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Corriemoillie BESS

Transport Statement & Construction Traffic Management Plan

November 2024

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1 Introduction

1.1 Purpose of the Report

Pell Frischmann has been instructed by TNEI on behalf of Field Corriemoillie Limited (the Applicant) to produce a combined Transport Statement and Construction Traffic Management Plan (CTMP) to support a planning application for the creation of a Battery Energy Storage System (BESS) and associated development at a site to the north of the A832 and north-east of Corriemoillie Substation, in The Highland Council (THC) administrative area.

The planning application is for a proposed BESS (the Proposed Development). This covers the construction, operation and maintenance of a BESS of up to 200 MW with associated infrastructure (including cable route to substation), access and ancillary works (including landscaping and biodiversity enhancement).

This report provides an overview of the Proposed Development in relation to construction traffic and sets out the proposed mitigation measures for use at the site. Once operational, the Proposed Development will generate minimal levels of maintenance traffic and no specific traffic measures are required for the operational phase.

1.2 Report Structure

Following this introduction, the report is structured as follows:

- Section Two describes the Proposed Development, including access arrangements;
- Section Three details the existing transport conditions in the vicinity of the site;
- Section Four details the types of construction traffic likely to be used on the site, including estimated delivery volumes;
- Section Five outlines the proposed construction traffic management measures to be used on the site; and
- Section Six provides a summary of the report.

2 Development Description

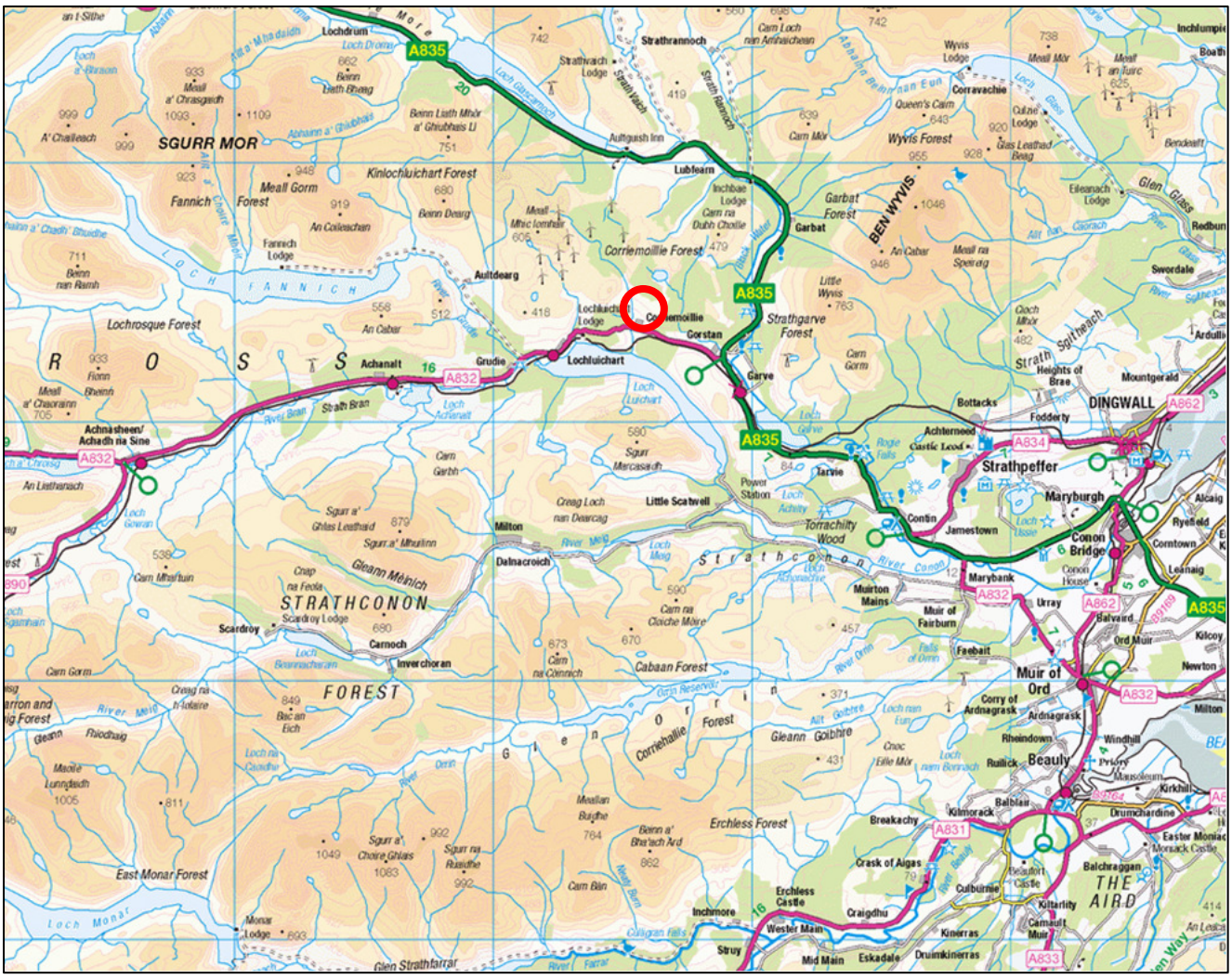
2.1 Development Location and Layout

The Proposed Development comprises of a BESS, featuring the following elements:

- Battery storage and their associated electrical connections and medium voltage switchgear;
- Control facilities and an underground electrical connection to the nearby existing Corriemoillie Substation facility located to the southwest of the Proposed Development;
- Access track to the secure compound (accessing from the west) and a separate emergency access track (located to the east); and
- Security and noise attenuation fencing, landscaping and other soft features.

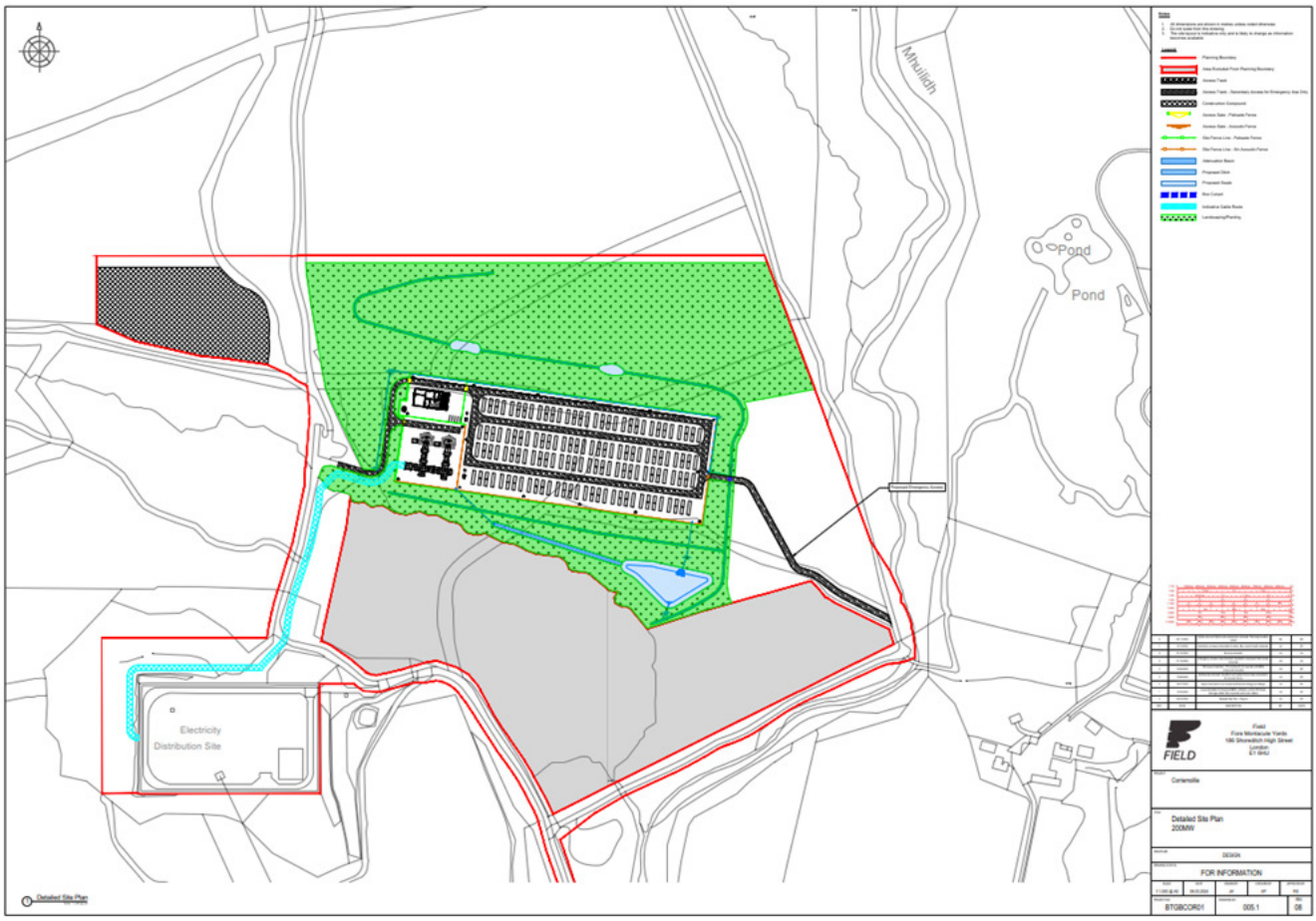
The Proposed Development location is illustrated in Figure 1.

