Appendix 12.2

Preliminary Traffic Management Plan

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Glossary

Term	Definition
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of drawing together by the developer, in a systematic way, a description of the development and information relating to the likely significant environmental effects arising from a Proposed Development
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Regulation 5
The Proposed Development	The proposed Scawd Law Wind Farm development
The Proposed Development Area	The development area within the red line site boundary (application area) as shown in Volume 3a Figure 1.2: Site Layout.

List of Abbreviations

List and describe your abbreviations here.

Abbreviation	Description
AIL	Abnormal Indivisible Load
EIAR	Environmental Impact Assessment Report
HGV	Heavy Goods Vehicle
LGV	Light Goods Vehicle
SBC	Scottish Borders Council
SPA	Swept Path Analysis
TA	Technical Appendix
TMP	Traffic Management Plan

A12.2.1 INTRODUCTION

A12.2.1.1 This document has been prepared to establish the preliminary Traffic Management Plant (TMP) for the Proposed Development and AIL route, establishing the route and methodology of transportation of the construction plant, equipment (including turbine components) and materials during the construction phase of the wind farm. This preliminary TMP has been developed in conjunction with Chapter 12: Traffic and Transport for the Environmental Impact Assessment Report (EIAR) for the Proposed Development.

A12.2.1.2 This preliminary TMP contains the principles that will form the basis for the appointed contractor (post consent) to develop their construction phase TMP which will be utilised to manage traffic during construction. It is expected that a planning condition will be included in any consent requiring the TMP to be fully developed and approved in consultation with the local authority prior to construction works commencing.

A12.2.1.3 The TMP includes a range of mitigation measures that were identified in Chapter 12: Traffic and Transport of the EIAR to reduce the impact of the traffic associated with the Proposed Development and manage the construction traffic.

Policy and Legislation

A12.2.1.4 Traffic management is regulated by the following legislation and regulations:

- The Electricity Act 1989, which is the statutory instrument for applications for electricity generating stations of a certain generating capacity.
- The Town and Country Planning (Scotland) Act 1997 as amended which provides for deemed planning permission and associated planning conditions.
- Construction (Design & Management) Regulations 2015, which regulate the manner in which construction works take place from the perspective of health and safety.
- Overarching National Policy Statement for Energy (EN-1). Chapter 5.13 of EN-1 relates to transport for a new energy nationally significant infrastructure project.
- National Policy Statement for Renewable Energy Infrastructure (EN-3) which provides more detailed guidance on traffic routing and mitigation, particularly for abnormal loads.
- The Roads (Scotland) Act 1984 and other associated legislation – which give powers and duties to local government for, amongst other things, local road construction, repair and maintenance and safety.
- The Roads Vehicles (construction and use) Regulations 1986, The Road Vehicles (Authorised Weight) Regulations 1988, The Road Vehicles (Authorisation of Special Types) General Order 2003 and Section 44 of the Road Traffic Act 1988, which together regulate the movement of Abnormal Indivisible Loads (AIL's) on the road network.
- Scotland's Third National Planning Framework (2014), The Scottish Government;
- Scottish Planning Policy (SPP) (2014), The Scottish Government;
- Planning Advice Note (PAN) 75: Transport and Planning (2005), The Scottish Government;
- Onshore Wind Turbines; Online Renewables Planning Advice, The Scottish Government;
- Transport Assessment Guidance (2012), Transport Scotland;
- Scottish Borders Local Development Plans (2016 and proposed 2020);
- SBC Supplementary Guidance, Renewable Energy (2018).

A12.2.2 PROJECT DETAILS

Purpose

A12.2.2.1 The purpose of the production of this TMP is to ensure the safety of the public and workforce and to manage traffic to/from the site efficiently to aid in minimising disruption to local residents and businesses. The preliminary TMP establishes the traffic management measures that will be developed in consultation with relevant Roads Authorities and local communities, post-consent to form the construction TMP. The approved construction TMP will set out the traffic management methods to be adopted post-consent.

The Development

A12.2.2.2 The Proposed Development comprises up to 8 wind turbines with a generating capacity of up to 60 MW, near Innerleithen in the local planning authority area of SBC).

