March 2025

Glen Earrach Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices
Appendix 13.2: Framework Construction Traffic Management Plan

Glen Earrach Energy Ltd

Glen Earrach AECOM

Quality information

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Issue History

Issue	Issue date	Details	Authorized	Name	Position
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1. Framework Construction Traffic Management Plan

1.1 Introduction

1.1.1 This Framework Construction Traffic Management Plan (FCTMP) appendix supports **Chapter 13: Access, Traffic and Transport (Volume 2: Main Report)**.

1.1.2 For a description of the Proposed Development and the Proposed Development Site, see EIAR **Chapter 2: Project and Site Description (Volume 2: Main Report)**.

1.1.3 This appendix provides supporting data and background calculations for **Chapter 13: Access, Traffic and Transport (Volume 2: Main Report).**

1.2 Purpose

1.2.1 The purpose of this FCTMP is to provide a framework from which a finalised CTMP can be developed post-consent. This Framework outlines the measures which could be used during the construction of the Proposed Development to mitigate transport-related impacts. Access to the Proposed Development by HGVs and construction plant vehicles would be planned, managed, and executed by the applicant's appointed Construction Contractor to ensure the safety and reliability of deliveries to site, reduce congestion on the local road network and minimise the environmental impact generated by the temporary increase in traffic.

1.3 CTMP Development

1.3.1 The opportunity to develop, amend and enhance the finalised CTMP in response to comments received on this framework document and through the planning and consultation process should be recognised.

1.3.2 The CTMP would consider feedback from local residents and the Community Liaison Group and be developed in consultation with THC to establish the appropriate methods in which the impact of traffic related to the Proposed Development's construction can be minimised.

1.3.3 This document would be updated as necessary with input from THC following feedback from their consultation and planning process.

1.4 Construction Traffic Management Plan Objectives

1.4.1 The FCTMP details the mitigation measures which have been included within the design and would be implemented to mitigate, so far as is reasonably practical, the impact of traffic generated through the Pre-Construction and Enabling Phase and Construction Phase of the proposed development.

1.4.2 The FCTMP will be incorporated into the Construction Contractors contract documentation.

1.4.3 The key objectives of the FCTMP are shown in **Table 1-1 CTMP Objectives** below.

Table 1-1. CTMP Objectives

Objective	Description
A	Ensure that the movements of people, plant and materials are achieved in a safe, efficient, timely and sustainable manner
B	Ensure that the impact to the local communities is minimised
C	Ensure construction traffic levels do not exceed an acceptable level during network peak periods
D	Minimise and control construction vehicle trips where practical
E	Ensure strategies and mitigation measures are implemented and adhered to through continued monitoring, review and improvement of the CTMP

Objective	Description
F	Limits the impacts of construction traffic on the Local Road Network (LRN) and Strategic Road Network (SRN)
G	Ensure that safe access and egress to the site is maintained during construction for all users of all transport infrastructure

1.5 Construction Vehicles Classification

1.5.1 There would be a variety of vehicle types that would be used for the construction of Proposed Development. Vehicles would be required for transportation of materials, workers and equipment to the site as well as vehicles for exporting any excess material (i.e., soils).

1.5.2 For the construction of the development both Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) will be required to transport materials and personnel to and from the site. Following classifications in accordance with the Driver and Vehicle Standards Agency Lorry types and weights guide 1 the following classifications have been used for this FCTMP:

- LGV = Vehicles 3.5 tonnes or below in gross weight; and
- HGV = Vehicles above 3.5 tonnes in gross weight.

1.5.3 The classification of Abnormal Indivisible Loads are as per the Road Vehicles (Construction and Use) Regulations 1986 and the Special Types General Order (STGO) (2003) and are as follows:

- **Category 1:** Vehicles carrying loads up to 50,000 kg, requiring a minimum of 6 axles and specific notifications to authorities.
- **Category 2:** Vehicles carrying loads up to 80,000 kg, which must adhere to more stringent axle and speed restrictions.
- **Category 3:** Vehicles carrying loads up to 150,000 kg, where detailed planning and notification are critical.
- **Special Order Movements:** Vehicles must have a special order if they are more than 150,000kg or 16,500kg in weight per axle, 6.1 m wide or 30 m long in rigid length when loaded. These vehicles are required to give 5 working days' notice to highway and bridge authorities and 2 working days' notice to police.

1.6 Routing of Construction Traffic

1.6.1 Construction traffic routing depends on origin of material being transported. The exact sourcing of each material to be imported to site will be determined by the Construction Contractor once appointed however the A82, A833 and A831 will be used to route the vast majority of construction traffic to site. **Table 1-2. Construction Traffic Routing** considers the likely routing of construction traffic given its origin.