Figure 1 Proposed Development Location



Access to the Proposed Development is to be taken from the existing access junction on the A832 that currently provides access to the nearby substation. The layout of the Proposed Development is illustrated in Figure 2. The site access junctions have been previously designed to accommodate substation construction traffic deliveries and would provide construction and operational access to the Proposed Development.

Figure 2 Proposed Development Layout



Within the site, access to the Proposed Development will be taken from the west, with an access track leading from the existing access track network. A further access point is provided to the east to provide a secondary point of access for emergency use only.

3 Existing Network

3.1 Active Travel Network

A review of THC Core Path maps[1] indicates that there are no Core Paths located near to the Proposed Development site. The closest Core Path is located to the north of Garve, located approximately 5 kilometres (km) to the southeast.

The National Cycle Network (NCN) route map[2] of the United Kingdom indicates that there are no NCN routes located close to the Proposed Development.

3.2 Existing Road Links

The nearest trunk road to the site is the A835, linking Tore to Ullapool (although the road itself continues northbound to Ledmore Junction as a non-trunk road from Ullapool). The A835 between Tore and Ullapool is operated by Transport Scotland on behalf of Scottish Ministers and is subject to a 60 miles per hour (mph) speed limit in sections outwith towns and villages on the route.

Access to the Proposed Development from the A835 is via the A832. The A832 provides connections from Garve to Corrieshalloch, via Kinlochewe and Gairloch. The road is of local distributor road standard and is maintained by THC. The A832 is considered suitable for Heavy Goods Vehicle (HGV) traffic between the site access junction and the A835.

Access from the A832 is taken from an existing access junction used for recent upgrade works by SSEN as part of the adjacent Corriemoillie Substation. The junction is also used for forestry and estate management purposes and is capable of accommodating HGV traffic use. The existing access junction is shown in Figure 3.

Figure 3 Existing Access Junction

[1] https://highland.maps.arcgis.com/apps/webappviewer/index.html?id=2fd3fc9c72d545f7bcf1b43bf5c8445f

[2] https://explore.osmaps.com/?lat=57.629360&lon=-4.792731&zoom=11.0997&style=Standard&type=2d&overlays=os-ncn-layer

3.3 Road Network Suitability

The Agreed Timber Route Map[3] has been developed by The Timber Transport Forum who are a partnership of the forestry and timber industries, local government, national government agencies, timber hauliers and road and freight associations. One of the key aims of the forum is to minimise the impact of timber transport on the public road network, on local communities, and the environment and a way of achieving this is to categorise the roads leading to forest areas in terms of their capacity to sustain the likely level of timber haulage vehicles i.e., 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.

The A835 and A832 form part of the agreed route network used for the extraction of timber and are therefore regularly used by HGV traffic. As such, they are considered suitable for the movement of construction HGV traffic.

3.4 Road Safety Review

Personal Injury Accident (PIA) data for the five-year period commencing 01 January 2018 through to the 31 December 2022 was obtained from the online resource CrashMap[4] which uses data collected by the police regarding road traffic crashes occurring on British roads, where someone is injured.

Transport Assessment Guidance requires an analysis of the accident data on the road network in the vicinity of any development to be undertaken for at least the most recent three-year period, or preferably a five-year period.

The statistics are categorised into three categories, namely "Slight" for damage only incidents, "Serious" for injury accidents and "Fatal" for accidents that result in a death.

A review of the A832 indicates that there have been three accidents on the A832 between its junction with the A835 and Grudie within the last five years (2018 – 2022). None of the accidents occurred at or in the vicinity of the site access junction.

Two accidents, one "Serious" and one "Slight" occurred at a residential access junction located approximately 1.6km to the east of the site access junction. The "Serious" accident involved a motorcyclist and two cars, whereas the "Slight" accident involved a Young Driver and no other vehicles. Both accidents occurred on the same day in 2018.

The accident near Grudie was classified as "Slight" and involved one Young Driver in a single vehicle incident, occurring in winter.

HGV traffic was not involved in any accidents on the A832 during the five year study period.

[3] https://timbertransportforum.org.uk/ [Accessed October 2024]
[4] https://www.crashmap.co.uk [Accessed October 2024]

At the A835 / A832 junction, two accidents were recorded. One collision between a motorcyclist and a car at the junction resulted in a fatality in 2022. A "Slight" accident was also recorded at the junction, involving a Car and an HGV during winter.

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

3.5 Existing Traffic Flows

To review the existing traffic flows on the A832, Streetwise Services were commissioned to undertake an Automatic Traffic Survey (ATC) at the access junction in June 2024.

Data from the Transport Scotland traffic count database for the A835 from Count Stations ATC01100 (A835 Contin to Garve) and JTC08230 (A835 Aultguish) was also obtained for 2023.

The traffic data allowed the traffic flows to be split into vehicle classes and the data have been summarised into cars / light goods vehicles (LGV) and HGV.

These traffic flows were factored to 2024 traffic flows using National Road Traffic Forecast (NRTF) Low Growth factors. The NRTF Low Growth Factor from 2023 to 2024 is 1.005.

The traffic survey summary is provided in Table 1 below.

Table 1: 2024 Daily Traffic Flows

Description	Cars & LGV	HGV	Total Traffic
A832	1,541	790	2,330
A835 North	1,715	155	1,870
A835 South	2,956	1,028	3,984

Should the Proposed Development be consented, construction works are expected to commence 2027[5]. NRTF Low Growth assumptions have been used to provide a factor to convert the 2024 flows to 2027 flows. The NRTF Low Growth Factor from 2024 to 2027 is 1.016.

The 2027 baseline flows are provided in Table 2.

Table 2: 2027 Daily Traffic Flows

Description	Cars & LGV	HGV	Total Traffic
A832	1,565	802	2,368
A835 North	1,743	158	1,900
A835 South	3,003	1,044	4,048

3.6 Committed Developments

A review of planning applications in the area has been undertaken. In line with established practice, the following screening factors of applications has been undertaken to determine those that can be included in the assessment:

- Will the application use the same study area as the Proposed Development?
- Is the application determined, and as such, can be considered as Committed Development?
- If the application results in temporary traffic, will these traffic flows occur at the same time as those for the Proposed Development?

[5] https://www.fieldcorriemoillie.co.uk/faqs/

- Does the application provide publicly available traffic data in the relevant traffic classes?.

The review suggests that Lochluichart Wind Farm Extension 2 meets the above criteria and as such would be considered as committed development. The traffic flow for this scheme is temporary in nature, however as the exact construction programme has yet to be publicly confirmed, it is assumed that its peak of construction traffic could theoretically coincide with the peak of construction traffic for the Proposed Development. The peak of construction traffic for Lochluichart Wind Farm Extension 2[6] is 46 Car & LGV and 14 HGV movements per day on the A835. These movements have been added to the 2027 daily traffic flows presented with the combined traffic flows presented in Table 3 as the revised 2027 future baseline daily traffic flows. This will be used in the Construction Peak Traffic Impact Assessment.

Table 3: 2027 Future Baseline Daily Traffic Flows

Description	Cars & LGV	HGV	Total Traffic
A832	1,565	802	2,368
A835 North	1,789	172	1,960
A835 South	3,049	1,058	4,108

Should other significant traffic generating developments be consented prior to works commencing on the Proposed Development, the Applicant will liaise with the relevant third parties and THC to agree any common interest traffic management measures.

[6] https://www.lxxwindfarm.co.uk/wp-content/uploads/2019/07/LXX%20vol1/Chapter_7_Traffic_and_Transport.pdf

4 Construction Traffic

4.1 Trip Generation

The proposed construction works are estimated to take up to 24 months[7].

The programme has been divided into its component sections and estimates of the likely traffic generation have been made from the material quantities, staff requirements and component deliveries required. The main areas of construction traffic can be subdivided as follows:

- Import of Plant and Machinery;
- Site Establishment Clearance Loads;
- Import of Bulk Materials;
- Import of Ready-Mix Concrete;
- Import of General Building Supplies;
- Delivery of HV Electrical Components;
- Delivery of batteries;
- Delivery of general site materials and supplies;
- Grid and electrical connection works; and
- Arrival and departure of construction and commissioning staff at the site.

The traffic generation during the construction phase has used first principles to establish the volume and tonnage of construction materials. This has then been converted to two-way vehicle movements to create the construction programme illustrated in Appendix A.

The peak of construction activity occurs in Month Six of the construction programme.

