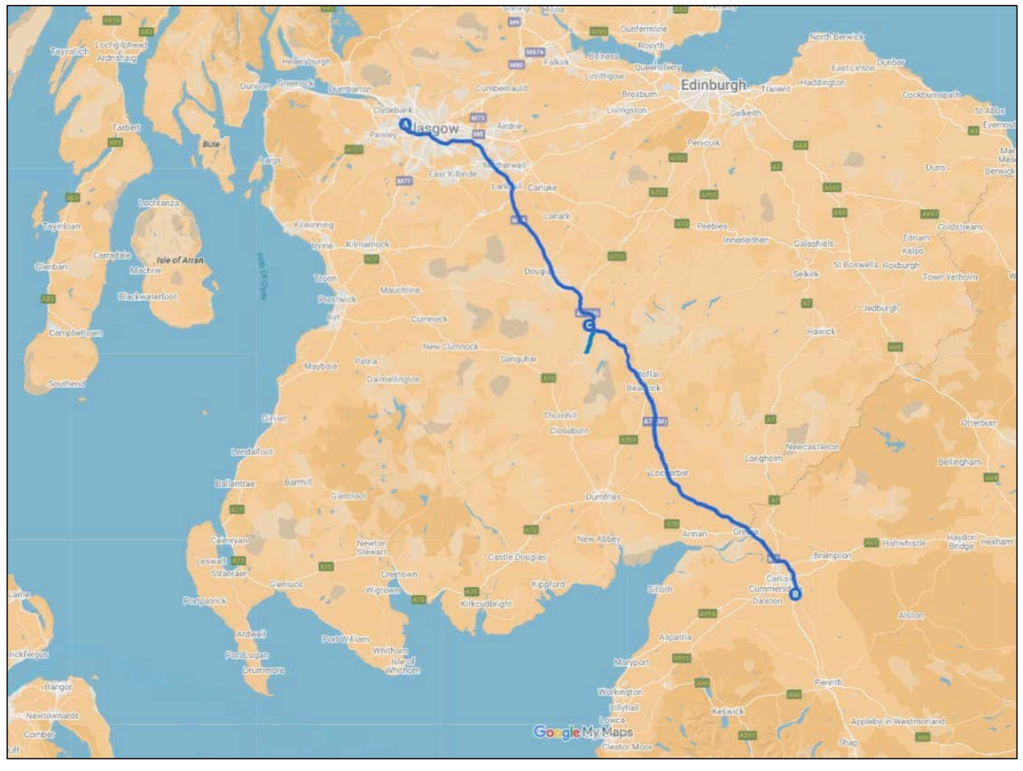


Figure 7-1: Proposed Access Route

8 Delivery Equipment

To provide a robust assessment scenario based upon the known issues along the access route, it has been assumed that all blades would be loaded onto a dolly clamp trailer to reduce the need for mitigation in constrained sections of the route, shown in **Figure 8-1**.

Figure 8-1: Dolly Clamp Trailer

Towers would be loaded onto a 4+7 clamp adaptor style trailer shown in **Figure 8-2**, whereas loads such as the hub, nacelle housing and top towers would be carried on a six-axle step frame trailer.

Figure 8-2: Tower Clamp Trailer

These configurations are subject to confirmation by the chosen haulier at the time of their commissioning.

As the loads are classified as Special Order, due to a rigid length in excess of 30 m, a full Police Escort would be required along the full length of the route.

9 Route Constraints

9.1 Route Constraint Assessment

The constraints noted during the review are provided in **Table 9-1** below. These cover all constraints from the port access gate through to the site access junction and are classified in terms of risk to delivery as follows (N.B. the below list is not exhaustive):

High Risk

- Building / overbridge conflict
- Third-party land owner(s) access permission
- Permanent road works
- Reprofiling / ground works
- Bridge upgrades
- Overhead line removal / relocation
- Tree clearance

Medium Risk

- Land searches to confirm extent of available adopted land
- Topographical survey
- Detailed junction / access track design
- Structural assessment / overbridging
- Overhead line survey
- Vertical elevation check
- Bridge parapet removals
- Street furniture removals
- Tree / vegetation pruning
- Vegetation clearance
- Use of dedicated abnormal load bypass / access track
- Shunt / contraflow manoeuvre
- Trailer interchange
- Carriageway surface repairs

Low Risk

- Temporary load bearing surface to be laid
- Existing load bearing surface to be utilised
- Parking restrictions
- Loads to be raised above obstruction using trailer hydraulics

Risk has been assessed in terms of enabling works time, potential cost and complexity.

Full details of the mitigation measures are shown on the SPA drawings included in **Appendix B**.

