Scottish & Southern Electricity Networks

TRANSMISSION

Spittal to Loch Buidhe to Beauly 400 kV OHL Connection Environmental Impact Assessment Volume 5 | Technical Appendix

Appendix 14.5 | Outline Construction Traffic Management Plan

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VOLUME 5: APPENDIX 14.5 – OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN

1.	**INTRODUCTION**	**1**
1.1	Background	1
2.	**CONSTRUCTION TRAFFIC MANAGEMENT PLAN**	**2**
2.1	Purpose of a CTMP	2
2.2	CTMP Structure	2
3.	**PROPOSED DEVELOPMENT DESCRPTION**	**3**
3.1	Overview	3
3.2	Construction Programme	3
3.3	Temporary Construction Compound	4
3.4	Vehicle Classification	4
3.5	Traffic Generation	4
3.6	Working Hours	4
4.	**PRINCIPAL ACCESS ROUTES**	**5**
4.1	Introduction	5
4.2	Access Routes	5
5.	**TRAFFIC MANAGEMENT MEASURES**	**6**
5.1	Local Highways Issues and Constraints	6
5.2	Mitigation Measures	6
6.	**RECREATION AND LEISURE ROUTE MANAGEMENT STRATEGY**	**9**
6.1	Routes	9
6.2	Mitigation Measures	9
7.	**ROAD CONDITION SURVEY**	**10**
8.	**MANAGEMENT STRUCTURE**	**11**
8.1	Introduction	11
8.2	Monitoring and Review	11
8.3	Compliance	11

1. INTRODUCTION

1.1 Background

1.1.1 SSEN Transmission has appointed Murphy Group and Wood Group as the Principal Contractors for the Proposed Development to install approximately 173 km of new double circuit steel structure 400 kV (kilovolts) overhead line (OHL) to connect into new substation sites at Spittal, Loch Buidhe and Beauly.

1.1.2 Murphy Group shall deliver the 96 km section of the Proposed Development between Banniskirk Substation and Carnaig substation (Sections A and B). Wood Group shall deliver the 77 km section of the Proposed Development between Carnaig Substation and Fanellan Substation (Sections C, D and E).

1.1.3 The requirement for an Outline Construction Traffic Management Plan (CTMP) was identified by the Highland Council (THC) through the EIA Scoping process. The Principal Contractors have therefore developed this Outline CTMP for the Proposed Development.

2. CONSTRUCTION TRAFFIC MANAGEMENT PLAN

2.1 Purpose of a CTMP

2.1.1 The purpose of this document is to establish the traffic management principles that SSEN Transmission / the Principal Contractors will adopt to mitigate the impacts associated with the construction of the Proposed Development. This Outline CTMP aims to ensure traffic and transport impacts are managed throughout the construction of the Proposed Development.

2.1.2 Environmental Resources Management (ERM) produced the Environmental Impact Assessment (EIA) Report, and this Outline CTMP forms a Technical Appendix to **Volume 2, Chapter 14: Traffic and Transport**. The traffic and transport assessment identified potentially significant effects relating to severance, non-motorised user amenity, non-motorised user delay, and road vehicle driver and passenger delay. Therefore, mitigation identified in **Volume 2, Chapter 14: Traffic and Transport** will also need to be considered in the CTMP.

2.1.3 The guidance included in this Outline CTMP shall be used to inform the Principal Contractors' CTMP, which will be updated throughout the construction period as required, and control measures amended or expanded as necessary.

2.1.4 The primary objectives of the CTMP are as follows:

- Ensure the movement of people and materials in a safe, efficient, timely, and sustainable manner;
- Keep construction traffic to a minimum during peak network periods to reduce the impact on the highway network;
- Ensure that the impact and disruption on local communities is minimised and communicated;
- Minimise vehicle trips where possible; and
- Limit the impacts on the natural and built environment.