4.2 Distribution of Construction Trips

Exact material suppliers will be determined through the Balance of Plant (BoP) contract. The supplies anticipated for use in this study however are based upon the following:

- Aggregate and stone: Likely to be supplied from quarries located to the southeast of the site and accessed from the A835 and A832;
- Ready-mix Concrete: Likely to be supplied from suppliers located to the southeast of the site and accessed from the A835 and A832;
- HV electrical equipment and batteries: Likely to be supplied from the Central Belt via the A9, A835 and A832, but to be confirmed upon confirmation of HV supplier;
- Transformer Abnormal Indivisible Loads (AIL) to be imported via the route described in Appendix B from the A9 Tore Roundabout, via the A9, A835 and A832;
- General construction and site supplies: Supplied from the southeast via the A835 and A832; and
- Construction Staff: It is assumed that 90% of staff will access the site from the southeast via the A835. 5% are assumed to access the site from the west of the site via the A832, with the remaining 5% accessing from the A835 to the north.

These general distributions have been applied to the peak of construction activities to estimate the likely peak traffic associated with construction activities. The peak construction traffic flows are summarised in Table 4.

[7] https://www.fieldcorriemoillie.co.uk/faqs/

Table 4: Peak Daily Construction Traffic Flows

Description	Cars & LGV	HGV	Total Traffic
A832	76	36	112
A835 North	4	0	4
A835 South	72	36	108

A review of the traffic impact of the construction traffic on the road network has been undertaken and is illustrated in Table 5.

Table 5: 2027 Base + Construction Traffic Flows / Traffic Impact

Description	Cars & LGV	HGV	Total Traffic	Cars & LGV % Impact	HGV % Impact	Total Traffic % Impact
A832	1,641	838	2,480	4.86%	4.48%	4.73%
A835 North	1,792	172	1,964	0.21%	0.00%	0.19%
A835 South	3,121	1,094	4,216	2.37%	3.39%	2.63%

The peak construction traffic impact level is significantly below the 10% threshold for undertaking a detailed Transport Assessment. The daily flows are therefore not significant in traffic terms for the A835 or A832.

The increase in traffic is significantly less than 30%, the threshold for undertaking a full Environmental Impact Assessment (EIA). The increase in traffic represents an additional 112 vehicle movements (56 inbound and 56 outbound) per day, of which 36 are classified as HGV (18 inbound and 18 outbound). This represents on average 2 additional HGV movements in and out per hour during the peak month.

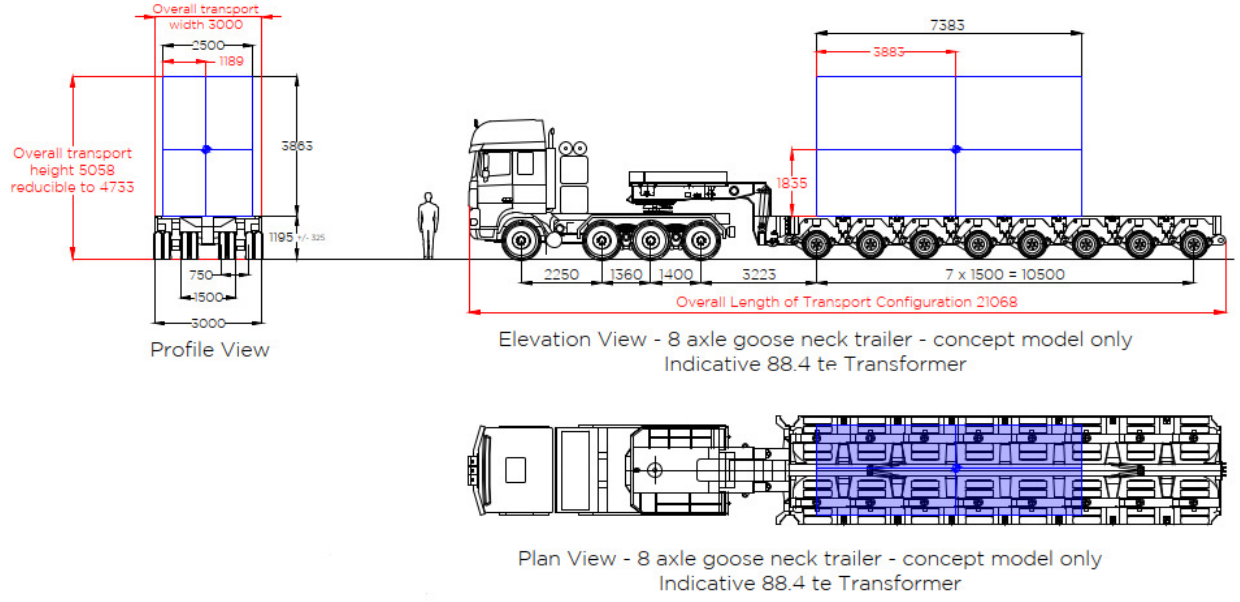
The impact of this number of HGV movements on the study area road network can be managed by a CTMP to ensure that any disruption and disturbance can be kept to a minimum.

4.3 Abnormal Load Traffic

The proposed transformers to be used on site are considered AIL due to their weight and the need for a specialist trailer to transport them on the public road network.

Load details for the AILs were obtained from the Applicant. The proposed transformers are up to 7.383 metres (m) in length, 2.500 m in width and 3.863 m in height. At 88.4 tonnes, they would be carried on an eight axle trailer. An example of the style of trailer is provided in Figure 4.

Figure 4: Indicative AIL Trailer



A Route Survey Report (RSR) describing the transport of the load has been prepared and is attached in Appendix B. The transformer loads would be subject to a police escort due to the weight of the proposed loads.

Crane loads will also be required at the site and these are considered to be escorted loads due to their width at 3 m. Civilian escorts would be used to assist these loads access the site.

4.4 Operational Traffic

Traffic associated with the operational phase will be minor in nature and restricted to occasional visits for maintenance, servicing and security reviews. It is anticipated that traffic flows associated with this phase of the Proposed Development will be restricted to up to no more than ten vehicle movements (five inbound and five outbound) per month.

This level of traffic is not considered to be significant and as such, no further assessment is proposed.

5 Construction Traffic Management Proposals

The traffic management proposals in this report will be provided to the Principal Contractor and they will be required to abide by these regulations as part of their commercial contracts with the Applicant. Failure to follow the traffic management measures proposed would be a contractual matter and could result in contractors being dismissed from the site.

Pages with information about the construction of the development could be available on a project website. Facilities for members of the public to ask questions relating to construction traffic associated with the project could also be provided. A telephone number for the Principal Contractor would be published during operational hours to resolve any traffic management problems that occur, and these calls would be logged and reported to the Applicant on a weekly basis to monitor the situation.

All contractors will be monitored through regular spot-checks to ensure they follow the approved access route(s). Access routes identified will be clearly defined in all sub-contracts and signposted.

The site access junction will be kept clear at all times during construction and will be monitored by onsite staff to ensure vehicles do not attempt to use the area for parking.

Use of a visible vehicle identification system for HGV deliveries should be employed to ensure compliance with the agreed route and driver behaviour standards. This will allow the public to identify any rogue vehicles to the site office for easy recognition and review.

The Applicant will also create a protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic wherever possible.

The following measures would be provided to assist in managing traffic across the study area road network.

5.1 General Measures

Wherever reasonably possible, local suppliers such as quarries and concrete works are proposed to help minimise traffic levels of the network.

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

- Contractual requirement in the BoP contract that contractors will only use the agreed access routes;
- Direction signage signposting traffic on the agreed access routes;
- Providing the public with details of how to report use of unapproved routes or driving issues of concern;
- Setting out site staff disciplinary measures for those who ignore the agreed access routes and enforcing these throughout the construction period;
- All site vehicles will feature “white noise” reversing warning devices to reduce noise disruption when on site;
- All materials delivery lorries (dry materials) will be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures will be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Wheel cleaning facilities will be established at the site entrance. A road sweeper would also be provided at site to ensure that the area of the A832 near the site access is kept clean at during the development platform works and any other works likely to generate material that could be tracked on to the public road network; and
- Site induction for all staff instructing them on what route to site they can use to enter and exit the site and obtaining their acknowledgement that there is only one approved access route. The induction would include:
    - A tool box talk safety briefing;

- The need for appropriate care and speed control;
- A briefing on driver speed reduction agreements (to drive slowly through villages and settlements on the access route) and to be aware of pedestrian, cyclist and equestrian traffic in these areas; and
- Identification of the required access route and access junction operation and the controls to ensure no departure from these routes.

5.2 Wear & Tear Agreement

An agreement is suggested to cover the cost of any abnormal wear and tear on the A832. This would be agreed with the Council subject to the granting of planning approval.

The wear & tear agreement will address concerns about possible damage to the public road, verges and structures. It will be based upon condition surveys of the road to ensure that the condition of the road does not deteriorate as a result of the construction works.