9.2 Route Constraint Tables

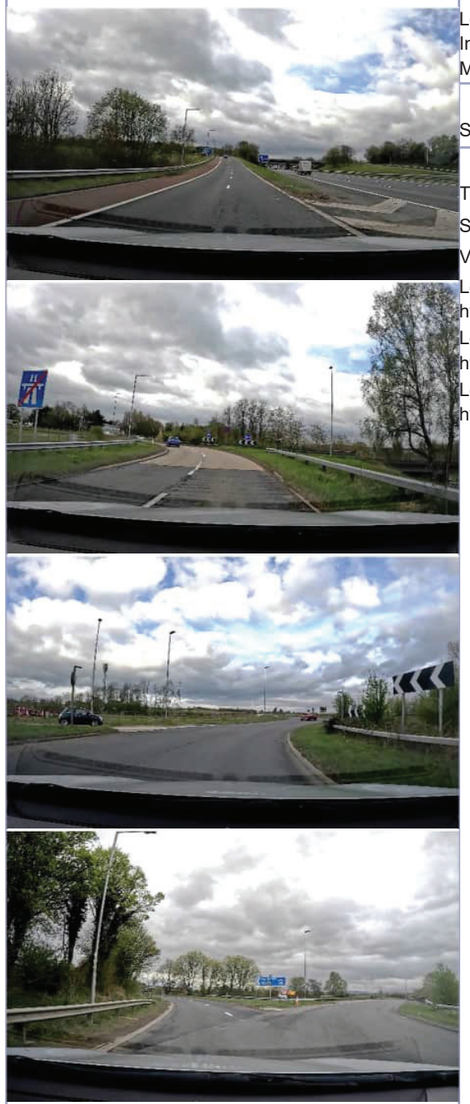
Tables 9-1 detail constraints from the KGV Dock access gate through to the proposed site access junction on the route.

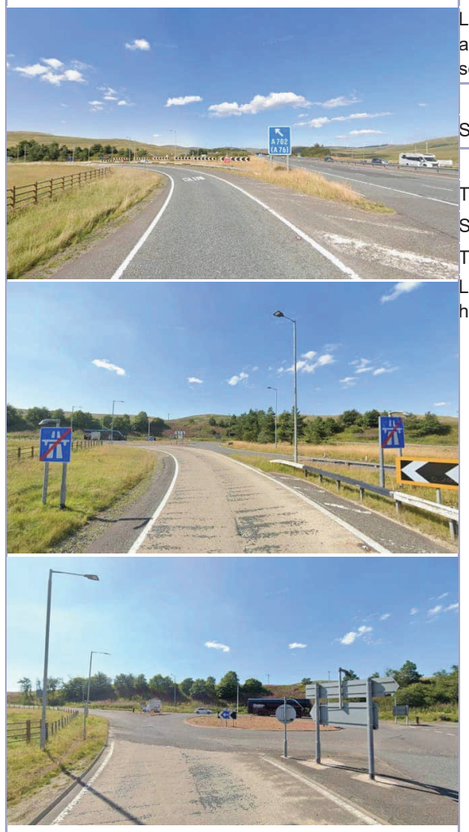
Table 9-1: Route Constraint Points and Details (Dolly Clamp and Tower Clamp Trailers)

POI	Key Constraint	Details	
1	**KGV Dock exit / Ikea Glasgow roundabout** 	Direction of travel Loads will exit KGV Dock and take the third exit at the roundabout onto Kings Inch Drive northbound.	
		Document reference	Doc. No.
		Swept path assessment	SPA-01
		Mitigation measures	Risk level
		Street furniture removals	Medium
		Contraflow manoeuvre	Medium
		Storage area to be cleared	Low
		Temporary load bearing surface to be laid	Low
2, 3	**Kings Inch Drive Sainsbury's and McDonald's roundabouts**  	Direction of travel Loads will take the first exit at the Sainsbury's roundabout and the second exit at the McDonald's roundabout to continue on Kings Inch Drive westbound.	
		Document reference	Doc. No.
		Swept path assessment	SPA-02
		Mitigation measures	Risk level
		Ground works	High
		Street furniture removals	Medium
		Tree / vegetation pruning	Medium
		Existing load bearing surface to be utilised	Low
		Temporary load bearing surface to be laid	Low
4	**Kings Inch Drive / Marlinford Road roundabout** 	Direction of travel Loads will take the second exit at the roundabout to continue on Kings Inch Drive westbound.	
		Document reference	Doc. No.
		Swept path assessment	SPA-03
		Mitigation measures	Risk level
		No mitigation measures required	N/A

POI	Key Constraint	Details
5	**Kings Inch Drive / M8 Jct 25A junction** 	Direction of travel Loads will turn left onto M8 Jct 25A slip road southbound. Document reference: Swept path assessment — Doc. No.: SPA-03 Mitigation measures — Risk level: Street furniture removals — Medium Tree / vegetation pruning — Medium Contraflow manoeuvre — Medium Temporary load bearing surface to be laid — Low Loads to oversail street furniture using trailer hydraulics — Low
6	**M8 Jct 25A eastbound entry slip road** 	Direction of travel Loads will continue on M8 Junction 25A eastbound entry slip around a left-hand bend and then merge onto M8 eastbound. Document reference: Swept path assessment — Doc. No.: SPA-04 Mitigation measures — Risk level: Topographical survey — Medium Loads to oversail street furniture using trailer hydraulics — Low
7	**M8 / M74 Jct 22 Interchange** 	Direction of travel Loads will exit M8 at Junction 22 and merge onto M74(M) eastbound. Document reference: N/A — Doc. No.: N/A Mitigation measures — Risk level: No mitigation measures required — N/A