2.1.5 The Principal Contractors CTMP shall be submitted to the Local Highway Authorities (The Highland Council (THC)) and Transport Scotland prior to works commencing on site. This is to inform the Local Highway Authorities of the suitability of the construction access routes and traffic management practices being proposed.

2.1.6 Following agreement of the construction access routes and traffic management measures, SSEN Transmission / the Principal Contractors will be responsible for arranging all permits / licences necessary to close and / or divert the public highway. Any licences / permit applications required for the Proposed Development will be submitted through the Electronic Transfer of Notifications (ETON) system (as applicable).

2.2 CTMP Structure

2.2.1 The remainder of this report is structured as follows:

- Section 3: Proposed Development Description;
- Section 4: Principal Access Routes;
- Section 5: Traffic Management Measures;
- Section 6: Recreational and Leisure Routes Management Strategy;
- Section 7: Road Condition Survey; and
- Section 8: Management Structure.

3. PROPOSED DEVELOPMENT DESCRPTION

3.1 Overview

3.1.1 The Proposed Development consists of the following:

- Pre-construction environmental survey data.
- Pre and post-construction site and road condition surveys with photographic evidence.
- Pre-construction site protection measures.
- Local community liaison activities.
- Micro-siting (if required).
- The formation of access tracks (permanent, temporary, and upgrades to existing tracks) and the installation of structures, for example, bridges and culverts to facilitate access.
- Public road improvements (PRI) which would be required in some areas to facilitate construction traffic.
- The upgrade of existing, or creation of new, 'bellmouths' (i.e. junctions with curved entry and exit points) at public road access points.
- Other temporary measures required during construction, such as measures to protect road and water crossings during construction (scaffolding etc.).
- Formation of flat areas from which the conductor will be pulled during construction, which will contain earthed metal working surfaces referred to as Equipotential Zones (EPZs) pulling positions.
- Working areas around infrastructure to facilitate construction.
- Permanent diversion works required to existing 132 kV and 275 kV OHLs (referred to within this EIA as special arrangements) to enable the construction of the Proposed Development including the temporary diversion works required to construct the permanent diversions.
- Removal of redundant sections of the existing OHLs, following construction and energisation of the permanent diversion works.
- Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development, to comply with the Electricity Safety, Quality and Continuity Regulations (ESQCR) 2002.
- The installation and operation of new double circuit 400 kV OHL supported by a series of steel lattice towers. Install foundations, construct and erect steel lattice towers and wire the associated 400 kV circuits.
- Materials and waste management including removal of temporary works and site reinstatement including replanting where required.
- Compensatory planting.
- Environmental mitigation and enhancement measures.
- Site restoration.
- Other associated ancillary works.

3.2 Construction Programme

3.2.1 It is anticipated that construction of the Proposed Development would take place over a 48 month period (approximately), following the granting of consents and discharge of pre-commencement conditions. A further seven months (approximately) would be required for dismantling works associated with the existing OHL.

3.3 Temporary Construction Compound

3.3.1 Temporary construction compounds will be required along the route of the Proposed Development to facilitate its construction. The final location and design of temporary site compounds will be confirmed by the Principal Contractors and separate planning permissions will be sought as required.

3.3.2 Construction of the Proposed Development would give rise to regular numbers of staff transport movements, with work crews travelling to work site areas from site compound areas that will be identified by the Principal Contractors.

3.4 Vehicle Classification

3.4.1 Several vehicle types will be used during construction, as identified in **Table 1** below.

Table 1: Example of Typical Construction Vehicle Classification

Lights (LGVs)	Medium (MGVs)	Heavy (HGVs)
Car	14t & 20T Excavator	Drilling Rig
Van	Winch Tractor	Low Loader
4x4 Site Vehicle	Tractor and Trailer	Flatbed Truck
4x4 Transit	10 Tonne Truck c/w Hiab	Concrete Wagon
Borehole rig	Core drill rig	20ton Dumper
Welfare Vehicle	Merlo 40/30 Telehandler	100t Crawler Crane

3.4.2 The vehicles and specifications provided above have been identified based on similar projects by scale and type and will comply with Principal Contractors specifications.