A12.2.2.3 The principal components and related ancillary development of the wind farm comprises:

- 8 wind turbines with a maximum tip height of up to 180m,
- Site access tracks,
- Access point with the B709,
- Underground electricity cables,
- Crane hardstanding pads and lay down areas,
- Anemometry Mast,
- Site construction compound and concrete batching plant for a temporary period,
- Substation, external compound, battery storage and control building.

Site Access

A12.2.2.4 The site will be accessed from a new dedicated access junction (refer to Figure 4.11) off the B709, located to the north of Innerleithen. The B709 runs in a north-south direction from Innerleithen in the south to its junction with the B7007 in the north. From its junction with the B7007, the B709 runs easterly through the hamlet of Heriot before joining the A7. The B7007 runs to the north of the B709 from its junction with the B709 until it also joins the A7 near Middleton.

A12.2.2.5 The B709 in is a single two-lane carriageway through Innerleithen after which its cross-section is reduced to a single lane carriageway heading north to the site access and further north towards its junction with the B7007. Around 8km north of the site access (south of the B7007 junction) the B709 returns to a single two-lane carriageway. The B7007 is a single two-lane carriageway from its junction with the B709 to the A7.

Emergency Vehicle Access

A12.2.2.6 Proposals for the HGV site access and egress measures, including emergency procedures, shall be included within the Principal Contractor's own site-specific Construction Phase Plan. The Principal Contractor shall be responsible for communicating these details to all operatives and visitors of the site. For the avoidance of doubt, the site access shall remain free of obstruction at all times during the construction phase.

Rights of Way

A12.2.2.7 There are no specific Rights of Way or Core Paths through the site, however at all times during construction, signs shall be in place to warn the public of the construction site and the hazards it would present. It may be necessary to erect a post and rail fence or similar barrier to segregate the public from the works and the assessment of the need for this shall be confirmed in conjunction with the Principal Contractor.

A12.2.3 CONSTRUCTION PROGRAMME

A12.2.3.1 A preliminary construction programme, with key durations for construction works, is included within Chapter 4: Project Description of the EIAR.

A12.2.3.2 A detailed construction programme shall be provided by the contractor as part of the construction TMP.

A12.2.3.3 The Principal Contractor shall develop a logical sequencing and duration of construction works to reduce HGV vehicle movements and avoid high peak movements.

A12.2.3.4 The Principal Contractor and Turbine Supplier shall provide SBC with major updates to the programme as required.

Key Dates

A12.2.3.5 The table below shall be augmented and completed as part of the construction TMP to illustrate the key dates for the construction works.

Table 12.2.1: Contractors Key Dates

Description	Estimated Dates	Estimated Timescales
Site mobilisation	TBC	1 month
Civil Works (access tracks and hardstands)	TBC	8 months
Concrete Foundation Pours	T1 – TBC T2 – TBC T3 – TBC T4 – TBC T5 – TBC T6 – TBC T7 – TBC T8 – TBC	5 months
AIL Delivery Route upgrade works	TBC	3 months
Turbine Delivery and Installation	TBC	5 months
Completion	TBC	1 month

Source: Natural Power – data to be completed post-consent as part of the construction TMP

A12.2.4 CONSTRUCTION TRAFFIC MANAGEMENT

Consultation

A12.2.4.1 Key to the successful implementation of the TMP is proactive consultation with Borders Council Roads Authority, Transport Scotland, the local communities and individuals effected by traffic routing to develop and agree appropriate traffic management measures.

A12.2.4.2 The construction TMP shall be developed in consultation with the above parties with the traffic management measures agreed and implemented prior to construction commencing. A system of communication shall be agreed with the above parties for enabling proactive consultation to take place throughout the construction phase. This will include community meetings and direct notification (i.e. letter drops, face to face, SMS, etc) to affected parties prior to construction beginning. Signage on the road advising of dates for particular construction events affecting the road network (i.e. AIL deliveries, concrete pours, etc) will be deployed well in advance of the relevant scheduled construction dates.

A12.2.4.3 Thereafter, the Principal Contractor shall appoint a nominated person to whom all traffic management and road safety issues shall be referred. The nominated contact will liaise with both the relevant stakeholders to review and update the agreed construction TMP as required during the construction period.