POI	Key Constraint	Details
8	**M74 6-5 75 Raith** 	Direction of travel Loads will continue on M74 southbound over structure no. M74 6-5 75 Raith. Document reference: N/A — Doc. No.: N/A Mitigation measures — Risk level: Structural caution — Low Loads to straddle lanes 1 and 2 No other traffic on structure at same time
9	**M74 Jct 13 / A74(M)** 	Direction of travel Loads will merge from M74 onto A74(M) southbound. Document reference: N/A — Doc. No.: N/A Mitigation measures — Risk level: No mitigation measures required — N/A
10	**A74(M) / M6 Jct 45** 	Direction of travel Loads will merge from A74(M) onto M6 southbound. Document reference: N/A — Doc. No.: N/A Mitigation measures — Risk level: No mitigation measures required — N/A

POI	Key Constraint	Details	
11, 12	**M6 Jct 42 exit slip / Golden Fleece Interchange** 	Direction of travel Loads will exit M6 southbound at Junction 11 Golden Fleece Interchange and take the sixth exit at the roundabout to join M6 northbound.	
		Document reference Swept path assessment	Doc. No. SPA-05
		Mitigation measures Tree clearance Street furniture removals Vegetation clearance Loads to oversail bridge parapet using trailer hydraulics Loads to oversail street furniture using trailer hydraulics Loads to oversail junction box using trailer hydraulics	Risk level High Medium Medium Low Low Low
13	**M6 Jct 45 / A74(M)** 	Direction of travel Loads will merge from M6 onto A74(M) northbound.	
		Document reference N/A	Doc. No. N/A
		Mitigation measures No mitigation measures required	Risk level N/A

POI	Key Constraint	Details	
14, 15	**A74(M) Jct 14 / A702 Elvanfoot Interchange** 	Direction of travel Loads will exit A74(M) at Junction 14 Elvanfoot Interchange and take the first exit at the roundabout onto A702 southbound.	
		Document reference Swept path assessment	Doc. No. SPA-06
		Mitigation measures Third-party land owner(s) access permission Street furniture removals Traffic control measures Loads to oversail street furniture using trailer hydraulics	Risk level High Medium Medium Low

POI	Key Constraint	Details
15	**A74(M) Jct 14 / A702 Elvanfoot Interchange (contraflow)** 	Direction of travel As an alternative to negotiating Elvanfoot Interchange conventionally, loads will cross the central reservation to exit A74(M) southbound, contraflow A74(M) Jct 14 northbound entry slip and take the first exit at the roundabout onto A702 southbound. If this option was to be used, loads would not travel south to Golden Fleece Interchange, therefore, POIs 10 – 14 would not be required. Document reference: Swept path assessment — Doc. No.: SPA-06 Mitigation measures / Risk level: Third-party land owner(s) access permission — High Street furniture removals — Medium Contraflow manoeuvre — Medium Traffic control measures — Medium Temporary load bearing surface to be laid — Low Loads to oversail street furniture using trailer hydraulics — Low
16	**A702 Elvanfoot Farm LH bend** 	Direction of travel Loads will continue on A702 southbound around a left-hand bend. Document reference: Swept path assessment — Doc. No.: SPA-07 Mitigation measures / Risk level: Third-party land owner(s) access permission — High Ground works — High Street furniture removals — Medium Temporary load bearing surface to be laid — Low Loads to oversail street furniture using trailer hydraulics — Low

POI	Key Constraint	Details
17, 18	**A702 / Elvan Water bypass** 	Direction of travel Loads will exit A702 onto proposed Elvan Water bypass southbound, cross Elvan Water and re-join A702 southbound. Document reference: Swept path assessment — Doc. No.: SPA-08 Mitigation measures / Risk level: Third-party land owner(s) access permission — High Permanent road works — High Ground works — High Structural design and construction — High Overhead line removal / relocation — High Topographical survey — Medium Detailed access track design — Medium Street furniture removals — Medium Tree / vegetation pruning — Medium Temporary load bearing surface to be laid — Low
19	**A702 Elvanfoot series of bends** 	Direction of travel Loads will continue on A702 southbound around a series of bends. Document reference: Swept path assessment — Doc. No.: SPA-09 Mitigation measures / Risk level: Third-party land owner(s) access permission — High Ground works — High Ditch to be culverted — High Overhead line removal / relocation — High Tree clearance — High Street furniture removals — Medium Temporary load bearing surface to be laid — Low