3.5 Traffic Generation

3.5.1 **Volume 2, Chapter 14: Traffic and Transport** has considered the potential traffic and transport effects associated with the construction of the Proposed Development on the surrounding public road network and sensitive receptors. The additional traffic due to the construction activities of the Proposed Development would result in temporary and short-term increases in traffic flows on the surrounding highway network.

3.5.2 The construction traffic associated with the Proposed Development would comprise construction staff in private cars and LGVs, and also HGVs carrying construction materials and plant equipment including cranes. There would be no requirement to transport any components as abnormal loads.

3.5.3 The level of vehicle trips anticipated to be generated by construction activities has been derived from estimates and an initial programme provided by the OHL Contractors, construction is expected to run for a total of approximately 48 months. These trips have been assigned to the local road network based on the most appropriate route for HGV traffic identified by the OHL Contractors between the A9(T) corridor and the proposed access points.

3.6 Working Hours

3.6.1 Construction working is likely to be during daytime periods only. Working hours are anticipated seven days a week between approximately 07.00 to 19.00 during British Summer Time (BST) and 07.00 to 18.00 during Greenwich Mean Time (GMT), seven days a week.

4. PRINCIPAL ACCESS ROUTES

4.1 Introduction

4.1.1 The primary considerations to account for when delivering a route strategy are:

- Routes have been planned to utilise the most suitable major and minor trunk roads & the point of access to tower locations (subject to approval by THC. Thereafter, agreements made with the individual grantors will dictate routes in. Factors such as road suitability for type of vehicles, loads being carried and safety have all been taken into account for route selection;
- Use of a sliding scale approach with regards to route assignment and road classification, utilising the 'A' classified highway network as far as practicable, before resorting to lower classifications of highway;
- Avoid single carriageway highways where alternatives are available; and
- Avoid settlements and sensitive receptors where possible.

4.2 Access Routes

4.2.1 The Proposed Development is located within adequate reach of the Strategic Road Network (SRN) which is managed by Transport Scotland.

4.2.2 In general, proposed construction access would be taken via the existing public road network and would make use of existing forest and estate tracks, as far as practicable, and upgraded as required. Existing bellmouths would be utilised where possible, subject to improvements. New bellmouths would be required at a number of locations.

4.2.3 To enable larger construction vehicles to access the site, a limited number of public road improvement (PRI) works would need to take place. The type of works includes short sections of road widening; junction widening; passing place lengthening and passing place creation.

4.2.4 Deemed planning permission will be sought for these access tracks and access points as part of the Section 37 application.

4.2.5 The access is designed to accommodate HGV movements and is acceptable in its current state for Proposed Development vehicles and will include adequate passing bays along the route.

4.2.6 Access arrangements may need to be limited during certain hours, the Principal Contractors will set out what is required to facilitate all site access and consider the impact to residents and businesses in the CTMP.

5. TRAFFIC MANAGEMENT MEASURES

5.1 Local Highways Issues and Constraints

5.1.1 The Principal Contractors shall undertake a desktop route audit to identify and review any local highway issues and constraints. This will include the identification and review of the following potential constraints:

- Height restrictions;
- Width Restrictions (Bridges & Roads);
- Weight restrictions;
- Road classification;
- Road layout;
- Existing pedestrian crossing facilities;
- Existing traffic calming features;
- Sensitive receptors adjacent to the highway network;
- Visibility constraints;
- Railway Crossings;
- Restricted access;
- Speed limits and traffic speeds;
- Gradient changes;
- Public Right of Way (PRoW); and
- Other road users (pedestrians, cyclists, and equestrians).

5.2 Mitigation Measures

5.2.1 SSEN Transmission / the Principal Contractors will be required to implement a number of Traffic Management measures to help deliver the Propsoed Development safely. It is essential to provide safe and convenient access from the local road network protect the highway and pedestrians from project works and the associated risks. Mitigation identified in **Volume 2, Chapter 14: Traffic and Transport** will also need to be considered in the CTMP.