Preliminary Traffic Management Measures

A12.2.4.4 The Traffic and Transport chapter of the EIAR identified a number of potential traffic management measures that could be implemented to mitigate the impacts of the construction traffic on the local communities. These measures include:

- Scheduling of HGV deliveries to avoid peak times (e.g. morning, evening, school drop off and pick up times and golf medals and competition events);
- Temporary signage through the peak construction periods to inform both road users and pedestrians of the risks and highlight rights of ways/priorities, particularly with respect to vehicles parked on the B709. This could consider temporary railings along the footpath to provide a physical demarcation between the footpath and the highway;
- Temporary speed restrictions for construction traffic. It is understood the 20 mph speed limit trial in the Borders is currently being assessed to determine whether to retain the limits permanently. However, a temporary speed limit, similar to a construction site of 5 mph or 10 mph, could be introduced for the B709 for construction traffic; and
- Temporary road crossings and barriers along the road verge at the most sensitive locations to provide a more physical demarcation/barrier between the road edge and property;

A12.2.4.5 As part of the construction TMP, the above measures, as well as any other measures identified during the development and consultation of the construction TMP, shall be fully developed and detailed post-consent including locations, extents and durations.

B709 Road Structure

A12.2.4.6 The Traffic and Transport chapter of the EIAR, identified potential deterioration of the structure capacity and condition of the single lane section of the B709 due to increased traffic loading. As part of the development of the construction TMP, the structural adequacy of the road for the predicted increased HGV traffic volumes shall be assessed and strengthening works undertaken if required.

A12.2.4.7 The construction TMP shall detail the locations, extents and strengthening details to be implemented as part of the construction phase. The timing of any strengthening works on the B709 shall be agreed prior to wind farm construction commencing.

B709 Passing Places

A12.2.4.8 The single lane section of the B709 from just south of Dewar, past the site entrance and onto Innerleithen was identified as having a high sensitivity to increased HGV movements due to the absence of formal passing places to facilitate the two way movement of traffic.

A12.2.4.9 As part of the construction TMP, it is recommended that further investigation works are undertaken, in consultation with SBC Roads, to install a series of temporary passing places prior to commencement of the construction phase.

Driving and Speed Restrictions

A12.2.4.10 All vehicles (cars, LGVs, HGV's and AILs) shall be driven in a manner which is safe and suitable for the conditions at all times. All vehicles will adhere to the speed limit on site and on the public highway. A zero-tolerance policy shall be adopted by all contractors, such that any infringement results in that person not returning to site.

A12.2.4.11 As part of the construction TMP, temporary speed limits for construction traffic (e.g. 10 mph, 20 mph, etc) shall be agreed with SBC. This shall include settlement areas (i.e. Innerleithen, Peebles, Walkerburn) and along single lane sections of the B709 where individual properties or businesses front the road (e.g. Innerleithen Golf Course).

A12.2.4.12 All cars and personnel vehicles used for commuting to site must be road worthy and fully legally compliant.

A12.2.4.13 All commercial vehicles must be road worthy and fully legally compliant.

Timing of construction traffic

A12.2.4.14 Timing of construction traffic will be scheduled to avoid peak times, in particular through areas of schools and public amenities. For example, transportation will be scheduled to avoid Peebles, Innerleithen and Walkerburn during peak times, e.g. periods of school pick-up/drop-off, to avoid congestion and safety issues in the town.

A12.2.4.15 The hours of construction are anticipated to be as follows:

- Monday to Friday 0700 – 1900
- Saturday 0700 – 1600
- Sunday No construction work

A12.2.4.16 The Principal Contractor shall detail how HGV traffic will be controlled to avoid peak times, including buffers either side of these times.

Adherence Measure of Routes

A12.2.4.17 Suppliers will be advised of their designated route in advance and given a map with the route clearly marked, a copy of which each driver will be obliged to carry in their vehicle. Routes will also be clearly signposted at any points of ambiguity.

Section 96 Agreement

A12.2.4.18 A Section 96 Agreement to cover "wear and tear" to the road network shall be agreed with the relevant roads authorities if requested.

Signage and Lining Details

A12.2.4.19 Any signage required on the public road will be erected and positioned in accordance with the requirements of Chapter 8 of the Traffic Signs Manual, and Safety at Street Works and Road Works – A Code of Practice, and in consultation with the relevant Roads Authority.