POI	Key Constraint	Details
20	**A702 east of Bucht Knowe series of bends**  	Direction of travel Loads will continue on A702 southbound around a series of bends. Document reference: Swept path assessment — Doc. No.: SPA-10 Mitigation measures — Risk level: Third-party land owner(s) access permission — High Ground works — High Tree clearance — High Street furniture removals — Medium Temporary load bearing surface to be laid — Low Loads to oversail street furniture using trailer hydraulics — Low
21	**A702 west of Knock Fessock RH bend** 	Direction of travel Loads will continue on A702 southbound around a right-hand bend. Document reference: Swept path assessment — Doc. No.: SPA-11 Mitigation measures — Risk level: Third-party land owner(s) access permission — High Street furniture removals — Medium Loads to oversail raised embankment using trailer hydraulics — Low Loads to oversail street furniture using trailer hydraulics — Low
22	**A702 Air Cleuch series of bends** 	Direction of travel Loads will continue on A702 southbound around a series of bends. Document reference: Swept path assessment — Doc. No.: SPA-12 Mitigation measures — Risk level: Street furniture removals — Medium

POI	Key Constraint	Details
23	**A702 east of Lang Knowe series of bends** 	Direction of travel Loads will continue on A702 southbound around a series of bends. Document reference: Swept path assessment — Doc. No.: SPA-13 Mitigation measures — Risk level: Third-party land owner(s) access permission — High Land searches to confirm extent of available adopted land — Medium Topographical survey — Medium Street furniture removals — Medium Loads to oversail street furniture using trailer hydraulics — Low
24	**A702 south of Annanshaw Burn RH bend** 	Direction of travel Loads will continue on A702 southbound around a right-hand bend. Document reference: Swept path assessment — Doc. No.: SPA-14 Mitigation measures — Risk level: Third-party land owner(s) access permission — High Street furniture removals — Medium Loads to oversail street furniture using trailer hydraulics — Low
25	**A702 Glenochar series of bends**  	Direction of travel Loads will continue on A702 southbound around a series of bends. Document reference: Swept path assessment — Doc. No.: SPA-15 Mitigation measures — Risk level: Third-party land owner(s) access permission — High Utility box removal — High Street furniture removals — Medium Tree / vegetation pruning — Medium Temporary load bearing surface to be laid — Low Loads to oversail bridge parapet using trailer hydraulics — Low Loads to oversail street furniture using trailer hydraulics — Low

POI	Key Constraint	Details	
26	**A702 east of Doddin RH bend**	Direction of travel	
		Loads will continue on A702 southbound around a right-hand bend.	
		Document reference	Doc. No.
		Swept path assessment	SPA-16
		Mitigation measures	Risk level
		Street furniture removals	Medium
27	**A702 northwest of Watermeetings Rig RH bend**	Direction of travel	
		Loads will continue on A702 southbound around a right-hand bend.	
		Document reference	Doc. No.
		Swept path assessment	SPA-17
		Mitigation measures	Risk level
		Third-party land owner(s) access permission	High
		Overhead line removal / relocation	High
		Tree clearance	High
		Street furniture removals	Medium
		Loads to oversail street furniture using trailer hydraulics	Low
28	**A702 Peden S-bend**	Direction of travel	
		Loads will continue on A702 southbound around an S-bend.	
		Document reference	Doc. No.
		Swept path assessment	SPA-18
		Mitigation measures	Risk level
		Overhead line removal / relocation	High
		Land searches to confirm extent of available adopted land	Medium
		Topographical survey	Medium
		Loads to oversail raised embankment using trailer hydraulics	Low
		Loads to oversail utility box using trailer hydraulics	Low
		Loads to oversail street furniture using trailer hydraulics	Low

POI	Key Constraint	Details	
29	**A702/05 Peden S-bend**	Direction of travel	
		Loads will continue on A702 southbound around an S-bend over structure no. A702/05 Peden.	
		Document reference	Doc. No.
		Swept path assessment	SPA-19
		Mitigation measures	Risk level
		Overhead line removal / relocation	High
		Loads to oversail bridge parapet using trailer hydraulics	Low
		Loads to oversail street furniture using trailer hydraulics	Low
30	**A702 Little Peden Burn series of bends**	Direction of travel	
		Loads will continue on A702 southbound around a series of bends.	
		Document reference	Doc. No.
		Swept path assessment	SPA-20
		Mitigation measures	Risk level
		Loads to oversail street furniture using trailer hydraulics	Low
31	**A702 / site access junction**	Direction of travel	
		Loads will turn left onto the proposed site access track eastbound.	
		Document reference	Doc. No.
		Swept path assessment	SPA-21
		Mitigation measures	Risk level
		Third-party land owner(s) access permission	High
		Permanent road works	High
		Ground works	High
		Structural design and construction	High
		Detailed junction design	Medium
		Detailed access track design	Medium

POI	Key Constraint	Details	
32	**A702/09 Elvanfoot S-bend**	Direction of travel	
		Tower loads will continue on A702 southbound around an S-bend over structure no. A702/09 Elvanfoot.	
		Document reference	Doc. No.
		Swept path assessment	SPA-22
		Mitigation measures	Risk level
		Third-party land owner(s) access permission	High
		Overhead line removal / relocation	High
		Ground works	High
		Tree clearance	High
		Land searches to confirm extent of available adopted land	Medium
		Topographical survey	Medium
		Structural feasibility check with South Lanarkshire Council	Medium
		Street furniture removals	Medium
		Temporary load bearing surface to be laid	Low
		Loads to oversail bridge parapet using trailer hydraulics	Low
		Loads to oversail street furniture using trailer hydraulics	Low

10 Swept Path Assessment Terminology

The detailed Swept Path Assessment (SPA) drawings for the locations assessed are provided in **Appendix B** for review. The drawings illustrate tracking undertaken for the worst-case loads at each location.