Table 1-2. Construction Traffic Routing

Material Origin	Likely Route to Site
Inverness	A82, A831
Beauly / Wester Balblair	A833, A831
Central Belt	A9 or A82 depending on Central Belt origin

1.7 Proposed Development Site Access

1.7.1 Access to the Proposed Development construction vehicle route in the vicinity of the Forestry and Land Scotland (FLS) car park at Balnain will be managed. There will be traffic management personnel at the bottom of the access track near the FLS car park, and also at the top of the access track where vehicles enter the construction site proper. During working hours access to the track will be controlled by traffic management personnel. Figure 070017 in Appendix H of **Appendix 13.1: Access, Traffic and Transport (Volume 5: Appendices)** shows the

conceptual Balnain Main Access junction layout, and how FLS traffic will be separated from construction traffic for site access from the A831.

1.7.2 Warning signs would be established and maintained on the A831 throughout the duration of construction works and would be situated at agreed locations to warn road users of the Balnain Main Access.

1.8 Hours of Work

1.8.1 Working hours for construction activities related to the Proposed Development would be agreed with THC, but are anticipated to be:

- 08:00 to 19:00 Monday to Friday.
- Saturday 08:00 to 13:00 (although this may be extended to 19:00 at critical path construction phases).
- 24-hour operational during tunnel construction.
- No working on Sundays or Bank Holidays except subject to prior agreement and/ or reasonable notice to THC.

1.9 Deliveries

1.9.1 Due to the scale of the Proposed Development, and the estimated peak of 1,000 construction personnel being present on-site during Year 4 of construction, there is expected to be daily deliveries to the Proposed Development Site in terms of consumables. Deliveries will be scheduled in order to minimise the impact on other road users where possible.

1.10 Enforcement

1.10.1 All Construction Contractors would be required to adhere to the CTMP. Compliance will be monitored by the applicant's site representative via spot checks to ensure that vehicles follow the measures set out in the CTMP.

1.11 Speed Limit

1.11.1 The applicant would ensure that all Proposed Development Site traffic abides by local speed limits to maintain the safety of other road users and pedestrians. An appropriate Proposed Development speed limit would be established and enforced throughout the duration of construction works to provide a safe environment for Proposed Development Site workers and any pedestrians on Core Paths.

1.11.2 Signage would be in place prior to any works taking place which will advise of any temporary speed limits which are in force and all Proposed Development Site workers or haulage sub-contractors would be made aware of the speed limits as part of their induction.

1.12 Traffic Management

1.12.1 Traffic management methods would be used to enhance safety conditions on the local road network and where physical mitigation measures are impractical or cannot be accommodated during the construction period of the Proposed Development. Traffic Signs Manual Chapter 8 states:

- The complexity of traffic management arrangements varies from scheme to scheme, but the primary objective is always:
- To maximise the safety of the workforce and the travelling public.

1.12.2 The secondary objective is:

- To keep traffic flowing as freely as possible.

1.12.3 Traffic management on all highways and roads would comply with the UK Government's Code of Practice 'Safety at Streetworks and Roadworks' (DfT, 2013) and would be agreed with the relevant road authorities prior to the commencement of works.

1.12.4 Traffic Management signage would be in accordance with the Traffic Signs Regulations and General Directions (TSRGD) 2016 and Traffic Signs Manual Chapter 8.

1.12.5 Traffic management arrangements would be produced at the detailed design stage of the access junction. Detailed designs, site specific risk assessments and method statements would be produced and agreed with THC for all traffic management and highways related construction activities.

1.12.6 All traffic management works are to be completed by trained competent personnel from specialist sub-contractor. All TTMS shall be designed and installed in accordance with Chapter 8. A risk assessment and method statement shall be completed for the installation of each TTMS and shall consider hazards associated with the scheme and necessary control measures.

1.12.7 Where reasonable and practicable, construction vehicles will avoid travelling in convoys on public roads.

1.12.8 Construction staff using private vehicles to travel to the site will park their vehicles in designated construction site car parks and not on public roads.

1.12.9 Community consultation has indicated that school children are collected by bus at a number of informal locations on the A831 between the A82 and the Balnain Main Access junction. This is understood to include school buses serving Balnain Primary School and Glen Urquhart High School. The specifics of these locations are unknown but are likely to encompass local access junctions and private dwelling access located along the A831 where no formal pedestrian infrastructure currently exists.

1.12.10 As mitigation, it is proposed that warning signs at appropriate locations be installed along the A831 in line with DfT Traffic Signs Manual Chapter 4, Warning Signs, 2018. The Traffic Signs Manual shows the warning sign (replicated in **Image 1.1)** which can be combined with 'Pedestrians Crossing' and sets out the distances and parameters at which the sign should be set from each location. Consideration will also be given to providing surfaced areas within the public road verge at appropriate locations for school children to board and alight from school buses along the A831.