A12.2.4.20 Any road markings required on the public road will be positioned and installed in accordance with the requirements of Chapter 5 of the Traffic Signs Manual, and Safety at Street Works and Road Works – A Code of Practice, and in consultation with the Council.

A12.2.4.21 The Principal Contractor shall agree the detailed layout, signage and management of traffic with SBC.

Construction Vehicle Parking

A12.2.4.22 Suitable parking for cars, LGV's and HGV's will be established to ensure all parking will be within the site and no vehicles require to park on the B709 at the site entrance.

Wheel Washing

A12.2.4.23 The Principal Contractor will be responsible for ensuring the existing carriageways are clean and clear of any material that may enter the public carriageway and to ensure a safe running surface on the public highway.

A12.2.4.24 A vacuum road sweeper may be required at the request of SBC to be used to ensure clearance on public carriageways remains at all times free from material generated from the Proposed Development.

Wind Farm Traffic Movements and Concurrent Projects

A12.2.4.25 There are no confirmed major projects likely to generate significant volumes of traffic on the routes being undertaken at the expected time of the wind farm construction. Once construction dates are known, this aspect should be re-assessed and the impacts and vehicle movements with any concurrent projects established and mitigated in consultation with SBC.

A12.2.4.26 An application has been submitted for Greystone Knowe Wind Farm near Heriot. The access for that is identified as being off the A7, south of the B709, B7007 and B6368. The Cumulative Assessment undertaken in Chapter 12 of the EIAR for that proposal indicated there may be limited overlap with the Proposed Development. However, as identified in the Cumulative Assessment, it is recommended that, should the construction timings overlap, then the two projects should consult to ensure their peak construction events are scheduled to avoid simultaneous use of the A7.

Access Junction

A12.2.4.27 The proposed site access junction is off the single lane section of the B709 around 4 km north of Innerleithen. Figure 4.11 illustrates the proposed access junction with associated visibility splays suitable for the design speed of the B709. A detailed junction design shall be developed for approval by SBC.

Compliance with Traffic Management Measures

A12.2.4.28 The Principal Contractor shall ensure compliance with all matters contained in the TMP. A means of monitoring, reviewing and enforcing the TMP shall be established in agreement with the relevant roads authorities and local authority. Consideration shall be given to the use of GPS vehicle tracking on road going construction vehicles, regular briefings, toolbox talks, etc.

A12.2.5 ACCESS PLAN FOR ABNORMAL LOADS

Definition

A12.2.5.1 The vehicles used to transport turbine components are considered to constitute an abnormal load only on the delivery phase of the journey, the extendible trailers are retracted to the size of a standard articulated vehicle during the return leg. Each delivery of turbines components therefore consists of one abnormal load movement.

A12.2.5.2 An "abnormal indivisible load" is defined in The Road Vehicles (Authorisation of Special Types) (General) Order 2003 as:

> *"a load that cannot, without undue expense or risk of damage, be divided into two or more loads for the purpose of being carried on a road and that –*

- *On account of its length or width, cannot be carried on a motor vehicle of category N3 or a trailer of category O4 (or by a combination of such vehicles) that complies in all respects with Part 2 of The Construction and Use Regulations; or*
- *On account of its weight, cannot be carried on a motor vehicle of category N3 or a trailer of category O4 (or by a combination of such vehicles) that complies in all respects with*
- *Authorised Weight Regulations (or, if those Regulations do not apply, the equivalent provisions in Part 4 of the Construction and Use Regulations); and*
- *Part 2 of the Construction and Use Regulations."*

A12.2.5.3 Notifications for abnormal indivisible loads are required where loads or vehicles exceed maximum gross vehicle weight or dimension limits in any of the following ways:

- a gross vehicle weight of more than 80,000kg
- a width exceeding 3m
- a length exceeding 18.75m

A12.2.5.4 Each load requires at least two clear days' notice to the relevant police and highway authorities, as detailed in Table 12. The haulier must also indemnify each highway authority against any damage caused to any road, bridge or other structure.