Video footage of the pre-construction phase condition of the agreed area covered by the condition survey would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This High Definition (HD) baseline review would inform any change in the road condition during the construction stage of the Proposed Development as it notes the existing condition of the road surface and features and details current condition.

The condition survey would feature still images for the survey and would measures specific defects to monitor their progression. Locations of points would be accurately logged using a GPS tracker.

To agree the current state of the road, the report would be agreed with the Council prior to construction works commencing.

Any immediate necessary repairs would be coordinated with the Council. Any damage caused by traffic associated with the Proposed Development, during the construction period that would be hazardous to public traffic, would be repaired immediately.

During construction activities, a general road wear and tear review would be undertaken with the Council every three months during construction. Interim reviews will be undertaken by the principal contractor on a regular basis and the progress reports issued to the Applicant.

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

There would be a regular road edge review and any debris and mud would be removed from the public carriageway to keep the road clean and safe during the initial months of construction activity, until the construction junction and immediate access track works are complete.

Where defects occur, the principal contactor will ensure that they maintain a stockpile of road repair material on site to undertake repair works quickly and efficiently, when authorised by the Council to undertake interventions.

Upon completion of construction activities, a follow-on condition review will be undertaken around the site access junction and a defects list prepared. Works required to reinstate the road back to its original condition would be undertaken at the Applicant's expense follow a review by the Council.

There are cases where defects will need to be undertaken quickly and the contractor will have arrangements in place to respond to serious and significant defects within agreed hours.

5.3 Turning Facilities & Banksmen

For safety reasons, both onsite and for other road users, the site has been designed so all vehicles can enter and exit the site in a forward gear at both junctions. No vehicle shall reverse onto unmanaged public roads and shall only enter / exit the site using forward gear only.

A banksman will be provided at the site access to help guide traffic within the site and to ensure health and safety access for the site. The banksman will be in radio contact with the wider site compound to advise of movements to and from the site.

The site construction compound will be sized to ensure that staff can park safely in the appropriate areas and that no parking occurs near the A832 site access junction.

5.4 AIL Traffic Management Measures

General Measures

AIL movements must be escorted by the Police. Given the size of the proposed loads, it is expected that at least two private escorts and a minimum of two police escort vehicles are likely to be required (exact requirement will be confirmed with the police). The likely deployment of escorts will be as follows:

- The first police escort vehicle will be the advance escort and will be located sufficiently ahead of the convoy, to advise the convoy in good time of traffic stoppages, constraints and oncoming hazards;
- The second police escort and first civilian escort will provide support to the first escort at junction closures and would be located at the front of the lead vehicle; and
- The second civilian escort will be located behind the last vehicle to protect the rear of the convoy and ensure that following vehicles do not attempt dangerous overtaking manoeuvres.

Before the convoys depart the Port of Entry ((PoE) – to be determined post the granting of planning permission) the Lead Driver should check weather and traffic conditions and ensure this information is included within the daily toolbox talks.

Within the route, there are locations where general traffic flows will need to be stopped to allow the safe manoeuvre of the loads. In these circumstances, the advance escorts will ensure that the traffic is stopped before the convoy enters the affected section. The advance escorts will confirm through radio contact that the area is clear and safe for transit. Should general traffic fail to observe the request to stop, the advance escort will advise the convoy to immediately halt and will then proceed to remove the rogue traffic. The convoy must not start without approval from the advance escort.

In areas where the load is likely to, or is close to straddling the centre line, the advance escort should be positioned to give advance warning to the convoy such that action can be taken. In constrained areas and other locations where verges are potentially soft the drivers must exercise care to ensure the trailer wheels do not leave the road surface as this may result in adverse load stability conditions.

Urban areas along the route pose different challenges for the abnormal loads. Whilst the vehicle speeds will be less than those in the rural sections of the route, there are more potential conflicts with other road users to be aware of. These include:

- Pedestrians and cyclists;
- Local vehicular traffic;
- Parked vehicles;
- Side junctions; and
- Street furniture.

Within urban areas, the convoy escorts will need to be aware of all road and footway users at turn sections within the route. At these locations there is potential for load over-sail and reference to the swept path assessment drawings is considered essential to identify these areas. It is important to note that only the Police have the power to request that vehicles and pedestrians move.

Within urban areas there is a higher chance of parked vehicles along the route and a possibility that parked cars will restrict available road width. Whilst these areas will not impede the loads, they do create a further zone where the load drivers and escorts will need to take care of conflicts that include restricted road widths, car doors opening and pedestrians crossing the road between parked vehicles.

Information relating to AIL movements will be provided directly to residents living in the immediate vicinity of the access route. Information on the movement of the abnormal load convoys would also be provided to local media outlets by the Principal Contractor (or their appointed AIL delivery contractors) to help assist the public. Information would be provided to local newspapers and radio stations.

The project website will also be used to help advise of movements. Information would relate to expected vehicle movements on the route. It is hoped that this level of information will make residents aware of convoy movements and help reduce any conflicts.

AIL Convoy Health & Safety Measures

All staff working on the project will be inducted before entering the site. This will be undertaken prior to the commencement of AIL movements.

A daily Tool Box Talk for all convoy staff to be held at the start of each working day and carried out by the appointed Transport Co-ordinator or Appointed Lead Driver. A detailed record of the talk should be kept and filed once the convoy has arrived at the site.

The Tool Box Talks will cover a minimum of the following matters:

- The current version of the CTMP to be carried by all convoy vehicles;
- Identification of any updates since the previous version of the CTMP;
- Requirement to have a CB radio (fixed or portable), with fully charged batteries;
- Anticipated transport restrictions in each section of the route;
- Driver instructions on incident reporting;
- Driver instructions on trailer steering methodology, and availability of assistance;
- Instructions on areas requiring traffic stoppage, and methodology for convoy passing through these areas;
- The welfare arrangements for drivers;
- A summary of the predicted weather, traffic and road conditions; and
- Any questions on the contingency plans.

Each of the convoy vehicles must be suitably equipped with hazard warning devices to warn all other road users. All the tractor, trailer and escort vehicles operating on the project must have the following:

- Tractor units to have beacon bars on the roof and 3M reflective markings on both sides;
- All vehicle warning signage to be in English;
- Trailer units to have amber beacons on the rear with 3M reflective markings on both sides;
- All escort vehicles will have beacon bars on the roof, with 360 degree motion for all round visibility, and 3M reflective markings;
- Fire extinguisher and first aid kit; and
- Certified cargo lashing straps are to be used at all times. Certification must be carried and made available for inspection, kept within the cab.

All hazard warning equipment must be checked and cleaned at the start of each day. Additional cleaning of the warning equipment may be required throughout the day and must be undertaken when required.

All relevant personnel must have the appropriate Personal Protective Equipment (PPE). All PPE clothing must be 'CE' marked to show it meets current standards and should be appropriate for use in trunk road situations (i.e. must be full coats with reflective bands on the arms).

Emergency & Contingency Plan

To ensure access for emergency service vehicles, a coordination protocol will be established with the blue light emergency services. As the AIL convoys are escorted by the Police, the Police will be aware of potential access issues for ambulances and fire service vehicles and can take appropriate action on the route to pull to the side of the road or mount a verge to allow emergency vehicles past.

The civilian escort vehicles carry equipment to make running repairs to vehicles in the unlikely event of a breakdown. Further spares and equipment can also be based at the site for faster responses in case of mechanical issues.

The haulier will establish contracts with local suppliers to attend to any punctures and tyre issues, to minimise any stoppage time on the route.

6 Summary

This combined Transport Statement & Construction Traffic Management Plan has considered the likely impact of traffic generated by the Proposed Development on the local road network.

A review of the type and volume of vehicles associated with the construction programme has been provided and the peak of construction activities identified. This peak in traffic has been used to review the likely impact that construction activities would have.

Construction of the Proposed Development will generate approximately 112 movements vehicle movements per day at the peak of construction. It is expected that during the peak month of construction (Month Six), 36 two-way HGV movements per day will occur per day. A further 76 car / LGV trips would be created by construction staff travelling to and from the site.

Traffic management procedures have been proposed within this report which would ensure the safe operation of the approach route to the site during construction. Determination of the final details of these traffic management measures will occur once the contractor has been appointed.

As the Proposed Development will not be manned, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider road network will be negligible.