The colours illustrated on the swept paths are:

- Grey / Black – Ordnance Survey (OS) / topographical base mapping,
- Cyan – indicative road edge,
- Green – vehicle body outline (body swept path),
- Red – tracked pathway of the wheels (wheel swept path) and
- Purple – the oversail tracked path of the load where it encroaches out with the trailer (load swept path).

Where mitigation works are required, the extents of the overrun and oversail areas are illustrated and fully detailed on the SPA drawings. Additional land areas to those indicated in the SPA drawings may be required to facilitate the construction of the proposed physical mitigation measures depending on the site conditions and topography. The extent of any additional areas required to construct the mitigation works highlighted within this study and the detailed design of said mitigation works is beyond the scope of this study and should be confirmed on detailed topographical survey data.

Please note that where SPA have been undertaken using OS base mapping, AutoCAD based aerial mapping and historic topographical data, there can be errors in these data sources.

Where provided by the client, topographical data has been utilised. Please note that PF cannot accept liability for errors on the data source, be that OS base mapping, aerial mapping, historic topographical surveys or client supplied data. Where applicable, mapping has been augmented with aerial imagery for illustration only. The accuracy of this mapping cannot be confirmed by PF.

Please note that turbine supplier guidance suggests that the minimum road width for the safe transport of AIL components is 4.5 m. All public roads and onsite access tracks should comply with this standard unless a relaxation has been agreed with suppliers.

The need to widen public roads will require engagement with the relevant road authority and may constitute permanent or temporary surfacing.

11 Summary

11.1 Summary of Route Survey Review

Pell Frischmann Consultants Ltd (PF) has been commissioned by Ramboll UK Ltd (Ramboll) to undertake a Route Survey Review (RSR) on behalf of RenewCo (the Developer) to examine the issues associated with the transport of wind turbine Abnormal Indivisible Loads (AIL) associated with the development of Watchman Wind Farm, located to the south of Elvanfoot, in the South Lanarkshire Council (SLC) administrative area.

This report identifies the key points and issues associated with the proposed routes and outlines the issues that will need to be considered for successful delivery of the components.

The access review has been based upon Siemens Gamesa SG170 wind turbine components and has been undertaken on the basis of a dolly clamp trailer and a tower clamp trailer.

Due to the transport configurations being classified as Special Order, in accordance with the Water Preferred Policy, King George V (KGV) Dock has been considered as Port of Entry (POE) for the project as it is the closest marine facility to site capable of dealing with this size of cargo. Also, due to the Special Order classification of the loads, full Police escort will be required along the length of all routes from KGV Dock to site.

The route travels south from KGV Dock to M6 Jct 42 Golden Fleece Interchange where the loads will exit the southbound carriageway, travel around the roundabout and re-join the M6 northbound in order to enable the loads to join the A702 southbound en route to the proposed site access point.

A review of the current structural capability of the route has been carried out; however, responses had not been received from Amey (South West Scotland), Network Rail and SLC at the time of writing this report, therefore, the route has not been confirmed as structurally capable of accommodating the AILs. M6DBFO and National Highways North West Region (NHNW) have approved the use of their structural assets; and M8 DBFO have approved the use of their structural assets under operational cautions. Loads are to cross structure no. M74 6-5 75 Raith straddling lanes one and two with no other traffic on the structure at the same time.

The route from KGV Dock to Elvanfoot is considered negotiable with tree and vegetation clearance and pruning; street furniture removals, areas of temporary load bearing surface, use of existing AIL crossings and special manoeuvres. Third-party land uptake is required at the Kings Inch Drive / M8 Jct 25A junction, Elvanfoot Interchange and at the left-hand bend over Network Rail structure no. WCM1/B/282 with the potential requirement for ground works to accommodate the loads. Land searches are required to confirm the extent of the adopted highway at these locations.

The existing carriageway alignment of the A702 over structure no. A702/09 Elvanfoot is not negotiable for the loads, therefore, a bypass is to be designed and constructed including a new structure over Elvan Water. The design of this bypass is being undertaken separate to this report, but the carriageway alignment has been used as the basis for a Swept Path Assessment (SPA) and is negotiable with third-party land uptake, ground works, carriageway surfacing, Overhead Line (OHL) removals and street furniture removals.