5.2.2 Methods of traffic management that may be applicable during these works are as follows:

Crossings

5.2.3 Measures to maintain safe and convenient access to and from the road network may be introduced where needed. It is anticipated there will be a minimal impact on surrounding road networks.

Temporary Traffic Signals

5.2.4 Temporary traffic signals are deployed when it is necessary to control or prohibit vehicular traffic along the highway where partial access to the highway is required. This allows short-term works to be completed whilst maintaining access, which reduces the impact on highway users and avoids instigating full highway closures.

5.2.5 The appointed Traffic Management Coordinators will prepare an application for the use of traffic signals, if required for the Proposed Development.

Road Closures

5.2.6 Road closures are deployed when it is necessary to control or prohibit vehicular or pedestrian traffic along the highway. A Traffic Regulation Order (TRO) is made to the highway authority under The Road Traffic Regulation Act 1984 so that a Temporary Notice can be issued. It is not envisaged that this will be required for the Proposed Development.

Signage

5.2.7 Deployed at access locations, within the vicinity of the works and shared accesses with footways. The primary purpose of signage is to inform/warn existing users. Effective signing is fundamental to an efficient and safe Proposed Development. All signing will also be provided in accordance with the Traffic Signs Regulations and General Directions 2016 and associated Traffic Signs Manuals 3, 5 and 8, where required.

Plant Vehicle Marshal (Banks Person)

5.2.8 Qualified personnel with appropriate street work licences will be in place at key access points to assist deliveries entering or vehicles exiting the working areas where required., wearing appropriate high visibility PPE.

5.2.9 In addition to the above, a banks person may also be required to perform traffic management duties to minimise potential conflict with vulnerable road users (pedestrians, cyclists, and equestrians) and other road users. It is not envisaged that this will be required for the Proposed Development.

Warning of Works

5.2.10 Early engagement should take place with stakeholders that may be affected by the Proposed Development. This could involve a letter drop and/or Wayleaves Officer or Community Engagement Officer liaising with residents and business or other parties who live or work near the area. Any proposed communications will be agreed with SSEN Transmission before taking place.

Information Pack and Communications

5.2.11 Driver information induction will be provided to all contractors which will form part of the contractual agreement between contractors and Principal Contractors / SSEN Transmission. The information pack will contain the details of the following CTMP requirements:

- Purpose and safety rules;
- Construction routes including site speed limits;
- Pre-booking sheet and TMP site contacts; and
- PPE requirements.

5.2.12 Finalised information packs and communication details will be shared with THC prior to commencement of works. The driver information pack will be additionally reiterated at the site office and cover the fundamentals as noted above.

HGV and LGV Vehicle Routes and Timings

5.2.13 Primary consideration for vehicles routing to the Proposed Development shall be identified in the driver information induction presented to drivers prior to accessing site. The spread of deliveries to the site across the whole day will be managed through vehicles pre-booking and this will prevent their refusal from site. This management will also minimise the impact of site traffic during network peak periods.

Travel Plan

5.2.14 A Travel Plan will be implemented as part of the CTMP during the proposed works which sets out a number of transport planning / travel demand management initiatives including:

- Travel planning awareness;
- Welfare provision for staff and external locations to site;
- Public transport;
- Car sharing; and
- Traffic Management Coordinators.

6. RECREATION AND LEISURE ROUTE MANAGEMENT STRATEGY

6.1 Routes

6.1.1 The Proposed Development crosses footpaths and cycle routes. This management strategy identifies appropriate mitigation to ensure the safety of the users of the footpaths and road corridor whilst carrying out cable works.

6.1.2 Wayleaves and a separate access plan have been produced for the Proposed Development, which identifies and details methodology for managing any public interface along the entire works corridor, the required segregation and control measures.