Appendix A Construction Programme and Delivery Profile

Construction Programme

Element	Vehicle																							
Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Site Establishment / Reinstatement	HGV	80	40																					80	40
General Deliveries	HGV	44	44	44	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	44	44	44	44	44
Site Clearance & Preparation	HGV		44	44																					
Timber Extraction	HGV		76	76																					
Access Tracks	HGV				77	77																			
Geotextile	HGV				6	6	6																		
Development Platform	HGV						680	680	680	680	680	680													
Foundation Steel	HGV												10												
Foundation Concrete	HGV												200	200	200										
Cabling	HGV														7										
Cable Sand	HGV														30	30	30								
EV Gear & Switchgear	HGV																	18							
Cranes	HGV																	2							
Buildings	HGV																30	30	30	30					
Fencing, Landscaping & Security	HGV												12								12		44	4	
Battery & Inverter Delivery	HGV																			128	128	128			
Commissioning	LGV																				88	88	88	88	88
Staff	LGV	564	1254	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1254	836	418	418
Total		688	1458	1836	1843	1843	2446	2440	2440	2440	2440	2440	1982	1960	1997	1790	1820	1810	1790	1918	1944	1514	1012	634	590
Total HGV		124	204	164	171	171	774	768	768	768	768	768	310	288	325	118	148	138	118	246	184	172	88	128	84
Total LGV		564	1254	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1672	1760	1342	924	506	506
Total HGV / Day		***6***	***9***	***7***	***8***	***8***	***35***	***35***	***35***	***35***	***35***	***35***	***14***	***13***	***15***	***5***	***7***	***6***	***5***	***11***	***8***	***8***	***4***	***6***	***4***
Total LGV / Day		***26***	***57***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***80***	***61***	***42***	***23***	***23***
Total per Day		***31***	***66***	***83***	***84***	***84***	***111***	***111***	***111***	***111***	***111***	***111***	***90***	***89***	***91***	***81***	***83***	***82***	***81***	***87***	***88***	***69***	***46***	***29***	***27***

Please note that rounding errors may occur

Appendix B AIL Route Survey

Abnormal Indivisible Load Access to the Proposed Corriemollie Battery Energy Storage System Site – High Level Summary Document & Desktop Review

Prepared for Field Corriemollie Ltd

Shaftesbury House, High Street, Eccleshall, Staffordshire ST21 6BZ, UK
Tel: +44 (0)1785 850411

wynnslimited.com
Registered in England & Wales No. 3162297

NAME		SIGNATURE	DATE
Prepared by:	Brad Dyke	[redacted]	12.06.24
Checked by:	Micah Orbart	[redacted]	13.06.24
Approved by:	Andy Pearce	[redacted]	14.06.24

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DOCUMENT REVISIONS

Issue	Date	Details
0	14.06.24	Summary Report
1	22.10.24	Client Comment Added
2		

Site	Proposed New Field Energy Corriemollie Substation Site
Level of Difficulty for AIL Access **RED – Major issues expected that present risk to access** **AMBER – Issues expected but remedial can be undertaken to allow access** **GREEN – AIL Access proven and no major issues**	The structural status of the route has been confirmed for 88.4te loads.
Existing Substation or Potential New Site	Proposed Energy Battery Energy Storage (BESS) Site adjacent of the existing Corriemollie Substation.
Route Inspection and AIL Access Report Recently undertaken by Wynns?	Yes, route inspections undertaken between 7th – 10th May.
Has Agreement in Principle (AIP) been provided by National Highways in line with the Water Preferred Policy	No – Wynns are not aware of an existing AIP as the movements to the proposed substation are to be STGO Category 3 and will not require a Special Order, an AIP will therefore not be required. Appendix 2 includes the National Highways Aide Memoir which explains movement thresholds and permission requirements for AILs.
National Highways AIP Reference Number	NA
Proposed port/Marine access point of Delivery	As the AIL is within STGO it is not limited to the closest port. Therefore, any suitable east coast port can be expected to be utilised. The route proposed can be accessed from potential ports of delivery to the A9. The closest port used for AILs is Inverness, as used for the Special Order delivery (in excess of 150te gross weight) to Tomatin Substation as part of the transmission upgrade between the existing Knocknagael and Tomatin substation in 2018. Invergordon, although being marginally further has been used for the delivery of 50m wind turbine blades to the Corriemollie Wind Farm and used prior to that for the Lochluichart Wind Farm for 45m blades. Invergordon has also been used for substation transformers to various locations in the region. The delivery could be from as far as Immingham Docks which are regularly used

Site	Proposed New Field Energy Corriemollie Substation Site
	for STGO delivery into the UK from mainland Europe.
Transformer Transport Weight considered during the most recent report in line with future project requirements	Transformer of circa 88.4te nett
Typical trailer used in Route Clearance works	Flat top trailers or Goose Neck trailers would be expected to be considered in the first instance for the transformer of this weight at 88.4te and nett height of 3813mm which can be transported under the standard UK trunk road and motorway running height of 4950mm
Expected delivery date of next planned transformer if known	To be confirmed, though construction is anticipated in 2027.
Known Maximum Transformer Weight (according to available records)	N/A
Last Recorded Special Order Movement (according to available records)	45m Wind Turbine blades were delivered to Lochluichart Wind Farm adjacent to Corriemollie in 2012/13. Wynns carried out route surveys for 50m blades to Corriemollie Wind Farm from Invergordon in 2014.
Nearest Common Heavy Load Route	Invergordon via A9
Suggested route based on historical information	**Proposed route 1 from Immingham** Exit Immingham Docks via Humber Road Turn left A180 Continue M180 Exit M180 joining M18 Junction 5 Join M62 Junction 35 Join A1 Junction 41 Turn left A66 (Scotch Corner) Turn right joining M6 Junction 40 Continue A74 Turn right M73 Continue M80 Continue M9 Continue A9 Turn left at Tore Roundabout A835 Turn left A832 Turn right Corriemollie Substation access road **Route from Inverness** Exit offload area onto Longman Drive Continue onto Stadium Road Turn right onto A9 from Stadium Road Continue as Route 1 to site

Site	Proposed New Field Energy Corriemollie Substation Site
Is a map available of the proposed route(s)?	Yes – See attached.
Any Known Problems for AIL Access in terms of structures?	An STGO notification (WYNL/135) was submitted via ESDAL of the route from the Tore Roundabout joining the A835 and then A832 to the proposed site location on 16.05.24 and there were no structures raised by the affected authorities as causes for concern.
Any Known Problems for AIL Access in terms of Negotiability and other Route Comments?	No known problems, route from Tore Roundabout proven for much larger loads. Police Scotland have confirmed the load will require a full police escort and 2 clear days' notice would need to be provided when applied for.
Any Known Problems for AIL Access in terms of Onsite issues?	No review of site access has been undertaken within this report. Wynns were unable to survey further than the existing Corriemollie Substation gate as the site was locked. The status beyond the gate would need to be confirmed, however the right turn off of A832 into the existing site is negotiable and has had wind turbine blades delivered previously.
Do routing issues currently present a serious risk that access to the site may be restricted?	No

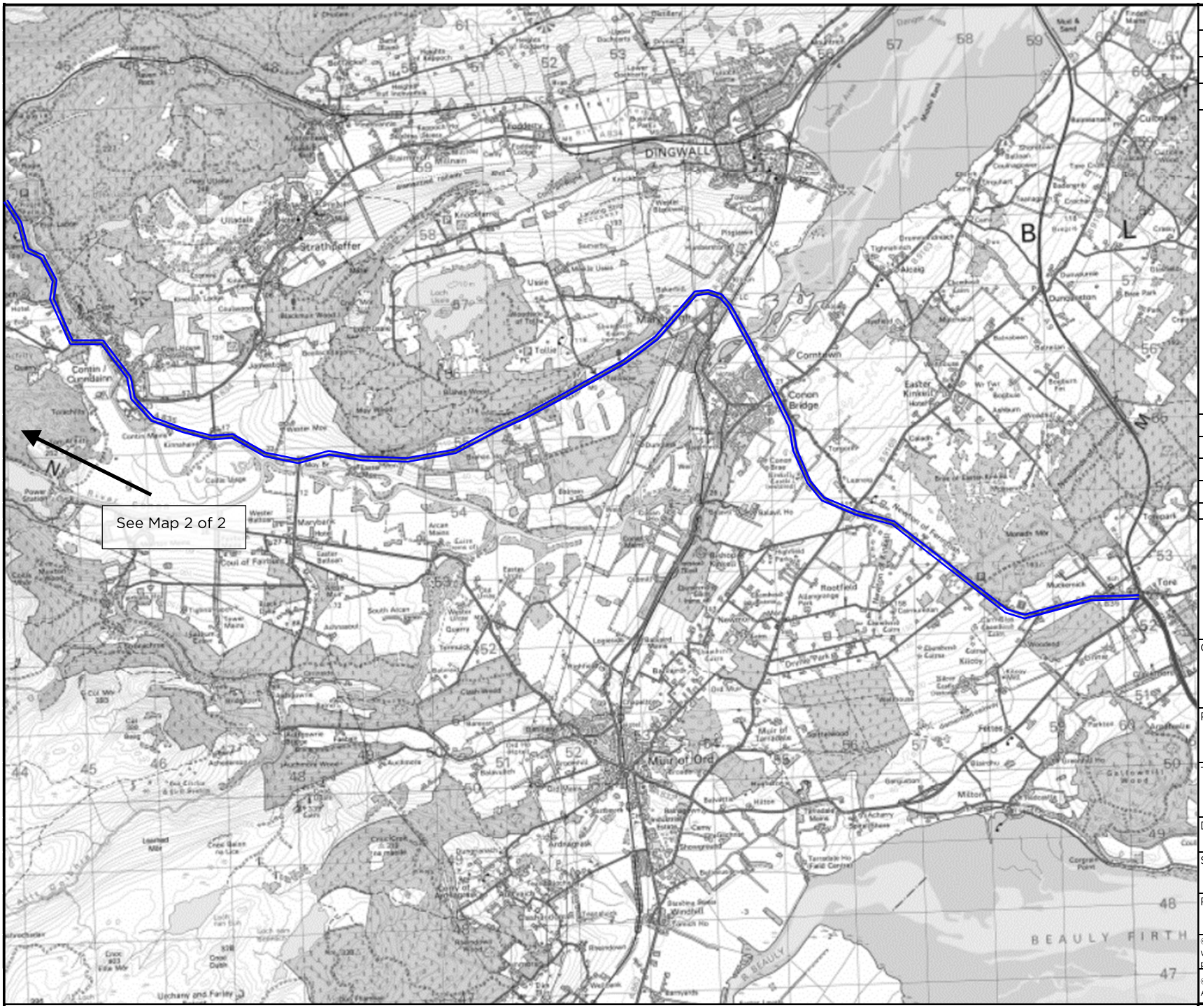
Any other Relevant Information and Notes:

Garve level crossing would be subject to the Network Rail Standard Caution for crossing a level crossing with an AIL is detailed below at for information.

"Before the trailer crosses any automatic half-barrier railway level crossing or any other railway level crossing, equipped with a telephone, the driver of the towing vehicle shall telephone the railway signaller of the intention to cross the railway with the trailer. The trailer and the vehicles used with it shall not cross except with the permission of and in accordance with the instructions of the railway signaller. After crossing the driver shall again, telephone the signaller to inform him that the crossing is clear."

Appendix 1

Maps



Key	
	Proposed Route from the A9
	Point of Interest
	Corriemollie proposed BESS

Rev	Date	Amendments
B		
A	22.10.24	Client Comments Added
0	20.05.24	Final Report

Revisions

Wynns Ltd.
Independent Transportation Engineers
Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ. Tel: (01785) 850411

Client:
FIELD
Virmati Energy Ltd
Fora Montacute Yards
Shoreditch High Street
London - E1 6HU
United Kingdom

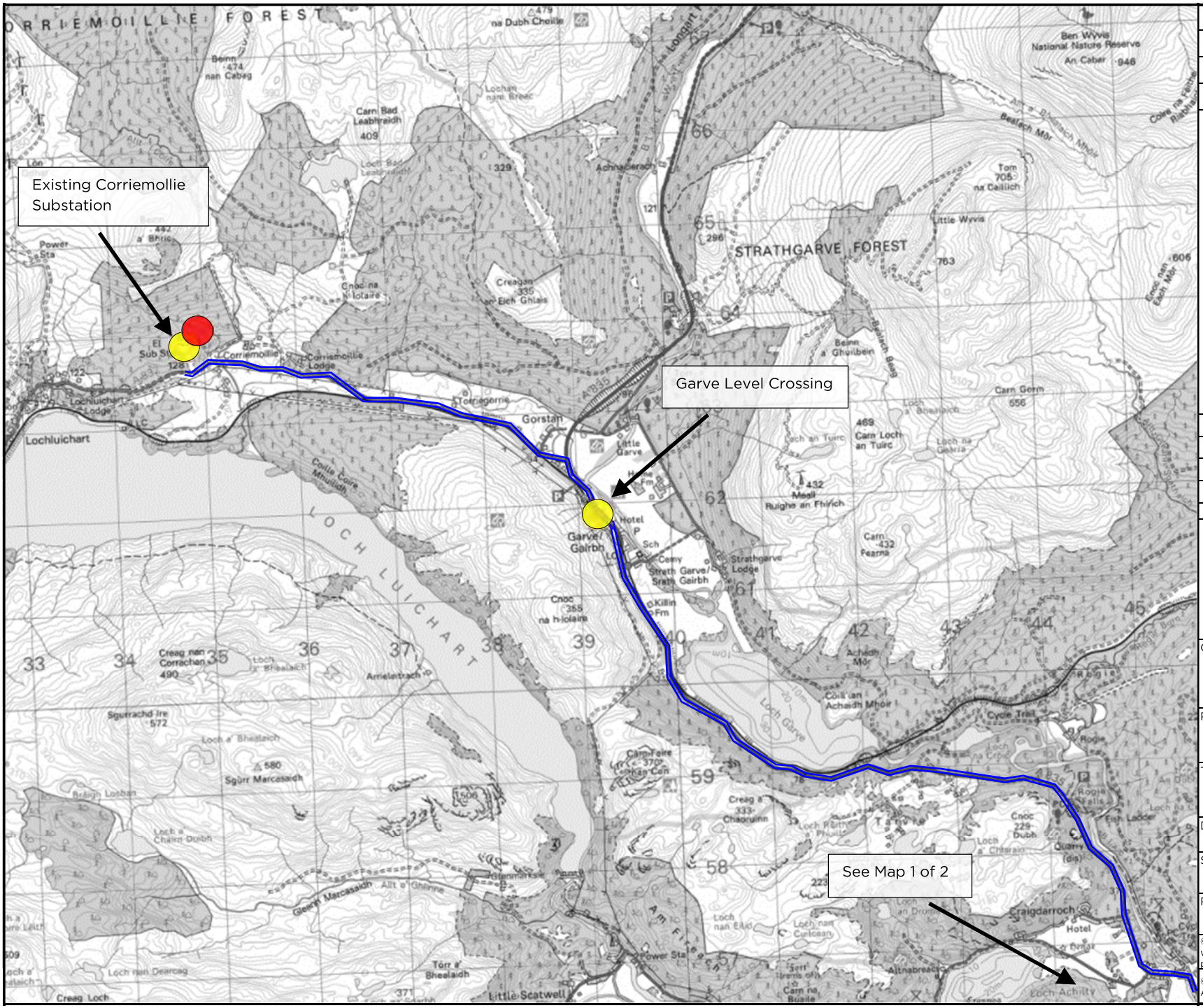
Project:
Field Proposed BESS AIL Access

Title:
Map 1 – Routes to proposed Corriemollie BESS

Drawing Status:
Final Report

Scale (A4):	Drawn by:	Checked by:
NTS	BD	ARP

Ref No.:	Sheet:	Rev.:
24-1236-Map1	1 of 2	1



Key	
	Proposed Route from the A9
	Point of Interest
	Corriemollie proposed BESS

Rev	Date	Amendments
B		
A	22.10.24	Client Comments Added
0	20.05.24	Final Report

Revisions

Wynns Ltd.
Independent Transportation Engineers

Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ. Tel: (01785) 850411

Client:

Virmati Energy Ltd
Fora Montacute Yards
Shoreditch High Street
London - E1 6HU
United Kingdom