A SPA of the existing carriageway alignment of the A702 over structure no. A702/09 Elvanfoot considerate of the tower loads has been undertaken, which shows that due to minimal clearance between the loads and the bridge parapets, topographical survey is required and the SPA repeated in order to confirm negotiability. Third-party land uptake is required to the inside of a right-hand bend on exit from the structure. Also, OHL removals are required, both High-Voltage (HV) and telecom OHLs; along with ground works, areas of temporary load bearing surface, street furniture removals and tree clearance. At the time of writing this report, SLC were yet to comment on the structural feasibility of structure no. A702/09 Elvanfoot, therefore, it not yet known whether the structure can accommodate the anticipated ground loadings of the tower loads.

Should the design and construction of a new structure over Elvan Water not be selected, investigation could be made into transhipping the blades from the dolly clamp trailer onto a blade lifter prior to Elvanfoot for onward delivery to site; however, this option has not been considered as part of this report.

The remainder of the route to the proposed site access junction is considered negotiable with third-party land uptake, OHL removals, street furniture removals, tree and vegetation clearance and pruning; ground works, areas of temporary load bearing surface, removal of utility boxes and oversail of bridge parapets.

SPA of the A702 / site access junction has been carried out, and the proposed junction design is to be amended to accommodate the loads.

No consideration has been given to the on site design requirements as part of this report.

The report is presented to Ramboll for consideration. Various road modifications and interventions are required to successfully access the site. If these are assessed, approved and undertaken, access to the site is considered feasible.

11.2 Further Actions

The following actions are recommended to pursue the transport and access issues further:

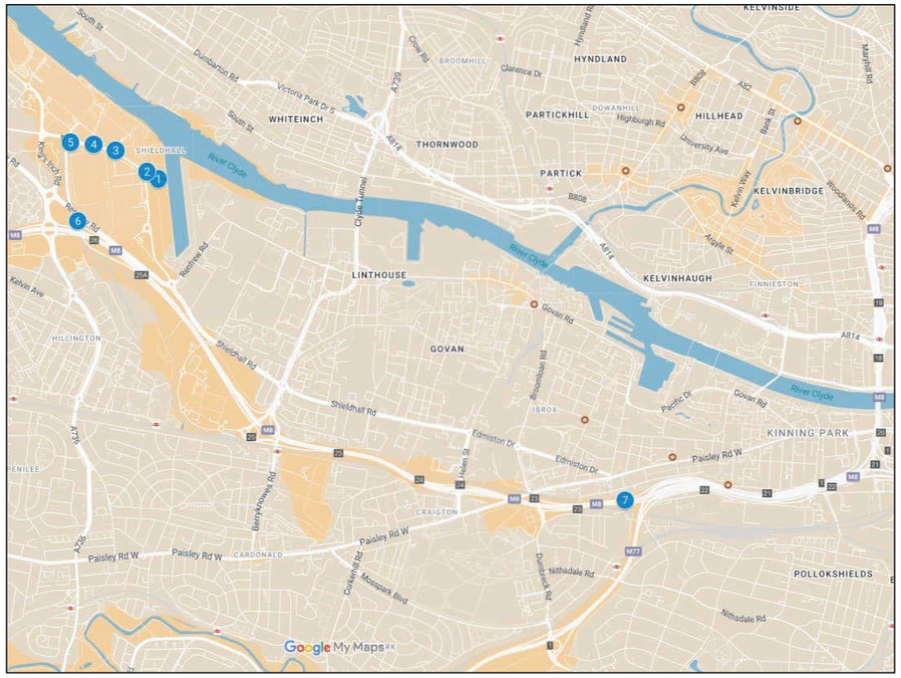
- Undertake topographical survey and land searches at the identified locations and repeat the swept path assessments to confirm mitigation measures;
- Obtain responses from Amey (South West Scotland), Network Rail and SLC on current structural capability of the routes to accommodate proposed AILs;
- Conduct a test run to confirm negotiability and identified mitigation measures;
- Undertake discussion with the affected utility providers and roads agencies;
- Prepare detailed mitigation design proposals to help inform the land option / consultee discussions;
- Obtain the necessary land options;
- Obtain the necessary statutory licences to enable the mitigation measures; and
- Develop a detailed operational Transport Management Plan to assist in transporting the proposed loads.