6.2 Mitigation Measures

6.2.1 The roads and footpaths will remain open to maintain public access. Management of the works will also be addressed with:

- Warning of Works – Communications officers will liaise and consult with third parties and stakeholders;
- Communications - Residents, businesses and third parties within proximity to the affected routes will be addressed by letter advising working hours and works programme; and
- Signage – Warning signage will be situated at appropriate locations to warn any members of the public of the construction works.

6.2.2 Mitigation identified in **Volume 2, Chapter 14: Traffic and Transport** will also need to be considered in the CTMP.

7. ROAD CONDITION SURVEY

Subject to discussions with THC and Transport Scotland, a pre and post construction road condition survey will be undertaken to help identify any damage that may be caused by works traffic.

7.1.1 The extent and scope of condition survey will be agreed with THC. The survey will be undertaken in accordance with the requirements set out by THC.

7.1.2 It is expected that a visual walk over survey and driven survey (using a video camera) will be undertaken by two site operatives. This will be undertaken within the general carriageway of the identified roads (to be agreed with THC).

Plans will identify where there is existing evidence of highway defects as part of the pre-construction survey.

7.1.3 The survey will be repeated following completion of the works to identify evidence of highway defects as part of the post-construction survey.

7.1.4 The survey shall be carried out close to the to the intended start of work, thus capturing most recent information. The following sequence of works will be undertaken:

- Carry out a video survey of agreed roads using a suitable video camera to record the condition of the road and verges and subsequent surveys dependant on usage;
- Identify during the video survey specific areas where pre-existing damage has occurred;
- Inspect each area of specific damage and record the details such as: -
  - Location of the damage;
  - Type of damage;
  - Extent of damage; and
  - Potential for increased damage (vulnerability).
- Photograph the damaged areas;
- Compile a report to include the recorded details and submit the report to SSEN Transmission and Highlands Council consultation and consent;
- Consider the impacts of construction traffic; and
- Highlands Council to approve the details recorded in the report after any consultation process.

7.1.5 Upon completion of the site restoration works, another survey will be carried out jointly with SSEN Transmission and THC and the condition recorded in the same way as for the initial pre-entry survey. This survey shall be carried out within two weeks of the completion of the Proposed Development.

8. MANAGEMENT STRUCTURE

8.1 Introduction

8.1.1 This section reviews the management structure that will oversee the CTMP. It is important that a strong management structure is in place to ensure the CTMP objectives are met and that continued monitoring and review of the CTMP is maintained.

The Principal Contractors shall appoint Traffic Management Coordinators for the north and south of the Proposed Development.

8.1.2 The Traffic Management Coordinators will be employed prior to the commencement of works and will have the following transport related responsibilities:

- Liaise with and report to SSEN Transmission and THC / Transport Scotland about mitigation and any remedial measures, if required;
- Update the CTMP as required; and
- Resolve issues and problems through the liaison with relevant stakeholders.

8.2 Monitoring and Review

The Traffic Management Coordinators shall oversee the implementation and monitoring of the CTMP.

8.2.1 The Traffic Management Coordinators will undertake monitoring as necessary to ensure compliance with the requirements of the CTMP, this will include the maintenance of traffic management measures.

8.2.2 The Traffic Management Coordinators will monitor and review the CTMP. These reviews are required to ensure that the CTMP delivers on the commitments and achieves the goals set out in the document.

8.3 Compliance

8.3.1 The following mechanisms will be established to provide all parties with a clear understanding of the enforcement procedures that will be applied if the requirements set out in the CTMP are not achieved.

- Risk Assessment Method Statement (RAMS) – this will include site inductions for contractors, briefing on obligations of Principal Contractors / SSEN Transmission standards, induction and adherence to RAMS procedures, driver inductions and compliance guidance. This will be prepared by the Traffic Management Coordinators and Principal Contractors' HSE Advisers.

8.3.2 The Traffic Management Coordinators will ensure that appropriate measures are taken to ensure that contractor behaviour and performance is monitored and where appropriate corrective measures are taken to resolve, redress and enhance service performance which is in breach of the standards within the CTMP.