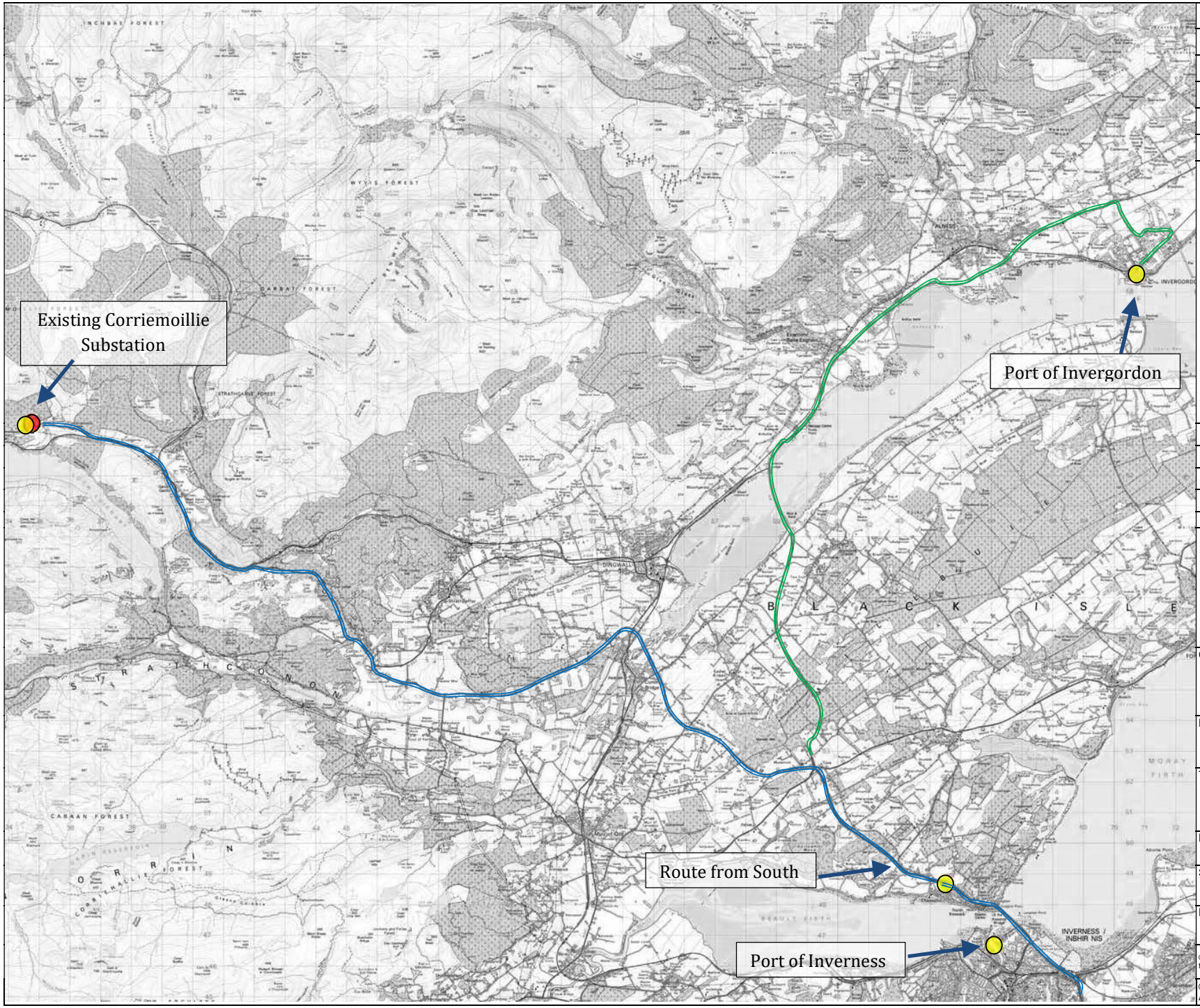
Project:
Field Proposed BESS AIL Access

Title:
Map 1 – Routes to proposed Corriemollie BESS

Drawing Status:
Final Report

Scale (A4):	Drawn by:	Checked by:
NTS	BD	ARP

Ref No.:	Sheet:	Rev.:
24-1236-Map1	2 of 2	1



Key

	Route 1 from A9 South, expected to be used for STGO loads.
	Route 2 from Invergordon, not expected to be used for STGO loads.
	Point of Interest
	Corriemollie proposed BESS

Rev	Date	Amendments:
B		
A		
0	22.10.24	First Issue

Revisions

Wynns Ltd.
Independent Transportation Engineers
Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ. Tel: (01785) 850411

Client:

FIELD

Virmati Energy Ltd
Fora Montacute Yards
Shoreditch High Street
London - E1 6HU
United Kingdom

Project:

Field Proposed BESS AIL Access

Title:

Map 3 – Overview of Route to Proposed Corriemoillie BESS

Drawing Status:

Final Report

Scale (A4):	Drawn by:	Checked by:
NTS	MTO	ARP

Ref No.:	Sheet:	Rev.:
24-1236-Map3	1 of 1	0

Appendix 2

National Highways Aide Memoir

national highways

Aide Memoire for notification requirements for the movement of Abnormal Indivisible Loads or vehicles by road when not complying with The Road Vehicles (Construction and Use) Regulations 1986 (commonly known as C & U)

Weight

Gross weight of vehicle carrying the load exceeding C & U limits up to and including 80,000kgs (78.74 tons)	2 clear working days' notice with indemnity to Road and Bridge Authorities.
Gross weight of vehicle carrying the load exceeding 80,000kgs up to and including 150,000kgs (147.63 tons)	2 clear working days' notice to Police and 5 clear days' notice with indemnity to Road and Bridge Authorities.
Gross weight of vehicle carrying the load exceeding 150,000kgs (147.63 tons)	National Highways Special Order* plus 5 clear working days' notice to Police and 5 clear days' notice with indemnity to Road and Bridge Authorities
Gross axle weight carrying the load exceeding 16,500kgs (16.24 tons)	National Highways Special Order* plus 5 clear working days' notice to Police and 5 clear days' notice with indemnity to Road and Bridge Authorities

Width

C & U loads:- width exceeding 2.9m (9ft 6ins) up to and including 4.3m (14ft 1 ins) STGO loads:- width exceeding 3.0m (9ft 10ins) up to and including 5.0m (16ft 5ins)	2 clear working days' notice to Police
Width exceeding 5.0m (16ft 5ins) up to and including 6.1m (20ft)	National Highways form VR1** plus 2 clear working days' notice to Police
Width exceeding 6.1m (20ft)	National Highways Special Order* plus 5 clear working days' notice to Police and 5 clear days' notice with indemnity to Road and Bridge Authorities

Length

C&U loads:- length exceeding 18.65m (61ft 2in) up to and including 27.4m (90ft) - See C&U Regulations 1986 for definition of length STGO loads:- length exceeding 18.75m (61ft 6 ins) - See part 2, article 12 of the Road Vehicles (Authorisation of Special Types) (General) Order 2003 (Commonly known as STGO) for definition of length	2 clear working days' notice to Police
Overall length of a part 2 vehicle-combination exceeding 25.9m (85ft) and up to and including 30m (98ft 43ins).	2 clear working days' notice to Police
Maximum length exceeding 30.0m (98ft 43ins) – see STGO Schedule 1, part 4, paragraph 25 for definition of maximum length NB For some very light loads, such as yacht masts, that are moved on conventional motor vehicles not exceeding 12,000kgs gross weight or trailers not exceeding 10,000kgs gross weight, a National Highways' Special Order* will be required if the rigid length exceeds 27.4m (89ft 11ins)	National Highways Special Order* plus 5 clear working days' notice to Police and 5 clear days' notice with indemnity to Road and Bridge Authorities.

Overhanging Loads

Front & Rear Overhanging Loads Projections exceeding 3.05 metres (10ft 01ins) rearwards and/or forwards	2 clear working days' notice to Police (C&U Schedule 12, paragraph 1), Attendant required (C&U Schedule 12, paragraph 2), Marker boards required (C&U Schedule 12, paragraph 3. https://www.gov.uk/government/publications/overhanging-loads-on-vehicles/overhanging-loads
Side Overhanging Loads Over 0.305 metres (1ft) lateral projection on either side	2 clear working days' notice to Police (C&U schedule 12, paragraph 4), Marker boards front and rear (C&U Schedule 12, paragraph 3), Additional lights required during hours of darkness or poor visibility. https://www.gov.uk/government/publications/overhanging-loads-on-vehicles/overhanging-loads

NOTE 1 “Clear days’ Notice” excludes Saturdays, Sundays or a public holiday in any part of Great Britain in relation to movements authorised by the Special Types General Order only, there being no such exclusion in Special Orders unless specifically stated.

NOTE 2 There is no statutory limit governing the overall height of a load, however, when applying for a Special Order or VR1 it should, wherever possible, not exceed 4.95m (16ft 3ins) in order that the maximum use can be made of the motorway and trunk road network.

NOTE 3 The notification requirements for mobile cranes can be found in the Road Vehicles (Authorisation of Special Types) (General) Order 2003, statutory instrument number 1998 (Part 2 Articles 10 to 18), which is available on the OPSI website: http://www.legislation.gov.uk/uksi/2003/1998/contents/made

NOTE 4 Application to move Special Types or Special Purpose vehicles, such as very large agricultural vehicles, that may not be fully permitted by the Construction & Use (C&U) Regulations or fall outside the scope of the Special Types General Order should be made to the Vehicle Certification Agency (VCA). Their website is at https://www.vehicle-certification-agency.gov.uk/

*A Special Order application can be completed and submitted online at https://nationalhighways.co.uk/road-safety/abnormal-loads-and-the-esdal-system/. The Special Order application form BE16 can also be downloaded and e-mailed to the address below. Approval is not automatic and is at the discretion of the National Highways Abnormal Loads Team acting on behalf of the Secretary of State for Transport. To ensure that the necessary clearances can be obtained in good time from the Police, Highway and Bridge Authorities, you should request permission for the move by returning the completed form 10 weeks prior to the scheduled date of the move. In fact you cannot apply too early and we invite manufacturers or hauliers to contact us at pre tender stage, before making a financial commitment to supply the load, to check whether permission would be granted.