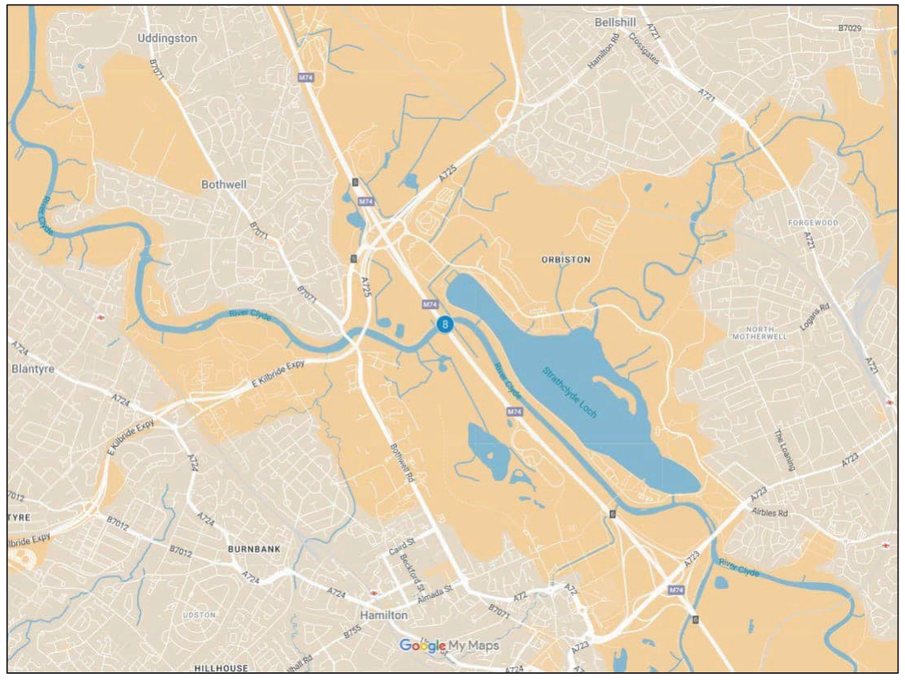
Appendix A Points Of Interest

10110070 Watchman Wind Farm
Abnormal Indivisible Load Route Survey

An electronic version of the POI plans can be found here:

https://www.google.com/maps/d/edit?mid=1r31gUurAHKjSO6QjpxfUNmcqi_Tkunc&usp=sharing