Image 1.1. Warning sign Diagram 562 to be combined with Pedestrians Crossing (Source: Figure 16-1, Traffic Signs Manual Chapter 4)

1.13 Proposed Mitigation Measures

1.13.1 In line with the objectives set out in **Table 1-1. CTMP Objectives**, a number of mitigation measures would be implemented as summarised in **Table 1-3. Proposed Traffic and Transport Mitigation Measures**.

Table 1-3. Proposed Traffic and Transport Mitigation Measures

Mitigation Measure	Ref	Objective
Prescribed HGV and LGV Construction Routes Only proposed construction traffic routes agreed with THC and TS will be used.	1	A/B
Access Arrangements A road safety assessment and Road Safety Audit will be undertaken on the final layout and arrangements required for construction access to the site.	2	A
Workforce Travel Management Plan	3	A

Mitigation Measure	Ref	Objective
Opportunities for car sharing and other sustainable travel measures are included in the travel plan.		
Community Engagement and Public Information Information regarding construction traffic activities and movements would be provided to the public. The means of communication could include online updates, letter drops, information boards and details of key contracts.	4	B/D
Traffic Management and Diversion Routes Where required, suitable traffic management would be implemented to ensure safe operation and to minimise the impact of construction vehicles on the SRN and LRN. Where road closures are required, diversions would be in place with suitable signage and monitoring.	5	A/B/F
Temporary Traffic Regulation Orders Temporary traffic regulation orders may be proposed to allow enforcement of reduced speed limits, road closures and parking restrictions.	6	A/B/F
Working Hours The core working hours would be 07.00 hours to 19.00 hours Monday to Friday and 08.00 hours to 13.00 hours on Saturday. There would be no working outside of these hours or on Sundays or Bank Holidays without prior agreement of THC, as the local planning authority.	7	B/C/F
Wheel Cleaning Facilities Appropriate facilities would be installed at the site access location to allow removal of debris from construction vehicles prior to use of the LRN or the SRN.	8	F
Delivery Management System Delivery records would be kept at the site Compound. Delivery records would allow vehicular activities to be recorded, monitored and managed throughout the construction of the proposed development to ensure compliance with the CTMP.	9	All
HGV Traffic Movement & Timing Restrictions These could include: • Timing restrictions on routes with schools. • Timing restrictions linked to junction capacity results. • Restriction of movements to allow for local special events • CCTV to monitor movement at the Access	10	C/D/F
HGV Emissions and Safety Features All HGVs used in the construction of the Proposed Development would be to the required Euro Class and could have additional cycle friendly measures such as cameras, full length door windows, blind spot warning system and additional mirrors.	11	A/B
Traffic Marshals Suitably qualified personnel would be present at key locations during construction to guide traffic, the public and to enhance safety.	12	A
Contractor Information Packs All contractors could be provided with: • Prescribed Construction routes • Code of Good Practice • Traffic Incident Management Plan	13	All

Mitigation Measure	Ref	Objective
• Project / Local Authority / Emergency Contact Details • Delivery Management Systems and Vehicle Monitoring • HGV Timing Restrictions.		
Highway Condition Surveys, Maintenance and Repair An inspection, monitoring and repair strategy during the construction of the Proposed Development would be agreed with the LHA and included in the final CTMP	14	F
Traffic Safety and Control Officer (TSCO) Appointment of a TSCO for the duration of the construction of the Proposed Development to act as the main point of contact and undertake the following duties for example; Check all Traffic Management (TM) drawings for compliance prior to issue Ensure sufficient resource is available to maintain TM on site Monitor the TM schemes and layouts to ensure their effectiveness and safety to workers and public	15	A/B/F
Pedestrians and Cyclists Have a staff member present to direct traffic at the site access junction to ensure pedestrians and cyclists can safely negotiate the junction during the construction period.	16	B/G

1.14 Monitoring

1.14.1 The detailed CTMP and compliance with it would likely be secured as a planning condition. It will be prepared in consultation with THC.

1.14.2 The objectives and mitigation measures which are set out in the CTMP being met and managed will be the responsibility of the Construction Contractor with the following responsibilities:

- Communicate and monitor the CTMP and its mitigation measures;
- Ensure records of HGV movements are maintained and reported;
- Install CCTV cameras at the entrance to the access to ensure compliance with HGV arrival and departure procedures;
- Be the first point of contact for the public, stakeholders and the project contractors;
- Hold regular update meetings as required with the relevant roads authority and relevant stakeholders;
- Record near misses, incidents, hazards and resolve issues as informed by the contractors and the public; and
- Monitor, review and improve, where necessary the CTMP and associated mitigation measures.

1.14.3 The applicant would continue liaising with stakeholders throughout the construction of the Proposed Development. Regular contact would help to inform the levels of CTMP monitoring, review and improvement as necessary.

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