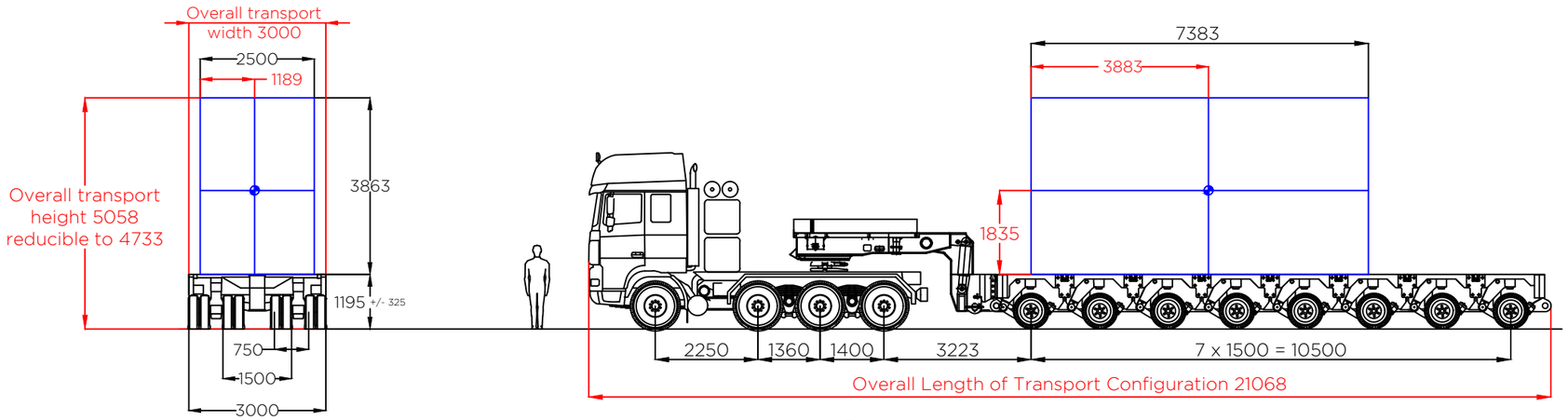
** A VR1 application can be completed and submitted online at https://nationalhighways.co.uk/road-safety/abnormal-loads-and-the-esdal-system/. The form can also be downloaded and e-mailed to the address below. Approval is not automatic and is at the discretion of the National Highways Abnormal Loads Team acting on behalf of The Secretary of State for Transport. To ensure that the necessary formalities can be completed in good time, you should request permission for the move by submitting the completed form 2 weeks prior to the date of the scheduled move. Again, you cannot apply too early and we invite manufacturers or hauliers to contact us at pre-tender stage, before making a financial commitment to supply the load, to check whether permission would be granted.

Forms and enquiries to:
National Highways
Abnormal Loads Team
9th Floor, The Cube
199 Wharfside Street
Birmingham
B1 1RN

E-mail: abnormal.loads@nationalhighways.co.uk
Tel: 0300 470 3004

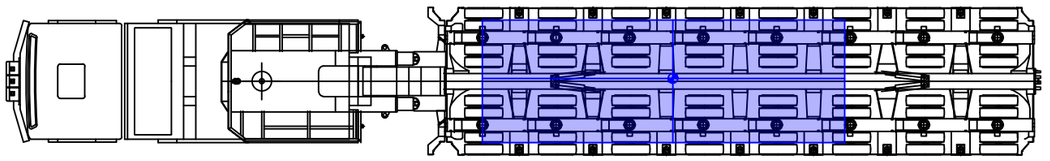
Appendix 3

Indicative Transport Arrangement Drawing

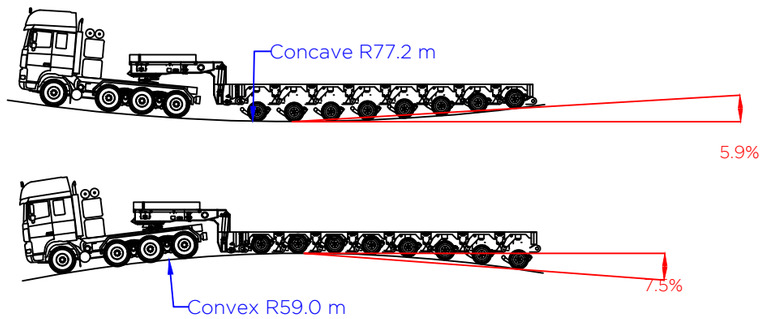


Profile View
Scale 1:125

Elevation View - 8 axle goose neck trailer - concept model only
Indicative 88.4 te Transformer
Scale 1:125

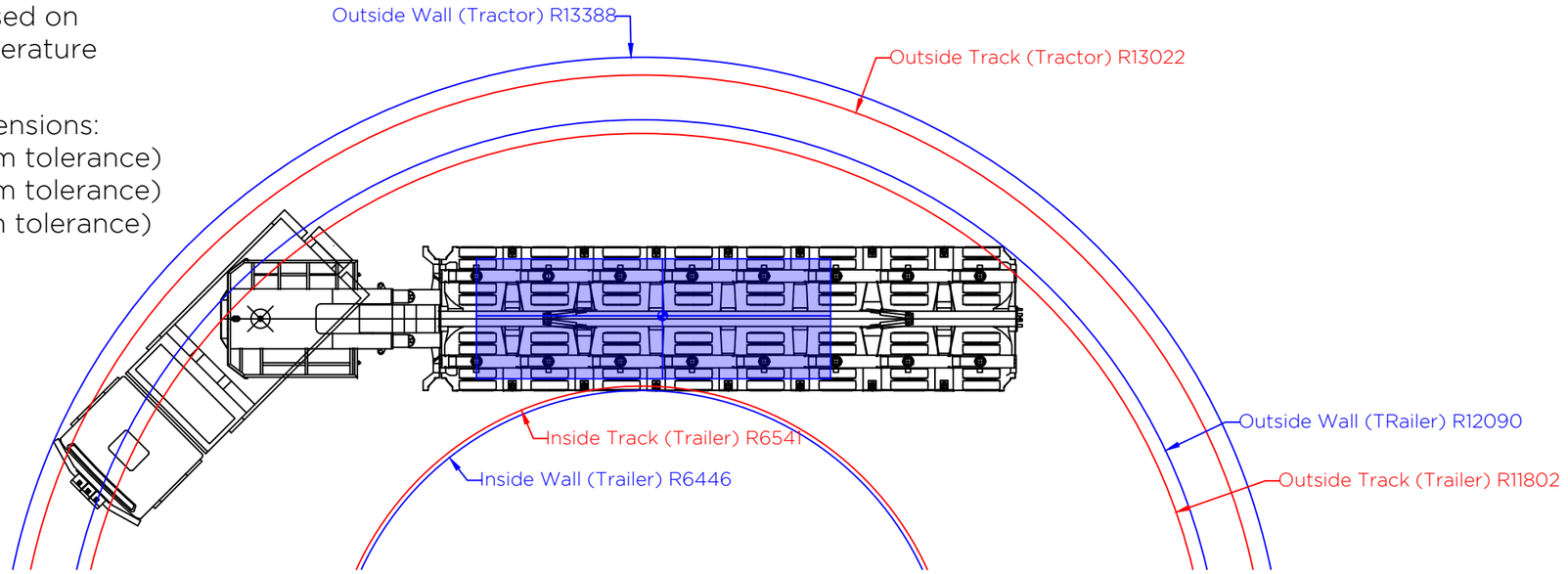


Plan View - 8 axle goose neck trailer - concept model only
Indicative 88.4 te Transformer
Scale 1:125



Vertical Curve Negotiability
Information based on
manufacturers literature

Transformer Dimensions:
7.383m (L) (incl. 50mm tolerance)
2.50m (W) (incl. 50mm tolerance)
3.863 (H) (incl. 50mm tolerance)



Minimum Turning Radii -
8 axle goose neck trailer - concept model only
Indicative 88.4 te Transformer
Scale 1:125

Load Table

8 Axle Goose Neck Trailer

Self weight of Transformer - incl. +2% tol	88.4 te
Self weight of trailer	Say 35.0 te
Self weight of tractor	14.0 te
Total combined weight	137.4 te
Load per axle line	12.34 te
Load per axle (2 per axle line)	6.17 te
Load per wheel (4 per axle)	1.55 te
Max. ground bearing pressure (trailer)	2.99 te/m²

Tractor (14 te)

Front axle	6.0 te
Second steer	8.0 te
Rear axle	12.34 te
Rear axle	12.34 te

Notes:-

[1] The figures shown above are representative of the transport configuration portrayed. However, as tractor and trailer arrangements can vary then the loads and dimensions indicated should be treated as probable values.

[2] All linear measures in millimetres unless stated otherwise.

[3] Drawing of transformer indicative only. Weight specified includes a +2% tolerance as per manufacturer drawing

Rev.	Date	Amendments
1	22.10.24	Project Name Amended
0	26.04.24	Issued for comment

Revisions

Prepared by:
2 High Street, Eccleshall, Stafford, ST21 6BZ
Tel: (01785) 850411
Independent Transportation Engineers

Client: FIELD

Project: Corriemollie BESS

Title: Indicative Transport Configuration 88.4 te Transformer carried upon typical 8 axle goose neck trailer showing minimum turning radii

Drawing status: Final report

Scale (A3):	Drawn by:	Checked by:
1:125	JMB	MTO

DWG. no:	Sheet:	Rev:
24-1236.TC01	1 of 1	1

P:\Clients\Existing Clients\Field Energy\24-1236 Corriemollie\Transport Configuration\24-1236.TC01 Corriemollie 88.4 te 8 axle goose neck.R0.dwg