Table 12.5.1: Weight Regulations

Weight	Action required
Gross weight or axle weights exceeding C&U or Authorised Weight limits up to 80,000kgs	Two clear days' notice with indemnity the Highway and Bridge Authorities.
Gross weight (of vehicle carrying the load) exceeding 80,000kgs up to 150,000kgs	Two clear days' notice to Police and 5 clear days' notice with indemnity to Highway and Bridge Authorities.
Gross weight (of vehicle carrying the load) exceeding 150,000kgs	HA Special Order (BE16) (8-10 weeks) plus five clear days' notice to Police and five clear days' notice with indemnity to Highway and Bridge Authorities
Width	**Action required**
Width exceeding 2.9 metres (for C&U loads 3.0 metres) up to 5.0 metres for other loads	Two clear days' notice to the Police
Width exceeding 5.0 metres up to 6.1metres	HA form (VR1) (2 weeks) plus two clear days' notice to Police
Width exceeding 6.1 metres	HA Special Order (BE16) (8-10 weeks) plus five clear days' notice to Police and five clear days' notice with indemnity to Highway and Bridge Authorities
Length	**Action required**
Length exceeding 18.65 metres up to 30 metres rigid length (Vehicle or train of vehicles)	Two clear days' notice to the Police
Vehicle combination exceeding 25.9 metres	Two clear days' notice to the Police
When exceeding 30.0 metres rigid length	HA Special Order (BE16) (8-10 weeks) plus five clear days' notice to Police and five clear days' notice with indemnity to Highway and Bridge Authorities

Source: Natural Power

Routes and Access

A12.2.5.5 The route that has been assessed for the turbine component abnormal loads is as follows (see EIAR Volume 4 Appendix 12.1):

- From Grangemouth Port join the M9 motorway heading south;
- Follow M9 motorway south and join A720 Edinburgh City Bypass via the M8 motorway and Hermiston Gate interchange;
- Follow A720 Edinburgh City Bypass heading east to Old Craighall Roundabout, continue around the roundabout and head back along the A720 Edinburgh City Bypass heading west;
- Take the A68 turnoff at Millerhill and follow the A68 south to the junction with the B6458;
- Follow B6458, onto B6367 and onto the A7, heading north;
- Follow A7 north to its junction with the B7007;

- Follow the B7007, join the B709 near Garvald Lodge and continue south along the B709; and
- Turn left off the B709 near Colquar at the new site entrance (333349, 640398) (Main Access).

Permits

A12.2.5.6 The hauliers will be contractually responsible for applying for the necessary abnormal load BE16 permits and ensuring that such deliveries are undertaken in accordance with the statutory requirements. These permits will apply to the entire abnormal load delivery route to the point of entry to the site. The hauliers will ensure that no abnormal loads are allowed to be transported unless the required permits are in place.

Escorts

A12.2.5.7 Where necessary under statutory regulations, abnormal deliveries shall be escorted by service vehicles provided by the transport haulier. Utilising the services of an escort aid will provide advance warning to the other road users of the approaching load and will ensure traffic are temporarily held at passing places to allow the AIL convoy to pass. Where escorts are required, there are typically two services vehicles per convoy. If required by the local police, the convoys will also have a police escort.

Driving and Speed Restrictions

A12.2.5.8 As above, all vehicles, including abnormal load vehicles, shall be driven in a manner which is safe and suitable for the conditions at all times. The Principal Contractor and haulier shall undertake further assessment of the delivery route and structures to determine if further restrictions are to be applied, including speed limits, to ensure the integrity of the route is maintained and deliveries are made safely to the site.

Advance Arrangements – Street Furniture and Street Parking

A12.2.5.9 Each transport haulier will be responsible for agreeing a final delivery schedule with the relevant authorities with regards to the number of deliveries per convoy and the number of those convoys travelling to site per day. It is envisaged that an optimum number of abnormal loads per convoy will be implemented such that it will reduce the overall number of convoys without significantly impacting on local traffic flows.

A12.2.5.10 Once the trailer has delivered its load to site, its length can then be reduced to a standard HGV size. When compressed, these HGV vehicles shall be able to utilise the local network without the assistance of escort vehicles.

A12.2.5.11 Any permanent signs and street furniture which require to be relocated to allow AIL loads to pass shall be identified in consultation with the Road Authority and from the trial run that shall be undertaken. Where possible and agreed with the Road Authority, signs requiring such relocation shall be permanently shifted onto new permanent mountings.