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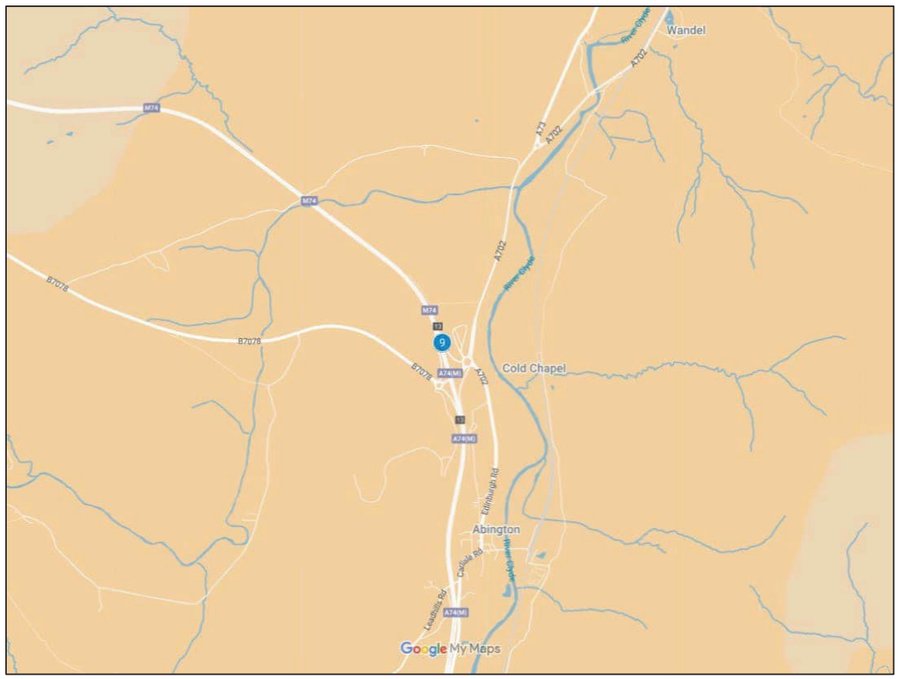
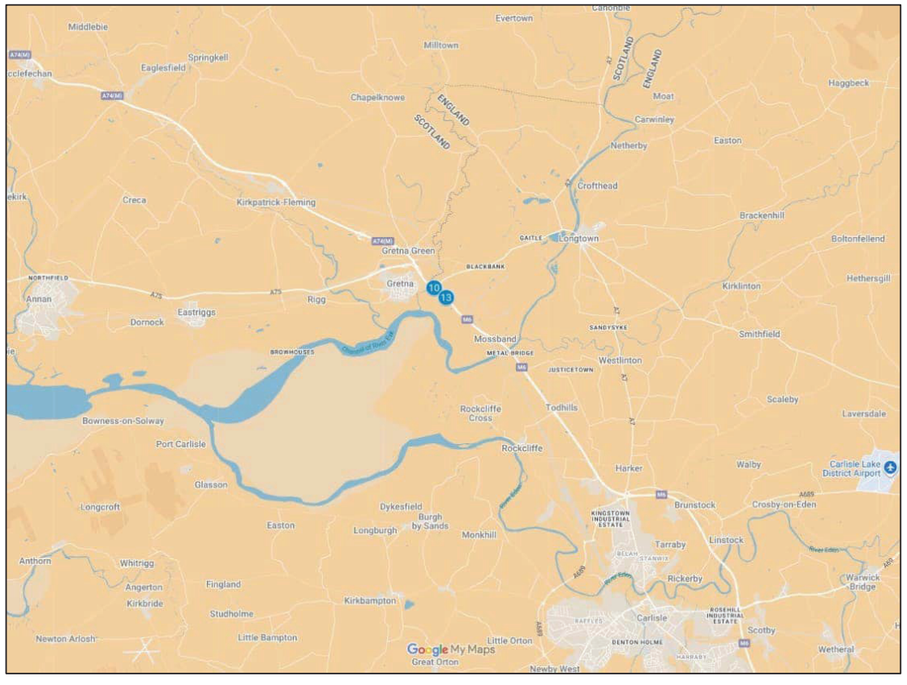
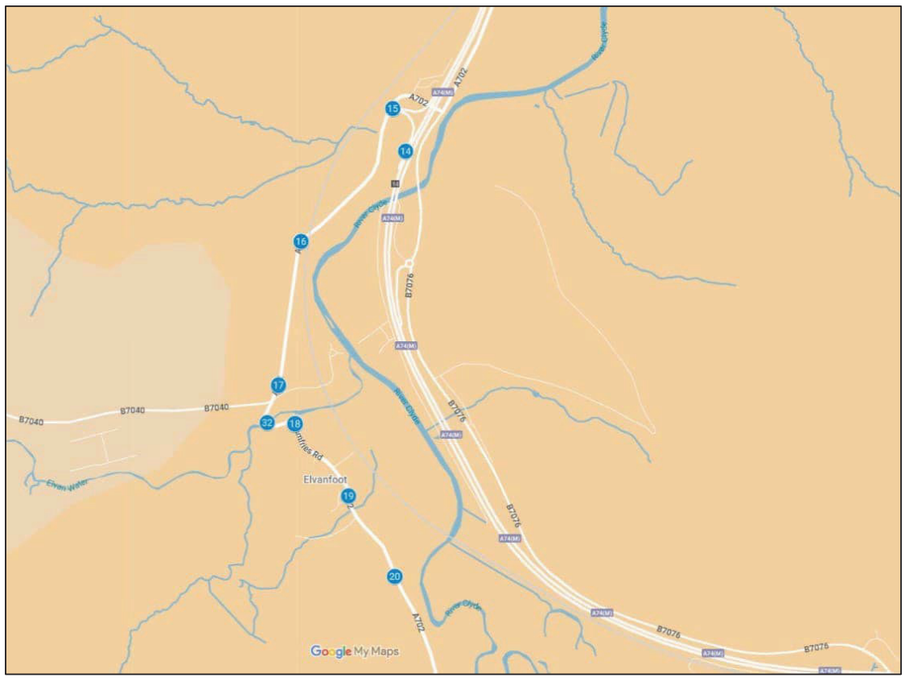
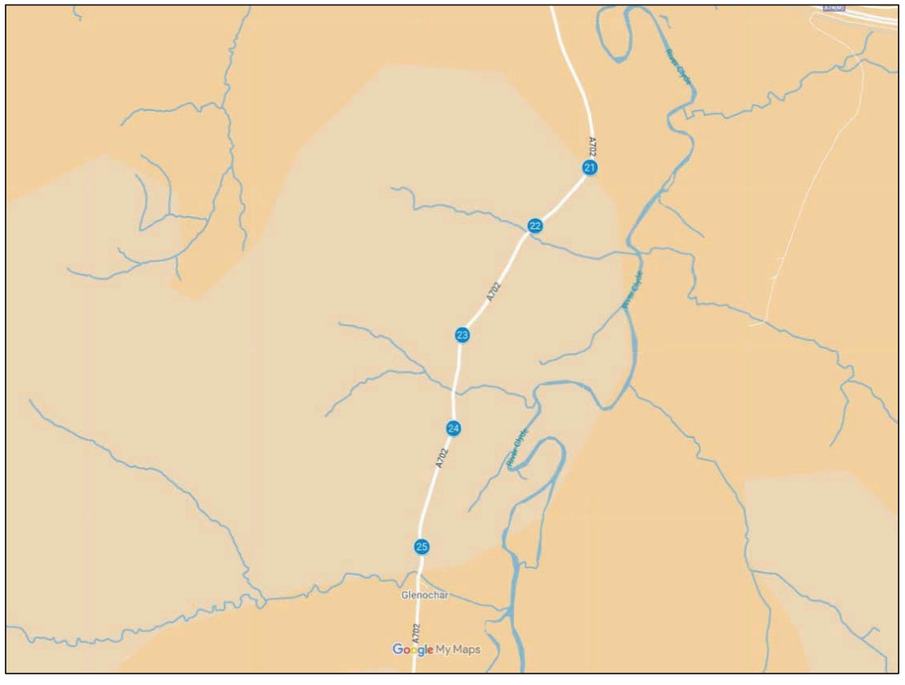




10110070 Watchman Wind Farm
Abnormal Indivisible Load Route Survey





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