A12.2.5.12 Where signs are required to remain at their present location in normal use, they shall be provided for the duration of the works with temporary mountings designed to facilitate rapid removal. These signs shall be taken down immediately in advance of the passage of abnormal loads and re-erected immediately after the load has passed.

A12.2.5.13 Removal of street furniture along the access route will be identified through swept path analysis. The relocation or temporary removal of all affected street furniture will be agreed prior to movements taking place.

A12.2.5.14 Restrictions to on-street parking through settlements during the abnormal load delivery times will be provided once delivery vehicle is confirmed and identified through final swept path analysis in agreement with the relevant Roads Authorities. On-street parking cones will be utilised ahead of scheduled deliveries to ensure parking restrictions are in place in liaison with the local police.

A12.2.5.15 A letter drop will be undertaken to local residents advising them of dates of movements and requesting that the route be kept clear and free from parked cars.

Contingency Planning

A12.2.5.16 The hauliers shall be responsible for preparing their own contingency plan for use in the event that unforeseen circumstances arise during the course of the abnormal load deliveries. Their contingency plans will elaborate on issues such as road blockages and breakdowns.

A12.2.5.17 The contingency plan will take account of the results from any necessary trial runs conducted.

A12.2.5.18 The contingency plans shall be provided to the relevant Local Authorities, including SBC.

Emergency Procedure

A12.2.5.19 The hauliers shall be responsible for developing their own breakdown/emergency procedures that will be implemented ahead of their abnormal deliveries. It is anticipated that the procedure will follow a similar structure to that outlined below:

- The situation shall be assessed to ascertain the risks involved and to establish the necessary action required to resolve the situation;
- Where possible the vehicle shall be moved off the road or cleared to the nearest suitable location to allow any emergency vehicles to pass;
- The vehicle emergency flashing lights will be activated, and a reflective emergency triangle placed behind the vehicle to warn other drivers of the potential hazards associated with the breakdown/emergency situation; and
- The vehicle will remain immobile until the incident has cleared, and the driver has been given the go ahead to continue from either the police or the haulier Site Manager.

Reporting of Incidents

A12.2.5.20 The hauliers will have an incident reporting hierarchy in place which everyone involved in the transportation will be aware of. The reporting of incidents will be escalated externally to the relevant parties, such as the police, if deemed necessary by the hauliers.

A12.2.5.21 The reporting arrangements will require to be linked with the turbine supplier's own health and safety arrangements.

A12.2.5.22 Any damage to the road infrastructure shall be reported to the relevant road authority (i.e. Transport Scotland, SBC).

Number of Loads

A12.2.5.23 The turbine components will be transported to site using a number of different large vehicles specially designed to carry the wide, heavy and/or long loads.

A12.2.5.24 The following is a general assessment of the standard number of loads required based on standard turbine components for one turbine comprising; 4no. tower sections, 1no. nacelle, 3no. blades and 1no. hub.

Table 12.5.2: Cumulative Turbine Components

Item	Number per turbine	Number of turbines	Total loads	Total Movements
Rotor Blade	3	8	24	48
Tower Sections	4	8	32	64
Nacelle	1	8	8	16
Hub	1	8	8	16
TOTAL			72	144

Source: Natural Power

Maximum Loading

A12.2.5.25 The maximum vehicle and axle loadings will be confirmed by the nominated haulier prior to planning for the AIL deliveries.

Bridges Structural Assessment

A12.2.5.26 The AIL route crosses several bridge and culvert structures. No weight restrictions have been identified on the route, and prior to the delivery of abnormal loads an updated assessment of the structures, with specific vehicle set-ups and axle loadings, will be undertaken in consultation with the relevant road/bridge authorities.

Timing of AIL Deliveries

A12.2.5.27 The movement of abnormal loads will be timed to avoid periods of heavy flow to minimise disruption to the public. In additional to normal peak times, Saturdays, festivals, and major public events will be avoided. The programme for deliveries will be arranged with the police and local authorities prior to taking place. A letter drop will be issued in the locality advising of details once these are known and ahead of delivery commencement.

A12.2.5.28 The Principal Contractor shall provide detailed proposals to publicise AIL movements, for example web site/social media, letter to community councils and appropriate signage.

Trial Run

A12.2.5.29 A trial run shall be organised and undertaken with the haulage contractor appointed by the developer using a vehicle simulated for carrying the proposed turbine components. The whole route would be driven between the selected port of arrival and the site entrance, the outcomes of which will be included in updates to the TMP.

Improvements to the Public Roads to Facilitate Development

A12.2.5.30 A route assessment has been undertaken along with swept path analysis using typical delivery vehicles associated with the candidate turbine components (refer to Appendix 12.1 of the EIAR and Figures 12.3a-z). As noted previously, this assessment will be updated and finalised adopting the specific delivery vehicles and a trial run. Based on this preliminary assessment, several areas have been identified where temporary accommodation works would be required to facilitate abnormal loads. Table 4 summarises the AIL road improvements required.

Table 12.5.3: AIL Summary of Road Improvements Required

Location	Required work	Figure Reference
Exit from Grangemouth Dock to South Shore Road	Temporary removal of street furniture Vehicle trial run to assess the need for additional works.	Figure 12.3a Pinch Point 1
Grangemouth South Shore Road to Powdrake Road	Temporary removal of street furniture Verge widening required Vehicle trial run to assess the need for additional works.	Figure 12.3b Pinch Point 2
Grangemouth Bend on Powdrake Road	Temporary removal of street furniture Verge widening required Vehicle trial run to assess the need for additional works.	Figure 12.3c Pinch Point 3
Grangemouth Powdrake Roundabout	Temporary removal of street furniture Verge widening required Contraflow manoeuvre along Bo'ness Road Vehicle trial run to assess the need for additional works.	Figure 12.3d Pinch Point 4
Grangemouth Inchyra Roundabout	Temporary removal of street furniture Contraflow manoeuvre along Bo'ness Road Vehicle trial run to assess the need for additional works.	Figure 12.3e Pinch Point 5
Grangemouth Wholeflats Roundabout	Temporary removal of street furniture Contraflow manoeuvre. Overrun on existing paved islands. Vehicle trial run to assess the need for additional works.	Figure 12.3f Pinch Point 6
M9 Junction 5 Slip Road	Temporary removal of street furniture Vehicle trial run to assess the need for additional works.	Figure 12.3g Pinch Point 7
N/A	Pinch Point 8 Not Used	N/A
A720 Edinburgh City Bypass, Old Craighall Roundabout	Temporary removal of street furniture Vehicle trial run to assess the need for additional works.	Figure 12.3h Pinch Point 9
A720 Edinburgh City Bypass, Millerhill Junction to A68	Temporary removal of street furniture Overrun on existing paved island. Vehicle trial run to assess the need for additional works.	Figure 12.3i Pinch Point 10
A68 Pathhead	Temporary removal of street furniture Ovverrun on existing footpath and paved island. Vehicle trial run to assess the need for additional works.	Figure 12.3j Pinch Point 11
Junction from A68 to B6458	Temporary removal of street furniture Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3k Pinch Point 12
B6367 Tynehead Borders Rail Crossing	Diversion off public road through new track within field. Vehicle trial run to assess the need for additional works.	Figure 12.3l Pinch Point 13
B6367 Return from Pinch Point 13 diversion	Return to B6367 public road from Pinch Point 13 diversion off public road through new track within field. Vehicle trial run to assess the need for additional works	Figure 12.3m Pinch Point 14
B6367 Bend	Temporary removal of street furniture Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3n Pinch Point 15
Junction from B6367 to A7	Temporary removal of street furniture Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3o Pinch Point 16
Junction from A7 to B7007	Temporary removal of street furniture Road widening required Vegetation clearance required Vehicle trial run to assess the need for additional works.	Figure 12.3p Pinch Point 17
B7007 Bend	Temporary removal of street furniture Vehicle trial run to assess the need for additional works.	Figure 12.3q Pinch Point 18

Location	Required work	Figure Reference
B7007 Bend	Temporary removal of street furniture Vehicle trial run to assess the need for additional works.	Figure 12.3r Pinch Point 19
B7007 Bend	No works required Vehicle trial run to assess the need for additional works.	Figure 12.3s Pinch Point 20
B7007 Bend (Mound)	Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3t Pinch Point 21
B7007 Bend	No works required Vehicle trial run to assess the need for additional works.	Figure 12.3u Pinch Point 22
B7007 S Bends	Verge widening required Vehicle trial run to assess the need for additional works.	Figure 12.3v Pinch Point 23
B7007 Bend	Verge widening required Vehicle trial run to assess the need for additional works.	Figure 12.3w Pinch Point 24
B709 Bend after Junction with B7007	Temporary removal of street furniture Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3x Pinch Point 25
B709 Bend (near Blackhopebyres Steading)	No works required Vehicle trial run to assess the need for additional works.	Figure 12.3y Pinch Point 26
B709 Southern Section to Site Entrance	Temporary removal of street furniture Road widening required Vehicle trial run to assess the need for additional works.	Figure 12.3z Pinch Point 27

Source: Natural Power

A12.2.5.31 As part of the construction TMP, the finalised access assessment adopting confirmed delivery vehicles, turbines and port of entry shall be undertaken and any temporary accommodation works identified. Full details of the accommodation works shall be prepared and included in the updated TMP.

A12.2.5.32 Traffic management measures for the safe execution of the upgrade works shall be agreed with the relevant roads authority.

A12.2.5.33 As part of the construction TMP, details of the locations, extents and widening details along the B709 single carriageway, single lane section shall be agreed with SBC Roads. The timing of any widening works shall be agreed prior to wind farm construction commencing. It is recommended that any widening works takes account passing place provision as discussed in Section A12.2.4.

A12.2.5.34 Traffic management measures for the safe execution of the B709 single lane widening works (including passing places and strengthening works) shall be agreed with SBC and is anticipated to include:

- Advance notification to the local community and property owners along the B709. These should set out the nature of the works and detailed programmes to ensure the locals are as informed and aware of the works as can be;
- Road signs at suitable locations to advise of the closures, opening times and alternative routes that can be used;
- Road closures scheduled out-with peak periods (i.e. morning and evening commute and school drop off/pick-up);
- Provision to ensure immediate re-opening of the road in the case of an emergency or to allow emergency vehicles to pass through;
- Staggered closures with the road re-opened at set periods throughout the day (e.g. closed 10am to 12pm, open 12pm to 1pm, closed 1pm to 3pm and re-opened until the next morning) to allow local residents access.

A12.2.6 SUMMARY

A12.2.6.1 This preliminary TMP has been prepared to address the transportation needs of the Proposed Development in conjunction with the preparation of Chapter 12: Traffic and Transport of the EIAR and AIL access assessment. This should be considered a working document which will be updated post-consent by the developer (or their appointed contractor) with the most up-to-date information.

A12.2.6.2 The preliminary TMP outlines potential mitigation measures that could be implemented to help manage and mitigate the traffic impacts associated with the Proposed Development. It is expected a planning condition will be applied to the development for a final construction TMP to be prepared and approved by SBC post consent and prior to construction works commencing. The potential measures identified in this preliminary TMP, as well as other measures, shall be considered, developed (in discussion with the relevant stakeholders) detailed and then agreed. The TMP will be updated post consent through the detailed design and construction stages as more specific details for the construction of the Proposed Development are understood.

A12.2.6.3 A trial run is required for the abnormal loads as this will help to supplement this document with information on specific sections along the complete proposed route that may require further investigation to determine modifications to road infrastructure. These investigations will be undertaken as part of the construction phase works and will involve a full assessment and detailed design of upgrades required and will be carried out by a competent Civil Engineering contractor.

A12.2.6.4 Management measures have been identified for both the delivery of abnormal loads, HGV vehicles and general construction traffic, which when implemented will help to ensure that the route to site remains a safe environment and disruption to local traffic flows are kept to a minimum.

A12.2.6.5 Proactive consultation with SBC, local communities and individual property owners/occupiers will be undertaken during the development of the construction TMP and throughout the construction stage.

A12.2.6.6 The Principal Contractor will be responsible for monitoring and enforcement to ensure the measures detailed in the TMP are adhered to.

A12.2.6.7 Signage will be deployed along the route to warn other road users of potential hazards.

A12.2.6.8 Prior to the transportation of any abnormal loads, the turbine supplier will ensure that all necessary permits are in place and that the accommodations works have been carried out to a satisfactory standard.